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Improving Adolescent Lives in India (2015-2019)

An Impact Evaluation

March 2022

Improving Adolescent Lives in India

An Impact Evaluation

This evaluation is conducted

at

the Center for Evaluation and Development

by

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Executive Summary

Objective of the Adolescent Empowerment Program (AEP) The AEP operated in four districts of four states (Sibsagar in Assam, Visakhapatanam in Andhra Pradesh, Purulia in West Bengal and East Singbhum in Jharkhand) and set out to cover 50% of the adolescent population in each of these districts. The program's goal was to empower adolescents and make them "agents of change" for themselves and their communities, simultaneously making their surrounding aware of and responsive to their rights and needs. For the same, the program worked along three pillars.

The goal of *Pillar I* was to empower adolescents through activities, including the formation of adolescent groups, that increased their knowledge and encouraged dialogue with their peers to enable an understanding of issues particular to their age group, and to remove barriers to their agency and confidence. Depending on the activity, male and female adolescents within the ages of 10 to 19 were to be reached, both in and out of school. *Pillar II* was targeted more broadly towards communities, especially influential community members and leaders, and parents of adolescents. These adults were understood as the foundation that frames the knowledge, agency and confidence of these adolescents, and targeting them would ensure a modification in the social norms and traditions that hold adolescents back. Lastly, measures under *Pillar III*, focused on public services and authorities. The knowledge of and access to services would enhance adolescents' physical and mental well-being, and help them overcome any external barriers to their empowerment. The program was active from 2015 to 2019, with activities intensively implemented from 2017 to 2019, by one or several UNICEF implementing partners in each district.

Objective of the Evaluation In order to assess the impact of the AEP, an independent mixed-methods evaluation of the program was undertaken. The evaluation aimed to answer questions related to implementation fidelity, as well as relevance, effectiveness, and impact of the program on adolescents' lives in India. It assessed whether or not the program improved adolescent lives, eventually increasing school retention or enrollment, prompting later marriages and delaying early pregnancy. Of particular interest for the impact evaluation were the intermediate outcomes which outlined the potential channels through which the desired changes were to occur. These were developed following the Theory of Change (ToC), according to which, the program was to raise awareness and knowledge on adolescents' rights and strengthen supportive community structures to facilitate their empowerment. The program's effectiveness for key stakeholders such as adolescents,

parents and communities as a whole was to be tested through its effects on attitudes towards adolescent' empowerment and gender norms, changes in social norms and practices within the community, as well as improved provision, access to, and enforcement of services and rights. With this being a flagship program, with the eventual aim to scale up the intervention, the lessons learned from this evaluation are to inform future programming, and to alleviate the barriers that the implementation of future programs might face.

Evaluation Methodology The evaluation followed a mixed-methods design, leveraging and combining quantitative and qualitative data to answer evaluation questions. The quantitative component was designed as a randomized control trial. Out of 82 program-eligible blocks in the sample, 42 (treatment) blocks were allocated to receive a set of foundational interventions, including adolescent girls groups, or the *Basic Package*. The remaining 40 blocks served as a comparison (or control) group, that received no intervention. In a second-stage of randomization, 480 villages in the program blocks were equally divided into 4 groups, and assigned into the *Plus Package*, which included additional activities on top of the *Basic Package*. As part of the *Plus Package*, villages where assigned to (a) additional parents groups, (b) additional adolescent boys groups, or (c) additional parents and adolescents boys groups. The last set of group of villages were assigned to no additional activities besides the *Basic Package*, to serve as a comparison point to the villages with additional boys and parents groups.

This evaluation relied on census data as a baseline, and on data collected between March and October 2021 in 72 sampling blocks as the endline. While the program included 82 blocks, the endline sample dropped 7 blocks because of their small relative size and 3 blocks because they were entirely urban. All of these 10 blocks were from Andhra Pradesh. The data for the analysis were acquired with the help of face-to-face surveys with adolescents, parents and community leaders. A total of 6,787 interviews were conducted with the three actors mentioned above, in 699 villages. The respondents stemmed from 419 villages in program areas and 280 villages in control areas.

Within the mixed-method set up of the AEP endline evaluation, the qualitative component complemented the larger quantitative component, providing additional in-depth qualitative insights to answer particular evaluation questions. In this line, the qualitative component focused on questions related to implementation fidelity, relevance, and effectiveness, while the quantitative component largely addressed the questions on effectiveness and impact. The qualitative component used a detailed desk review of primary documents, in addition to key informant interviews, in-depth in-

terviews, and focus group discussions with key stakeholders, as well as with intended beneficiaries (e.g., adolescents and parents) to answer the key evaluation questions. It followed a dual approach for collecting data, where 32 implementing partners, United Nations Children's Fund (UNICEF) staff at state and country level, district officials and other key informants were interviewed remotely (via Phone, Microsoft Teams and Skype), while 56 adolescent boys and girls aged 16 to 21, 45 frontline workers and 29 parents were interviewed face-to-face, in four villages per state.

Findings and Implications *Implementation fidelity:* The AEP evaluation leveraged endline survey data, project monitoring data and project documentation to assess the reach and scope of activities implemented as part of the AEP. Based on the endline survey data, implementation reach in treatment areas was modest: in 46% of villages none of the respondents reported awareness of the implementation of any AEP activities within their villages. However, triangulating information from both project monitoring data and endline survey data, the AEP reached a much larger share of treatment villages (94%). Project monitoring data also reveals that the reach and scope of program implementation varied considerably by state.

All in all, program awareness among respondents was low. Only 16% of respondents (including adolescent, parents and community leaders) were aware of any AEP activity, and remember the name of the implementing organization, within their villages. Low levels of awareness among respondents also hint that the intensity of program implementation was modest, although recall bias could have reduced reported levels of program awareness if respondents forgot about specific activities implemented in their villages in the past four years. Among those who were aware of the implementation of AEP activities in their village, a majority participated in these activities (86%) and all (100%) participants reported they were satisfied with the activities.

Overall impact and final outcomes: The evaluation results show that at the aggregate program level, the AEP had very limited impact on all final outcomes. At the state-level, however, program effects present an assorted picture.

For the program on the whole, there is no evidence that the AEP led to a reduction in the incidence of **child marriage** or early pregnancy. The small sample size for early pregnancy might explain the absence of findings in this outcome. Qualitative evidence points in the same direction. Respondents in qualitative interviews reported a general decrease in child marriage rates over the past decade. However, in line with quantitative evidence, they mentioned this may not have been necessarily

associated with the AEP. Despite these declines in child marriages, participants felt that a longer program duration - particularly in Assam's tea gardens - could have yielded additional decreases in child marriage rates. A few participants stated that the government's (Kanyashree) scheme also helped motivate and encourage parents to delay arranging marriages for their daughters. Financial reasons emerged as an important factor driving child marriage in both qualitative and quantitative evidence.

For **education** outcomes, the AEP led to a small increase in current school attendance for adolescent girls aged 10 to 19 (90%), when compared to adolescent girls aged 10 to 19 in the control group (88.3%). Likewise, the AEP is associated with a 2.1 percentage point (pp) increase in current school attendance among older adolescent boys and girls (aged 15 to 23) (81.2%), when compared to adolescent boys and girls of the same age in control areas (79.1%). The share of adolescent girls aged 10 to 14 who reported to attend secondary education was also 3.1pp higher in treatment areas, when compared to the share of adolescent girls of the same age in control areas. Finally, the program also had positive effects when considering formal years of education. An increase in 0.3 years of formal education is found among adolescent boys and girls in treatment areas, when considering results from all states combined. This increase is statistically significant for both girls and boys. At the state level, more significant results are found:

Final outcomes at state level: The AEP adopted differing program modalities to fit the context in which it was operating. Therefore, it is useful to examine the impact of the AEP on each state separately. The program led to positive effects in several outcomes for the states of Andhra Pradesh and Jharkhand. Given low levels of reported early pregnancies, results for early pregnancies at the state level are not reported because of small sample sizes.

In treatment areas of **Andhra Pradesh**, the AEP is associated with a statistically significant reduction in child marriage rates among adolescent girls and boys aged 10 to 19(2.9pp lower). This reduction was stronger for adolescent girls aged 10 to 19 than for adolescent boys, at 4.2pp and 1.6pp, respectively. In terms of education effects, no statistically significant effects on school attendance rates were found for adolescent girls in any age group within treatment areas of the state. It is important to consider these results with caution since Andhra Pradesh was the state with the largest deviations from evaluation design.

In **Assam**, the AEP is associated with a higher incidence of child marriage among adolescent girls aged 10 to 19, when compared to adolescent girls of the same age in control areas. On average,

4.3% girls in program areas reported being married of early, compared to 1.5% in non-program (a difference of 2.8pp). Among adolescent girls aged 18 to 21 in treatment areas, the program is also associated with higher child marriage rates (7.2pp). The overall low rates of reported child marriage in Assam, in both treatment and control areas, may have influenced these results. In terms of schooling, the AEP had a positive impact on school attendance rates among adolescent boys and girls in treatment areas. Attendance was 3.8pp higher in program areas, compared to school attendance rates of adolescent boys and girls of the same age in control areas (~88%). Focusing only on adolescent girls aged 10 to 19, the increase in school attendance is smaller (3.2pp) and only weakly significant.

In **Jharkhand**, the AEP is associated with a 2.5pp lower incidence of child marriage rates among adolescent boys and girls aged 10 to 19 (2.7%), when compared to adolescent boys and girls of the same age in non-program areas (5.2%). This reduction is not statistically significant when considering program effects on adolescent girls alone. The program is also associated with a considerable, statistically significant, increase in schooling rates for adolescent girls aged 10 to 19 (6.2pp). That is, while 81.9% of adolescent girls in non-program areas reported they attended primary or secondary education, 88.1% did so in program areas.

West Bengal was the state where the AEP presented a lower impact. Overall the AEP is not associated with any impact in terms of reduced child marriage and early pregnancy or in terms of improved schooling.

"Basic" versus "Plus" program activities At an aggregate level, increasing program intensity through *Plus package* activities did not have any additional impact on child marriage, early pregnancy and school enrollment. However, when disaggregating the results by the three treatment arms (boy group, parents group or boys and parent groups), villages with parents group in addition to the *Basic package* showed positive effects on reduced marriage for adolescent girls (reduction of 1.7pp).

Intermediate outcomes: Adolescent empowerment, social norms, communication, and service provision Intermediate outcomes were envisioned in the Theory of Change of the AEP as impact pathways to shape final outcomes. All in all, the evaluation finds the AEP increased awareness of child rights among respondents in treatment areas, while the impact on other intermediate outcomes was more limited.

In relation to **adolescent empowerment**, the AEP shows positive effects in terms of supporting

awareness of child rights among adolescents, parents and community service providers. The share of respondents in program areas that were aware of child rights was 25.1%, relative to 17.7% in comparison areas - a 7.4pp improvement. This improvement was even more notable when comparing very poor respondents in program versus non-program blocks (+9.7%). However, improvements in other areas of adolescent empowerment were very limited or non-existent. In this sense, improvements in terms of confidence were only observed among adolescent girls in Andhra Pradesh. In the state program areas, 59.3% of adolescent girls reported they felt confident in doing daily activities by themselves, while 46.7% did so in non-program areas. No impact is observed in terms of improved well-being, self-efficacy or active support when comparing adolescents in treatment and control areas.

Overall, the AEP had a limited effect in supporting **communication** outcomes. The program had a small, positive effect (2.2pp) on the share of situations involving intergenerational dialogue that adolescent boys and girls engaged in. This positive effect was stronger when focusing on adolescent girls alone (2.8pp) and on older adolescent girls in particular (4.2pp). Likewise, intragenerational dialogue increased among older adolescent girls (2.2pp). Qualitative evidence supports positive program effects in terms of improved communication among adolescents and parents that participated in them.

At the aggregate level, evidence from quantitative data hints that the program did not significantly shape **social norms** surrounding child marriage or equal opportunities for girls and boys. Only when looking at program effects on male respondents, a small decrease in agreement with child marriage is observed (2pp). In qualitative interviews, respondents who took part in the program noted positive changes in regards to their attitudes about equality. This includes learning about treating girls and boys equally in relation to their educational pursuits and becoming more aware of the importance of providing girls the opportunity to attend school for the same length of time as boys. However, respondents felt equality between girls and boys was something "people just say" and that, "in real life, it's not true". All in all, it seems like increase awareness of adolescent rights and equality principles were not enough to shape social norms.

Impacts for **service provision** reflect changes under the *Pillar III* of the program. Considering results from all states, community leaders in program villages were slightly more likely to report an improvement in access to community services (4.7pp). Likewise, access to Child Protection Committees (CPCs) was improved in program areas (8.4pp). However results differ by state and a large majority, namely 78.7% of community leaders, reported that CPCs were not present in

their village. Finally, the AEP is associated with a small increase in the government services that adolescent girls were aware of (2.0pp) and could access (+2.1pp), when compared to adolescent girls in comparison areas. This increase was higher when considering adolescent girls in Andhra Pradesh, who showed an increase of 6.4pp in the share of government services they knew and of 5.0pp in the share of services they could access.

The change in some of the intermediate outcomes, especially at the community level, suggest that the program activities did push adolescents towards the path of becoming "agents of change", although this effort did not translate at the last mile, within the impact level outcomes.

Relevance, key informants frequently reported a strong integration and explicit alignment of AEP programming with existing government goals, schemes and initiatives. In addition to ensuring the AEP's alignment with international frameworks such as the United Nations Convention on the Rights of the Child (UNCRC), they emphasized that the AEP had been well integrated with existing government activities. However, in spite of the apparently close integration and ownership by the government, many study participants felt they were incapable of continuing program activities in the absence of Non-Governmental Organisations (NGOs) and/or UNICEF support and guidance. According to them, this was due to lacking financial support, lack of knowledge and training as well as limited motivation among facilitators and group members. Together with this, the wide variety of contexts and conditions that the intervention needed to adapt to may have lowered its impact. In many cases, the adaptations eventually undertaken were dependent on individual initiative and responsiveness to feedback and good monitoring. As discussed below, this was not always optimal. The local factors that required adaptation related to language, culture, religion, security situation, need for inclusiveness and much more. This means that apart from increased responsiveness, greater participation in program design and flexibility of intervention may help provide the necessary adaptability to account for the immense diversity of local contexts.Finally, despite generally positive assessments of the monitoring mechanisms in place throughout the AEP, one District Officer requested stronger coordination and more regular meetings between AEP and other service providers in order to ensure transparency in data sharing, for instance in relation to adolescent healthcare seeking behavior, in the absence of which service providers "are missing the opportunity of giving the service to those adolescents who are actually referred or who actually need the service" (District Officer 2, West Bengal).

Recommendations The recommendations in the report are based on the main lessons learned the evaluation process, the implementation data, and finally, the quantitative and qualitative findings. All recommendations are targeted at UNICEF country and regional office, but also can be directed at a more general audience that plan to conduct a similar evaluation or roll out a program similar to the AEP.

The recommendations are as follows:

- Create a communication strategy for child marriage and education programs that includes a variety of methods for outreach, e.g., engaging with digital media outreach as well as collaboration with the private sector.
- Create a strategy for the effective engagement of parents and adolescent boys in child marriage prevention programs. This should include strategies and recommendations to overcome gender and availability barriers for the participation of boys and parents in child prevention programs.
- To avoid variation in reporting, the evaluation team recommends the development of a toolkit for programs targeting child marriage of (qualitative and) quantitative research tools, techniques and standardized indicators for monitoring changes in knowledge, practices and gender equitable attitudes.
- Embedding sustainability of programs as a key aspect of future programming is important, for instance, by embedding programmatic approaches into existing government schemes based on representative and rigorous evidence. It is also important to develop and implement an exit strategy to be rolled out at least a year before the end of the program.
- A workshop targeted a building capacity of UNICEF program staff at country and regional level, and potentially key Implementing Partner (IP) would ensure the understanding and use of highly rigorous evaluation approaches, such as randomized control trial and quasi-experimental methods.

Limitations It is worth noting that the evaluation of the program started right before the COVID-19 worldwide outbreak at the end of 2019, and experienced several hardships due the prolonged lockdowns that followed. Even though the evaluation process successfully adapted to the new

conditions, data was collected a significant time after the end of the program. COVID-19 could thus have diluted some of the effects between the end of program implementation and September 2021, particularly due to recall bias. This is particularly relevant for the implementation reporting from respondents. Likewise, the pandemic has been shown to have significant adverse impacts on the schooling, health and well-being of adolescents, affecting the intended outcomes of the program. As a mitigation strategy, the evaluation has assessed impact on education outcomes from different angles, including changes in current and past school attendance or in attitudes towards education

Another deviation is that program implementation focused on a small subset of treatment blocks in Andhra Pradesh. In this state, adolescent and parent groups, and mid-media activities were only implemented in five states, two of which are included in the sample. Since implementation in these blocks was decided for strategic reasons, it is hard to disentangle the reasons for this selection into treatment. Moreover, seven blocks were dropped from the endline during sampling, because of their relative small size. Since these blocks represent 0.5% of the overall number of villages in Andhra Pradesh, results for the state are likely to be unaffected by this change. However, given the deviations in the sample on top of the significant changes in program implementation, results in Andhra Pradesh should thus be considered with caution. It is difficult to measure the extent of bias in the results, and if it leads to lower or higher effects for the outcomes. To account for the implications of these changes on results at the aggregate level, main outcomes were also calculated excluding Andhra Pradesh, as a robustness checks. All in all, evaluation results for final outcomes hold when excluding from the analysis treatment and control areas of Andhra Pradesh.

Finally, the program was implemented by several local implementing partners across and within states, with differing approaches. Together with this, implementation intensity varied during the time the program was implemented. In this line, program intensity varied between and within states, and over time. The multiplicity of implementation approaches pose complications to accurately assess the aspects of the AEP that ,ay have led to changes, or lack thereof, in outcomes of interest of the evaluation.

List of Acronyms

T_0 Treatment arm 0

A adolescent

AEP Adolescent Empowerment Program

ag. against

agr. agrees

AQ adolescent questionnaires

ASHA Accredited Health Activist

AWW Anganwadi Worker

B boy

AGG Adolescent Girls Group

ABG Adolescent Boys Group

BPL Below Poverty Line

bro. brother

C4ED Center for Evaluation and Development

CCT Conditional Cash Transfer

CL community leader

CLQ community leader questionnaire

CM child marriage

comm. community

conf. confident

corp. corporal

pn. punishment

CP Child Protection

CPC Child Protection Committee

CR child right

dau. daughter

DCPO District Child Protection Officer

dec. decision

DHS Demographic and Health Surveys

disc. discussed

educ. education

FGD Focus Group Discussion

G girl

GG Adolescent Girls Group

gov. government

GP Gram Panchayat

HH household

i.l.3m. in the last 3 months

i.l.y. in the last year

ICC Interpersonal Communication Competence

IDA Intensity Data on Activities

IDI In-Depth Interview

IKEAF IKEA Foundation

imp. important

INR Indian rupee

intergen. intergenerational

intragen. intragenerational

IP Implementing Partner

IPC Inter-Personal Communication

IRB Institutional Review Board

ITT Intention-to-Treat Effect

KII Key Informant Interview

KK Kishoree Kontha

KP Kanyashree Prakalpa

KPI Key Performance Indicator

LASSO Least Absolute Shrinkage and Selection Operator

LATE Local Average Treatment Effect

m.c. multiple choice

mar. marriage

MDES Minimum Detectable Effect Size

mem. members

MIS Monitoring Information System

NFHS-5 National Family and Health Survey

NGO Non-Governmental Organisation

no. number of

NSS National Service Scheme

o.l.2w. over the last 2 weeks

o.l.4y. over the last 4 years

OLS Ordinarly Least Squares

P parent

PAP Pre-analysis Plan

PG Parents Group

PHFI Public Health Foundation of India

pp percentage point

ppl. people

PQ parent questionnaire

PRI Panchayati Raj Institution

QPMS Quarterly Progress Monitoring System

RBSK Rashtriya Bal Swasthya Karyakram

RCT Randomized Control Trial

rea. reason

rgd. regarding

RKSK Rashtriya Kishor Swasthya Karyakram

RKSK Rashtriya Kishor Swasthya Karyakram

SAG Scheme for Adolescent Girls

SDG Sustainable Development Goal

SED Secondary Education

SHG Self Help Group

SI summary indicator

sis. sister

SMC School Management Committee

STI Sexually Transmitted Infection

ToC Theory of Change

UN United Nations

UNCRC United Nations Convention on the Rights of the Child

UNFPA United Nations Population's Fund

UNICEF United Nations Children's Fund

viol. violence

W women

w/o without

WDCW Women Development and Child Welfare

WHO World Health Organization

General Information

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Researchers and their Role The authors of the evaluation are Alexandra Avdeenko (corresponding author), Markus Frölich, and Atika Pasha[1]. The views and opinions expressed are those of the authors' and do not necessarily reflect the official policy or position of UNICEF. Any errors and omissions are the sole responsibility of the authors. All affiliations of the authors listed in the title page are those that were in effect at the time the report was accepted. Any comments or queries should be directed to the corresponding author, Atika Pasha (pasha@c4ed.org). Finally, the researchers had no direct decision-making power over whether and how to implement the program.

Quality Assurance Quality assurance was performed by UNICEF ROSA Evaluation Section as an independent section within UNICEF's Regional Office and had no involvement in Adolescent Empowerment Program design or implementation. Members of different sections from UNICEF ROSA and UNICEF India reviewed and provided feedback on the Pre-analysis Plan and draft report.

Researcher Independence and Financial Conflicts of Interest No contractual limitations existed on the ability of the researchers to report the results of the study. The researchers have no financial conflicts of interest with regard to the results of the research. The researchers' contract for this evaluation was with 3ie.

Evaluation Process The impact evaluation of the Adolescent Empowerment Program is part of a larger package of impact evaluations covering the regional Improving Adolescent Lives program in three countries (Afghanistan, India and Pakistan). The Terms of Reference (ToR) for the assignment initially covered all these evaluations. In 2019, the India evaluation component and a multi-country synthesis review were split off in a separate ToR. This ToR focused the India AEP evaluation on the program effects on key outcomes of adolescent well-being such as child marriage, teen pregnancy and secondary enrollment rates, and intermediate outcomes such as empowerment and perception in relation to adolescent well-being. Furthermore, the relevance and implementation fidelity of the program were to be examined. The ToR focused the evaluation on the Basic Package, while also covering other program aspects such as the Plus Package activities. The impact evaluation scope of work and methodology was refined in the first quarter of 2020 and adjusted again in June 2020 and April 2021 to adapt the workplan and design to the COVID-19 pandemic outbreak. A Pre-analysis Plan was developed over time and documented the changes. The final version is publicly available under AEARCTR-0007595 at the American Economic Association website. The original TOR is

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available upon request.

Timeline The assignment into the program vs. control group was performed in 2015. The program implementation took place between summer 2017 and winter 2019. The implementation was conducted by several implementing partners, supported by UNICEF. The endline data collection officially began on February 24th (first registered interviews) and ended on October 7th, 2021. Originally, the endline data collection was planned for March 2020, the difference in timing being caused by the elections and the outbreak of the COVID-19 pandemic. The qualitative in-person interviews were conducted between February and March 2021 and June 2021. In August 2020, some qualitative interviews happened remotely.

Study Pre-registration A pre-analysis plan was registered prior to the endline data collection, on November 17th 2021, under AEARCTR-0007595.

Institutional Review Board (Ethics Approval) The necessary ethics approvals have been obtained from Catalyst Foundation on July, 14th 2020.

Declaration of Interest None.

Scarcity No. Budget and other non-research considerations were the critical factors limiting scale and as such the random assignment merely influenced who got which program.

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Similarly to UNICEF, we thank the **local implementing organizations** for answering us to our numerous questions and requests regarding the program implemented. We made our best efforts to reflect your work in this study, with any mistakes, if any, being our own. We hope our work is helpful in designing evidence-based impactful programs for adolescents.

Our local partners were crucial for the quality of evidence. For years, this work has benefitted from working closely with Sumeet Patil and his team at Neerman. At CMS we thank Abdul Latheef P., Kumar Raman, and Karabasappa K.
At **C4ED**, we would like to thank a group of junior researchers that were essential for this project, namely Jakob Gärtner, Joaquin Rodriguez, Ariane Gordan, Joaquín Cárceles, Mariya Afonina, and Josh McCormick. It is your motivation for the cause and your hard work that kept this evaluation alive and going. A number of research assistants and interns supported this work over the years. In its last phases we would like to in particular thank Tom Fuhrländer, Julia Wagner, and Daniela Uribe. Yajna Elouard, Christina Walaan, Katharine Hagerman, Laura Ahlborn, Elisa Sanz and Franziska Satzinger conducted the qualitative evaluation supporting the rigorous evaluation with further insights. Ravi Baghel quality-assured and refined the work.

Last but not least, we thank the **Government of India** for permitting this work. We hope the evidence generated will be insightful for the adolescents in India. We are grateful to the donors of the program, the **IKEA foundation**, for allowing to align an impact evaluation to the programming and therewith permit learning in an area where it's urgently needed.

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CHAPTER 1

Introduction

I. General Context of the Program

Adolescence is a period of physical, social and psychological development during which young people experience and adapt new roles in their families and communities. This period often entails the loss of many protective structures endowed to adolescents in their childhood. As a consequence, it is often a time of great vulnerability.[1] Nonetheless, for many years, this stage of life has not receive the deserved interest within policy.

Relevance of the Problem This is especially so for adolescent girls, whose rights and needs have been reportedly widely abused or ignored (**???**). Rigid gender norms, discrimination, abuse, and poverty can render girls significantly more vulnerable to negative physical and psychological health outcomes (**?**). As the largest country in South Asia, and home to 240 million adolescents between the ages of 10 to 19 (**?**), India presents evidence towards the unique set of challenges and vulnerabilities that adolescents in poverty, particularly girls, face. UNICEF reports that adolescent girls in India are six times more likely to being married off, than adolescents boys (**?**). The negative consequences of child marriage are far-reaching. Early marriage is associated with lower educational and nutritional outcomes for adolescent girls, and with higher rates of early pregnancy (**??**). Likewise, a misconception exists that girls in marriage are protected from violence while in fact, married adolescents are particularly vulnerable to domestic abuse (**??**). This adds to a broad array of additional negative impacts of child marriage covered extensively in the literature. Studies show that married adolescents exhibit a higher prevalence of poor reproductive health (**?**), higher exposure to Sexually Transmitted Infection (STI) (**?**), and are less likely to deliver in health care centers (**?**). The likelihood of maternal mortality is increased as well (**?**).

In addition to its immediate negative impact on physical growth, mental and emotional development,

[1] As emphasized in UNICEF's State of the Children 2011 report (**?**).

and education opportunities, UNICEF stresses the perpetual cycles of poverty promoted through the practice of child marriage. Mothers that were excluded from education attainment from an early age, and faced a high incidence of disease, and often feel the financial burden that forces the practice of child marriage onto the next generation (**?**). Consequently, child marriage is recognized as a violation of human rights, and its eliminations is included in target 5.3 of the Sustainable Development Goals. Even less policy attention has been paid to males, who also suffer from rigid gender norms, but more indirectly. Expectations by society form gender roles and may encourage men to use violence to maintain authority in the family, and control women and girls within the family (**?**). Likewise, early marriage is also associated with lower educational and health outcomes for boys (**?**). In this sense, addressing entrenched gender norms that support early marriage is key to achieve an improvement in well-being for both genders.

Over the past 30 years, India took several legal steps to strengthen the legislative and policy frameworks supposed to protect adolescents from child marriage. In 1992, it acceded to the Convention on the rights of the child, and in the following year, ratified the Convention of the Elimination of All Forms of Discrimination Against Women. National efforts began in 2006 with the Prohibition of Child Marriage Act setting the legal age of marriage to 18. In 2013, India drafted the National Action Plan to Prevent Child Marriage. More recently, individual states, among them Rajasthan, Jharkhand and Bihar, have proposed strategy plans and roadmaps for the prevention of child marriage (**?**). Furthermore, the government set up programs such as Conditional Cash Transfer (CCT) schemes in the 1990s, to tackle different causes for early marriages.[2]

In line with many such reforms, the probability of a girl in South Asia marrying before the age of 18 has dropped from 50 to 30% over the last 10 years (**?**). These have been especially expedient in India, where child marriage rates especially for girls under 15 have declined (**?**). While it is true that the situation for very young Indian girls is slightly improving, child marriage continues to be a major problem. In fact, the latest National Family and Health Survey (NFHS-5) finds that 23% of women aged 20 to 24 were married before the age of 18. Roughly 7% of adolescent girls between 15 and 19 were already mothers or pregnant at the time of the survey (**?**). Eventually, adolescent girls have often little control over when and to whom they will be married. Rather, for many girls life is dictated by a combination of patriarchal societal norms, monetary concerns, and negotiations between parents and in-laws. Additional considerations of prestige and honor are also of paramount importance. The importance of dowry continues to be a prime concern central to the negotiation of a marriage (**?**).

COVID-19 and Adolescents In light of the COVID-19 pandemic, the rights and entitlement of adolescents are particularly at risk, especially those based in rural, poor areas. A policy brief by

[2]For instance, under the Sahong Scheme, for example, families of lower castes in Rajasthan were provided with Indian rupee (INR) 5,000 if the girl married between the ages of 18 and 21, and INR 10,000 if the marriage is postponed until after the age of 21. The Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (SABLA scheme) first put major emphasis on empowerment aspects (**?**). Combined efforts between the government at central, state, and district levels are increasingly working at reducing child marriage in India. However, challenges such as the rural-urban divide, with rural women being significantly more likely to have been married before the age of 18, still remain (**?**).

Right to Education, estimated that ten million girls in India could drop out of secondary school due to the pandemic **?**. Even before the pandemic, adolescent girls were more vulnerable to dropout, but school closures increased their probability of not attending education, getting married off, and more unintended pregnancies.(**?**; **?**) After India began lifting restrictions, cases of child labor showed a steady rise, representing a barrier for school enrollment and consistent attendance (**?**). COVID-19 has also increased the risk of child marriage. During the onset of the pandemic, Childline 1098[3] experienced a 50% increase in their regular call volumes (**?**). Almost 10,000 calls required Childline 1098 staff intervention, with 30% of these calls related to child protection issues, including child marriage. During 2020 alone, interventions by social workers from childline stopped nearly 898 child marriages during this pandemic (**?**). In this line, the analysis from **?** and **?** reveal that the lockdown also disrupted anti-child marriages programs and new financial burdens increased the incidence of child marriage (**?**; **?**). This, plus the rise in the incidence of child abuse and violence during lockdown, is likely to lead to an increase in child pregnancy. With this considerable threat to the progress made within the past decades, key players in the area of adolescent empowerment would need to redouble their efforts, to ensure that these rights and liberties of adolescents are upheld to the utmost possible. This report will thereby contribute to the understanding of adolescent empowerment programs, and improve future program planning and implementation, to make these more relevant, efficient and to have larger impacts.

II. The Program

Overall Aim and Approach In 2015, UNICEF and IKEA Foundation (IKEAF) launched the "Improving Adolescents' Lives in South Asia" program, with interventions in India, Pakistan and Afghanistan. The overall aim of the program implementation was to contribute in developing a model feasible for later scale-up in South Asia, drawing on the experiences and lessons learned from the three countries. The "Improving Adolescents' Lives in India", or AEP as named in India, was based on a three pillar approach: The first one focused on adolescents to make them *agents of change* for themselves and their communities. The second pillar targeted families, communities and decision makers so that they protect adolescents from right abuses, while improving the dialogue between them. The third pillar was centered on public authorities and services such that they upheld the adolescents' rights, and ensure their protection, health and education. While the pervasive approach in development programs has been to engage communities as a homogeneous construct, or to engage girls and women alone, this project additionally addressed the boys, men and leaders as stakeholders in the process of change.

Geographical Scope The AEP operated in four states: In Andhra Pradesh (southeast India), the neighboring states of West Bengal and Jharkhand (east India) and in Assam (northeast India).

[3]India's hotline number for children at risk

In West Bengal, the program was implemented in the district of Purulia, where 20% of the state's poorest villages are located (**?**). In 2019, the rate of women aged 20 to 24 years who married were before the age of 18 was particularly high with 37%, in comparison to the national average of 23% (**?**). The Kanyashree Prakalpa (KP) program was adopted in 2013, providing scholarships and grants to unmarried girls who remain in education or actively employed. Years later, the government implemented the Scheme for Adolescent Girls (SAG)-KP Convergence Program in the state to enable adolescent girls for self-development and empowerment, promote health and childcare awareness, build and upgrade life skills, and provide guidance about existing public services.

In Jharkhand, the district of East Singhbhum (adjacent to Purulia) was covered under the project. While similar to Purulia, in that around 20% of the approximately 2.2 million inhabitants are adolescents (**?**), the rate of women aged 20 to 24 years who were married before the age of 18 in 2019 was much lower with 19.8% (**?**).

In Andhra Pradesh, the interventions took place in the urban, rural and tribal regions of the district of Visakhapatnam, which is located in the northeast of the state. While approximately 25.4% of the women aged 20 to 24 years were married before the age of 18 years, approximately 9.5% of women of the ages 15 to 19 were mothers or pregnant in 2019 (**?**). In this state, the government launched the SAG program for female empowerment in 2010 to address fundamental needs for a holistic growth of adolescent girls in terms of health, education and employment. Since then, the implementation through training in vocational skills and exposure to public services and leadership development has aimed to improve health, delay pregnancy and reduce maternal and infant mortality.

Finally, in the state of Assam, the interventions were implemented in the district of Sibsagar. In 2019, within the rural areas of Sibsagar, the rate of women aged 20 to 24 years who were married before the age of 18 was 27.9%, while women aged 15 to 19 pregnant or with child were around 12.8% (**?**). In addition to the implementation of the SAG scheme in this state, in 2017, the Assam government introduced the Swami Vivekananda Assam Youth Empowerment Scheme to provide training in entrepreneurship skills development and financial assistance.

Timeline Program activities were implemented from 2015 to 2019. Program results were to be measured one year after program completion, but were eventually measured two years after program completion, following delays caused by COVID-19.

Cost The India AEP had a program budget of 6,866,087.26 USD.

Linking Program Goals to the Sustainable Development Goals (SDGs) Via the three-pronged approach, the program intended to bring the targeted population closer to fulfilling the United Nations (UN) SDG 5 and 4, i.e., in the areas of gender equality and women's empowerment, and education. It particularly aimed to eliminate harmful practices against women, such as child and forced marriage, in accordance with target 5.3 of the SDGs. Regarding education it strengthens SDG 4.7 to "ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, human rights, gender equality, promotion of a culture of peace and non-

violence". Overall, the program directly reached 85,573 adolescents and 850,000 other direct beneficiaries (**?**).

II.A Program Activities, Stakeholders and Expected Changes

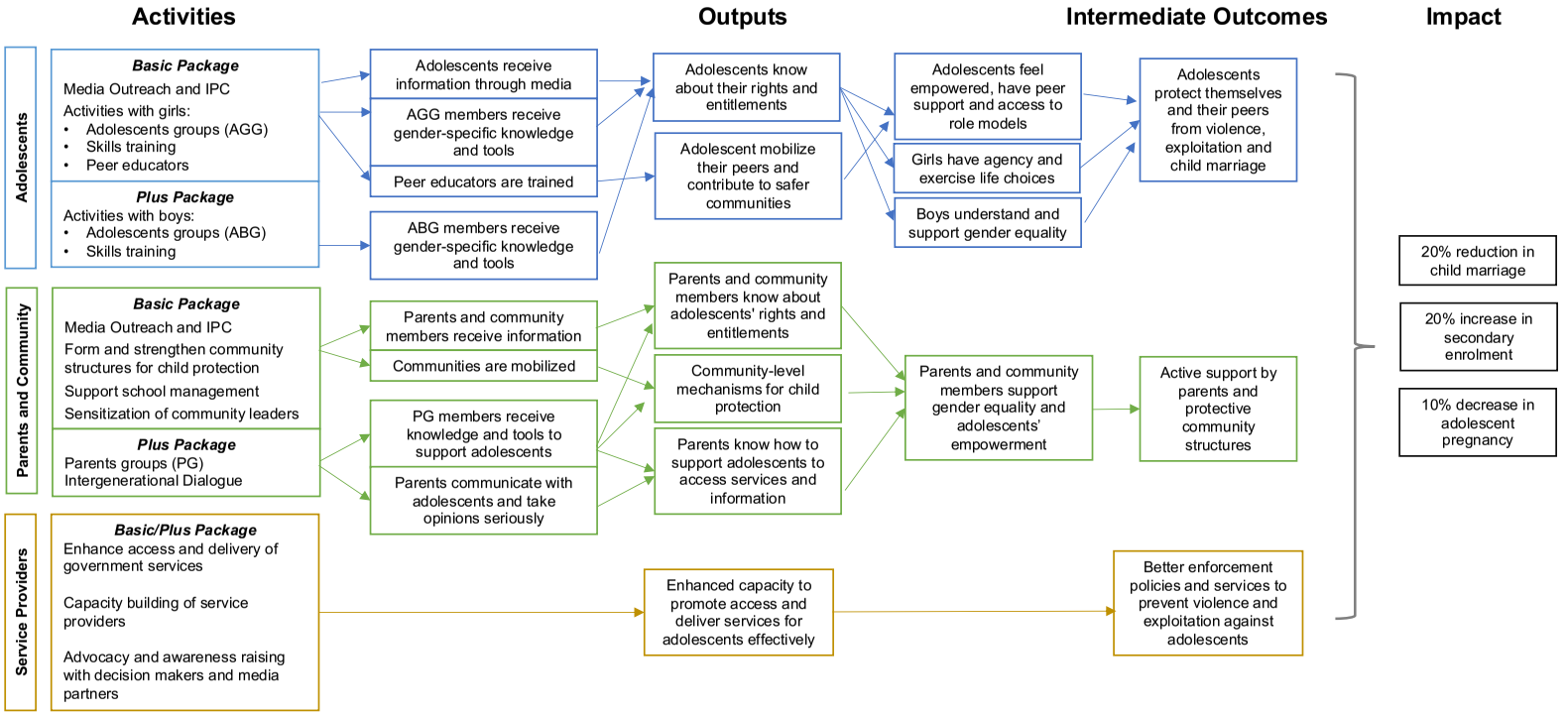
The program followed the three-pillar approach of the overall South Asia Program ToC. Following this, outputs and outcomes were defined around three pillars: Pillar I on adolescents, Pillar II on stakeholders (parents and communities) and Pillar III on service providers. The strategies of the program aimed at enabling adolescents to protect themselves and enhancing supportive community structures through awareness raising, capacity building, and mobilization of relevant stakeholders. Through these channels, the program was expected to have an impact in reducing child marriage, increasing secondary education enrollment and decreasing adolescent pregnancy. The program included information dissemination through media outlets such as radios, print media, and television, as well as capacity building activities geared toward adolescents, their parents, and other members of the community. Through these various channels, the interventions aimed to shape attitudes towards marriage, gender roles, education, and adolescent empowerment. Accompanied by specific skills training and capacity building workshops, the interventions were rolled out across the four Indian states. Under each strategic pillar, several activities were implemented between 2016 and 2019.[4] A *Basic Package* included outreach, awareness raising, and capacity building activities across the three pillars, as well as adolescent girls' groups. The *Plus Package* activities additionally comprised adolescent boys' groups, parents' groups, or a combination of both. Therefore, villages that received these additional efforts may experience greater improvements in the outcomes of interest through an increased engagement of additional target groups, as more comprehensive awareness and capacity building is expected to be linked with greater effectiveness.

The goal of Pillar I was that adolescents become agents of change for themselves and their communities. Adolescents of between the ages 10-19 were targeted as part of the AEP. Depending on the activity, male and female adolescents in and out of school were to be reached. Pillar II was targeted more broadly towards communities, especially influential community members and community leaders, as well as parents of adolescents. Measures under Pillar III focused on public services and authorities.Figure 1.1 summarizes the ToC, displaying its activities, expected outputs, intermediate outcomes, and their final impacts. Section A.I.A in Appendix A.I. includes a detailed list of activities under each Pillar.[5]

[4]see Section A.I.A in the Appendix for more information on the original ToC. Note, while the program activities in the four covered states were aligned under the umbrella of the AEP and, therefore, activities targeted towards the three pillars were implemented, the exact mix of interventions and the focus on different program activities also depended on the state-specific context. More precisely, the planned activities in each state had to be further aligned with existing interventions, the economic and cultural situation as well as potential barriers to implementation. In this sense, the states may have followed different versions of the ToC, while being still in line with the overarching goals and expected outcomes.

[5]At each stage of the results chain, several assumptions need to hold such that expected changes occur. These

Figure 1.1: Theory of Change



►*Notes*: Source: Author's depiction.

Pillar I: Adolescents The *Basic Package* under the first pillar includes media outreach and advocacy to engage adolescents through mid- and mass-media channels. Mid-media covers activities such as street plays, games-based activities, miking, community festivities, video screenings, and other infotainment, often in combination with Inter-Personal Communication (IPC) engagement. Mass media tools such as TV, internet, mobile phones, and applications are used to reach adolescents on a broad scale. These channels are expected to disseminate information regarding adolescents' rights, gender equality, violence, health, child marriage, and other topics to adolescents. The adolescents are actively engaged to create this content themselves. Additionally, under the *Basic Package* intervention, girls groups are formed and strengthened, girls receive training on different topics through groups or other channels, and peer educators are trained to become self-sufficient in spreading this knowledge with their peers. Thereby, the broad-based awareness activities through media are complemented with gender-specific knowledge and tools to empower adolescent girls. Adolescents, and specifically girls, should gain an increased sense of empowerment and self-efficacy not only through the increased knowledge about their rights and well-being, but also through the skills to tackle injustice towards themselves, their peers, or nuisances inherent in their community's structures. This sense of empowerment is further expected to be strengthened through peer support in and beyond groups, as well as increased access to role models and peer educators. Consequently, adolescents that feel empowered and supported by their peers may become more active in protecting themselves and their peers from harm and, therefore, make communities safer and more child-friendly. As an additional driver, the *Plus* activities include engagement of boys through adolescent boys' groups and skills development tailored towards changing their attitudes and behaviors towards girls, and equally becoming change agents for adolescents in their communities. Given that gender norms are manifested in social interactions and carried onto the next generations, educating and engaging boys is an important step towards gender equality. In this sense, these additional efforts to change boys' understanding and awareness of gender-specific adolescents' rights and entitlements are expected to amplify the effects on a supportive environment for adolescents.

Pillar II: Parents and Communities Similar to the media outreach activities with adolescents, parents and community members were to be sensitized and engaged in community-level advocacy and IPC events. Specifically, advocacy and awareness-raising was targeted towards influential community members and leaders to facilitate changes in community structures and enabling a protective environment for adolescents. These activities are expected to increase knowledge and understanding of adolescents' topics among parents and communities as a whole, which in turn should influence attitudes towards gender norms, adolescents' agency, and views towards child

assumptions include, amongst others, that (1) the activities were implemented as planned in terms of coverage, intensity and duration; (2) targeted groups in treatment areas have been aware of the activities, i.e., access to participation and exposure to outreach activities were ensured; (3) sufficient numbers of targeted groups took up the treatment, i.e., participated in program activities; (4) The contents of outreach activities, training and discussions were relevant to the respective target groups; (5) The program has added value, i.e., complements other initiatives in this area; (6) The program pillars complement each other, such that different activities enable comprehensive change in the communities.

marriage. Further program measures under this pillar include support to form or strengthen CPCs and to school management committees to enhance enrollment, attendance, and safety. This support should directly enhance the access to and quality of facilities in the community. Additionally, under the *Plus Package* parents' groups were formed or strengthened and inter-generational dialogue was facilitated. These groups are expected to create a platform for parents to learn about children's rights and entitlements, to question harmful social norms and to build support structures for adolescents. Active dialogue with adolescents should further enable a space of mutual learning and understanding, where children's opinions are taken seriously. As a consequence of these activities, parents should have the know-how and willingness to support their children and adolescents in their community. With communities being mobilized by media outreach and important community-level mechanisms built and strengthened, the additional engagement of parents through groups and communication with adolescents should yield stronger support structures as parents become active advocates for their children's rights.

Pillar III: Government and Service Providers Finally, the AEP offers support to public services and authorities to enhance the provision of adolescent-friendly health, nutrition, education, and protective services and social transfers. This includes advocacy and mobilization efforts as well as capacity building of key government stakeholders, teachers, health workers, and the media. [6] Thereby, these measures aim to build capacities in key support systems for adolescents to allow effective access and delivery of services. Hence, the strengthening of government service provision is a conditioning factor to erase structural impediments and provide the prerequisites for adolescents to exercise life choices.

The overall program goals were to reduce child marriage by 20%, reduce adolescent pregnancy by 10%, and increase secondary school enrollment by 10%. These changes in long-term outcomes were expected to be reached by a combination of providing the relevant government and community-level structures, such as protection schemes, facilities and security for adolescents, changing social norms within communities by sensitizing and educating parents and community members, and empowering adolescents to become change agents. Therefore, the success in reaching the overarching goals depends on the effectiveness of the measures to reach these intermediate outcomes as previously outlined. To rigorously test to what extent these changes have occurred and what pathways hold true, data was collected on several indicators related to each realm of the ToC, which will be presented in more detail in the following.[7]

The AEP was implemented through multi-stakeholder collaboration at different levels. At the country level, UNICEF ROSA led steering and technical committees. UNICEF India Country Office provided overall high-level support, program leadership, management and oversight across all three

[6] Activities with law enforcement authorities should have taken place as part of the original program design but were not finally implemented.

[7] Please also refer to the Appendix, Section A.II.A, for a detailed presentation of the hypotheses and indicators which were also pre-registered before the initiation of the impact analysis.

pillars, and coordination with donors. At the state level, UNICEF India State Offices provided day-to-day coordination with government offices, implementing partners in the field, and with UNICEF adolescent specialists for all outcome areas. State District Administrations and Officers were in charge of integrating adolescent empowerment interventions/ approaches into ongoing government schemes through cross-sectoral convergence of various departments. Program implementation and promotion was carried at the state and community level by different implementing partners and services providers, defined based on the local context of each state. Section A.I.B in Appendix A.I. includes a detailed list of main stakeholders during implementation, together with their responsibilities.

Evaluation Purpose, Objectives and Scope The main purpose of this evaluation was to strengthen future programs and inform policy advocacy. Likewise, the evaluation adds the learning generated to a greater **global evidence base on what works to empower adolescents and end child marriage**. Apart from the **research community**, the report speaks to the community of **implementers, policy makers, and donors**. In particular, the evaluation findings are expected to be used by policy makers across South Asia seeking to identify approaches that will yield better results for children. Policy makers as well as UNICEF and the IKEAF are expected to gain insights that can be used to strengthen future programs and inform policy advocacy.

The main objective of the evaluation was to identify and measure the causal impact (effectiveness) of the AEP on the lives and environment of adolescents in selected areas of Andhra Pradesh, Assam, Jharkhand and West Bengal (India). Core target areas of the AEP were the focus of this evaluation: Child marriage, early pregnancy and education. Together with outcomes in these main areas, this evaluation also assessed intermediate outcomes considered in the Theory of Change. These intermediate outcomes were conceived as impact pathways through which change in main outcomes was envisioned to occur. They include changes in adolescent empowerment, communication and social norms.

The thematic scope of the evaluation focused on assessing program effectiveness to assess whether adolescent empowerment activities, in combination with activities to change unequal social norms and improve communication outcomes, could reduce child marriage and early pregnancies, and increase schooling. The evaluation focused primarily on assessing the effectiveness of Basic Package activities of the AEP. As a secondary focus, the evaluation also explored the effectiveness of Plus Package activities to assess the impact of greater implementation intensity or different combinations of program activities (i.e., boys and parents groups).

To understand how program impact (or lack thereof) took place, the scope of the evaluation also included the assessment of implementation fidelity to ponder whether the program was implemented as planned in the assigned areas. In this line, the evaluation assessed whether target beneficiaries were aware of the program in the treatment areas and whether adolescents, parents and key community members participated in it. The evaluation scope also considered whether the program was relevant for the needs and contexts of target beneficiaries, national and local governments. Likewise it considered whether the program was responsive to feedback and internally/externally coherent.

The evaluation scope did not cover an assessment of all OECD DAC criteria, specially leaving out evaluative judgments on coherence and efficiency of the program. The evaluation was guided by a Theory of Change developed jointly with UNICEF. In particular, it defined and guided the outcomes and assumptions as well as the hypotheses tested in the impact assessment (Section II. for reference). The criterion **Effectiveness** is covered under Section II., while **Relevance and Impact/Effectiveness** are covered under Sections III. and V. The timeline of the impact evaluation covers a period from the onset of program activities (2015) to the endline survey (2020/21). The evaluation measured the impacts two years after the official end of the AEP in 2019, although the end of specific program activities may have varied. Finally, the geographic scope covers four districts of four states in India (Sibsagar in Assam, Visakhapatnam in Andhra Pradesh, Purulia in West Bengal and East Singbhum in Jharkhand). Changes in scope over time included the inclusion of treatment arms (Plus Package) as part of the evaluation in 2015 to assess the effectiveness of different combinations of program activities (i.e., boys and parents groups). To do this, Plus Package treatment arms were randomly assigned to a subset of treatment villages in a second-stage randomization. Likewise, the geographical scope of the evaluation changed to exclude the small sample of urban areas (centered in Andhra Pradesh and West Bengal) and focus entirely on rural areas. This change was motivated by differences in implementation and low comparability between rural and urban areas in the sample.

Global Evidence and Contributions This study adds to a growing body of evidence on how to reduce child marriage. In support of this goal, research has identified a number of channels to delay early marriages and consequential pregnancy. Programs focusing on enhancing education, adolescent empowerment and financial incentives have been successful in achieving this goal.[8] However, interventions that only provide financial incentives or empower girls may not suffice to trigger change if they do not enable a support environment and opportunities for adolescents. Rigid gender norms, discrimination, abuse, and poverty can render girls significantly more vulnerable to negative health, educational and economic outcomes (**?**). In that sense, evidence underpins the importance of leveraging holistic approaches to tackle child marriage. Child marriage is entrenched in deeply rooted social norms. A study conducted by **?** refers to the level of complexity of several types of approaches to tackle child marriage (such as empowerment, community engagement, schooling, and economic interventions) in order to assess whether an intervention was successful or not. Instead of single interventions with indistinguishable components, the authors shift to multi-component programs and found that empowerment approaches combining life skills, further training or social mobilization, were the most effective.

A closely related study to the current evaluation is the impact evaluation of a girls' empowerment program in Bangladesh by **?**. This study investigates the Kishoree Kontha (KK) program, which consists of a basic intervention package on community mobilization, education support and social competency training. On top of the basic package, several treatment arms including interventions on financial literacy, access to savings, and economic incentives are incorporated into the program. Key long-term outcomes under study are the age at marriage and educational attainments,

[8] See **?????????**.

while intermediate outcomes include girls' negotiation and decision-making skills, their awareness, knowledge and attitudes, as well as savings, mobility and income generation activities. To assess implementation fidelity, they further consider awareness and participation in the programs, attendance and frequency of participation, and continuation of groups after the formal program has ended. The program was run in four six-month cycles between December 2007 and August 2010 and program effects were measured four and a half years after program completion. The authors come to the conclusion that in their setting, the small financial incentive were a powerful driver to increase the age of marriage. However, they also found that while empowerment activities may complement the impact of the incentive, they are ineffective by themselves. These results suggest that the underlying context and conditioning factors of child marriage are crucial to identify adequate solutions.

Also in Bangladesh, the BALIKA program aimed to delay marriage and improve life opportunities for girls in rural areas with high rates of child marriage. The program worked with adolescent girls aged 12 to 18 and provided them with a basic package of basic lifeskills and community activities to raise awareness on child marriage. In addition to this, villages were divided into three treatment arms to receive a complement package: 1) Tutoring support, 2) livelihoods skills, and 3) gender rights awareness and mentoring support to empower girls. The program was implemented in treatment communities during 18 months and program effects were measured at the end of the program. The recent study of **?** reveals that the program reduced child marriages in adolescents below 18 years old significantly in all complement packages relative to control areas. The study demonstrated that working with communities to develop holistic programs that build skills among girls can reduce the prevalence of child marriage in short time.

Programs that combine awareness raising activities with activities to enhance communication skills among adolescents have also received increasing attention. In this sense, a relatively new body of recent evidence shows promising results for innovative approaches teaching children persuasion skills in order to enable an intergenerational dialogue.[9] For instance, in an Randomized Control Trial (RCT), **?** found that training girls in negotiation skills in Zambia led to more parental investment in their daughters' education. The program was administered through 6 two-hour sessions over two months and program effects were measured yearly over the ensuing four years. While this study found little evidence of changes in intergenerational dialogue, it found positive effects in intragenerational dialogue among peers, especially amongst girls. Findings also from **?** show that in a context where parents and children have different preferences over educational investments, household members can learn non-cognitive skills that facilitate strategic cooperation, helping families get closer to the efficient frontier.

Typically, programs addressing gender disparities have focused their efforts in targeting primarily girls and women for being a more vulnerable population. The effects of these interventions, however, depend on their target group, and the common approach of these programs has been to involve communities as a homogenous actor and/or to engage girls and women solely (**?**). In

[9] See **????**.

this light, causal evidence show gaps regarding further contributions of engaging boys and men in adolescent empowerment programs. Societal preferences such as traditional gender norms, strong beliefs about the benefits of marrying girls, and social conservatism are prevalent issues associated with high levels of child marriage. For that reason, directly targeting boys' and men's preferences at a young age could generate promising value. Findings from **?** and **?** reveal numerous benefits and reasons why men would agree with empowering women and assuring their rights.

? conducted an RCT evaluation of a program implemented in schools in Haryana (India) which mainly involved interactive classroom sessions, complemented by teacher training, youth clubs, school-based activities and a media and communications campaign. The program was administered over two and a half school years, and program effects were assessed shortly after the program ended and two years after completion. As the intervention's objective was to create awareness of gender-based discrimination, change gender perceptions and attitudes and provide tools to change behavior accordingly, the main outcomes of interest included a gender attitude index, an aspirations index, and a gender-equitable behavior index. They found positive effects on attitudes accompanied with changes in behavior. However, educational and career aspirations were unaffected. In this sense, **?** draw an important conclusion: Empowering adolescents does not necessarily mean it will be feasible for them to translate this empowerment into changes, it requires an ability to change. Therefore, it is relevant to bring boys and men on board.

The evaluation of an empowerment program in Indian schools conducted by **?** targeting adolescent boys supported this hypothesis and contributed to this literature by identifying the added value of making them more aware and sensitive of complex gender-related topics. Previous studies such as the one by **?** analysed how the PRACHAR program in India, through which training was provided to girls and boys to think about their own notions of the equality of men and women, and whether or not women have a right to decide about their bodies and participate equally in decisions related to their own lives, impacted in child marriage. Education sessions were given five hours a day for three days and results were measured four to five years later. Results evidenced that, after four to five years period of time, both boys and girls in the intervention group were significantly less likely to be married than those in the comparison group.

Structure of the Report The rest of this report is structured as follows: Chapter 2 presents the methodology for this study, including the evaluation design (Section I.) and data (Section III.). Chapter 3 presents all findings of the report. This includes results on implementation fidelity (Section II.), program effectiveness/impact on final and intermediate outcomes (Sections III.A and III.B) and program relevance (Section V.). The report ends with Chapter 4, a conclusion, followed by lessons learned and recommendations (Section III.). Appendix A.I. includes additional information on program design, Appendix A.II. includes more information on evaluation design and Appendix A.III. includes more empirical information (including results for robustness checks). Finally, Appendix O.IV. and Appendix O.V. include more information on indicators and questionnaires for endline data collection.

CHAPTER 2

Methodology

This chapter describes the methodology of the evaluation. The evaluation was designed following a mixed-methods approach, combining a core quantitative component with a smaller qualitative research component. The core of the evaluation design follows a quantitative, experimental approach using an RCT at two levels (blocks and villages) to address the main evaluation questions. This quasi-experimental approach allows to observe differences between treatment and control groups, and to derive causal inferences from them. The evaluation is primarily based on endline quantitative and qualitative data, collected two years after program completion. The study design allows to assess program impact based on endline differences in key outcomes between control and treatment areas, without requiring baseline data.

In recent years, mixed-method research methodologies have gained in popularity among researchers in the social and behavioral sciences (**?**). Indeed, the benefits of combining qualitative and quantitative methods can be manifold: not only does such a combination promote complementarity between differing research frameworks, methods and tools in impact evaluations, drawing on their strengths and overcoming their weaknesses, it also serves study development, as the results of one approach are used to develop the methodology of the other (**?**). Another important feature of mixed methods is the systematic use of between-methods triangulation to enhance the reliability and validity of estimates obtained from varied sources, providing a deeper understanding of the processes through which program outcomes and impacts are achieved and ensuring the inclusion of multiple perspectives, particularly those of the most vulnerable groups (**?**).

Evaluation Questions
The evaluation was guided by a set of evaluation questions, aligned with evaluation objectives, and designed to address the evaluation criteria of impact/ effectiveness, relevance and implementation fidelity. The quantitative component focused on addressing questions relating to impact/ effectiveness

and implementation fidelity. The qualitative component focused on addressing questions relating to the relevance of the program. Likewise, it provided qualitative inputs to nuance findings relating to the impact/ effectiveness and implementation fidelity of the program. Appendix A.II.A presents the quantitative and qualitative evaluation matrix with all evaluation questions and information sources to address them. Main evaluation questions are outlined below:

1. Implementation Fidelity

- 1.1. Was the program implemented as planned in the assigned areas?
- 1.2. Were target beneficiaries aware of the program in the treatment areas?
- 1.3. Did adolescents, parents and key community members participate in the program in the treatment areas?

2. Impact/ Effectiveness (Intermediate Outcomes)

- 2.1. Did adolescents, parents, and community members acquire an increased sense of adolescents empowerment and gender equality through the program?
- 2.2. Did intergenerational and intragenerational communication improve through the program?
- 2.3. Did social norms and practices change in treated communities towards abolishing structural impediments to adolescents, especially girls?
- 2.4. Did the program improves community services to support adolescents rights and entitlements?

3. Impact/ Effectiveness (Final Outcomes)

- 3.1.Did the the program lead to a reduction in the incidence of child marriage?
- 3.2 Did the program lead to a reduction in the incidence of early pregnancy?
- 3.3.Did the program lead to an increase in school enrollment?

4. Relevance

- 4.1. Was the program considered relevant by beneficiaries?
- 4.2. Was the program considered relevant by other stakeholders, e.g. governments?
- 4.3. Was the well aligned with policies and strategies of national and local governments, other UN organizations and other donors?

The hypotheses have been registered in a pre-analysis plan (prior to seeing the data) as estimation strategies.

In the following section, the quantitative component of the evaluation is described, followed by the qualitative component.

I. Quantitative Evaluation Design

This section introduces the evaluation design that underpins this study (Box I.). To do this, it firsts lays out the different program packages assigned to beneficiaries. Next, an outline presents how far the original plan was followed by actual implementation on the ground and the implications for the estimation strategy.[1]

Causal Evidence and RCTs:
A randomized controlled trial (RCT) is a method of impact evaluation in which all eligible units in a sample are randomly assigned to treatment and control groups. In this case, adolescents, parents and community leaders in treatment villages/ blocks were assigned tothe treatment (AEP), while respondents in control areas were not. Random assignment ensures that control and treatment groups are equal in both observed and unobserved characteristics. This means that both groups are very similar, and thus comparable, before the obset of the program. That is to say, the only difference between the treatment and control groups, is their exposure to the intervention itself. This allows to identify the impact that can be directly attributed to the program by comparing treatment and control groups after program implementation.
According to the latest NFHS-5, child marriage rates have decreased over the past years in India (**?**).There could be a number of reasons behind this decrease, including greater access to education, government schemes to curb child marriage or shifts in attitudes and social norms. However what has been the impact/ effectiveness of the AEP in reducing child marriage rates? Using an RCT as part of the evaluation allows to observe the effects in reducing child marriage that can be directly attributed to the program, separating them from other effects that could have shaped child marriage rates, and other outcomes of interest, in both treatment and control areas.

I.A Eligible Pool

The AEP operated in four districts of four states (Sibsagar in Assam, Visakhapatnam in Andhra Pradesh, Purulia in West Bengal and East Singbhum in Jharkhand) and was set out to cover 50% of the adolescent population in each of these districts. UNICEF India had reached a decision that because of the need to cover 50% of the district's population, 50% of each district's blocks would be assigned to the treatment group and 50% to the control group. That is, Adolescent Empowerment Program activities were to be implemented in 50% of each district's blocks (treatment blocks), whereas no

[1]The original design is summarized in Table A.2 in the Appendix.

Adolescent Empowerment Program activities were implemented in 50% of each district's blocks (control blocks).[2].

I.B Assignment

A crucial element for the credibility of every impact evaluation is the comparability of the treatment group to the control group. If the control group systematically differs from the treatment group any comparison of their outcomes would reflect a combination of the true treatment effects with the impacts of such systematic differences on the outcome variable. The most credible estimation approach ensures that treatment and control groups have identical distributions of observed (i.e., age, gender, education or housing quality) as well as unobserved characteristics (i.e., deep beliefs or attitudes that are hard to capture). To avoid systematic differences in observed characteristics, a randomized assignment to treatment and control groups was implemented. Randomized assignment, under the law of large numbers, implies that treatment and control groups do not systematically differ in observed or unobserved characteristics, thereby ensuring comparison between similar groups. The scope of this study not only assesses whether the program worked in improving the main outcomes, but also includes an assessment of which component or which modality is most successful. Thus, a two-stage randomization was applied, where the AEP implementation was randomized at the block level, and three different program modalities within the AEP were randomized at the village level.

The UNICEF interventions aimed to achieve behavioral changes in many outcomes and norms that are hard to capture in one single indicator only. For this reason intermediate outcomes were included in the analysis to assess intended changes along the theory of change.[3]

The next two subsections describe the initial program assignments: (1) To treatment and control blocks and (2) the different treatment arms. Then a short summary of the actual implementation of these assignments is presented. Section III. analyses more intensively the available implementation data.

[2]It is important to note that while 50% of each district blocks were assigned to the treatment group, not all target beneficiaries in these blocks complied with this treatment assignment. That is, some target beneficiaries in blocks assigned to the treatment group may not have received the treatment. Treatment assignment can be different from so-called treatment compliance for different reasons. For instance, target beneficiaries could have not taken-up AEP activities because they were not aware of them, they were not invited to participate or they were not interested or available for doing so.

[3]This is in contrast to interventions that for example only aim to increase a mathematical test score as a single outcome variable. In such simpler settings, one could simply stratify by baseline math test score, i.e., a single main indicator. For this reason baseline covariates were balanced.

I.B.1 *Basic Package*

In the first step, the effects of the intervention were captured through the randomization of the interventions at the block-level within each state. Randomization of treatment assignment was carried in 2015, involving different organizations.[4] At endline, following the sampling deviations outlined in Section I.C, data was collected from 37 of the 42 treatment blocks, and 35 of the 40 control blocks, by random attrition of low population blocks and removal or urban treatment blocks.

I.B.2 Additional *Plus* Activities

Randomizing at the block level has the disadvantage that the effective sample (of clusters) is rather small, implying reduced statistical power to detect impacts. Even though, a larger number of villages is included in the sampling, the number of clusters in terms of blocks (the level of treatment assignment) is only 42 versus 40. In order to increase statistical power and to enhance the richness of the evaluation, the University of Mannheim suggested to implement treatment arms, at the village level. The purpose was (1) to increase intensity of implementation in some areas and (2) through the introduction of experimental variation, to learn about the impact of different types of participation modes on the outcomes of interest and (3) increase the number of clusters from 82 to 700.

An additional second-stage randomization with 700 villages was thus carried out in 2015, before the onset of the program, to understand the extent to which specific interventions were more effective than others, and whether the *Basic Package* was sufficient to bring about the desired changes. In this second-stage, additional activities on top of the *Basic Package* were randomly allocated by the research team to certain villages across the four states. The treatment arms were designed and defined solely by UNICEF staff.

This second-stage randomization was carried at the village-level. In the control blocks, 220 villages were randomly selected to act as the pure control group. In addition, a sample of 480 villages in treatment blocks was randomly assigned to one of four same-sized arms. Thus, four modalities of interventions were implemented as part of the Adolescent Empowerment Program at the second-

[4]The design for the randomization and the actual randomization into treatment or control blocks was performed prior to involvement of the University of Mannheim. The design of the first stage of the randomization was developed by researchers at John's Hopkins University. Their approach proceeded by randomly allocating blocks to treatment and control. In total, out of 82 blocks 42 treatment blocks and 40 control blocks were selected (Table A.2 in the Appendix). The 42 randomly selected treatment blocks received the package of interventions, and the remaining 40 control blocks did not, to act as a control against which to measure the effects of the treatment. This randomization was carried out by the Public Health Foundation of India (PHFI) for two states: West Bengal and Andhra Pradesh. University of Mannheim/Center for Evaluation and Development (C4ED) researchers carried out the randomization for Assam and for Jharkhand – following exactly the same randomization procedure. Allocation proceeded by *coarsened exact matching*: Coarsened exact matching proceeds by constructing pairs of similar blocks and then randomly allocates one to treatment and one to control. For more information, see **?**.

stage randomization: (a) A basic intervention package, with only adolescent girl group formation, and the remaining groups where, additionally: (b) parents groups were initiated, (c) adolescent boys groups were initiated, (d) both parents and adolescents boys groups were assigned. These four different treatment arms were compared to the control group, which received no treatment. Likewise, outcomes of treatment arms (b), (c) and (d) (Plus Package) were compared vis-a-vis the treatment arm (a).

Under the second-stage randomization, it follows:

- T_0: 120 villages where only the *Basic Package* treatment (incl. adolescent girls groups, mass media, or other activities) is implemented (i.e., this is treatment arm (a).). In the evaluation of the additional effects of the *Plus Activities* this treatment arm T_0 serves as "control" villages
- T_1: 120 villages with boys' groups: "treatment arm 1"/ Adolescent Boys Group (ABG)
- T_2: 120 villages with parents' groups: "treatment arm 2"/ Parents Group (PG)
- T_3: 120 villages with boys and parents' groups: "treatment arm 3"/ ABG + PG

The research questions according to the original design would have been: (1) Whether the establishment of the parents' groups add any value to the outcomes of interest, (2) whether boys groups have an additional impact on the outcomes of interest and (3) whether the achieved impact would be the strongest, if boys and parents' groups are delivered in the same villages, versus if one of the two additional groups would suffice.

I.C Sample Deviations from the Original Design

While the original evaluation design included 82 blocks, (42 treatment and 40 control), the final evaluation includes 72 blocks as a result of changes in the endline sample. Table 2.1 outlines the final sample achieved, by state. Sample changes, together with their implications for the interpretations of results are outlined below:

1. **Exclusion of Urban Blocks** While the majority of blocks to be included in treatment and control groups were rural, the evaluation sample included three urban blocks in Andhra Pradesh (Gajuwaka Urban, Pedagantyada and Visakhapatnam Urban) and one urban block in West Bengal (Purulia (M)).[5] These were excluded from the sample for two particular reasons: (1) the urban centers that were treated did not have a counterpart in the control areas, thereby making it impossible to include comparable urban centers in the control blocks of Andhra

[5]The block in West Bengal was not part of the original 82 blocks.

Pradesh and West Bengal, likely biasing the outcome means between the two samples, (2) it became clear that identifying treated slums within these urban areas will prove to be unfeasible, due to unclear demarcation of the treated areas within the overall urban center, or any clear method to map the adolescents that were treated in these areas. The inclusion of the urban blocks would have made the balance of covariates at baseline improbable, implying a failure in randomization, given that urban areas are larger, more densely populated, and have a differing access to services that affect program outcomes, such as schools or health infrastructures. Therefore, at the inception mission a decision to remove the urban blocks was made. This implies that out of the 42 treatment blocks, only the 38 rural blocks were kept.

- **Implications for Results** The exclusion of urban blocks entails that results for the state, and the evaluation at large, focus and are representative of Adolescent Empowerment Program effects on rural communities.

2. **Random Attrition of Small Blocks in Andhra Pradesh.** During the data collection, the sampling approach followed i.e., probability proportionate to size, dropped seven small blocks in Andhra Pradesh. The Andhra Pradesh sample comprised a large number of blocks (40 after the removal of urban blocks) with heterogeneous sizes, including seven small blocks with less than 15 villages, representing less than 0.5% of all villages in Andhra Pradesh. Due of their small relative size, compared to the other blocks, these blocks were assigned a negligible selection probability (below 0.5). As a result, no villages for the final sample were drawn from seven small blocks in the state (Visakhapatnam (Rural), Narsipatnam, Yelamanchili, Paravada, S.Rayavaram, Padmanabham, Payakaraopeta). The total number of blocks from AP reduced to 33 in the endline sample.

   - **Implications for Results** There can be a few causes for concern regarding this drop of small blocks. In the first case, the validity of the results to the overall population is questionable, i.e. external validity. This evaluation considers average treatment effects in the control and treatment populations. As a result, excluding seven blocks with very small populations is unlikely to affect estimates to a great degree. These blocks would represent a small number of observations in a representative sample, given their small relative size. Secondly, it can be that the removal of small blocks, can lead to attrition bias in the estimation. This random attrition of blocks was equally distributed among treatment and control groups and was not systematic in one group (four in treatment and three in control), therefore unlikely to cause any attrition bias in the average outcomes of the two groups. Moreover, within the treated areas, this drop did not imply that blocks with heavy implementation, as reported within the MIS data, were kept while blocks with lower intensity of implementation were dropped. Rather two out of the five implementation blocks were also dropped as part of this random attrition. Further, baseline statistics comparing the remaining 33 blocks show that covariates are balanced between the two groups. Therefore, even within the smaller sample, the two groups remained comparable and do not introduce biases. Additionally, to control for any

differences at baseline, the final analysis includes covariates that would improve the precision of the estimation. The share of clusters that attrited in the sample is not very large, and amounts to less than 10% of the overall blocks. In terms of population, it amounts to a much more negligible share. Therefore, all likely threats to the internal validity of the results so not appear to be present, and the results likely remained unthreatened. Finally, the removal of these seven (and the aforementioned three urban clusters) may lead to the reduction of power. Section A.II.C shows that this is not the case, and the loss of power in the case of nearly all outcomes is nearly negligible. [6] Therefore, any power related concerned for the study are not exacerbated from the drop in these blocks either.

Table 2.1: Final Evaluation Sample

State (1)	Treatment (2)	Control (3)	Total (4)
Andhra Pradesh	15	18	33
Assam	4	4	8
Jharkhand	6	5	11
West Bengal	10	10	20
Total	35	37	72

▸ *Notes*: Sample: Program and control blocks (N=72).

I.D Implementation Deviations from Treatment Assignment

This section provides an overview of compliance with the original assignment of treatment arms for all states, based on project monitoring information provided by implementing partners Monitoring Information System (MIS) data. The objective is to learn if initially assigned treatment arms were followed or not. Section II. addresses evaluation questions on implementation fidelity and contains more details on the extent and scope of program implementation in each state. Table 2.2 presents an overview of the reach and deviations of block-level implementation based on MIS data.

Block-level Deviations: In **Andhra Pradesh** adolescent and parent groups were only implemented in five blocks, instead of the original 22 treatment blocks.[7] Other *Basic Package* activities were

[6] **?** also show that the loss of follow-up in certain clusters might lead to lower precision, i.e. a lower chance of finding effect due to loss of power, but it does not bias the estimation in specific circumstances, which apply to this study as well.

[7] Of the five, three blocks are not part of the sample as one is an urban block and two were dropped because of their relatively small size (See Section I.C)

implemented in all other treatment blocks, including mass-media activities. As a result, the original block-level treatment assignment was only partially followed in the state.

- **Implications for Results** Deviations in the implementation and the sample of Andhra Pradesh entail that results should be considered cautiously for this state. Implementation was not uniform across the all blocks in the state, with adolescent and parent groups focusing in a small subset of all blocks of the state. Since the implementation blocks was decided for strategic reasons, it is hard to disentangle the reasons for this selection into treatment. We cannot be certain whether the blocks more (or less) likely to succeed were selected, which can affect the results in opposing directions. Selection of districts more likely to succeed would likely show better results of the program. As a result if this unclear selection bias, a clean, rigorous causal interpretation of program effects within all blocks of the state is not possible. The endline data collection included all blocks, regardless the high intensity of implementation, to ensure that the results can be as unbiased as possible.

Table 2.2: Block-level Implementation

State (1)	Treatment implemented (2)	Treatment assigned (3)
Andhra Pradesh	5	22
Assam	4	4
Jharkhand	6	6
West Bengal	10	10
Total	22	42

▸ *Notes*: Sample: Treatment blocks (N=42).

Village-level Deviations: Based on MIS data, implementation compliance with treatment arms was not followed in Andhra Pradesh and in Assam. In Andhra Pradesh, treatment compliance was not followed in any treatment arm, as boys and parent groups were implemented only in five blocks of the sample. In the case of Assam, parent and boys' groups were implemented in a higher share of villages than originally intended, including a small share of *Basic Package* villages, which were not supposed to receive *Plus Package* activities.[8] In Jharkhand and West Bengal, MIS data is only available at the Gram Panchayat (GP) level. As a result, implementation compliance at the village-level cannot be accurately calculated for these states.

- **Implications for Results** *Plus Package* results can be interpreted as representing a higher intensity of treatment, or a higher likelihood to receive parent or boys groups. The individual

[8]In Assam, boys' adolescents groups were implemented in a majority of villages (<75%), while parent groups were implemented in 44% of villages

results for each treatment arm need to be considered with care as implementation following treatment arms was not rigorously followed in every village. TO counteract this, the evaluation team capture observation from a larger number of villages in West Bengal and Jharkhand, where the treatment arms assignment fidelity is highest of the four states.

I.E Estimation Strategy

This section introduces the estimation strategy to identify the program's effects. The estimation analysis was conducted at the block level (first randomization step) and at the village level (second randomization step). At both levels, two different methods were used: Intention-to-Treat Effect (ITT) and Local Average Treatment Effect (LATE). The ITT estimator measures the impact of treatment assignment, i.e., it compares units assigned to the treatment with units assigned to the control group, disregarding actual program delivery or uptake. Contrarily, the LATE estimates the effect of the treatment only for compliers, i.e., for those units that were assigned to and also received the treatment. In the case of full compliance, i.e., all units assigned to the treatment and none of the units assigned to the control group take up the intervention, these estimators would yield the same result. However, as described above, actual implementation did not always follow assignment, leading to differences between the two estimators. In the given case of imperfect compliance there is a trade-off between the results: Only comparing outcomes in the treatment with the control group (i.e., measuring ITT) may underestimate the actual effect of the treatment. On the other hand, the LATE estimate only provides insight to a subgroup of the population, namely the so-called compliers. The ITT estimator is, despite being lower in size, more credible since it is not biased by reasons of why the program has been implemented and/or taken-up in some areas rather than others. Still, looking at both measures can enrich the understanding of program effects.

The estimation of the ITT was conducted first. To do this, the two levels of randomization were considered: First by comparing the outcomes of those who were randomized into the treatment group in the *Basic Package* activities ($R_{basic} = 1$) with those who were in the control ($R_{basic} = 0$). Second by comparing the outcomes of those who were randomized into the treatment group in the *Plus Package* activities ($R_{plus} = 1$) with those who were in the control ($R_{plus} = 0$), whereby three versions of treatment groups (R^i_{plus} with i=3) are compared.

$$\begin{aligned} Y_{ij} = \beta_0 + \beta_1 R_{basic} &\text{— note: } \textit{Basic Package} \text{ treatment} \\ +\beta_2^i R^i_{plus} &\text{(— note: synergies of Basic and Plus treatments)} \\ +\mathbf{X}_{ij}\delta + \mathbf{Res}_{ij}^T\eta + \xi &\text{— note: Control variables} \\ +u_{ij} & \end{aligned} \tag{2.1}$$

Y_{ij} refers to main outcome variables described in Section III.G, i.e., a set of different indicators measuring for example child marriage prevalence, school attendance or early pregnancies. The subscript i refers to the respondent and j to the geographical area (village). The respective outcome indicator was measured at endline, i.e., at $t = 1$. Given that different respondents provide responses to survey questions, regressions control for the respondent type (Res_{ij}^{T}), i.e., adding a different dummy variables differentiating between the three main types of respondents (a community leader and/or a parent of an adolescents and/or an adolescent).

R variables are binary treatment variables, that equal 1 if a treatment was assigned to the specific treatment and zero otherwise. Two big categories of treatment are distinguished: *Basic Package* and *Plus Package* Activities. R_{basic} was captured by the original assignment to the so-called Treatment arm 0 (T_0)-group (i.e., the villages that were explicitly not assigned to any *Plus Activities*) and villages that were not eligible for the *Plus Activities* but are also located in the treatment blocks (i.e., control villages from treatment block).[9] These are measured by the geographical area (village), i.e., program assignment is done by at the block or village level and not at the individual level. The various ITTs are captured in the β parameters: β_1 is the treatment effect for the *Basic Package* intervention.Finally, β_2 is the additional, potential synergy effect from additionally receiving the *Plus Package Activities* treatment.[10]

Control variables include a set of covariates selected following a Least Absolute Shrinkage and Selection Operator (LASSO) procedure (Appendix A.II.E).[11] In this case, covariates were selected for each outcome from the variables that were used for stratification/for the randomization.

Additionally, regressions include basic exogenous individual-level variables (gender and age), geographical information variables (state fixed effects). The constant term is β_0 and ξ reflects the enumerator fixed effects. The error term, u_{ij} is clustered at the level of blocks [12].

Originally, the study planned to distinguish between the various differential impacts of the *Plus Package Activities* treatment arms, i.e., R_{Plus}^{BG} for areas randomly assigned to mobilize more adolescent boys, R_{Plus}^{PG} for more parents and R_{Plus}^{BGPG} for the mobilization of both, parents and adolescent boys. However, the differentiated approach was only implemented in West Bengal, where the actual added value of each component can be differentiated more clearly. In all other states but Andhra Pradesh, the assignment of the *Plus Package Activities* boils down to more intensive implementation

[9]Originally these were 120 villages across all states, given the implementation data 63 of those villages were sampled. To account for deviations from program design during implementation, an additional 148 Basic Package villages were sampled during endline. See Table A.7 for more information.

[10]Note, not all villages were eligible for the study, but only 700 villages sampled in the census.

[11]LASSO is a regression method of automatic variable selection usually performed to improve the accuracy of regression estimations. It is commonly used when there exists many potential variables to choose from, many of which actually exert zero to little influence on an outcome of interest. The LASSO method automatically discards variables which exert little influence over the outcome of interest to select a subset control variables that best predict the outcome.

[12]Appendix A.III.E includes all regression models with standard errors clustered at the village level as a robustness check

of adolescent groups in general.[13] Thus, this specific analysis can be better interpreted for three states, interpreting the coefficient of the dummy R_{Plus} as an indicator for a higher likelihood to be exposed to a higher level of intensity of the program implementation. For West Bengal, results can also be interpreted for the assignments of R^{BG}_{Plus}, R^{PG}_{Plus}, and R^{BGPG}_{Plus}.

In this framework, the ITT provides a measure of the overall effect of the AEP on all the villages that were assigned to the program, regardless of whether they received the program. One important implication is that the ITT can be low if, for some reason, the program did not reach the beneficiaries.

In some interventions, the discrepancy between the intended treatment status and actual one can be large for various reasons.[14] To identify compliers, individuals that were actually reached by the program, respondents were asked whether any of the following events with or about children and adolescents had taken place in their village in the last four years: Training or workshop, group sessions, trainings restricted to a selected group of participants, group games, public gathering or sports events. Then, respondents were asked about the formal name of this event, training or workshop. Respondents who were aware of at least one event implemented by UNICEF, an implementing partner[15], or an event focusing on a topic related to the Adolescent Empowerment Program were identified as compliers. More detailed information on program implementation and compliance with treatment assignment is provided in Section II..

With the help of a two-stage least squares (2SLS) the LATE is identified. To do so, each of the R variables referred to in equation 2.1 above are - in the first stage - used to predict actual implementation, i.e., $\hat{D}$. In the second stage then, this value is used to estimate the LATE, i.e., the effect on the treated.

Finally, as indicated in the sampling section (Section III.), the estimation consider only individuals who had the chance to be exposed to the program, e.g., those who were adolescents when the program started.

Power Calculations Prior to the onset of the program and also with subsequent updates from the program implementation, extensive calculations were conducted and are presented in Section A.II.C of the Appendix. The power calculations suggest that several outcomes, include early marriage and

[13]In Andhra Pradesh the design was not adhered to, something which was confirmed again by sampling few villages within each treatment arm and qualitatively assessing the situation.

[14]For example, not all of the targeted program participants actually participated in the program, administrative reasons might have impeded them from participating or there was selective migration due to nonconformity with the treatment status. Substantial differences between ITT and LATE could reveal that either the treatment is correlated with unobserved characteristics, and some of the potential beneficiaries did not find it attractive to participate in the program (compliance depends on unobservable traits), and/or suggest that the intervention could not reach a significant share of the beneficiaries.

[15]Implementing partners include implementing organizations named in Adolescent Empowerment Program yearly progress reports or background documents provided by UNICEF, and government schemes that the Adolescent Empowerment Program supported (i.e., Kanyashree, SABLA, etc.)

pregnancy, are not well powered, in spite of the large sample size.

I.F Balance Statistics

Before the onset of any program activities, were there any substantial differences between program and control blocks? Table 2.3 compares key baseline characteristics of program-assigned and control areas to assess the comparability of both areas before any Adolescent Empowerment Program activities were implemented. Column (1) includes mean values in control-assigned blocks while column (2) shows mean values in blocks assigned to treatment (Basic and some combination of Plus Package activities). Column (3) reports the difference between mean values in both areas and whether this difference is statistically significant.

All in all, there were no statistically significant differences between treatment and control areas before the onset of the Adolescent Empowerment Program. Differences in key outcomes such as adolescent marriage or early pregnancy rates do not appear as statistically significant. Balanced statistics across both groups ensure the comparability of both areas ex ante. This is helpful to understand whether any differences observed after the implementation of the Adolescent Empowerment Program program stem directly from it and not from preexisting differences across both groups.

Appendix A.II. includes additional results on balance statistics for treatment arms and state subsamples.

Table 2.3: Balance Statistics: Census 2011

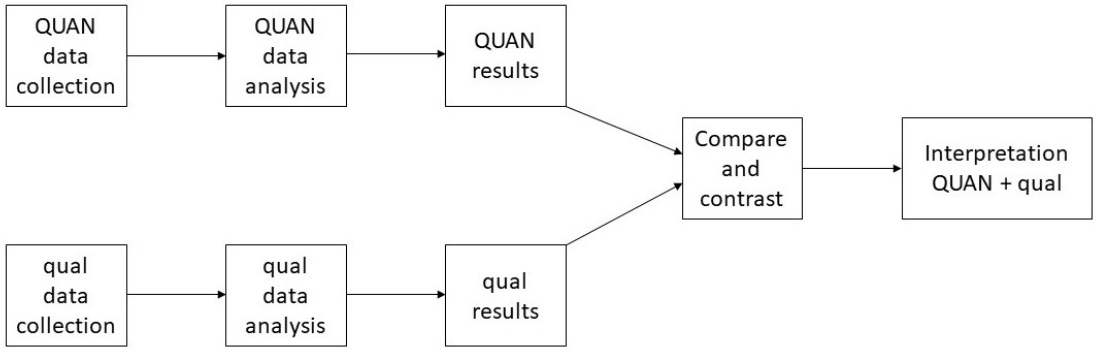
	(1) Control Mean	(2) Treatment Mean	(3) Difference *Diff*/*SE*	(4) (5) Blocks *N*C *N*T
	Mean C	Mean T	*Diff*/*SE*	*N*C *N*T
Total Population (in thousands)	1124	1220	-96 (233)	37 35
Total Population, men (in thousands)	562.235	623.349	-61.114 (121.090)	37 35
Total Population, women (in thousands)	561.834	597.114	-35.279 (112.340)	37 35
Populatation, aged 0 - 6 years (in thousands)	141.253	149.935	-8.682 (25.503)	37 35
Presence of gov. prim. school (numbers)	1.593	1.384	0.209 (0.192)	37 35
Presence of gov. middle school (numbers)	0.501	0.564	-0.063 (0.121)	37 35
Presence of gov. sec. school (numbers)	0.151	0.232	-0.081 (0.078)	37 35
Telephone (landlines)	0.408	0.329	0.079 (0.096)	37 35
Public call office	0.305	0.266	0.038 (0.095)	37 35
Mobile phone coverage	0.775	0.718	0.057 (0.079)	37 35
Internet cafes	0.004	0.010	-0.005 (0.005)	37 35
Mandis/regular markets	0.152	0.196	-0.044 (0.072)	37 35
Power supply for domestic use	0.969	0.976	-0.008 (0.021)	37 35
Share literacy	0.512	0.497	0.015 (0.028)	37 35
Share female literacy	0.398	0.387	0.010 (0.012)	37 35
Share main workers	0.498	0.510	-0.012 (0.024)	37 35
Share female main workers	0.385	0.404	-0.019 (0.022)	37 35
Share non-working females	0.572	0.561	0.010 (0.012)	37 35
Share under age of 6	0.128	0.131	-0.003 (0.006)	37 35
Share girls under age of 6	0.063	0.065	-0.002 (0.003)	37 35
Scheduled castes population	0.104	0.089	0.015 (0.031)	37 35
Scheduled tribes population	0.310	0.368	-0.058 (0.082)	37 35
Agricultural commodities (first): paddy	0.409	0.521	-0.111 (0.104)	37 35
Do not attend school because education was too expensive	0.068	0.067	0.001 (0.003)	37 35
Do not attend school because there is no interest in studies	0.066	0.066	0.000 (0.004)	37 35
Share of female adol. who were ever married	0.130	0.133	-0.002 (0.008)	37 35
Share of adol. girls aged 15-19 who were ever pregnant	0.143	0.145	-0.001 (0.014)	37 35
Share of adol. who disapprove violence against girls and boys	0.055	0.061	-0.006 (0.013)	37 35
Share of adol. who perceive that child marriage, violence and existing discrimin	0.532	0.511	0.020 (0.042)	37 35
Share of adol. who are members of any adolescent groups	0.153	0.158	-0.005 (0.009)	37 35
Share of adol. who know how to stay healthy and well-nourished	0.268	0.259	0.009 (0.023)	37 35
Share of adol. who know about health services for adolescents	0.142	0.132	0.010 (0.014)	37 35
Share of adol. who know about anaemia	0.138	0.139	-0.001 (0.006)	37 35
Share of adol. who believe that it is harmful to get married before the legal ag	0.497	0.482	0.015 (0.017)	37 35
Share of adol. who have knowledge on nutrition (balanced diet, dietary diversity	0.170	0.151	0.019 (0.028)	37 35
Share of parents participating in activities (talks, discussions and counselling	0.075	0.069	0.005 (0.008)	37 35
Share of adol.' parents who support adolescents to obtain information and access	0.148	0.145	0.004 (0.007)	37 35
Share of adol. who know their rights and entitlements	0.797	0.783	0.014 (0.021)	37 35
Share of adolescents accessing social protection schemes specifically targeted	0.068	0.067	0.001 (0.008)	37 35

▸ *Notes*: Sample: Treatment and control blocks (N=72).
▸ Source: Census 2011, (1) mean values of control blocks. (2) mean values of treatment blocks. (3) difference between mean C and mean T and the corresponding standard errors. (4) & (5) sample size of control and treatment blocks.

II. Qualitative Evaluation Design

The AEP evaluation follows the mixed-methods approach of concurrent triangulation design for impact evaluation. The methodology relies heavily on quantitative methods, employing primarily survey data collection and econometric analysis (see Section I. for further information). Integrating the quantitative data with qualitative data strengthens the design by honing in on a smaller sample to more thoroughly explain the statistical relationships found in the quantitative data. This is done through purposive sampling from the main population, ensuring representation of the key stakeholders and target groups, taking into account the heterogeneity of activities implemented in the four states. A concurrent design lends itself to evaluations that have limited time resources and aim to triangulate data from several sources. It involves simultaneous but separate collection and analysis of quantitative and qualitative data, adopting the techniques traditionally associated with each data type.[16] The resulting data sets are then converged to compare and contrast or validate and expand quantitative results with qualitative findings (**?**). In this study, the qualitative findings are triangulated and integrated with the quantitative results to address the evaluation questions concerning implementation fidelity and effectiveness. The evaluation question on relevance was addressed exclusively through the use of qualitative methods. Figure 2.1 is adopted from **?** to illustrate the sequencing of our concurrent triangulation design. However, our methodology differs from theirs in so far as it assigns different weights to the quantitative and qualitative methods used (QUAN > qual).

Figure 2.1: Concurrent Triangulation Design



Source: Adapted from **?**

[16] See Sections I. and III.B for further information.

III. Data

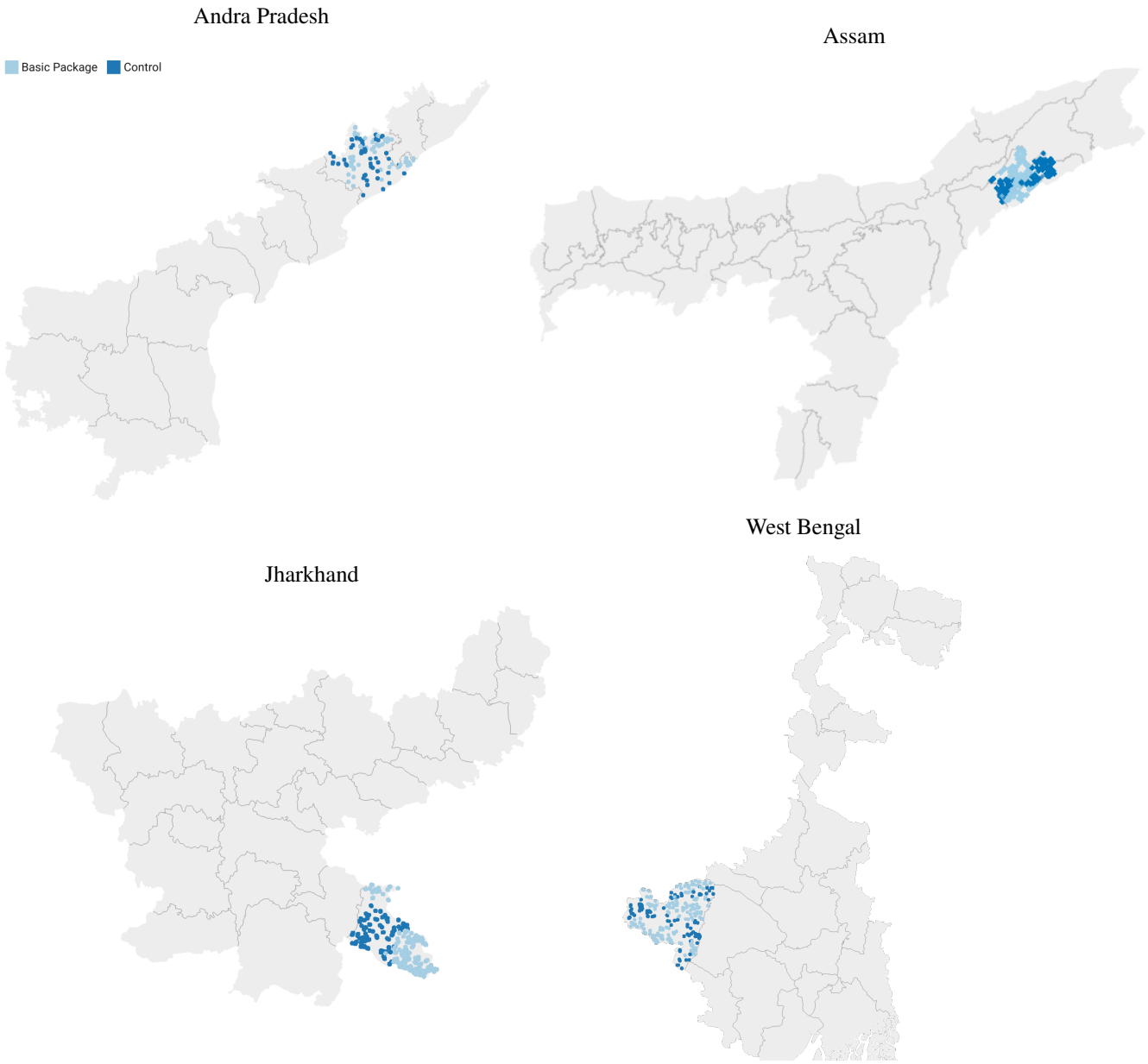
This section provides an overview of the geographical coverage, data collection process and questionnaire structures of the endline quantitative survey used for this evaluation III.A. Section III.B below provides an overview of in-depth interviews conducted while section III.C provides an overview of additional data sources used as part of the evaluation process. Section III.D and III.E offer insights into ethical considerations and quality assurance. Finally, Section III.G offers an overview of indicators used in the analysis.

III.A Large-scale Data Collection

This section provides an overview of the geographical coverage, data collection process and questionnaire structures of the endline quantitative survey used for this evaluation.

Geographical Coverage The sampling universe covered for the endline survey covered all program districts: Sibsagar in Assam, Visakhapatnam in Andhra Pradesh, Purulia in West Bengal and East Singbhum in Jharkhand. The target sample for Jharkhand, Assam, West Bengal, and Andhra Pradesh was 7,000 surveys. In the four states, 6,752 surveys were successfully completed. While the original sample included a small number of urban areas, these were dropped from the sample to focus the evaluation entirely on rural areas (See Section I.C). Figure 2.2 provides an overview of interview GPS points across the four states.

Figure 2.2: Interview Coordinates by State



► *Notes*: Sample: Endline survey. Treatment refers to Basic and/or Plus Package activities.

Targeting Three different respondent types were targeted and administered a different questionnaire. That is, a separate questionnaire was developed for each respondent type: A questionnaire for adolescents (adolescent questionnaires (AQ)), a parent of adolescent questionnaire (parent questionnaire (PQ)) for parents, and a community leader questionnaire (community leader questionnaire (CLQ)) for community representatives. In a household roster, respondents were additionally asked about each household member and about siblings/offspring who no longer live in the household.

Target households were households where adolescents of the (current) age group 10 to 23 resided or had resided in the past four years, i.e., considering that the individuals were adolescents when the program took place (in the following, adolescents always refer to this age group). Details on the sampling approach can be found in Appendix A.II.B.1. The overview below summarizes the different types of individuals that were targeted per village:

- 7 Adolescent questionnaires (AQ)
- 2 Parent of adolescent questionnaires (PQ)
- 1 Community leader questionnaires (CLQ)

For adolescents, the age eligibility criterion was chosen so as to include the group of young people that were adolescents at some point during program implementation and, therefore, eligible to participate in program activities, hence 10- to 23-year old respondents were sampled due to their eligibility for the program during its implementation. Depending on their age, adolescents and young adults were targeted by and, therefore, exposed to the program for a different duration of time. For this reason, and also to capture the impact of the program on its beneficiaries with more power, the random draw of the adolescent among all household members aged 10 to 23 was weighted to account for this difference in program exposure. For parents, the eligibility criteria was having at least one child aged have at least one child aged 10 to 23. Likewise, a community leader was targeted in each village.

Sampling of Villages During the endline sampling, villages were randomly selected from blocks. Appendix A.II.B.1 provides an overview of the number of villages sampled in each state by treatment arm.

The number of villages to be randomly selected from each block was defined by the number of villages by treatment arm and the number of villages per block. The sampling probability of villages was proportionate to block size. That is, villages in bigger blocks (those with more villages) had a higher sampling probability. Through this approach, a greater number of villages was selected into treatment arms from blocks with more villages.

Sampling within Villages Since in the context of India no reliable household listing was available and the available census dated back to 2011, enumerators followed a random walk sampling

approach. In this procedure, enumerators walked from a central point in the village, e.g., the religious site or school. After at least a 5 minutes' walk away from the central point, the enumerator stopped at every third household as per their interview plan. Before the actual interview started, several screening questions were asked, in order to ensure that a household was eligible (i.e., if there was at least one adolescent or one parent of an adolescent in the household that would be able to answer the interview).

In addition, based on their sampling sheet, the enumerators considered the eligibility of the household by stratification of the sample on the gender, where about 43% of the adolescent sample was male and around 57% female. No such distinction was made for the parents of adolescents since these were randomly selected by the survey tool, after completion of the household roster. Furthermore, to account for the large range of adolescents, a further stratification was made by the age of the adolescent. 2 out of the total 7 adolescents to be interviewed are to belong to the age group, 10 to 14. This distinction was to ensure that the differential impact between the two age groups could be established.

Sampling followed the strategy depicted in Table 2.4.

Table 2.4: Sample Stratification for Adolescent Sample per Village

		Gender		
		Male	Female	Total
Age	15 to 22	2	3	**5**
	10 to 14	1	1	**2**
	Total	**3**	**4**	**7**

▸ *Notes*: Table 2.4 shows how adolescents in each village were stratified by age group and gender.

At each household the enumerator began the interview by completing the household roster: Listing all household members plus adolescents that had moved out in the last four years and asking general questions about each member. Then, in order to assure that no biases arose in the estimation of the treatment effect, the respective respondent was randomly selected. In cases where the household did not fulfill the sampling stratification for adolescents (or the sample division between adolescent and parent), enumerators politely concluded the interview and continued the walking procedure without interviewing any member of the household. In case of the CLQ, no special procedure was necessary. Similar to the random walk procedure, the first community leader our enumerator is led to upon arrival in the village was interviewed.

Achieved Sample Table 2.5 outlines complete interviews by questionnaire type and state. Appendix

A.II.B.1 includes further information on achieved sample by treatment arm and state. The relative underachievement in the Andhra Pradesh sample was due to challenges in data collection. Villages in the northeast suffered from poor access during the rainy season or were completely inaccessible and in areas where Naxalite-Maoist insurgents operate and entrance is proscribed. When possible, these villages were replaced. Likewise, in distant villages, to which enumerators had to travel for half a day, it was difficult to interview respondents who worked in the fields outside of the villages - since respondents only came home at night time when enumerators had left. Thus, despite the fact that half of villages in Andhra Pradesh were visited more than once - far more than in other states - a complete sample could not be taken in 46 villages.

Table 2.5: Achieved Sample by State and Respondent Type

State	Treatment	A	(A)	P	(P)	CL	(CL)	T	(T)	V	(V)
Andhra Pradesh	0	223	280	62	80	37	40	322	400	40	40
Andhra Pradesh	1	286	364	84	104	49	52	419	520	52	52
Assam	0	553	560	149	160	79	80	781	800	80	80
Assam	1	557	560	151	160	80	80	788	800	80	80
Jharkhand	0	560	560	183	160	80	80	823	800	80	80
Jharkhand	1	896	896	291	256	128	128	1315	1280	128	128
West Bengal	0	545	560	150	160	80	80	775	800	80	80
West Bengal	1	1073	1120	297	320	159	160	1529	1600	159	160
Total	0+1	4693	4900	1367	1400	692	700	6752	7000	699	700
Female	0+1	2686	2793	702	798	316	399	3704	3990	-	-
Male	0+1	2007	2107	665	602	376	301	3048	3010	-	-

▸ *Notes*: Table 2.5 displays survey completion by respondent type, treatment assignment and state.
▸ A = Adolescents, P = Parents, CL = Community Leader, T = Total, V = Villages. Achieved results for each category are displayed first. Expected results are subsequently displaced in parentheses.

Timing of Survey Given the need to respond to the changes COVID-19 situation, data collection took place in different waves between February and October 2021. Data collection was conducted first in Jharkhand between February and March 2021. Once COVID-19 restrictions permitted, data collection was conducted in Assam, Andhra Pradesh and West Bengal, between September and October 2021. Data collection in Andhra Pradesh was also halted for several days when the tropical cyclone Gulab made landfall and was completed by the end of the first week of October.

Questionnaire The endline questionnaires (three questionnaires, one for adolescent, one for parents, and one for community leader) captured key characteristics of respondents and program goals. Questionnaires began with screening questions concerning the economic status and presence of female/male adolescents in the household - key information to meet the sampling criteria. Then, the adolescent and parent questionnaires included a household roster to capture basic demographic information about all household members. After this, questionnaires included modules to capture

information on outcomes of interest for this evaluation (Section O.V.).

The adolescent and parent questionnaires were built following a parallel structure, i.e., the same questions were asked to adolescents and to the parents (with reference to the behavior of their randomly selected adolescent child). The community leader questionnaire collected key leaders' and village characteristics. All questionnaires were subject to several rounds of revisions with the IPs and UNICEF. The questionnaires were translated into Assamese, Bengali, Hindi and Telugu.

Following a pre-household roster used for the listing, a household head or a knowledgeable adult provided answers on the whole household by answering a household roster. Applying an out-of-household roster, basic information was obtained from the household head about adolescents who moved out from the respective household in the past four years. Here, questions about the marriage status of the children, educational levels, and children, amongst others were asked. The household roster respondent also answered questions about basic characteristics of the household. This covered the number of rooms, type of toilet, ownership of refrigerator, air conditioner, microwave oven, engine driven vehicles, TV and livestock.

The following survey modules were asked to the main respondent (the parent of an adolescent or an eligible young person). First, the main respondent was asked how long she or he has been living in the household, followed by a module on education. In the parent questionnaire, the same questions were asked about the child. In a participation module, the aim was to better understand if and how the program was implemented. Adolescents and parents were asked whether they were aware of the activities, whether they participated in them, and additional information on the activities. The survey continued with modules on actions taken and self-efficacy, on protection and safety, and on personality and wellbeing. Following, the adolescents were asked questions regarding discussions of the adolescents with parents, religious leaders and others, in which situations the adolescent's opinion is taken into consideration, whether the adolescent experienced corporal punishment and similar questions. A module on marriage included questions regarding the marriage status, arranged marriages, plans of getting married or engaged and for having children, main reasons for marriage and similar questions. Final modules of the main questionnaire included information on role models, where respondents' opinions regarding certain statements regarding adolescents and expected behavior of men and women were asked about. This was followed by questions on attitudes about marriage and education, asking about the opinion with respect to certain statements regarding adolescents and expected behavior of men and women.

III.B Qualitative Methods

To complement the quantitative findings, we used individual qualitative cases studies to investigate key issues pertaining to the AEP's implementation fidelity, effectiveness and relevance. This involved conducting key informant and in-depth interviews with a variety of stakeholders and AEP participants.

Key Informant Interviews (Key Informant Interview (KII)) are qualitative, in-depth interviews with individuals selected for their first-hand knowledge about an aspect of the program being evaluated (**?**). They can provide valuable contextual information that deepens our understanding of the political, economic and social setting within which the program was implemented. Based on a stakeholder mapping prepared by the research team (see Table A.2 in the Appendix), a final list of key informants was developed in close consultation with UNICEF India. To assess implementers' training and knowledge of the interventions as well as delivery modalities and fidelity to program design, priority was given to capturing the perceptions of individuals involved in planning, implementing and otherwise supporting the AEP activities on site. To this end, we consulted community mobilizers, Anganwadi Workers (AWWs) and/or Accredited Health Activists (ASHAs) as well as CPC and School Management Committee (SMC) members at the community level. We also consulted high-level representatives of UNICEF India Country and State Offices, district-level officials as well as implementing partner staff who could provide an institutional perspective and/or background information on the program. In combination with a thorough desk review, their testimonies were particularly relevant when addressing questions on program implementation and relevance.

In-Depth Interviews (In-Depth Interviews (IDIs)) are one-on-one guided interviews that aim to elicit depth (rather than breadth) of information through conversation with individual respondents. Interviewing Adolescent Girls Group (GG) and ABG members as well as peer educators enabled us to assess the knowledge gained by adolescent beneficiaries as well as the extent to which - and how - they integrated and adopted their learnings into their attitudes and behaviors. They also helped us identify demand-side concerns, issues and barriers. The interviews were semi-structured, relying on a combination of both open and closed questions. Thus, the research team had sufficient control of the structure of the data collected while allowing for additional relevant data to be shared by the respondents. In each village, we attempted to interview an equal number of female and male adolescent group members (provided both GGs and ABGs exist in the respective village). Disaggregating IDI respondents by age and gender helped us to pay special attention to the needs and vulnerabilities of adolescent girls and boys as well as younger and older adolescents. Conducting one-on-one interviews has the advantage of minimizing the potential influence of social desirability bias and group think more frequently seen in group interviews or discussions. With adolescents as target respondents, it is particularly important to ensure that respondents can understand the questions unambiguously and that sensitive questions are addressed in ways that curb any possible negative effects. Thus, child-friendly interview guidelines were prepared to guide the researchers' interactions with adolescents. This encompasses, among other things, assessing any potential risks to adolescents prior to beginning the interview, ensuring that they are comfortable and able to share their stories without outside pressure, and avoiding questions, attitudes or comments that are judgmental and/or insensitive.

Data Collection In total, we included 162 people in the qualitative component of the study. In August 2020, when COVID-19 restrictions prevented us from doing face-to-face data collection, we remotely interviewed (via phone, Microsoft Teams and Skype) 32 IPs, UNICEF staff at state and

country level, district officials and other key informants suggested by UNICEF. Between February and March 2021, once restrictions had eased, the data collection team conducted face-to-face interviews in four rural villages in each state with 56 adolescent boys and girls aged 16 to 21, 45 frontline workers and 29 parents.

Four villages per state from among each state's treatment arms were randomly selected. Following the initial random selection, UNICEF state offices reviewed the sample to ensure the program had indeed been implemented in those locations and to assess the feasibility of a field visit based on the COVID-19 and security situations. In cases where villages had to be removed, a replacement was again randomly selected. The sampling framework for adolescents and parents aimed for approximately equal representation of female and male respondents. Adolescents included in the sample represented part of the adolescent groups formed with the support of UNICEF, either as regular members or as peer educators. In all reporting of the study, we have anonymized the names of study participants for their protection.

Analysis MAXQDA software was used to code the data and to elaborate on categories and sub-categories (coding system) in order to analyze it. We analyzed all transcripts by interpreting text segments related to the same code and contrasting data from each interview with other interviews to identify trends, similarities and contradictions.

III.C Additional Sources of Information

This section lists and describes additional data sources used in this evaluation to define the sampling framework. Likewise, it provides insights into matching strategies that were used triangulate these different data sources.

Census 2011 The census provides information at the village level. It counts the number of illiterate female and males. It also divides the population into sectors: Industry, worker, agriculture and cultivation, etc. Further, the census also gives information on the number of children up to six years old, the number of households in each village/block, and the number of casts and tribes. While the census is not able to provide precise information on schooling, marriage or pregnancies, it provides additional evidence for a set of variables in villages where monitoring data was not collected.

Listing Data Listing data contains de-identified information on individual level from 150 to 200 households (N=86,697) listed in the sampled communities from the treatment area. The data is for (33*3 =) 99 villages/wards from Assam, Jharkhand and West Bengal and 3 villages from Andhra Pradesh which were listed in the baseline. Information was collected in 2016, along the first wave of AEP data collection. This information includes variables such as age, gender, school enrollment, marital status, caste, and religion.

Data on implementation (MIS data) IP information about program implementation (MIS data)

was shared for the impact evaluation. The IPs provided standardized quarterly monitoring reports to help track the progress on key process indicators, irrespective of whether they worked in that community or not. This data was collected in the Quarterly Progress Monitoring System (QPMS), an android or web-based platform used by IPs. To do this, IPss were provided with necessary training and hand holding support to use QPMS by Neerman.[17] The QPMS data contains eight rounds and covers the period July 2017 to June 2019 (in 2017, the period was six month, afterwards on quarterly basis). The latest version of the QPMS data was shared on August 29, 2019. Complete data was uploaded for 915 communities across the program area in the July - October 2019 quarter.

Summary and Overlap of All Data Sources These additional data sources were triangulated and combined to create a dataset with villages which was used during sampling for the endline survey. A number of figures in the Appendix A.II.B indicate the overlap of information described above (see Figures A.4, A.5 and A.6).

III.D Ethical Considerations and Integration of Gender

This section discusses ethics and data quality assurance.

Ethical Considerations This impact evaluation follows the United Nations Evaluation Group Ethical Guidelines. There is no conflict of interest; the evaluation is conducted independently by C4ED. The impartiality standard is also followed, and the results are presented in an unbiased manner, with a goal to transparently describe the program's strengths and weaknesses. The credibility of the evaluation is granted by the employed methodology as well as the data quality assurance process throughout the data collection and multiple rounds of the review process assured that the data collection firmly adheres to the principles of the conduct of research laid out in the UNICEF procedures for Ethical Research Involving Children. To address the ethics of the entire research process, ethical clearance was acquired from the Institutional Review Board (IRB) at the University of Mannheim before C4ED was involved in the impact evaluation of the program. Approval for the study was granted in May 2015. In September 2020, the IRB further approved the start of the endline data collection. Additionally approval from the IRB at the Catalyst Foundation in India was approved in July 2020.

Prior to engaging respondents for data collection, C4ED follows a thorough informed consent procedure for participation in the study. This includes providing prospective respondents with the opportunity to ask questions and to terminate data collection without repercussions at any time. For respondents under 18 years of age, parental informed consent had to be acquired together with an adolescent's assent indicating their willingness to take part in the interview. C4ED keeps all participant data confidential by encrypting and/or removing from the data any identifying

[17]Neerman was the organization in charge of program monitoring for AEP through the QPMS system

information prior to sharing it beyond the core research team.

The research team made sure that settings, questions and the entire process are free of stigmatization and that all respondents are comfortable with their engagement in the evaluation. The questionnaires and interview grids were adapted to the local context with the help of UNICEF. Moreover, all the enumerators and qualitative researchers received training on basic ethics and, in particular, ethical behavior during the interview process.

COVID-19 The highest priority of C4ED is the health and safety of staff, field teams, and the communities in which we work. Together with UNICEF India, the country situation was critically assessed and necessary measures implemented to protect staff and respondents (in line with all national guidelines and restrictions). Data collection was only conducted when the epidemiological situation in each state allowed for it, following state recommendations. All enumerators used faced masks during face-to-face interviews, followed social distancing protocols, conducted interviews outdoor when possible, cleaned data collection devices routinely and conducted daily self-screening COVID-19 assessments. Enumerators were asked to isolate if any COVID-19 symptom was detected.

III.E Data Quality Assurance

Quantitative Component Before the start of data collection, questionnaires were extensively piloted and fine-tuned to ensure their relevance for the local context. Field teams were trained on the different questionnaire modules and survey ethics by the research team at C4ED. During data collection, real-time checks were conducted to assure high-quality data. Those checks included, i.a., average interview duration, response distribution of key outcome variables and outliers. The progress of completed interviews by day and enumerator was closely monitored during the full period of data collection. Additionally, back checks as well as spot checks of a random sample were realized. In case that any suspicious patterns were detected, the most convenient actions were taken to improve data quality. Finally, interviewer assignment to villages were independent of the treatment status of the villages. During analysis and report writing, peer reviewers and UNICEF reviewed the working documents to assure quality. In this course, draft findings were also presented to UNICEF ROSA and UNICEF India to provide feedback. Likewise, the Pre-analysis Plan (PAP) for the evaluation was presented and discussed with reference group composed of UNICEF ROSA and UNICEF India staff from different sections, including the independent Evaluation Sections of both offices. Quality of results are also assured applying different robustness checks (e.g., running different regression specifications, multiple hypothesis testing). All flagged interviews - due to suspicious data quality - were excluded from the main analysis. All estimations include fixed effects for each enumerator.

Qualitative Component The qualitative evaluation team ensured high-quality data collection through regular and rigorous quality assurance at every stage. Prior to beginning data collection,

quality assurance measures included i) systematic review and control of qualitative research instruments, drawing on the combined expertise of C4ED's qualitative department and our local partner CMS, ii) appropriate choice and training of the field staff and iii) pilot testing of qualitative research instruments. During data collection, qualitative researchers uploaded update sheets on a daily basis, including the audio data and/or notes from interviews, together with their own field-notes reflecting on the main themes and salient observations. A field team coordinator from CMS and two qualitative researchers from C4ED supported and supervised data collection remotely through daily briefs with the local team. To ensure the quality of the qualitative data, the C4ED qualitative researchers also performed a series of quality checks to review the data format, sound quality, file length and update the data monitoring table on a regular basis. After data collection, the audio-recorded KIIs, IDIs and Focus Group Discussions (FGDs) were transcribed and (instantly) translated by the same researchers who collected the data to limit room for misinterpretation and ensure the understanding of the audio files. To capture both verbal and nonverbal information and ensure the transcripts' quality, researchers were asked to transcribe the audio recordings verbatim. C4ED reviewed the transcripts' data format, compared their length to that of the corresponding audio file and checked for plagiarism between transcripts. Any inconsistencies between audio recordings and transcripts were clarified prior to integrating the transcript into our data analysis program.

III.F Limitations

Deviations from the Original Evaluation Design in Andhra Pradesh Given deviations in the sample and in program implementation outlined in Sections I.C and I.D, results in Andhra Pradesh should be considered with care. Adolescent and parent groups were only implemented in a small subset of treatment blocks in the state, compared to the original design. The remaining blocks only received a "light-touch" implementation, implying that the effect in those areas would be muted, compared to the treatment in the 5 blocks with intense implementation. Since implementation in these chosen blocks was decided for strategic reasons, it is hard to disentangle the reasons for this selection into treatment. Also, seven small blocks were dropped from the sample because of their relatively small size during sampling (0.5% of all villages), although the relative small size of these blocks entails that results for the state are likely unaffected by this change. To account for the implications of these changes on results at the aggregate level, Section A.III.E.2 in Appendix A.III.E shows results for main outcomes excluding Andhra Pradesh. All in all, evaluation results for final outcomes hold when excluding from the analysis treatment and control areas of Andhra Pradesh.

Low Power in Key and Intermediate Outcomes The power calculations with the block level design (including 82 or 72 blocks) shows that certain indicators are heavily underpowered. For instance, pregnancy, and many adolescent empowerment outcomes, and parent related indicators all have power values that lie below the normally accepted threshold of 80%. The village level design was suggested as a work-around to allow more power to these indicators (as can be seen in the power tables at village level). However low implementation fidelity for the second level of randomization

implied that this design has to be modified at endline, to stick to block level analysis. This low power cannot be countered with a higher sample size, as additional power calculations (during inception stage) showed that even much larger sample sizes than in the current study would not be able to increase power to a sufficient level for these outcomes.

Low Implementation Fidelity at Second-level of Randomization In order to acquire more power for key outcomes, and also to understand which modalities might yield higher impact on outcomes, the second-level of randomization was proposed in all four states. As can be seen in the implementation section, there was low implementation fidelity, especially in the state of Andhra Pradesh, while Assam was not sufficiently close either. In order to still capture the effects of the *Plus Package* a larger sample of treatment arms village were included from the states of West Bengal and Jharkhand. However, given the absence of implementation in a large majority of villages, the effects from the *Plus Package* analysis on the entire sample may be understated.

Inability to implement LATE Estimation In order to tackle the problems with implementation fidelity, LATE or an instrumental variable estimation might be an alternative. Here we first regress the treatment status (self reported in our case) on treatment assignment, and thereafter regress the outcomes on the treatment assignment (predicted values from the first stage).[18] Given that overall reported treatment status (even with the most open-ended definition of AEP implementation[19]) was only as high as 32%, we expect considerable bias with the LATE estimates. However, the validity of the instrument (treatment status) is questionable in this case, as evidence by the low F-test value. This implies that we cannot be certain that the instrument is strong enough. Additionally, none of the first stage results are significant, implying that none of the treatment status variables are able to predict the treatment assignment, implying that the second stage is not feasible. Therefore, the evaluation team is also unable to reliably estimate results from a LATE estimation to accommodate concerns related to selection bias in the sample, arising from partial compliance of treatment assignment. With slightly higher reported implementation values, LATE would have been an appropriate strategy, however, the long period between the end of the program and the endline data collection severely reduced the possiblity to use this approach to account for issues with partial compliance and ITT estimation.

Village-level Deviations in Implementation Based on MIS data, implementation compliance with treatment arms was not followed in Andhra Pradesh and in Assam. In Jharkhand and West Bengal, MIS data is only available at the GP level. In these states, implementation compliance with treatment arms at the village-level cannot be accurately measured. In Assam, Jharkhand and West Bengal, conversations with IPs revealed that parents and boys groups were implemented in *Plus Package* villages, although not necessarily in all, and in a small number of *Basic Package* villages. To address these limitations, the evaluation team, together with UNICEF, modified the sampling design to include additional villages in states areas where the original design had been followed.

[18] for addition explanation on the method, please go to section IV.A.

[19] which does not require participants to identify the organization that organized activities simmilar to AEP activities within their villages

Section A.II.B.1 includes an overview of the village allocation by treatment arm that was originally planed, together with the final allocation. Despite these changes, the village-level compliance with *Plus Package* treatment arms cannot be accurately verified for all states. As result, *Plus Package* results can be interpreted as representing a higher intensity of treatment, or a higher likelihood to receive parent or boys groups. The individual results for each treatment arm need to be considered with care as implementation following treatment arms was not rigorously followed in every village.

Implementation Intensity, Implementation Approach and Timing of Measuring Outcomes The intensity of implementation changed during the period of program implementation and the overall duration of the main implementation phase was short, about 2,5 years (summer 2017 to end of 2019). Moreover, the program was implemented by several local implementing partners across and within states, with differing approaches. In this line, program intensity varied between and within states, and over time. To change deeply rooted social norms and traditions a longer period of implementation may need to be required, at least this was the original concern. The diversity of implementation approaches across and within states poses complications to accurately assess the aspects of the AEP that led to changes, or lack thereof, in outcomes of interest of the evaluation. Although the evaluation is still able to find whether the combination of these implementation approaches was able to cause change or not. In this case, the results from the *Plus package* estimations are more reliable in establishing the effect of particular program modalities, over other modalities.

Sampling Frame The sampling frame was based on the list of census villages for the 2011 census. In some cases, this list was inaccurate, e.g., the village was not inhabited. In other cases, the village could not be found. Six villages in Andhra Pradesh, Assam, and West Bengal were replaced for these reasons. In other cases, villages were located but only after considerable effort.

Marriage Rates Reported rates of adolescent marriage and pregnancy were lower than expected. Despite significant communication with the field team on this matter, rates remained low. The nature of the survey, i.e., its focus on child marriage and related issues, combined with the fact that it is illegal to marry under the age of 18 could have led respondents to underreport adolescent marriages. To account for this, the evaluation considered other indicators on adolescent marriage such as “Adolescent has a friend of his/her age and gender that is married”. However, no changes in program effects were observed when using these alternative indicators.

COVID-19 The evaluation of the program started right before the COVID-19 worldwide outbreak at the end of 2019, and experienced several hardships and delays due the prolonged lockdowns that followed. Even though the evaluation process successfully adapted to the new conditions, data was collected a significant time after the end of the program. This is very likely to have caused issues related to recall within the data. This bias is mostly relevant for the self-reported implementation data, while other intermediate and higher level outcomes are unlikely to suffer from it. We do observe low reported implementation in our data, with the highest such indicator allowing 32% implementation. A more conservation but likely indicator yields only around 11% self-reported implementation. A more diluted effect on the main and intermediate outcomes can be

as a result of COVID-19. The pandemic has also been shown to have significant adverse impacts on the learning, health and wellbeing of adolescents. COVID-19 could thus have diluted some of program effects between the end of program implementation and September 2021, when data was collected. COVID-19 lockdowns had a particularly negative effect in education access, preventing many adolescents from attending schools. To account for this, the evaluation considers schooling rates using different indicators, including current school attendance, past school attendance[20], and attitudes towards education.

Missing Baseline Data A drawback of the evaluation was the absence of high quality baseline data within the treatment units, i.e. all 82 blocks. While the current evaluation uses the Census 2011 as a basis, this data is not the latest for all outcomes, such as access to schools, and other public utilize. . Additionally, other sources of biases, that could have that would be necessary to check for differences in access to the health centers, digital media and communication access were not captured, which affect program outcomes. The information on adolescent empowerment outcomes at baseline, for instance were missing and derived from a much smaller baseline survey done in 2016. A larger baseline survey would have allowed a much more accurate representation of adolescent and parent outcomes.

Qualitative Component Due to limited resources, the qualitative component was limited in scope at endline. Findings from the qualitative component of the evaluation by their very nature cannot be generalized to an entire population or to other settings. In order to nevertheless strengthen the reliability of the results, the sampling methodology ensures the inclusion of a variety of affected groups. To maximize the internal validity of the evaluation findings, the qualitative component uses a variety of data sources.

III.G Outcome Indicators

Outcome indicators for this study have been developed to address evaluation questions relating to final and intermediary outcomes, together with implementation fidelity and relevance. These indicators were designed to capture changes provoked by the AEP through the different phases outlined in the Theory of Change. These include main outcomes outlined in the Theory of Change - child marriage, early pregnancy, and education; intermediary outcomes, indicators on implementation fidelity and qualitative outcomes. An exhaustive list of indicators used as part of this evaluation, together with details of how these were constructed is provided in Appendix O.IV.A.

[20] Adolescents reporting to have ever attended primary or secondary education.

Measuring the Strategic Outcomes
The main three outcomes - marriage, pregnancy, and education - were measured by referring to information captured in the household roster. During the household roster, enumerators asked the household head or, in case of absence, a knowledgeable adult to provide answers on the whole household by answering a household roster.

- **Marriage**: To capture the child marriage incidence, the household head was asked about the age of all household members, and, few questions later, whether this household member was married. See Table 3.5 for the main marriage results.
- **Pregnancy**: In order to capture the prevalence of child pregnancy, we asked the household head about the age of all household members, and, few questions later, whether this household member has any children to whom she has given birth, conditional on them being a female and being married, widowed, or divorced. We additionally asked about the age of the oldest child they have given birth to in order to capture age at first child. See Table 3.9 for the main pregnancy results.
- **Education**: To capture educational information, we asked the household head about whether household members were currently attending any school or education institution. See Table 3.12 for the main education results.

To capture program effects on different adolescent age groups, main outcome indicators were constructed for adolescents in different age brackets. To construct these indicators, young adults (up to 23) were considered since these were adolescents at the time of program implementation (2015-2019). For marriage and pregnancy, age brackets for main outcomes refer to age at the time of marriage or pregnancy, adolescents may now be older (up to 23) based on years since marriage. The different age brackets considered for main outcomes are:

- Adolescents aged 10 to 19 - UNICEF Definition of adolescent.
- Adolescents aged 10 to 17 - Illegal age of marriage for both girls and boys where child marriage is unfrequent.
- Adolescents aged 15 to 17 - Illegal age of marriage for both girls and boys where child marriage is more frequent.
- Adolescents aged 18 to 21 - Illegal age of marriage for boys and legal for girls.

Implementation Fidelity To assess the extent and scope of program implementation, the evaluation also considers different program compliance indicators. Compliance indicators stem from two sources, which are triangulated to assess program implementation from different angles: (1) Program monitoring data from the QPMS and (2) the participation module administered as part of the endline survey and questionnaires with community leaders. This information is used to investigate if the AEP was conducted as planned in terms of coverage (i.e., if activities were implemented in areas that were assigned to treatment and no program activities were administered to control areas), intensity (i.e., the share respondents in each village who received the intervention), and duration (i.e., program activities finished when planned).

Intermediate Outcomes Intermediate outcomes were conceived in the Theory of Change as potential drivers of change. They are closely aligned with program activities, capturing changes in adolescent well-being, communication, social norms and service provision. Information to assess changes within different sub-topics of these intermediate outcomes was collected through surveys with adolescents, parents, and community leaders and through the qualitative component. Sub-topics in relation to adolescents' empowerment, include indicators that identify adolescents' awareness of their rights and healthy practices, their self-efficacy (e.g., confidence, agency, and aspirations), as well as peer-group and parents' support. Additionally, to identify the role of additional activities with boys (plus package), we examine if these activities have led to a change in boys' and attitudes to relevant topics, especially towards gender norms. Sub-topics in relation to social norms include changes in social norms and practices, gender egalitarian views or disapproval of violence, discrimination and child marriage. Sub-topics in terms of communication consider changes in communication competence, intergenerational and intragenerational dialogue. Finally, the capacity, access to and awareness of adolescent-relevant government services as well as their uptake are investigated.

Final Outcomes The final outcomes are measured in three main indicators: Adolescents being married, adolescents who are enrolled in school, and adolescent girls who were ever pregnant.

Qualitative Outcomes Qualitative outcomes were developed through qualitative content analysis to provide nuanced to findings from the quantitative component and to address evaluation questions in relation to the relevance of the program. Using MAXQDA, a qualitative content analysis of the transcribed and translated KIIs was conducted. Qualitative content analysis here refers to the "subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns" (**?**, p. 1278). In line with direct content analysis, the codes were developed mainly deductively by drawing from the ToC as well as from the qualitative evaluation matrix. Additionally, some categories were generated inductively based on insight from transcribed interviews. All interviews were coded by a coder of the C4ED office in Mannheim in close cooperation with surveyors who conducted the interviews. To ensure the anonymity of the KIs, identifying information (such as names, workplace or job title) was omitted or enciphered.

III.H Integration of Gender and Equity in the Methodology

Gender and equity belong to the core topics of the AEP. Consequently, the impact evaluation addressed these subjects at various stages, both in the quantitative and qualitative components. This section summarizes to what extent and how gender and equity were considered in the design and analysis of the evaluation.

Quantitative Considerations about gender and equity were incorporated in the quantitative component through evaluation questions, the sampling and questionnaire design, and during field work and analysis. Evaluation questions included questions on gender egalitarian social norms and attitudes

or on reproductive health for adolescent girls, main and intermediary outcomes of interest in the evaluation. To observe gender-disaggregated results for all outcomes, the sample was stratified on gender, where about 43% of the adolescent sample was composed by males and 57% by females. A gender-balanced sample allowed to conduct a heterogeneity analysis by gender, estimating results for adolescent boys and girls separately. This same exercise was repeated for parents. Likewise, equity was considered in the heterogeneity analysis, which analyzed results for poor and very poor individuals separately. The analysis also incorporated gender as part of the ITT and LATE estimation, including gender as basic exogenous individual-level variable. Finally, gender and equity were also considered in the quantitative data collection tools. Several questions about gender attitudes as well as reproductive health practices for girls were included in the questionnaire. These data points were used to answer evaluation questions relating to early pregnancy or gender egalitarian norms and attitudes.

Qualitative Considerations about gender and equity were equally included in the sampling approach and analysis for the qualitative component. The qualitative component purposely sampled individuals from vulnerable groups to analyze equity in program effects. To do this, the evaluation team approached community leaders in pre-selected villages and asked to nominate individuals who faced social, political or economic marginalization, paying special attention to gender equity components. Together with this, IDI respondents were disaggregated by age and gender allowing to pay special attention to the needs and vulnerabilities of adolescent girls and boys.

Likewise, the groups for the FGDs were carefully composed to maximize respondents' willingness to openly express their opinions, considering social norms and power relationships (for instance, separating by gender). In this line, one FGD with mothers and one FGD with fathers was conducted per village. These were conducted in separate locations within the village to create an positive environment for addressing sensitive topics relating to gender norms and attitudes. Finally, data collection teams were gender-balanced, consisting when possible of one female researcher and one male researcher each.

CHAPTER 3

Findings

This chapter presents key findings from this evaluation. These are based on endline survey data collected after the end of the AEP and on MIS program data, collected during program implementation. Section I. starts with a description of key characteristics of respondents in the sample, combining both treatment and control areas and drawing comparisons with official statistics and related studies. This way, the section provides a snapshot of the specific population of interest - individuals eligible for the program - for whom the results presented thereafter hold. Section II. continues to lay out evidence on **implementation fidelity**, assessing program implementation, awareness, exposure, and uptake; capturing program main inputs and their limitations. Building upon this background information, main results are presented in Section III.A, addressing **effectiveness/impact** evaluation questions. First, causal changes in child marriage, early pregnancies, and education are explored. Second, to better understand the drivers of change or the lack thereof, Section III.B, explores causal changes in program's outputs and intermediate outcomes, including changes in adolescent empowerment, communication, and social norms. Finally, Section V. leverages qualitative information to assess the **relevance** of the program.

I. Descriptive Statistics

This section provides a snapshot of key characteristics of adolescents and parents in the sample, combining both treatment and control areas of the Adolescent Empowerment Program. This section does not intend to observe differences between treatment and control groups, but to obtain a picture of basic characteristics disaggregated by gender from respondents in the whole sample at the time of data collection. Data for this sample was collected from February to March 2021 in Jharkhand and from October to September 2021 for Andhra Pradesh, Assam and West Bengal.

Considering both treatment and control areas, the sample includes a total of 22,427 adolescents (thereof 4,693 with full interviews), and a total of 6,483 parents (thereof 1,367 with full interviews).[1] Among adolescents, 51.46% were girls (11,550) and 48.54% were boys (10,886).

Table 3.1 provides an overview of descriptive statistics for respondents in the sample. Table 3.1 Part I displays the full sample, including information collected for all household members as part of the household roster or combining answers from the adolescent and parent surveys. Part II restricts the sample to respondents of the full adolescent survey and Part III to respondents of the full parent survey. Statistics are disaggregated by gender for parents and adolescents. For each group, the table includes a t-test to observe whether differences by gender in key characteristics were statistically significant.

The average adolescent in the sample was 16 years of age and lived in a household of 5, within a relatively small village (<1000 inhabitants). A majority of these households (78%) held a Below Poverty Line (BPL) card and could be considered financially poor for Indian standards.[2] Adolescents and parents in the sample frequently had an educational center within their village (83%), while two out of three needed to travel out of their village to visit a health clinic.

Among adolescents aged 10 to 19, adolescent marriage was not widely reported. In the sample, 5% of adolescent girls and 1% of adolescent boys reported they were married as adolescents (aged 10 to 19). Yet, 41% of adolescent girls and 19% of adolescent boys reported having a friend of their age who was married. Reported marriage rates more than double among those aged 18 to 21 (7.4%), when marriage is legal only for girls.[3] Marriage rates for adolescents in the sample were considerably low when compared to available evidence of adolescent marriage from other sources. The rate of adolescent marriage for girls in the 2019 India Demographic and Health Surveys (DHS) ranged between 21% to 30%.[4] **Differences existed in marriage rates by gender**. Adolescent girls in the sample were more likely to be married than boys, 5 in every 100 report being married as an adolescent, compared to 1 in every 100 boys. **A majority of adolescents (75%) reported they were married for reasons other than love.** In this case, gender differences also existed: 77% of adolescent girls reported they were married for reasons other than love, while 69% of adolescent boys did so.

Educational attainment among adolescents in the sample was moderate, with no strong differences in terms of gender. A majority of adolescents aged 10 to 14 (96%) reported having

[1]The total number of adolescents and parents includes adolescents and parents that were part of the household, whose information was captured through the household roster, but who were not necessarily main respondents of the endline survey. Full interviews are only available for main respondents of the endline survey.

[2]BPL cards are ration cards issued by state governments to households living below the poverty line specified by the state government.

[3]Note that the legal age for marriage in India is 21 for boys and 18 for girls.

[4]The comparison is just for reference since the age group considered in DHS differs from the age groups considered in this evaluation. DHS considers women aged 20 to 24 years who were first married or in union before the age of 18 years.

completed primary education. However, fewer continued onto secondary education. Around three quarters (74%) of young adolescents (aged 10 to 14) reported attending secondary school. This rate was slightly higher (+4pp) for girls than for boys. When looking at older adolescents, those aged 15 to 21, a similar share reported attending secondary education or college (72%). Again, female adolescents were more likely to attend secondary education in this age group (+7pp). School attendance was significantly lower among married adolescents. Only 17% of married adolescent girls reported attending secondary or primary school while only 5% of married boys did so. In this line, boys were also more likely to dropout of school before grade 9 (13.5% of boys versus 10.5% of girls). A majority of respondents, 85%, wanted to continue education in the sample. However, negative attitudes towards education still existed. For instance, 12% of respondents considered that educating boys is more important than educating girls - a perception that existed among adolescents and parents regardless of their gender.

When it comes to adolescent empowerment, adolescents were usually aware of some of their rights. Adolescents and parents were asked about children rights. On average, adolescents were familiar with 88% of the adolescent rights they were asked about. For instance, a majority of adolescents (96%) knew their right to receive education. Considerably less (73%) was aware of their right to decide when to get married. 18% was not aware of their right to receive protection against sexual violence. Surprisingly, awareness of adolescent rights was higher among married adolescents. In this line, 98% of married adolescents was aware of their right to receive education and 92% was aware they had the right to decide when to get married. Likewise, a lower share (7%) was not aware of their right to receive protection against sexual violence. These rates were not significantly different between married adolescent girls or boys. It is important to mind that rates on awareness of adolescent rights among married adolescents are derived from a small share of adolescents who reported being married, and should thus be considered with care.

However, when it comes to confidence in their communities or in their day-to-day activities, adolescent empowerment was weakened. Only 47% felt confident expressing their needs to public officials and just 29% felt confident going to the local market alone. **Gender differences exist - adolescent girls felt considerably less confident doing day-to-day activities (-5pp)**.

Adolescent girls showed worse rates in terms of mental well-being and self-efficacy. The World Health Organization - Five Well-being Index (WHO-5) was employed as a short self-reported measure of current mental well-being. On average, adolescents boys reported 73% on the scale, while girls reported 67%, with 100% representing the best imaginable well-being. Self-efficacy was assessed through a short locus of control scale. On average, adolescents reached 68% on the scale, with 100% indicating a very strong feeling of being in control. Gender disparities were present in some of the items of the scale. For instance, when compared to adolescent boys, adolescent girls were 11pp less likely to have a growth-mindset (e.g., agreeing with statement "If I work hard, I will succeed").

More than a fifth of adolescents reported having experienced corporal punishments at home or in school. Use of violence against children was captured by asking respondents about their

acceptance of using corporal punishment on children in different situations, as well as by asking adolescents about their experience. On average respondents agreed that it is acceptable to physically punish an adolescent in more than one of the situations mentioned. For instance, 42% of respondents considered it was acceptable to punish their daughter if she did not obey. Just 33% reported that physical violence was not acceptable under any situation. Rates of violence experience among adolescents were considerable. More than a fifth of adolescents reported having experienced corporal punishments at home or in school. On average, adolescents reported having experienced violence at least in one of the situations mentioned as part of the interview.

Social norms in treatment and control areas were not gender egalitarian. To assess prevailing social norms, adolescents and parents were asked about their views on gender roles. To test this, a scale from **?** which captures the role of women/girls vs. men/boys in the public and private sphere was used. On average, respondents answered positively 15.1% of the questions on the gender role models scale (0-14 items), i.e., presented egalitarian beliefs about gender norms. For instance, only 21% of respondents agreed that daughters should have the same chance of working outside home as sons. Perceptions and attitudes surrounding child marriage were assessed through different questions, summarized in a scale. For example, respondents were asked whether they agreed with the statement that girls should finish education before marriage - which a slight majority agreed with (60% of all respondents).

Adolescents did not always have a say in decisions that affect their lives. Respondents were asked whether parents took their children's opinion into consideration for a series of decisions.[5] On average, adolescents' opinion were only considered in 33% of the situations posed (out of seven). Adolescents' opinions were more frequently considered in relation to timing of marriage (88%) or school enrollment (96%), with no significant differences by gender. In addition, the established psychological scale on communication by **?** was measured. On average, adolescents reached 31% on the interpersonal communication competence scale, with 100% representing full competence across 10 dimensions. In the empathy sub-domain, respondents were asked whether they felt they could put themselves in other shoes: On a scale of 1 to 5, adolescents reached a score of 2.75 on average, with 5 representing full empathy competence. Adolescents scored higher when asked how frequently they felt comfortable in social situations (3.58 points on average) and worse when asked about their use of descriptive communication (2.48 points on average).

[5]Adolescent's opinions where identified as "considered" when respondents reported that their opinion in an scenario was "fully considered or accepted" or "somewhat taken into consideration or accepted".

Table 3.1: Characteristics of the Estimation Sample

			(I) All			(II) Adolescents (11-23)			(III) Parents		
	Obs./ Blocks	Mean/ SD	Females	Males	T-test	Girls	Boys	T-test	Mothers	Fathers	T-test
			Mean/[SD]	Mean/[SD]	Diff.	Mean/[SD]	Mean/[SD]	Diff.	Mean/[SD]	Mean/[SD]	Diff.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Panel A: Child Marriage (all household members)											
married aged 10-19	11861	0.033	0.052	0.012	0.040***						
	[72]	[0.473]	[0.585]	[0.136]							
engaged aged 10-19	9833	0.001	0.002	0.000	0.002***						
	[72]	[0.035]	[0.049]	[0.000]							
married aged 18-21	3947	0.074	0.093	0.056	0.037***						
	[72]	[0.500]	[0.469]	[0.320]							
adolescent moved out and married	286	0.472	0.699	0.050	0.649***						
	[11]	[0.477]	[0.792]	[0.128]							
engagement due to unfavorable reasons	160	0.113	0.157	0.000	0.157**						
	[33]	[0.451]	[0.520]	[0.000]							
marriage due to reasons other than love	548	0.745	0.769	0.686	0.083***						
Child Marriage (only main respondents)											
adolescents have friends of their age that are married*	6031	0.311	0.408	0.186	0.222***	0.469	0.193	0.277***	0.177	0.167	0.010
	[72]	[1.028]	[1.040]	[0.598]		[1.070]	[0.643]		[0.503]	[0.450]	
Panel B: Education (all household members)											
adolescent (10-14) attends secondary school or college	4419	0.742	0.762	0.722	0.039***						
	[72]	[0.797]	[0.663]	[0.566]							
adolescent (15-21) attends secondary school or college	6570	0.721	0.750	0.687	0.063***						
	[72]	[1.312]	[1.097]	[0.880]							
left school before grade 9	6136	0.118	0.104	0.134	-0.030***						
	[72]	[0.881]	[0.622]	[0.682]							
Education (only main respondents)											
adolescent (11-14) completed primary education	1132					0.963	0.960	0.003			
	[71]					[0.260]	[0.323]				
wants to continue secondary education*	6060	0.849	0.854	0.844	0.010	0.849	0.837	0.012	0.872	0.866	0.006
	[72]	[0.797]	[0.670]	[0.583]		[0.649]	[0.553]		[0.478]	[0.460]	
share of negative education-related attitudes	6054	0.131	0.151	0.104	0.047	0.152	0.089	0.063	0.149	0.151	-0.002
	[72]	[1.091]	[0.903]	[0.720]		[0.809]	[0.683]		[0.530]	[0.383]	
• agrees: educating boy is more important than girl	5995	0.120	0.131	0.106	0.025	0.133	0.102	0.030	0.123	0.118	0.005
	[72]	[1.387]	[1.155]	[0.862]		[1.130]	[0.846]		[0.545]	[0.401]	

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Table 3.1 – *Continued from previous page*

			(I) All			(II) Adolescents (11-23)			(III) Parents		
			Females	Males	T-test	Girls	Boys	T-test	Mothers	Fathers	T-test
	Obs./ Blocks	Mean/ SD	Mean/[SD]	Mean/[SD]	Diff.	Mean/[SD]	Mean/[SD]	Diff.	Mean/[SD]	Mean/[SD]	Diff.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Panel C: Adolescent Empowerment											
summary indicator: awareness of rights	4693					0.854	0.833	0.021			
	[72]					[0.905]	[0.635]				
• knows child right: right to choose time for marriage	4406					0.751	0.718	0.033**			
	[72]					[1.468]	[1.389]				
• knows child right: right to education	4614					0.963	0.961	0.002**			
	[72]					[0.376]	[0.310]				
• knows child right: right to protection against violence	4525					0.829	0.832	-0.003			
	[72]					[1.586]	[1.643]				
share of confidence of adolescent in community	4668					0.308	0.247	0.060			
	[72]					[0.660]	[0.757]				
• confident expressing needs to local government officials	4608					0.510	0.432	0.078**			
	[72]					[1.095]	[1.326]				
share of confidence of adolescent in day-to-day situation	2229					0.573	0.626	-0.053***			
	[72]					[1.130]	[0.797]				
• confident going to local market alone	4693					0.259	0.335	-0.075***			
	[72]					[0.895]	[0.866]				
share of World Health Organization 5 items wellbeing scale*	2337					0.676	0.732	-0.056**			
	[72]					[0.564]	[0.359]				
has felt active & vigorous over the last 2 weeks*	2353					0.745	0.829	-0.084**			
	[72]					[1.002]	[0.838]				
short locus of control scale*	3663	0.683	0.674	0.694	-0.020*	0.673	0.704	-0.030**	0.676	0.679	-0.003
	[72]	[0.318]	[0.284]	[0.234]		[0.255]	[0.206]		[0.177]	[0.169]	
• agrees: if I work hard, I will succeed*	3710	0.707	0.674	0.750	-0.076**	0.681	0.793	-0.112***	0.660	0.683	-0.023
	[72]	[1.400]	[1.435]	[0.719]		[1.174]	[0.643]		[1.060]	[0.784]	
share of agrees with corporal punishment for any reason	4132	0.138	0.138	0.138	0.000	0.134	0.139	-0.005**	0.153	0.135	0.018**
	[72]	[0.560]	[0.457]	[0.456]		[0.380]	[0.458]		[0.334]	[0.270]	
• agrees to punish daughters who don't obey	2013	0.423	0.433	0.410	0.023	0.431	0.434	-0.003	0.442	0.336	0.105
	[72]	[0.919]	[0.778]	[0.911]		[0.646]	[0.998]		[0.656]	[0.632]	

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Table 3.1 – *Continued from previous page*

			(I) All			(II) Adolescents (11-23)			(III) Parents		
	Obs./ Blocks	Mean/ SD	Females	Males	T-test	Girls	Boys	T-test	Mothers	Fathers	T-test
			Mean/[SD]	Mean/[SD]	Diff.	Mean/[SD]	Mean/[SD]	Diff.	Mean/[SD]	Mean/[SD]	Diff.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
share of experience of corporal punishment of children at any place	4693					0.076	0.124	-0.048***			
	[72]					[0.363]	[0.599]				
experience of corp. punishment at home	4692					0.221	0.343	-0.122***			
	[72]					[1.152]	[1.346]				
experience of corp. punishment at school	4681					0.237	0.286	-0.049***			
	[72]					[1.117]	[1.366]				
Panel D: Social Norms											
share of positive items on gender role models mentioned	6046	0.151	0.145	0.160	-0.015	0.136	0.160	-0.024	0.179	0.159	0.020**
	[72]	[0.650]	[0.566]	[0.423]		[0.496]	[0.411]		[0.340]	[0.231]	
• agrees: daughters should have same chance to work as sons	2897	0.210	0.175	0.256	-0.082**	0.168	0.259	-0.091	0.201	0.247	-0.046
	[72]	[0.940]	[0.666]	[0.818]		[0.547]	[0.655]		[0.722]	[0.782]	
share of positive attitudes about marriage	6044	0.778	0.785	0.770	0.015	0.791	0.776	0.015	0.760	0.750	0.010
	[72]	[0.914]	[0.883]	[0.502]		[0.780]	[0.412]		[0.599]	[0.490]	
• agrees: girl should finish Secondary Education before marriage	6022	0.606	0.597	0.618	-0.021	0.606	0.630	-0.024	0.562	0.581	-0.019*
	[72]	[2.572]	[3.060]	[1.324]		[2.780]	[1.631]		[1.611]	[1.275]	
Panel E: Communication											
share of situations in which parents consider child's opinion	6042	0.334	0.346	0.318	0.027	0.348	0.317	0.031**	0.338	0.323	0.015
	[72]	[0.279]	[0.258]	[0.387]		[0.220]	[0.445]		[0.205]	[0.150]	
• parents consider child's decision on the timing of marriage	5770	0.888	0.895	0.878	0.017	0.895	0.877	0.018**	0.895	0.881	0.014
	[72]	[0.803]	[0.572]	[0.778]		[0.502]	[0.819]		[0.400]	[0.399]	
• parents consider child's decision on going to school	5935	0.916	0.930	0.898	0.032	0.936	0.895	0.040***	0.909	0.906	0.002
	[72]	[1.329]	[0.618]	[1.391]		[0.438]	[1.184]		[0.591]	[0.821]	
Score: Interpersonal Communication Competence scale (10-l./50-h.)*	2099					31.150	31.682	-0.532**			
	[70]					[15.493]	[10.972]				
• interpersonal communication competence: empathy*	2358					2.824	2.642	0.182			
	[72]					[3.170]	[3.538]				
Panel F: Background											
avg. HH size in village	6060	5.050	5.039	5.066	-0.027***	5.043	5.044	-0.001	5.022	5.131	-0.108**

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Table 3.1 – *Continued from previous page*

			(I) All			(II) Adolescents (11-23)			(III) Parents		
	Obs./ Blocks	Mean/ SD	Females	Males	T-test	Girls	Boys	T-test	Mothers	Fathers	T-test
			Mean/[SD]	Mean/[SD]	Diff.	Mean/[SD]	Mean/[SD]	Diff.	Mean/[SD]	Mean/[SD]	Diff.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	[72]	[5.560]	[4.176]	[3.686]		[3.600]	[3.121]		[2.210]	[2.007]	
poverty: Share of HHs with BPL card in village	6060	0.786	0.784	0.787	-0.003*	0.786	0.785	0.001	0.777	0.795	-0.017
	[72]	[1.355]	[1.013]	[0.905]		[0.895]	[0.780]		[0.493]	[0.475]	
village has an educational center	6010	0.834	0.833	0.836	-0.003	0.837	0.835	0.002	0.819	0.840	-0.020
	[72]	[2.391]	[1.795]	[1.593]		[1.591]	[1.393]		[0.873]	[0.809]	
village has a health center	6010	0.332	0.327	0.338	-0.011	0.334	0.335	-0.001	0.300	0.346	-0.046
	[72]	[2.701]	[2.022]	[1.805]		[1.781]	[1.545]		[0.997]	[0.986]	
age at endline	6060	21.870	20.944	23.058	-2.115***	16.282	16.099	0.183	38.359	44.613	-6.254***
	[72]	[11.047]	[13.946]	[11.662]		[3.747]	[3.215]		[9.106]	[9.337]	

- *Notes*: Table 3.1 displays summary statistics for the endline sample.
- Sample: Endline survey. Program and control blocks (N=72).
- Part I considers the full sample, Part II restricts the sample to adolescent respondents only, Part III to parents only. Columns (1) and (2) present the number of observations and the mean and standard deviation of each variable (outcome of interest) for the whole sample. Columns (3) and (4) report the mean and standard deviation by gender separately, followed by t-test differences (5). Columns (6) and (7) present the mean and standard deviation for girls and boys (aged 11-23) separately, followed by corresponding t-test differences (8). Columns (9) and (10) present the mean and standard deviation for mothers and fathers separately, followed by corresponding t-test differences (11).
- * indicates that parents were asked the question about their child (and not themselves). The child marriage and education variables were generated from the household roster information, whereas all remaining variables were only generated for respondents of the full survey.
- Bullet points indicate variables that are part of the preceding, composite indicators. For example, “share if negative education-related attitudes” is a composite indicator, of which “agrees: educating boys is more important than girls” is part.
- Differences in sample size (Obs.) can be due to the fact that some respondents refused to answer certain questions, some questions were not asked to all respondents, and some indicators restrict the sample to certain age groups. For example, the sample size for the indicator “marriage due to any other reason than love” is smaller because this was only asked for married individuals.
- Differences in reported block numbers can be due to missing information in some blocks.

II. Program Implementation, Exposure and Uptake

This section explores program implementation and exposure in program-assigned areas. To triangulate the scope of implementation, program documentation is contrasted with accounts from survey respondents in treatment areas. This is done contrasting MIS and endline survey data.Then, a comparison of program implementation in program-assigned and non-program areas using endline survey data is presented.

Implementation Fidelity - Key Findings
Key findings that emerge from this section in relation to evaluation questions are:

EQ. 1.1. *Was the program implemented as planned in the assigned areas?*

- Based on endline survey data, implementation reach in treatment areas was modest. At least one person per village reported to be aware of AEP activites in 54% of villages.
- Triangulating information from both MIS data and endline survey data, the AEP would have reached 94% of treatment villages.
- Based on MIS data, the reach of program implementation varied considerably by state.
- The original assignment of Plus Package treatment arms was only followed in West Bengal.
- A small share of respondents in control areas was aware of AEP activities (4%)
- According to key informants, the considerable diversity across and within Indian states meant that there was no single prototype of AEP objectives and design suitable for all contexts, but rather programing required considerable adaptation, not just by state but also by location.

EQ. 1.2.*. Were target beneficiaries aware of the program in the treatment areas?*

- Program awareness of AEP events among respondents in treatment areas was low (16%).
- Adolescents were twice more likely to be aware of AEP activities than parents (18% vs. 9%). One in five community leaders was aware of AEP activities in their village.
- Respondents were more frequently aware of AEP training or workshops when compared to other AEP acitivites (15%).
- Due to the sampling criteria all respondents to qualitative interviews were aware of the program per definition.
- Interviewed parents and adolescents were mostly unaware of the AdhaFULL TV series (with some exceptions in Assam) and were more likely to have seen street plays, skits and folklore performed by children.

***EQ. 1.3.**. Did adolescents, parents and key community members participate in the program in the treatment areas?*

- Participation rates for adolescent, parents and community members were very high among respondents who were aware of the program (86%).
- Participants were more than twice as likely to take part in an AEP activity if this happened within their own village than if they had to travel to a neighbouring village.
- The average respondent took part in an AEP activity for the last time 2.3 years ago, in June 2019.
- Due to the sampling criteria for qualitative interviews, respondents had all engaged with the program in some manner. However respondents mentioned a number of barriers to accessing or becoming engaged with the AEP, broadly along the categories of traditional beliefs, gender differences, availability of time and lack of relevance.

II.A Program-assigned Areas

Table 3.2 uses MIS program monitoring information provided by UNICEF's IPs. This includes key aspects such as what, where, and when program IPs' activities were implemented. All areas where no information from any IPs is available are assumed to have not received any activities (are set to zero).

An important note is that information for Andhra Pradesh and Assam is considered at the village level, i.e., if at least one adolescent or parent group exists in the village, this village is counted as having received treatment. In Jharkhand and West Bengal, however, information was provided at the GP-level which implies a more generous counting. If at least one adolescent group existed in the GP, all villages are counted as having received treatment.[6]

Based on MIS data, the reach of adolescent groups and CPC was modest in Andhra Pradesh. According to monitoring data, girls', boys' and parent groups were implemented in a minority of villages (<15%). That is, while girls' groups were supposed to be implemented in all 52 villages assigned to a treatment arm, they were only implemented in six villages based on program monitoring data. Likewise, CPCs and referrals were only used in 12% of treatment villages. The limited reach of AEP implementation in Andhra Pradesh is aligned with project documents from implementing partners in Andhra Pradesh.

In Assam, program implementation had a good reach. Together with this, MIS data hints that

[6]Based on MIS information, the sampling level was defined independently by each state. Therefore, direct comparisons from MIS implementation data cannot be drawn across states. The sampling level for each state is follows: Assam: village level; Andhra Pradesh: village level; Jharkhand: GP level; West Bengal: GP level.

program implementation did not always follow the original evaluation assignment. In Assam, girls' and boys' adolescents groups were implemented in a majority of villages (<75%), while parent groups were implemented in 44% of villages. Following the evaluation design, both parent and boys' groups were supposed to be implemented in 20 out of 80 treatment villages (25%).[7] This means that based on MIS data, both parent and boys' groups were implemented in a higher share of villages than originally intended. This information was confirmed by project documents from implementation partners in Assam. CPCs were implemented in more than three quarters of villages in the treatment group (79%). Of these, a majority had an active action plan (70%) and had met at least once (76%). Referral services were used in less than one third of treatment villages. In this line, at least one girl was referred to health services in 30% of treatment villages. Referrals to education schemes were used in 23% of villages and referrals to marriage schemes in 24%

In Jharkhand, program implementation reached villages in a majority of GPs. Adolescent and parent groups and CPCs were implemented in a large majority of villages in Jharkhand (<90%). However, the exact number of villages reached within each GP is not known from MIS data, so this figure is probably overstated. A majority of CPCs also had conducted at least one meeting (94%) and had an active action plan (80%). Adolescent girls were also referred to health, education and marriage services in a majority of villages.

Based on MIS data, program implementation also had a good reach in West Bengal. Adolescent and parent groups were implemented in villages of a majority of GPs in West Bengal (<95%), Similarly, CPC were functioning in a majority of villages, although few had an active action plan (19%) and 30% never conducted a meeting. Referrals for adolescent girls to health and education services were given in a majority of villages (<90%),. Referrals to marriage services were less frequent but still common. As in the case of Jharkhand, the exact village-level reach of program implementation cannot be known from MIS data, so these figures are probably overstated.

[7]Those corresponding to treatment arms 1, 2 and 3 (only boys' groups, only parents groups and boys' + parent groups) (See Appendix A.II.B.1).

Table 3.2: MIS Implementation Evidence

	(I) Andhra Pradesh			(II) Assam			(III) Jharkhand			(IV) West Bengal		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
Panel A: Program Activities												
Indicator for any girls' group in the village/block	0.12	0	52	0.79	0	80	0.94	0	128	1.00	0	159
No. of girl adolescent groups	0.71	2	52	0.99	1	80	11.12	5	128	22.87	13	159
Indicator for any boys' group in the village/block	0.12	0	52	0.72	0	80	0.91	0	128	0.96	0	159
No. of boy adolescent groups	0.69	2	52	0.88	1	80	5.67	3	128	3.55	2	159
Indicator for any parents' group in the village/block	0.10	0	52	0.44	0	80	0.92	0	128	0.99	0	159
Indicator for any parents' group conducting intergenerational dialogue in the vi	0.10	0	52	0.41	0	80	0.82	0	128	0.98	0	159
No. of parents groups conducting intergenerational dialogue	1.69	6	52	1.93	3	80	2.22	2	128	13.05	11	159
Panel B: Child Protection Committees												
Functional CPC is available	0.12	0	52	0.78	0	80	0.94	0	128	0.95	0	159
No. of functional CPCs	0.87	2	52	5.79	4	80	80.35	33	128	30.24	17	159
CPC has an active action plan	0.12	0	52	0.70	0	80	0.80	0	128	0.19	0	159
CPC has a suggestion box	0.12	0	52	0.20	0	80	0.24	0	128	0.05	0	159
CPC conducted at least one meeting	0.12	0	52	0.76	0	80	0.94	0	128	0.70	0	159
Panel C: Referrals												
Adolescent girl was referred to health services in village	0.12	0	52	0.31	0	80	0.94	0	128	0.99	0	159
No. of girl adolescents receiving health service referrals	10.46	46	52	9.90	27	80	196.17	167	128	327.43	332	159
Adolescent girl was referred to education scheme services in village	0.12	0	52	0.23	0	80	0.82	0	128	0.91	0	159
No. of girl adolescents receiving education scheme referrals	34.37	140	52	6.54	20	80	125.35	141	128	154.40	186	159
Adolescent girl was referred to marriage scheme services in village	0.08	0	52	0.24	0	80	0.89	0	128	0.75	0	159
No. of girl adolescents receiving marriage scheme referrals	2.90	11	52	4.96	20	80	128.75	114	128	111.00	202	159

▸ *Notes*: Table 3.2 displays MIS data on the village level for selected variables. For each state, the mean value, standard deviaton and number of villages are presented.
▸ Source: MIS data.

However, relative to MIS data, self-reported survey data hints that the implementation for AEP had a more moderate reach. Table 3.3 presents implementation and compliance indicators based on endline survey data. Self-reported implementation evidence is available for the treatment group by main respondent (adolescents, parents, and community leaders). This information is helpful to triangulate the reach and scope of activities implemented as part of the AEP.

To identify individuals and villages that were actually reached by the program, respondents were asked whether any of the following events with or about children and adolescents had taken place in their village in the last four years: training or workshop, group sessions, trainings restricted to a selected group of participants, group games, public gathering or sports events. Then, respondents were asked about the formal name of the institution implementing the event, training or workshop. Respondents who were aware of at least one event implemented by UNICEF, an IP[8], or an event focusing on a topic related to the AEP were identified as compliers[9]. Based on this information, villages where at least one respondent was aware of an AEP event were identified. Following this, respondents were asked whether they had been invited to these events and whether they had taken part in them.

Program awareness: Based on self-reported data, AEP activities reached 64% of treatment villages. Within a given village, only 16% of respondents on average were aware of an AEP activity implemented in their area. This hints that the breadth of program implementation, the number of villages that were reached, was more significant than the depth of program implementation, the number of individuals reached within each village.

While revealing, it is also important to note that only respondents who could identify the name of the implementing organization that carried an event, training, group activity of workshop in their village was identified as "reached by the program". Given that activities could have been implemented more than three years before the survey, and given the delays in data collection caused by COVID-19, recall bias could play an important role in low levels of reported program awareness. Thus, it was attempted to address this problem by encouraging the enumerators to use additional techniques so that respondents are encouraged to remember the events.[10] In this line, many respondents answered they had forgotten about the name of the implementing organization when asked about it. Likewise, respondents could have forgotten altogether about AEP activities implemented in their village if these took place some years before the survey. Finally, the questionnaire only asked about

[8]IPs include implementing organizations named in AEP yearly progress reports or background documents provided by UNICEF, and government schemes that the AEP supported (i.e., Kanyashree, SABLA, etc.)

[9]This approach was because of the multiplicity of activities that were part of the AEP which often varied in scope and implementing partner by state.

[10]Indeed recall problems may have occurred, but (1) given that the majority of interventions happened towards 2019 (Please see number of direct beneficiaries in **?**) and (2) given that there is no reason why the recall bias should have occurred more likely in treatment areas, it is believed the problem is not biasing the impacts of interest. Enumerators were trained to probe especially when asking questions in the participation module, e.g., enumerators were asking about any joint big gatherings conducted at community centre or a central place at community during last four years where community men, women and adolescent gathered or adolescent issues were discussed.

mid-media, group activities, trainings, workshops or events, not about the mass-media activities since the reach of these activities could not be restricted solely to the treatment group.

Panel A of Table 3.3 captures the awareness of any AEP event in the treatment group. All in all, adolescents and community leaders were twice as likely than parents to be aware of an AEP activity in their area. Training or workshops were the most frequent events reported by respondents.[11] Considering QPMS and self-reported survey data combined, at least 94% of treatment villages had a respondent aware of an AEP event.

Program characteristics: A majority of respondents aware of any AEP-related event (85%) were invited to take part in them. Panel B shows event characteristics reported by respondents that were aware of at least one AEP event, regardless of whether they took part in them. Statistics are only presented for respondents who were aware of any AEP-related event in their village (N=667). Invitations were more commonly received from other adolescents, family members, teachers or school officials (Figure 3.1a). Participants in AEP events were reported to be diverse. More than half of respondents (66%) report other adolescent friends or relatives attended the event. Likewise, more than a third of respondents reported participation from NGO representatives, school officials or other adolescents.

Based on information from respondents in treatment areas, AEP events usually addressed relevant topics for the AEP, such as early marriage, and were mostly attended by adolescents aged 15 to 19. As intended, participants report that a majority of AEP events addressed topics of early marriage (83%), education (73%), or early pregnancy (72%) amongst others (Figure 3.1b). AEP events were also more frequently composed of adolescent boys and girls aged 15 to 19 (Figure 3.2).

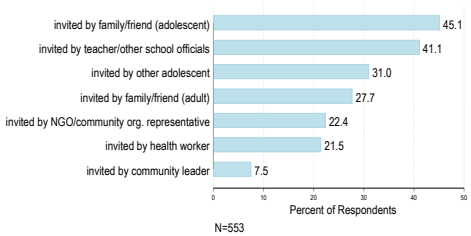
Program participation: A majority of respondents invited to an AEP event (86%) took part in the event. Virtually all participants that attended were satisfied or somewhat satisfied with the event. Participants were more likely to attend AEP events in their own city or village, rather than to travel to neighbouring areas and frequently, events were facilitated by an adolescent and an event facilitator. On average, participants report attending their last AEP event more than two years (27 months) ago.

A majority of respondents report the event shaped their attitudes and behaviours. This change was common for a majority (>80%) of adolescents, parents and community leaders. Likewise, event participants frequently report having discussed the event with someone after participation (89%), usually an adolescent or adult relative (Figure 3.3).

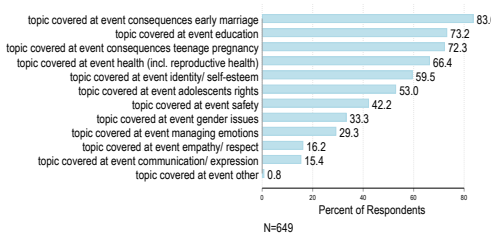
[11]To capture whether respondents were aware of any AEP events in their area, they were asked to indicate which of the following events took place in their village in the last four years: (1) Training or workshop (2) group session, (3) group meeting, (4) public gatherings or sports events, (5) others. Filtering questions were posed to identify events implemented specifically as part of the AEP. Respondents aware of events in their communities were asked about the official name of the event or the organization implementing it. Responses including UNICEF, AEP implementation partners or AEP - related topics, such as child marriage, were considered to identify AEP events.

Figure 3.1: Reported Program Characteristics

a) Invitation

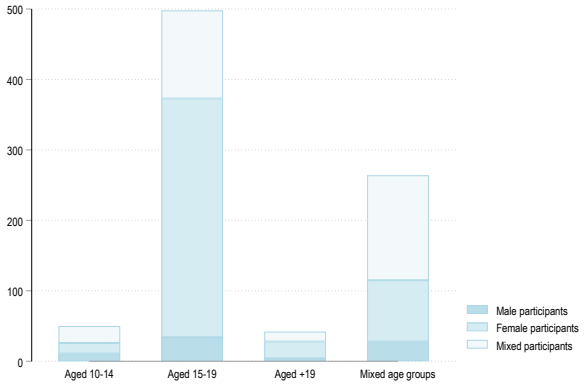


b) Topics of Events



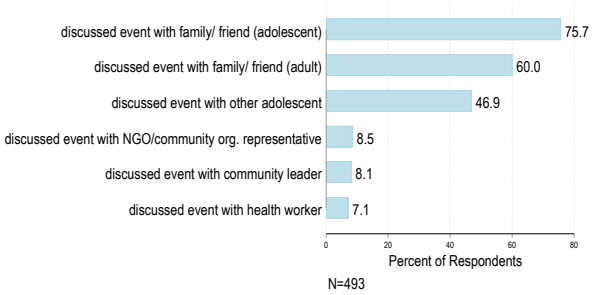
► *Notes*: Figure 3.1b shows the percentage distribution of different topics covered in project activities.
Figure 3.1a shows the percentage distribution of answers related to the question by whom participants were invited.
► Sample: Endline survey. Topic of events - Respondents that were aware of at least one Child Protection (CP) event.
Invitation - Respondents that were aware of at least one CP event and were invited to CP event.
► Question: Topic of events - "In general, what topics or skills have been covered?"
Invitation - "Were you personally invited to participate?"
► Answer options: Topic of events - identity/self-esteem/self-confidence, empathy/respect, communication/expression, coping with stress/managing emotion, gender issues/rights, health, safety/sanitary facilities, education, sports/play, journalism/arts/drama, transport/energy, child rights/entitlements, consequences of teenage pregnancies, consequences of early marriage, life skills, vocational skills, preparation of an action plan.
Invitation - family member or friend (adolescent), family member/friend (adult), acquaintance (adolescent), acquaintance (adult), community leader, non-governmental organization/community-based organization representative, teacher/other school-officials, health worker, religious leader/nikah khwan, police, ombudsman, media, other local/governmental authority.
Refuses to answer, does not know and other (specify) were answer options for all questions.
► Question type: Topic of events - multiple choice (m.c.). Invitation - m.c..

Figure 3.2: Participant Characteristics



► *Notes*: Figure 3.2 depicts on the x-axis the participants' age grouped by categories and on the y-axis number of respondents. The different blue shaded areas present the participants' gender.
► Sample: Endline survey.
► Question: Age - "What was (usually) the age group of most of the participants?"
Gender - "What was the gender of the participants?"
► Answer options: Age - younger than 10 years, age 10 to 14, age 15 to 19, older than 19, all age groups (mixed).
Gender - male, female, mixed (male and female).
Refuses to answer and does not know were answer options for both questions.
► Question type: Age - m.c.. Gender - single choice.

Figure 3.3: Discussion



► *Notes*: Figure 3.3 shows the percentage distribution of answers to the question with whom the project activity/event was discussed.
► Sample: Endline survey. Respondents that participated in at least one CP event.
► Question: "After your participation, did you usually discuss the topics covered in the event with others? Who did you talk to?"
► Answer options: Family member or friend (adolescent), family member/friend (adult), acquaintance (adolescent), acquaintance (adult), community leader, non-governmental organization/community-based organization representative, teacher/other school-officials, health worker, religious leader/nikah khwan, police, ombudsman, media, other local/governmental authority.
Refuses to answer, does not know and other (specify) were answer options for this question.
► Question type: m.c..

Table 3.3: Awareness, Uptake, and Self-reported Consequences for the Treatment Group

	(I) All		(II) Adolescents		(III) Parents		(IV) Community Leader	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Share	N	Share	N	Share	N	Share	N
Program Delivery (QPMS)	0.84	419						
Program Delivery (Self-reported - at least 1 in person aware in village/block)	0.64	419	0.56	418	0.16	411	0.21	416
Program Delivery (QPMS and Self-reported)	0.94	419						
Panel A: Program Awareness								
aware of event implemented by UNICEF, IPs or AEP topic-related event	0.16	4051	0.18	2812	0.09	823	0.21	416
training or workshop	0.15	3384	0.15	2306	0.13	748	0.25	330
group session	0.06	3384	0.05	2306	0.05	748	0.14	330
group games	0.05	3384	0.05	2306	0.04	748	0.08	330
public gatherings or sports events	0.04	3384	0.03	2306	0.03	748	0.08	330
other	0.00	3384	0.00	2306	0.00	748	0.00	330
Panel B: Program Characteristics								
invitated to event	0.85	667	0.89	506	0.73	75	0.73	86
who else participated[m.c.]								
other participants of event were family/friend (adolescent)	0.63	667	0.66	506	0.56	75	0.51	86
other participants of event were family/friend (adult)	0.42	667	0.38	506	0.51	75	0.57	86
other participants of event were other adolescent	0.43	667	0.39	506	0.40	75	0.65	86
other participants of event were community leader	0.14	667	0.08	506	0.15	75	0.45	86
other participants of event were NGO/community org. representative	0.34	667	0.36	506	0.19	75	0.40	86
other participants of event were teacher/other school officials	0.40	667	0.39	506	0.35	75	0.50	86
Panel C: Participation and Self-reported Consequences								
participated in event	0.86	667	0.90	506	0.71	75	0.72	86
would have liked to participate	0.78	129	0.70	76	0.85	26	0.93	27
reasons for not participating[m.c.]								
did not participate due to disinterest in topic	0.06	129	0.11	76	0.00	26	0.00	27
did not participate due to guardian	0.05	129	0.07	76	0.00	26	0.07	27
did not participate due to transport	0.00	129	0.00	76	0.00	26	0.00	27
did not participate due to domestic work	0.29	129	0.17	76	0.23	26	0.67	27
did not participate due to study for school	0.16	129	0.28	76	0.00	26	0.00	27
did not participate due to paid job	0.09	129	0.04	76	0.04	26	0.26	27
where[m.c.]								
participation in village/ city of residence	0.77	571	0.74	456	0.91	53	0.87	62
participation in village/ city neighbouring	0.31	571	0.33	456	0.23	53	0.23	62
last participation (avg. across events in months)	27.55	564	27.73	449	29.45	53	24.57	62
implementation (apart from facilitators)[m.c.]								
implementation of event by nobody else	0.05	667	0.05	506	0.03	75	0.10	86
implementation of event by an adolescent	0.66	667	0.69	506	0.53	75	0.62	86
implementation of event by an adult	0.02	667	0.01	506	0.03	75	0.06	86
ind. discussed event with at least one other person	0.89	571	0.88	456	0.83	53	0.98	62
satisfaction with event[m.c.]								
satisfied with event	1.00	571	1.00	456	0.98	53	1.00	62
changes in[m.c.]								
personality changed due to event	0.87	571	0.87	456	0.85	53	0.95	62
behavior changed due to event	0.73	571	0.70	456	0.77	53	0.87	62
no changes due to event	0.01	571	0.01	456	0.02	53	0.00	62

▸ *Notes*: Table 3.3 displays shares and totals for the awareness, uptake, and self-reported consequences questions in the endline survey at the individual level for the treated population.

▸ The table is restricted to the treated population and sections II through IV are split by respondent type: adolescents, parents, and community leaders respectively.

▸ Section I displays for the all individuals their shares (column (1)) and totals (column (2)) for the different variables. The succeeding sections restrict the sample to the treated adolescents (II), to the treated parents (III), and to the treated community leaders (IV). For each of these sections shares are described in the first column within the section and totals in the second one. All of the variables are at the individual level, except for the awareness variables in rows two and four.

▸ Only respondents that were aware of at least one event related to the AEP were asked implementation questions displayed in the table. All of the variables on the table are restricted to study participants that were aware of at least one event, i.e., variables are restricted to the first row (aware of (UNICEF)). Panel C was only asked to event participants, i.e. restricted to the individuals that participated in any event. Other variables are also restricted in similar fashion. For instance, *invited to event by* was only asked to individuals who were invited to an event, *reasons for not participating* to individuals who did not participate, etc.

▸ [n1]: Filtering questions were posed to identify events implemented specifically as part of the AEP. Respondents aware of events in their communities were asked about the official name of the event or the organization implementing it. Responses including UNICEF, AEP implementation partners or AEP - related topics, such as child marriage, were considered to identify AEP events.

▸ [m.c.]: These questions were multiple choice. Some of them allowed the respondent to give multiple answers (*invited to event by whom*, *topics of the event*, *who else participated*, *reasons for not participating*, *organizer of the event*, *implementation of the event*, *discussed with whom*, *satisfaction with event*, and *changes in*), while others only allowed the selection of one option (*age group of participants*, *gender of participants*, and *where did the event take place*).

II.B Comparison between Treatment and Control Areas

This section presents differences in program awareness and uptake between respondents in treatment and control areas. This information is useful to triangulate the extent of AEP reach within treatment areas and to assess potential spillovers in control areas.

Table 3.4 displays effects from a set of Ordinarly Least Squares (OLS) estimation results using endline survey information on several indicators of program awareness and uptake. Part I of the table considers program effects on overall program awareness, while Part II focuses on program uptake.

Awareness of AEP activities was higher among respondents in treatment areas, with different levels of program awareness across states. Overall, respondents in treatment areas were 11pp more likely to be aware of AEP activities than respondents in control areas. Andhra Pradesh and West Bengal report the highest levels of awareness within treatment areas. In treatment blocks of Andhra Pradesh, respondents were 15.6pp more likely to be aware of AEP activities than respondents in control areas. That is, in treatment areas of Andhra Pradesh, 26% of respondents were aware of any AEP activities in their village. This lies in contrast to MIS data which suggest the reach of AEP activities in Andhra Pradesh was more limited. In treatment areas of West Bengal, 23% of respondents (18pp over the control group share) was aware of AEP activities in their village.

A small share of respondents in control areas was aware of AEP activities. However, spillovers were more frequent in Andhra Pradesh. Within the control group, 4% of respondents were aware of AEP activities, hinting that spillovers (exposure of respondents to AEP activities in control areas) was low. In control blocks of Andhra Pradesh, the share of respondents which was aware of AEP activities in their village was considerably higher (11%). This hints that AEP implementation took place in some control villages of Andhra Pradesh, which progress reports from implementing partners confirm.

Awareness of IPCs/mid-media activities was low among respondents in treatment and control areas. To capture awareness of IPCs/mid-media activities, respondents were asked whether they were aware of any public gathering or sports events in their village in the past four years. Overall awareness of IPCs/mid-media activities among both the treatment and control group was very low (4.6%). Respondents in treatment areas were slightly more aware (+2.9pp) of IPCs/mid-media activities than respondents in control areas.

Share of Basic Package participation reports the average number of activities in which respondents took part in the past years.[12] These activities include those organized as part of AEP, but are not necessarily restricted to those as other organizations may have conducted similar activities in both areas. **On average, respondents in treatment areas participated in slightly more activities in**

[12]These activities include mid-media activities, girls' groups, self-awareness training, thinking skills training, communication skills training and coping skills training.

the past four years, including for instance life skills trainings. Overall, adolescent girls were more likely to participate in activities than boys. The control mean for variables in Part II of the table hints that a share of participants in control areas took part in activities similar to those implemented by the AEP, but not necessarily implemented as part of it. That is, respondents in control areas may have benefited from trainings which were not delivered as part of the AEP. This is particularly true in the case of Andhra Pradesh where 18% of respondents in control areas report taking part in such activities.

Table 3.4: Program Awareness and Uptake

	(I) Program awareness						(I)) Program uptake					
	Aware of AEP activities			Aware of mid-media activities			Share of Basic Package participation			Participated in life-skill training		
	All (1)	Male (2)	Female (3)	All (4)	Male (5)	Female (6)	All (7)	Male (8)	Female (9)	All (10)	Male (11)	Female (12)
Panel A: All states												
Basic package	0.112***	0.066***	0.142***	0.028	0.029*	0.026	0.043***	0.033***	0.049***	0.154***	0.113***	0.181***
	(0.026)	(0.017)	(0.034)	(0.017)	(0.017)	(0.017)	(0.007)	(0.008)	(0.010)	(0.024)	(0.022)	(0.033)
Control mean	0.039	0.034	0.043	0.037	0.059	0.021	0.110	0.086	0.127	0.062	0.054	0.067
N	6,043	2,659	3,384	6,043	2,659	3,384	4,676	1,994	2,682	4,616	1,960	2,656
Clusters	72	72	72	72	72	72	72	72	72	72	71	72
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols
Panel B: Andhra Pradesh												
Basic package	0.142**	0.113	0.153**	0.037**	0.043**	0.034	0.072**	0.084**	0.063**	0.219**	0.241**	0.190**
	(0.067)	(0.075)	(0.067)	(0.016)	(0.016)	(0.025)	(0.029)	(0.037)	(0.027)	(0.089)	(0.114)	(0.082)
Control mean	0.113	0.098	0.125	0.021	0.025	0.019	0.133	0.121	0.140	0.181	0.131	0.214
N	652	280	372	652	280	372	506	207	299	496	199	297
Clusters	33	33	33	33	33	33	33	33	33	33	32	33
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols
Panel C: Assam												
Basic package	0.027***	0.032**	0.024***	0.019	0.019	0.018	0.017**	0.021*	0.013**	0.083***	0.104**	0.068***
	(0.007)	(0.013)	(0.005)	(0.014)	(0.017)	(0.017)	(0.006)	(0.009)	(0.004)	(0.016)	(0.034)	(0.016)
Control mean	0.003	0.000	0.005	0.017	0.016	0.018	0.069	0.050	0.084	0.042	0.021	0.057
N	1,407	631	776	1,407	631	776	1,107	473	634	1,095	470	625
Clusters	8	8	8	8	8	8	8	8	8	8	8	8
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols
Panel D: Jharkhand												
Basic package	0.074***	0.035	0.101***	0.025	0.021	0.027*	0.033**	0.029**	0.037**	0.072*	0.030	0.104**
	(0.014)	(0.020)	(0.029)	(0.014)	(0.034)	(0.013)	(0.012)	(0.010)	(0.015)	(0.035)	(0.071)	(0.034)
Control mean	0.035	0.047	0.026	0.051	0.115	0.002	0.129	0.083	0.163	0.040	0.067	0.019
N	1,923	846	1,077	1,923	846	1,077	1,449	620	829	1,449	620	829
Clusters	11	11	11	11	11	11	11	11	11	11	11	11
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols
Panel E: West Bengal												
Basic package	0.180***	0.092***	0.249***	0.033	0.037	0.029	0.058***	0.032***	0.077***	0.215***	0.109***	0.294***
	(0.050)	(0.029)	(0.066)	(0.040)	(0.040)	(0.040)	(0.010)	(0.010)	(0.017)	(0.037)	(0.022)	(0.056)
Control mean	0.051	0.030	0.067	0.049	0.056	0.044	0.122	0.112	0.129	0.057	0.047	0.065
N	2,061	902	1,159	2,061	902	1,159	1,614	694	920	1,576	671	905
Clusters	20	20	20	20	20	20	20	20	20	20	20	20
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols

‣ *Notes*: Table 3.4 displays program effects on program awareness indicators. Effects from separate OLS estimations are reported.
‣ Sample: Endline survey. Panel A includes results for all states, Panel B includes results for Andhra Pradesh, Panel C includes results for Assam, Panel D includes results for Jharkhand and Panel E for West Bengal.
‣ Program effects on the following indicators of program awareness are considered: share of program awareness, share of Basic Package program awareness, share of Plus Package program awareness, and Mid-Media program awareness. "Event awareness" was captured by asking respondents (adolescents, parents, and community leaders) to indicate which of the following events, that they aware of, took place in their villages in the last four years: (1) Training, workshop, (2) group session, (3) group games, (4) public gatherings or sports events. Then, filtering questions were posed to identify events implemented specifically as part of the AEP. Respondents aware of events in their communities were asked about the official name of the event or the organization implementing it. Responses including UNICEF, AEP implementation partners or AEP - related topics, such as child marriage, were considered to identify AEP events. "Share of Basic Package awareness" and "Share of Plus Package awareness" were captured by first generating indicator variables for Basic or Plus Package-events which indicate whether respondents were aware of them individually. Then, a summary variables were constructed indicating the share of overall Basic or Plus Package awareness on a scale from 0 to 1. "Awareness of Mid-Media programs" was calculated. Columns (1), (4), (7), and (10) display the full sample. Columns (2), (5), (8), and (11) display the sample for boys only. Columns (3), (6), (9), and (12) display the sample for girls only.
‣ Control variables were selected using a lasso-selection, a procedure which considers potential imbalances in key observable characteristics between treatment and control groups at baseline. All regressions also include age and gender as control variables.
‣ Standard errors clustered at the block level.

III. Impact of the Program (Program Effectiveness)

This section presents results from final and intermediate outcomes to address evaluation questions on program effectiveness. Section III.A presents results for final outcomes (child marriage, child pregnancy, education), while Section III.B follows with a closer look into potential drivers of change (adolescent empowerment, communication, social norms, and service provision). To increase the learning, all results are further disaggregated by comparing the program's impacts by State, treatment package, and heterogeneous characteristics (poverty and adolescents' age group). The section ends by addressing potential limitations of the main and LATE analysis in a set of robustness analyses (Section IV.).

III.A Final Outcomes: Child Marriage, Child Pregnancy, Education

The AEP focused on reducing the incidence of child marriage and early pregnancy and on increasing education-related outcomes. This section presents program results from *Basic* and *Plus Package* components on these final outcomes.

Impact/ Effectiveness (Final Outcomes) - Key Findings
Key findings that emerge from this section in relation to evaluation questions are:

EQ. 3.1. *Did the the program lead to a reduction in the incidence of child marriage?*

Overall Impact Considering results from all states combined, there is no evidence that the AEP led to a reduction in the incidence of child marriage among adolescent girls and boys. Respondents in qualitative interviews reported a general decrease in child marriage rates over the past decade. However, this cannot be directly attributed to the program as this decreased seems to have happened in both treatment and control areas. During qualitative interviews, financial reasons were cited as an important factor driving child marriage. When considering results for individual states, AEP effects present an assorted picture:

- In treatment areas of **Andhra Pradesh**, the AEP is associated with a statistically significant reduction in child marriage rates among adolescents aged 10 to 19 (-3.0pp). This reduction was stronger for adolescent girls aged 10 to 19 than for adolescent boys, -4.2pp and -1.6pp.
- In **Assam**, the AEP is associated with a higher incidence of child marriage among adolescent girls aged 10 to 19 (+2.8pp). Among adolescent girls aged 18-21 in treatment areas, the program is also associated with higher child marriage rates (+7.2pp).
- In **Jharkhand**, the AEP is associated with a lower incidence of child marriage rates among adolescents aged 10 to 19 (-2.5pp). This reduction is not statistically significant when considering adolescent girls alone.

- In **West Bengal**, the AEP is not associated with a statistically significant change in the incidence of child marriage among adolescent girls or boys.

EQ. 3.2. *Did the program lead to a reduction in the incidence of early pregnancy?*

Overall Impact Considering results from all states combined, there is no evidence that the AEP led to a reduction in the incidence of child pregnancy among adolescent girls. Evidence from both quantitative and qualitative interviews point that early pregnancy is rare among adolescent girls in both treatment and control areas. Samples for early pregnancy are very small, since they only include married girls within the household. As a result, estimations for state-level results are statistically fragile.

EQ. 3.3. *Did the program lead to an increase in school enrollment?*

Overall Impact Considering aggregate results from all states, the AEP had a very limited effect in increasing school attendance rates for adolescent in the sample. Overall results only show a small, statistically significant increase in school attendance among adolescent girls aged 10 to 19 (+1.7pp). However, more significant results are found within some states:

- In **Andhra Pradesh**, the program is associated with a strong increase in school enrollment rates for older school-aged adolescent boys (15-17) of +10.8pp. No statistically significant effects on school attendance rates is found for adolescent girls in any age group within treatment areas of the state.
- In **Assam**, the AEP had a positive impact on school attendance rates among adolescent boys and girls (+3.8pp). Considering adolescent boys alone, this effect is strongly significant and slightly higher (+4.5pp). For adolescent girls aged 10 to 19, the increase in school attendance is smaller (+3.2pp) and only weakly significant.
- In **Jharkhand**, the program increased school attendance rates for adolescents aged 10 to 19 by 2.6pp. This increase seems to be mainly driven by an increase (+6.2pp) in school attendance rates among adolescent girls aged 10 to 19 in treatment areas.
- In **West Bengal**, the AEP is not associated with any statistically significant increase in school attendance for adolescent boys or girls.

The presentation of the findings takes place within three tables per outcome. The results for the *Basic Package* are discussed in the first table, where the sample combining results from all states, the overall pooled sample, and the four state disaggregated samples are presented in five panels, similar to the preceding sections (e.g., Tables 3.5). The second table for each outcome explores the effects from the overall *Plus Package* in the first panel and the differential effect of the various treatment arms in the second (Table 3.6). The final table explores the heterogeneous effects when disaggregating by the reported poverty status of the treated households and by adolescents' age group.

The results for Tables 3.5 and 3.6, for the child marriage indicator, are explained in detail, such that the overall interpretation of the various coefficients and statistics in all the tables is thereafter intuitive for the reader. For the other outcomes, the interpretation per table will remain shorter, in the interest of preserving the length of the report.

Additional empirical evidence is included in the Appendix of this report. Appendix A.III.C includes result tables from additional outcome analysis used to triangulate main findings from this study. Results from these additional outcomes are discussed when relevant below, under each outcome section. Appendix A.III.E includes robustness checks to assess whether results hold under different regression specifications and estimation samples and strategies. Together with this, three list experiments were conducted to capture the incidence of child marriage with indirect questions (see Section A.III.A for more details). Appendix O.IV.A includes details on how all indicators were generated.

Interpretation of the Results
In this evaluation, we focus on the so-called Intention-to-Treat (ITT) effects when discussing the results. This approach de facto measures the effects of an adolescent's community being randomly assigned to the program, or not. In this sense, ITT ignores the influence of factors that happened after the random assignment to the program, such as non-delivery or partial delivery of the program, non-compliance, withdrawal, or a general lack of program uptake, as well as deviation from the original assignment (such as program implementation in control communities). Therewith producing more conservative, yet also more credible (unbiased) estimates for the impacts, given that a lack of program implementation or deviations from the program are non-random and thus a relationship may exist between the selected program delivery/ uptake and the outcomes of interest (e.g., capturing a higher level of empowerment not only because of the program, but also because it was potentially selectively delivered to more empowered individuals to start with). Due to non-compliance, the ITT effects will remain an underestimate of the true effect (**?**). In other words, the effects on actual direct program participants/ beneficiaries would certainly be larger in size. Therefore, the evaluators recommend reading and interpreting the results of this evaluation as being more conservative, yet easier generalizable for policy purposes. What needs to be kept in mind is the community's eligibility criteria (original characteristics) for the original program assignment (i.e., the type of communities that were in the original pool to be either assigned to the treatment or control group).

III.A.1 Child Marriage

Reducing the incidence of child marriage was a key objective of the AEP. To construct this outcome indicator, the household head was asked about the age of all household members, and a few questions later, whether household members were married, widowed, or divorced and for how long they had been in their marital status. Using the information from these questions, age of marriage was constructed for all adolescents in the ages of 10 to 21 at the time of program implementation.

The age bounds were defined by the legal ages of marriage in India, where the relevant upper bound is 18 for the female sample, after which it is legally accepted for girls to marry, while for the males it is 21 years. The age groups reflected in the table reflect age at the time of marriage, adolescents may now be older (up to 23) based on years since marriage.

Interpreting Outcome Tables
Before we present the results, in this box, we provide a guidance on how to read and interpret the results. For reference, we refer to Table 3.4.

Control Mean
The control mean reports mean values of each outcome variable for the control group. Since the treatment was randomized, this mean can be interpreted as counterfactual for the treatment group, i.e. without the treatment, the treatment group would have experienced the same mean outcomes. The control mean helps to get a sense of the relative size of the effect. For example, the AEP had an overall positive effect of 0.111 on the "Awareness of AEP activities", with a control mean of 0.039. This means, that treatment on average increased this outcome by 11.1 percentage points from its counterfactual value of 3.9%.

Table 3.5 models the impact of the *Basic Package* AEP on child marriage indicators.The results are presented for different age groups: Part I considers the formal age definition for adolescent (10-19); Part II displays the age group for whom marriage is illegal; Part III considers the age group in which most child marriages occur; Part IV considers effects on adolescents who reported marriage in the age group 18 to 21, which is legal for females but illegal for male adolescents.[13]

Considering results from all states combined, the AEP is not associated with any reduction in child marriage. This is also true when considering results for adolescent boys or adolescent girls separately. Coefficients in result tables can be interpreted as follows: The mean reported values for the control group are presented within each panel, right above the number of observations (given by the N). The first column shows the mean reported value of child marriage for adolescents aged 10 to 19, in the control areas, as 0.031 in the table. This implies that 3.1%, or, 31 out of 1000 adolescents, reported being married within the control sample. The mean child marriage rate for the treated sample is 3% which is obtained by adding the first coefficient (-0.001 or negative 0.1pp) to the 3.1% control mean. The non-significant results, as indicated by the lack of "stars" (*, **, ***) in the coefficients for the *Basic Package* row, imply that the mean (or average) marriage rates among the control group are (statistically) similar to the mean marriage rates among the treatment group. In a simple model, an increasing number of stars on the coefficients indicates that it can be concluded with a higher level of confidence that the difference in means between the two groups is not observed per "chance". For instance, one star on the coefficient for male adolescents (column (5)), indicates a 10% significance level, or a 10% risk of falsely denying the difference between

[13]The sample in each regression was constructed in a way that includes all adolescents that were part of the age group during the implementation of the program. This implies that individuals currently older than the age group were included because they were part of the relevant age group between 2015 and 2019.

the two groups- when it actually exists. A coefficient with three (two) stars implies that the risk of falsely concluding no difference in means (where there is one) is as low as 1% (5%). The more stars that are indicated, the lower is the probability of finding false results, or conversely, being more confident in our results. Therefore, the evaluation concludes with 90% confidence, that **4 (out of 1000) fewer adolescent boys aged 10 to 17 report being married.**

Statistical Significance
In our study we assess the program effects based on a sample of individuals, not the entire population. Is the effect we calculate true for the whole population? Or did we simply capture it by chance? In other words, what is the likelihood our results are caused by chance (and not the program)?

To answer this questions many factors are considered, such as the sample size (which might be too small to generalize effects to the whole population with much confidence), the size of the observed effect, etc..

Moreover, it is common practice to display different levels of confidence, marking the results according to the **p-values** (a p-value is the probability that random chance could explain our results; thus, the lower the probability, the better; in our study: The more stars you observe, the more confident we are about the results). While we display all results (significant and not significant ones), to remain careful, only those outcomes that are significant are interpreted and discussed (marked with additional stars). It is focussed on the interpretation of outcomes that are **significant at the 5% or 1% significance level (two or three stars)**, since these effects are more robust. They tell us that with a chance of only 5% or 1% what we discuss is caused by random chance and not the program itself. If an effect is below this significance level, we are more careful with its interpretation given that the observed effect could be due to chance and not actually caused by the program. (Because we look at many outcome variables and at some point some of them would turn out significant by chance, we chose a conservative approach.)

At the state level, more program effects present a diverse picture. **In Andhra Pradesh, the AEP is related with lower child marriage rates for adolescent boys and girls in the treatment group.** The program is associated with a statistically significant reduction in child marriage rates for adolescents aged 10 to 19 (Part I). In Andhra Pradesh, 4.7% of adolescent boys and girls in the control group reported being married. This is to say, that out of every 1000 adolescents in the control group, on average 47 reported being married. The treatment group mean is 2.9pp lower than the control group (i.e., 1.8% of the adolescents in the treatment group reported being married between the ages of 10 to 19).This result is highly significant, at the 1% significance level. This reduction also holds when disaggregating results by gender. The AEP is associated with a reduction in child marriage rates of 1.6pp among adolescent boys and 4.2pp among adolescent girls. The reduction in child marriage rates is thus three times higher for adolescent girls in treatment areas when compared with adolescent boys in treatment areas.

In Jharkhand, the AEP is associated with a reduction in the share of treated adolescent boys being married early. This reduction is 2.0pp, i.e., only around 0.3% of the treated boys reported being married between 10 to 19. Considering results for adolescent boys and girls together, **the**

program is also associated with a reduction in marriage rates for adolescent boys and girls of 2.5pp. When disaggregating results by gender, this result appears to be driven primarily by adolescent boys. In treatment areas, 20 fewer adolescent boys out of 1000, reported being married, when compared to adolescent boys in the control group. The reduction in marriage rates is not statistically significant when considering results for adolescent girls alone.

In Assam, unexpectedly, the AEP is associated with an increase in marriage rates for adolescents in treatment areas, by 1.5pp (statistically significant). This increase is mainly driven by higher rates of child marriage for adolescent girls, where an additional 28 out of 1000 female adolescents (compared to 15 female adolescents in the control group) reported being married in the 10 to 19 age group.

For West Bengal, the AEP did not lead to an effect on child marriage rates for adolescent boys or girls. This implies that the adolescents did not report better child marriage outcomes, but also not worse, than the control group.

When considering program effects on adolescents in different age groups (Parts II, III and IV), the AEP is only associated with a reduction of child marriage rates for adolescent boys and girls in Andhra Pradesh. In Andhra Pradesh, the program is associated with a consistent, statistically significant, reduction in child marriage rates among adolescent boys and girls aged 10 to 17 and 15 to 17. This reduction is statistically significant for adolescent boys aged 10 to 17 (-2.4pp) and for adolescent boys aged 15 to 17 (-2.9pp). For adolescent girls, this reduction is only statistically significant for those aged 10 to 17 (-4.0pp). Additionally, within Parts II and III, a statistically significant increase of 1.0pp is observed in the child marriage rate for adolescent girls in Assam. In Part IV, the increase in marriage rates for adolescent girls aged 18 to 21 in Assam is higher, and statistically significant (+7.2pp). In West Bengal, an increase of 0.3 and 0.5pp in child marriage rates was reported for adolescent boys aged 10 to 17 and 15 to 17. The former is weakly significant at the 10% level.

The program appears to have a weak effect on child marriage outcomes for adolescent boys and girls aged 18 to 21. In Part IV, which focuses on the age bracket where marriage is legal for girls but illegal for boys (18-21), the only decrease in marriage rates was reported among adolescent boys and girls in Jharkhand (-3.2pp). This result is however only weakly significant and appears to be driven primarily by adolescent boys, for whom marriage is still illegal at that age. Together with this, the AEP is associated with an increase in the marriage rates among males and females in treatment areas of Assam (by +2.9 and +7.2pp, respectively), and for the overall female sample (by +2.5pp).

Table 3.6 considers *Plus Package* AEP effects on child marriage rates. Panel A presents results from all *Plus Package* treatment arms combined. In Panel A, the *Plus Package* coefficient shows the effect of providing a higher-intensity treatment, involving adolescent boys and/or parents groups, on top of the Basic Package. Panel B disaggregates *Plus Package* results by the three treatment arms of adolescent groups boys, Parents Group and both groups (which were introduced on top of

Table 3.5: Child Marriage

	(I) Adolescents Age 10-19 (now 11-23)			(II) Illegal age Age 10-17 (now 11-23)			(III) Illegal age Age 15-17 (now 16-23)			(IV) Legal age for girls only Age 18-21 (now 19-23)		
	All (1)	Male (2)	Female (3)	All (4)	Male (5)	Female (6)	All (7)	Male (8)	Female (9)	All (10)	Male (11)	Female (12)
Panel A: All states												
Basic package	-0.001	-0.004	0.001	-0.002	-0.004*	-0.001	-0.002	-0.005	0.000	0.013	0.006	0.025*
	(0.005)	(0.003)	(0.007)	(0.003)	(0.002)	(0.005)	(0.004)	(0.003)	(0.006)	(0.009)	(0.009)	(0.013)
Control mean	0.031	0.015	0.046	0.017	0.006	0.027	0.021	0.008	0.033	0.066	0.048	0.083
N	11,868	5,768	6,100	11,868	5,768	6,100	7,421	3,536	3,885	3,953	1,985	1,968
Clusters	72	72	72	72	72	72	72	72	72	72	72	71
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols
Panel B: Andhra Pradesh												
Basic package	-0.029***	-0.016*	-0.042***	-0.031***	-0.024***	-0.040**	-0.029**	-0.029**	-0.029	0.013	0.033*	-0.003
	(0.009)	(0.009)	(0.015)	(0.011)	(0.009)	(0.018)	(0.014)	(0.013)	(0.017)	(0.014)	(0.018)	(0.018)
Control mean	0.047	0.025	0.069	0.037	0.021	0.052	0.039	0.028	0.049	0.037	0.028	0.046
N	1,325	648	677	1,325	648	677	858	413	445	482	248	234
Clusters	33	33	33	33	33	33	33	33	33	33	33	32
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols
Panel C: Assam												
Basic package	0.015**	0.001	0.028***	0.003	-0.004	0.010**	0.002	-0.006	0.010**	0.051**	0.029**	0.072***
	(0.005)	(0.004)	(0.007)	(0.003)	(0.002)	(0.004)	(0.003)	(0.004)	(0.004)	(0.015)	(0.010)	(0.018)
Control mean	0.012	0.008	0.015	0.004	0.003	0.004	0.006	0.005	0.007	0.049	0.037	0.058
N	2,571	1,234	1,337	2,571	1,234	1,337	1,629	760	869	852	406	446
Clusters	8	8	8	8	8	8	8	8	8	8	8	8
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols
Panel D: Jharkhand												
Basic package	-0.025**	-0.020***	-0.025	-0.007	0.001	-0.014	-0.010	-0.002	-0.013	-0.030*	-0.042*	-0.009
	(0.010)	(0.005)	(0.021)	(0.008)	(0.004)	(0.014)	(0.007)	(0.005)	(0.014)	(0.016)	(0.020)	(0.036)
Control mean	0.052	0.023	0.080	0.027	0.008	0.046	0.037	0.010	0.062	0.106	0.074	0.137
N	3,855	1,902	1,953	3,855	1,902	1,953	2,410	1,163	1,247	1,361	667	694
Clusters	11	11	11	11	11	11	11	11	11	11	11	11
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols
Panel E: West Bengal												
Basic package	0.004	0.002	0.005	0.005	0.003*	0.006	0.006	0.005**	0.006	0.001	-0.005	0.012
	(0.006)	(0.004)	(0.009)	(0.004)	(0.001)	(0.007)	(0.006)	(0.002)	(0.010)	(0.011)	(0.016)	(0.014)
Control mean	0.017	0.006	0.027	0.009	0.000	0.016	0.011	0.000	0.020	0.044	0.035	0.056
N	4,117	1,984	2,133	4,117	1,984	2,133	2,524	1,200	1,324	1,258	664	594
Clusters	20	20	20	20	20	20	20	20	20	20	20	20
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols

▸ *Notes*: Table 3.5 displays program effects on the child marriage rate for different adolescents' age groups. The dependent variable, marriage by age group, was constructed by using information on marital status, length of marriage, and current age of household members reported in the household roster. Effects from OLS estimates are reported.
▸ Sample: Endline survey. Panel A includes results for all states, Panel B includes results for Andhra Pradesh, Panel C includes results for Assam, Panel D includes results for Jharkhand and Panel E for West Bengal.
▸ Part I considers considers adolescents aged 10 to 19 (standard definition of adolescents), Part II restricts the sample to the officially illegal age group (10-17), Part III considers child marriage incidence amongst adolescents aged 15 to 17, and Part IV focuses on the age bracket where marriage is legal for girls but illegal for boys (18-21). Columns (1), (4), (7), and (10) display the full sample. Columns (2), (5), (8), and (11) display the sample for boys only. Columns (3), (6), (9), and (12) display the sample for girls only.
▸ Control variables were selected using a lasso-selection, a procedure which considers potential imbalances in key observable characteristics between treatment and control groups at baseline. All regressions also include age and gender as control variables.
▸ Estimation method: OLS regression with enumerator and state fixed effects.
▸ Standard errors clustered at the block level.
▸ Related table(s): Table A.47.

the adolescent girls' group). It is important to flag that *Plus Package* treatment arms were only fully implemented as originally assigned by the evaluation in West Bengal. As a result, the estimates of

individual treatment arms need to be considered with care given deviations in implementation.

When considering program effects on adolescent boys and girls together, the *Plus Package* showed no additional effects in reducing child marriage. Panel A shows no difference in child marriage from *Plus Package* activities for the pooled sample. When disaggregating by gender, however, there is a small reduction of 0.6pp over the *Basic Package* effect (i.e., 0.1pp) in child marriage for boys. In the case of females between 18 to 21 years of age the evaluation observes a statistically significant, higher, reported marriage rate of 2.8pp within the *Basic Package*, compared to child marriage rates in the control group.

Disaggregating effects by the treatment groups, **a reduction in child marriage rates is observed across the board in villages that additionally implemented parents groups.** Overall, a statistically significant reduction of 1.3pp (on top of the *Basic Package*) is reported. Disaggregating results by gender, this reduction equals 1.7pp and 0.9pp lower marriage rates among adolescent girls and boys, respectively. Comparing Parts II and III, the effects of the PG are smaller, at 0.9pp and 0.8pp respectively, where the effect is not statistically significant in the older age group (15-17) for the female sample. In the 10 to 17 age group, however, the effects are driven by the female adolescent sample, which are up to seven times larger than the male adolescent sample (15 females compared to 2 males) (columns (5) and (6)).

Within Parts I and III, it can also be observed that villages having ABG+PG or *Both groups* experienced a reduced child marriage rate, which is driven by adolescents aged 15 to 17. In this age group, the female sample for *Both groups* is the only statistically significant coefficient, compared to all other treatment modalities. The adolescent boys groups modality had one weakly significant results for a reduction in child marriage rates for males ages 18 to 21 (Part IV), at 3.7pp.

All in all, the AEP showed no significant effects in reducing child marriage rates when considering program effects on younger and older adolescents separately. This is also true when considering program effects on poor and very poor adolescents separately. Table 3.7 and 3.8 shows heterogeneous results by the poverty status and age group of adolescents. Disaggregating the sample by the poverty status does not appear to show any statistically significant difference between the control and treatment groups for the *Basic Package* between poor and very poor adolescents. This is also true when considering results for younger and older adolescents, together or disaggregated by gender.

Evidence from In-Depth Interviews

Respondents in qualitative interviews reported a general decrease in child marriage rates over the past decade. However, in line with quantitative evidence, they mentioned this may not have been necessarily associated with the AEP. All participants speculated that child marriage rates were decreasing, not specifically in the previous year but in the past decades more generally. Despite these declines in child marriages, participants felt that a longer program duration - particularly in Assam's tea gardens - could have yielded additional decreases in child marriage rates. A few participants stated that the government's (Kanyashree) scheme also helped motivate and encourage

Table 3.6: Child Marriage, *Plus Package* and Treatment Intensity

	(I) Adolescents Age 10-19 (now 11-23)			(II) Illegal age Age 10-17 (now 11-23)			(III) Illegal age Age 15-17 (now 16-23)			(IV) Legal age for girls only Age 18-21 (now 19-23)		
	All (1)	Male (2)	Female (3)	All (4)	Male (5)	Female (6)	All (7)	Male (8)	Female (9)	All (10)	Male (11)	Female (12)
Panel A: *Plus Package*												
Basic package	0.002	-0.001	0.003	-0.002	-0.004	-0.001	-0.004	-0.005	-0.003	0.018*	0.018	0.025*
	(0.005)	(0.004)	(0.009)	(0.004)	(0.002)	(0.006)	(0.005)	(0.003)	(0.007)	(0.010)	(0.013)	(0.013)
Plus package	-0.007	-0.006*	-0.006	0.001	0.000	0.002	0.003	0.000	0.007	-0.012	-0.023	-0.000
	(0.004)	(0.003)	(0.007)	(0.003)	(0.002)	(0.007)	(0.003)	(0.003)	(0.007)	(0.014)	(0.018)	(0.018)
Control mean	0.031	0.015	0.046	0.017	0.006	0.027	0.021	0.008	0.033	0.066	0.048	0.083
N	11,868	5,768	6,100	11,868	5,768	6,100	7,421	3,536	3,885	3,953	1,985	1,968
Clusters	72	72	72	72	72	72	72	72	72	72	72	71
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols
Panel B: Program Intensity												
Basic package	0.002	0.000	0.004	-0.002	-0.004*	-0.001	-0.004	-0.005	-0.003	0.018*	0.030*	0.025*
	(0.005)	(0.005)	(0.009)	(0.004)	(0.002)	(0.006)	(0.005)	(0.004)	(0.007)	(0.010)	(0.017)	(0.013)
Adolescent Boys Group only	-0.010	-0.005	-0.014	0.002	0.004	0.000	0.004	0.007	0.002	-0.025	-0.038	-0.017
	(0.006)	(0.004)	(0.011)	(0.006)	(0.003)	(0.010)	(0.005)	(0.005)	(0.009)	(0.018)	(0.023)	(0.024)
Parents Group only	-0.013**	-0.008*	-0.017**	-0.008**	-0.002	-0.012	-0.006	-0.003	-0.009	-0.007	-0.017	0.007
	(0.005)	(0.005)	(0.008)	(0.003)	(0.001)	(0.007)	(0.005)	(0.002)	(0.010)	(0.015)	(0.024)	(0.020)
Both groups	0.004	-0.007	0.012	0.007	-0.002	0.015*	0.011*	-0.003	0.025**	-0.001	-0.019	0.011
	(0.006)	(0.004)	(0.009)	(0.005)	(0.002)	(0.009)	(0.006)	(0.002)	(0.011)	(0.018)	(0.021)	(0.022)
Control mean	0.031	0.015	0.046	0.017	0.006	0.027	0.021	0.008	0.033	0.066	0.048	0.083
N	11,868	5,768	6,100	11,868	5,768	6,100	7,421	3,536	3,885	3,953	1,985	1,968
Clusters	72	72	72	72	72	72	72	72	72	72	72	71
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols

▸ *Notes*: Table 3.6 displays *Plus Package* program effects on child marriage rates for different adolescents' age groups. The dependent variable, marriage by age group, was constructed by using information on marital status, length of marriage, and current age of household members reported in the household roster. Effects from OLS estimates are reported.
▸ Sample: Endline survey.
▸ Part I considers considers adolescents age 10 to 19 (standard definition of adolescents), Part II restricts the sample to the officially illegal age group (10-17), Part III considers child marriage incidence amongst adolescents age 15 to 17, and Part IV focuses on the age bracket where marriage is legal for girls but illegal for boys (18-21). Columns (1), (4), (7), and (10) display the full sample. Columns (2), (5), (8), and (11) display the sample for boys only. Columns (3), (6), (9), and (12) display the sample for girls only.
▸ Control variables were selected using a lasso-selection, a procedure which considers potential imbalances in key observable characteristics between treatment and control groups at baseline. All regressions also include age and gender as control variables.
▸ Estimation method: OLS regression with enumerator and state fixed effects.
▸ Standard errors clustered at the block level.
▸ Related table(s): Table A.48.

parents to delay arranging marriages for their daughters.

Awareness around legal age for marriage was widespread. Aside from a few exceptions, all respondents were aware of the legal parameters pertaining to marriage in India (where the legal age to marry is 18 years for women, 21 years for men) and most felt these ages were appropriate. This coherence between the law and study participants' perceptions may reflect agreement with the current law or a reluctance to express their personal opinions (in case it differed from the law). Some suggested that the legal age for marriage should be raised by two to seven years while others felt that, instead of age, maturity and whether the young couple had finished their studies, found a job and were financially stable should be the defining factors allowing marriage.

Participants were usually aware of referral mechanisms for child marriage cases, but would

Table 3.7: Child Marriage - Heterogeneous Analysis (I)

	(I) Adolescents Age 10-19 (now 11-23)			(II) Illegal age Age 10-17 (now 11-23)			(III) Illegal age Age 15-17 (now 16-23)			(IV) Legal age for girls only Age 18-21 (now 19-23)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Panel A: Poverty												
	Difference	Very Poor	Poor	Difference	Very Poor	Poor	Difference	Very Poor	Poor	Difference	Very Poor	Poor
Basic package	-0.015	-0.004	0.010	-0.008	-0.004	0.009	-0.009	-0.004	0.011	0.003	0.015	0.009
	(0.009)	(0.006)	(0.008)	(0.008)	(0.004)	(0.006)	(0.010)	(0.005)	(0.007)	(0.023)	(0.011)	(0.023)
Control mean	0.031	0.032	0.025	0.017	0.018	0.014	0.022	0.022	0.020	0.065	0.066	0.062
N	11,839	9,313	2,526	11,839	9,313	2,526	7,400	5,825	1,575	3,939	3,084	855
Clusters	72	72	47	72	72	47	72	72	45	72	72	45
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols

- *Notes*: Table 3.7 displays heterogeneous program effects on marriage by age group for the following groups: Poverty (very poor vs. poor). Effects from OLS estimates are reported.
- Sample: Endline survey - Full sample.
- Part I considers considers adolescents age 10-19 (standard definition of adolescents), Part II restricts the sample to the officially illegal age group (age 10-17), Part III considers child marriage prevalence amongst adolescents age 15-17, and PPart IV focuses on the age bracket where marriage is legal for girls but illegal for boys (age 18-21) . Columns (1), (4), (7), and (10) display the difference between the two groups. Columns (2), (5), (8), and (11) display the effects for very poor individuals (Panel A). Columns (3), (6), (9), and (12) display the effects for poor individuals (Panel A).
- Control variables were selected using a lasso-selection, a procedure which considers potential imbalances in key observable characteristics between treatment and control groups at baseline. All regressions also include age and gender as control variables.
- Estimation method: OLS regression with enumerator and state fixed effects.
- Standard errors clustered at the block level.

only use them as a last resort. Given that most participants reported not knowing of any child marriage cases, they described what they think they would do, should they learn of such a case. Most surmised they would talk to the family involved either directly as a group or, more often, through the local NGO. In this sense, most study participants felt such situations could first be addressed internally and viewed law enforcement only as a last resort. A few others feared being blamed or even physically harmed by family and/or the wider community should they attempt to intervene in a child marriage and thus preferred to keep quiet or, if necessary, to address it as a group. Two interviewees from West Bengal surmised that efforts to prevent child marriage are nearly impossible in regions with low levels of education and awareness regarding the negative consequences associated with this practice.

Most participants, especially adults, suggested that parents are and should be making the decision regarding whom and when their child shall marry. The few study participants reporting cases of adolescents making this decision themselves viewed these as efforts to elope (and wanting to marry before the legal age). Apart from two study participants who mentioned their parents had suggested or tried (unsuccessfully) to begin marriage arrangements before the age of 18, all others indicated this had not been part of their experience. Only few study respondents spoke of friends or relatives whose parents had (unsuccessfully) attempted to arrange marriages for them before the legal age.

Financial reasons were commonly cited as factors driving child marriage. Study participants suggested that parents are inclined to push their daughters to marry early as a way to offload their responsibility and "due to the burden of imposing strict restrictions on female sexuality, the desire to reduce the burden of financial support, and the need to ensure social security for daughters" (AWW, F, Andhra Pradesh). They also mentioned the practice of dowry payments for a bride (although

Table 3.8: Child Marriage - Heterogeneous Analysis (II)

	Adolescent married		
	(1)	(2)	(3)
Panel A: Younger vs. Older Adolescents			
	Difference	Younger adolescents (10-14)	Older adolescents (15-23)
Basic package	-0.007	-0.000	-0.002
	(0.011)	(0.000)	(0.007)
Control mean	0.031	0.001	0.048
N	11,861	4,447	7,414
Clusters	72	72	72
Model	ols	ols	ols
Panel B: Younger vs. Older Adolescents (Female only)			
	Difference	Younger adolescents (10-14)	Older adolescents (15-23)
Basic package	0.007	0.000	-0.007
	(0.006)	(.)	(0.005)
Control mean	0.015	0.000	0.024
N	5,763	2,232	3,531
Clusters	72	72	72
Model	ols	ols	ols
Panel C: Younger vs. Older Adolescents (Male only)			
	Difference	Younger adolescents (10-14)	Older adolescents (15-23)
Basic package	-0.023	-0.001	0.005
	(0.019)	(0.001)	(0.011)
Control mean	0.045	0.001	0.070
N	6,098	2,215	3,883
Clusters	72	71	72
Model	ols	ols	ols

‣ *Notes*: Table 3.8 displays heterogeneous program effects on adolescent marriage for younger (10-14) vs. older adolescents (15-23). Effects from OLS estimates are reported.
‣ Sample: Endline survey. Full sample.
‣ Columns (1), (4), (7), and (10) display the full sample. Columns (2), (5), (8), and (11) display the sample for young adolescents. Columns (3), (6), (9), and (12) display the sample for older adolescents.
‣ Control variables were selected using a lasso-selection, a procedure which considers potential imbalances in key observable characteristics between treatment and control groups at baseline. All regressions also include age and gender as control variables.
‣ Estimation method: OLS regression with enumerator and state fixed effects.
‣ Standard errors clustered at the block level.

officially illegal) as a factor contributing to parents' eagerness for their daughters to marry early: "If we don't give dowry, we won't get good grooms for our girls" (Parent, M, West Bengal). Other participants identified as one of the key factors contributing to child marriage the perceived need to arrange marriage for girls "before she graduates college, as she is the prettiest at that age" (Parent, F, Assam).

This is in line with findings from across South Asia that as soon as a girl reaches puberty it becomes the family's primary concern to protect her sexuality (virginity) until she is married. Early marriage, especially in poorer households is thus considered a way of guarding against a loss of virginity due to premarital sex or sexual assault, which would "threaten the family's honour" (**?**; **?**). Another strong driver of child marriage in South Asia is considered to be dowry, which is the payment of cash or assets by the bride's family to the groom's family at the time of the wedding. There is considerable evidence that parents have to pay a smaller amount of dowry for younger girls and the amount increases with the age of the girl (**?**).

III.A.2 Early Pregnancy

Following the ToC, early pregnancy rates in AEP treatment villages were expected to decrease relative to control villages. Theoretically this could have happened not only as a consequence of fewer child marriages, but also regardless of their marital status due to improved agency and awareness.

The results on child pregnancy are based on endline survey information captured through the household roster. The household head was asked about the age of all household members, and, a few questions later, whether household members have any children to whom she has given birth, conditional on them being a female and being married, widowed, or divorced. The incidence of early pregnancy is captured through a dummy (yes/no) indicator for married girls who had their first child while being an adolescent.

The age groups reflected in the table reflect age at the time of pregnancy, adolescent girls may now be older (up to 23) based on years since pregnancy.

Table 3.9 models the effects of the *Basic Package* AEP on early pregnancy indicators on the overall and state samples, using OLS regressions. **Samples for early pregnancy are very small, since they only include married girls within the household. As a result, results need to be carefully considered. This is particularly true for state-level analysis where small(er) samples result in more fragile results.**

Considering results from all states combined, the AEP is not associated with any reduction in early pregnancy rates for adolescent girls. In Assam, the *Basic Package* component is associated with a considerable increase in early pregnancies for two age groups (adolescents aged 10 to 17 and 15 to 17). Likewise, a considerably lower rate of early pregnancies (-32.5pp) can be observed in the 18 to 21 age group (Part IV). The treated sample in Andhra Pradesh reported 24.7pp lower early pregnancies (for ages 15 to 17 years), compared to the control sample. The variability of these results, together with the small sample of girls underlying the analysis (between 12 to 197 married adolescent girls), points to a lack of statistical power to observe significant changes from program effects.

Table 3.10 considers *Plus Package* AEP effects on early pregnancy. Panel A presents pooled results from all *Plus Package* villages, while Panel B disaggregates results by treatment type. Panel A reports a reduction of 10.1pp (statistically significant at 10%) in the early pregnancy of married adolescent girls aged 10 to 19. This implies a reduction of 10.1pp over the *Basic Package* effect.

For Panel B, the evaluation disaggregated that effect to find that it was the lower early pregnancy rates in villages that received the Parents Group component in additional to the formation of girls' groups, that drive the results. **The PG group on top of Adolescent Girls Group (AGG) led to significantly lower rates of child marriage for three age groups (10-19, 10-17 and 15-17). This implies that the combination of adolescent girl groups with parent groups was most effective, compared to the other treatment modalities.**

Table 3.9: Early Pregnancy

	(I) had first child 10-19 (now 11-23)	(II) had first child 10-17 (now 11-23)	(III) had first child 15-17 (now 16-23)	(IV) had first child 18-21 (now 18-23)
	(1)	(2)	(3)	(4)
Panel A: All states				
Basic package	0.015	0.028	-0.021	0.047
	(0.059)	(0.055)	(0.054)	(0.060)
Control mean	0.571	0.260	0.260	0.581
N	197	197	196	191
Clusters	46	46	46	46
Model	ols	ols	ols	ols
Panel B: Andhra Pradesh				
Basic package	-0.039	-0.151	-0.247*	-0.016
	(0.142)	(0.153)	(0.132)	(0.247)
Control mean	0.727	0.455	0.455	0.545
N	21	21	21	21
Clusters	12	12	12	12
Model	ols	ols	ols	ols
Panel C: Assam				
Basic package	-0.096	0.235***	0.235***	-0.325**
	(0.145)	(0.052)	(0.052)	(0.109)
Control mean	0.500	0.000	0.000	0.900
N	29	29	29	29
Clusters	8	8	8	8
Model	ols	ols	ols	ols
Panel D: Jharkhand				
Basic package	0.014	0.011	-0.022	0.146***
	(0.092)	(0.079)	(0.082)	(0.025)
Control mean	0.512	0.209	0.209	0.548
N	113	113	112	110
Clusters	11	11	11	11
Model	ols	ols	ols	ols
Panel E: West Bengal				
Basic package	0.077	-0.056	-0.097	0.231
	(0.112)	(0.163)	(0.149)	(0.242)
Control mean	0.692	0.462	0.462	0.455
N	34	34	34	31
Clusters	15	15	15	15
Model	ols	ols	ols	ols

▸ *Notes*: Table 3.9 displays program effects on early pregnancy rates for different adolescents' age groups. The dependent variable, pregnancy, considers female household members that are married, divorced or widowed and have a child, and the age of their oldest child reported in the household roster. Responses were provided by a household head or, in case absence, a knowledgeable adult. Coefficients from OLS estimations are reported.
▸ Sample: Endline survey. Panel A includes results for all states, Panel B includes results for Andhra Pradesh, Panel C includes results for Assam, Panel D includes results for Jharkhand and Panel E for West Bengal.
▸ Part I considers adolescents of age 11-23 having had their first child age 10-19. Part II considers adolescents of age 11-23 having had their first child age 10-17. Part III restricts the sample to adolescents age 15-23 and considers adolescents age 15-23 having had their first child age 15-17. Part IV focuses on the age bracket where marriage is legal for girls but illegal for boys (age 18-21), having had their first child age 18-23. Columns (1), (2), (3), and (4) display the sample for girls only.
▸ Control variables were selected using a lasso-selection, a procedure which considers potential imbalances in key observable characteristics between treatment and control groups at baseline. All regressions also include age and gender as control variables.
▸ Estimation method: OLS regression with enumerator and state fixed effects.
▸ Standard errors clustered at the block level.
▸ Related table(s): Table A.49.

This result follows the lower rates of child marriages previously discussed for this treatment arms, implying that fewer marriages, in the first place, is likely the main channel for the reduced incidence of early pregnancy in the Parents Group only sample. Yet, a statistically significant increase is

observed in pregnancy rates for girls aged 18 to 21 in the same villages, which is within the legal ages for females. This evidence hints that Parents Group were the most effective medium associated with delayed pregnancy for already married girls. **However, the evaluation cautions against program results on early pregnancy given they were only reported by a small number of adolescent girls in the sample** as in Table 3.9.

Table 3.10: Early Pregnancy, *Plus Package* and Treatment Intensity

	(I) had first child 10-19 (now 11-23)	(II) had first child 10-17 (now 11-23)	(III) had first child 15-17 (now 16-23)	(IV) had first child 18-21 (now 18-23)
	(1)	(2)	(3)	(4)
Panel A: *Plus Package*				
Basic package	0.058	0.050	-0.017	0.022
	(0.065)	(0.060)	(0.057)	(0.061)
Plus package	-0.101*	-0.054	-0.010	0.061
	(0.056)	(0.054)	(0.052)	(0.054)
Control mean	0.571	0.260	0.260	0.581
N	197	197	196	191
Clusters	46	46	46	46
Model	ols	ols	ols	ols
Panel B: Program Intensity				
Basic package	0.058	0.050	-0.017	0.023
	(0.065)	(0.061)	(0.057)	(0.062)
Adolescent Boys Group only	-0.084	0.049	0.061	-0.105
	(0.081)	(0.087)	(0.100)	(0.111)
Parents Group only	-0.220*	-0.164***	-0.105**	0.320**
	(0.122)	(0.050)	(0.047)	(0.127)
Both groups	-0.069	-0.097	-0.034	0.107
	(0.058)	(0.078)	(0.080)	(0.102)
Control mean	0.571	0.260	0.260	0.581
N	197	197	196	191
Clusters	46	46	46	46
Model	ols	ols	ols	ols

‣ *Notes*: Table 3.10 displays *Plus Package* program effects on early pregnancy rates for different adolescents' age groups. The dependent variable, pregnancy, considers female household members that are married, divorced or widowed and have a child, and the age of their oldest child reported in the household roster. Responses were provided by a household head or, in case absence, a knowledgeable adult. Coefficients from OLS estimations are reported.
‣ Sample: Endline survey.
‣ Part I considers adolescents of age 11 to 23 having had their first child age 10 to 19. Part II considers adolescents of age 11 to 23 having had their first child aged 10 to 17. Part III restricts the sample and considers adolescents aged 15 to 23 having had their first child aged 15 to 17. Part IV focuses on the age bracket where marriage is legal for girls but illegal for boys (18-21), having had their first child at age18 to 23. Columns (1), (2), (3), and (4) display the sample for girls only.
‣ Control variables were selected using a lasso-selection, a procedure which considers potential imbalances in key observable characteristics between treatment and control groups at baseline. All regressions also include age and gender as control variables.
‣ Estimation method: OLS regression with enumerator and state fixed effects.
‣ Standard errors clustered at the block level.
‣ Related table(s): Table A.50.

The results from the disaggregated sample based on poverty status of the household shows that there is no difference between the two groups (Table 3.11).[14]

Evidence from In-Depth Interviews

Study participants' perceptions regarding the rarity of child marriage in all target villages applied also to adolescent pregnancies. Only one participant mentioned a pregnancy occurring prior to marriage (a 13-year-old girl impregnated by a married man who was later imprisoned). Most suggested that such cases primarily illustrated a lack of knowledge regarding sexual and reproductive health (specifically, family planning methods) and its taboo status in families and society. **Views**

[14]Heterogeneous program effects on early pregnancy between younger and older adolescents cannot be calculated because there is only one reported case of early pregnancies among adolescent girls aged 10 to 14.

Table 3.11: Early Pregnancy - Heterogeneous Analysis

	(I) had first child 10-19 (now 11-23)			(II) had first child 10-17 (now 11-23)			(III) had first child 15-17 (now 16-23)			(IV) had first child 18-21 (now 18-23)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Panel A: Poverty												
	Difference	Very Poor	Poor	Difference	Very Poor	Poor	Difference	Very Poor	Poor	Difference	Very Poor	Poor
Basic package	-0.051	0.146	0.205	-0.114	0.134	-0.097	-0.069	0.061	-0.075	-0.122	-0.090	0.545
	(0.168)	(0.106)	(0.343)	(0.168)	(0.091)	(0.149)	(0.164)	(0.097)	(0.105)	(0.194)	(0.155)	(0.557)
Control mean	0.566	0.632	0.368	0.263	0.298	0.158	0.263	0.298	0.158	0.575	0.611	0.474
N	196	146	50	196	146	50	195	145	50	190	140	50
Clusters	46	45	18	46	45	18	46	45	18	46	45	18
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols

- *Notes*: Table 3.11 displays heterogeneous program effects on early pregnancy for the following groups: Poverty (very poor vs. poor). Effects from OLS estimates are reported.
- Sample: Endline survey - Full sample.
- Part I considers adolescents of age 11 to 23 having had their first child age 10 to 19. Part II considers adolescents of age 11 to 23 having had their first child aged 10 to 17. Part III restricts the sample to adolescents aged 15 to 23 having had their first child aged 15 to 17.Part IV focuses on the age bracket where marriage is legal for girls but illegal for boys (age 18-21), having had their first child aged 18 to 21. Columns (3), (6), (9), and (12) display the effects for poor individuals (Panel A).
- Control variables were selected using a lasso-selection, a procedure which considers potential imbalances in key observable characteristics between treatment and control groups at baseline. All regressions also include age and gender as control variables.
- Estimation method: OLS regression with enumerator and state fixed effects.
- Standard errors clustered at the block level.

regarding the appropriate time to become parents varied across study participants. Although most felt pregnancies should not occur before the age of 20 (some suggested women and men should not become parents prior to the age of 25 and 29 years), some study participants suggested girls could conceive immediately following marriage at age 18. One parent group member suggested an even earlier age to coincide with the age of marriage: "If a girl is married at age of 15 to 16, then she must get a baby after 2 to 3 months" (Parent (group member, F, West Bengal). Some of our study participants did not mention an exact age but rather a number of years following marriage at which they felt it was appropriate for a woman to bear children. They highlighted the importance of the young couple reaching physical and moral maturity and being able to take care of themselves and their offspring. Although two study participants noted the advantage of having children early when other still living family members could help raise the children, nearly all agreed that there was "no advantage of having a child early" (Parent, F, West Bengal) and recounted, instead, the concerns linked to health implications for both the mother and baby (e.g., low birth weight, anaemia, disability, etc. due to the immaturity and not yet fully developed young woman's body).

III.A.3 Education

The AEP should also have led to improvements in schooling for all adolescents in treatment villages, relative to control villages. This was one of the main mediums to ensure that adolescents are not married off.

To examine this hypothesis, school attendance was captured through dummy (yes/no) indicators for current attendance to primary or secondary schools. These indicators are constructed for adolescents in different age-groups. Results on school attendance are based on endline survey

information captured through the household roster. In this module, the household head was asked about if household members currently attend different types of educational institutions.

Table 3.12 models program effects on current school attendance, disaggregating results by state gender and age-group. Results are presented for the same adolescent age groups considered in Tables 3.5 and 3.9.

The difference between education indicators, versus those of child marriage and early pregnancy, is that the age of the respondent is current. In the case of marriage or pregnancy, a respondent aged 22 could have been married at 17, and is thus included in the sample for these indicators. In the case of education, the sample includes adolescents that actually fell within the age category reported in the tables at the time of the data collection. Therefore, adolescents in the age groups included in Parts I to IV, were more likely to have been exposed to the program at the time of implementation (2015-2019).

Considering aggregate results from all states, the AEP had a very limited effect in increasing school attendance rates for adolescent boys and girls in the sample. However, more significant results are found within some states. The evaluation only finds a small, statistically significant, increase in attendance rates (+1.7pp) for adolescent girls, aged 10 to 19, in program areas. Overall, attendance rates were generally high, in both treatment and control areas (>85%). This was particularly true for the school attendance rate of adolescent boys and girls aged 10 to 17 (93%). Given high schooling rates in control areas, the AEP only had a marginal capacity to increase these. Likewise, it is important to note that COVID-19 and the resulting lockdowns might have affected some of the impacts on educational outcomes driven by the AEP. These factors might explain part of the limited effects of the AEP on education outcomes.

In Andhra Pradesh, the AEP is associated with higher school enrollment rates for school-aged adolescent boys. For adolescent boys aged 10 to 17, the evaluation finds a statistically significant increase of 3.5pp. When considering older school-aged adolescent boys, those aged 15 to 17, the effect is stronger and statically significant (+10.8pp). This means that the school attendance rates for adolescent boys (15-17) in treatment areas of Andhra Pradesh was 85%, an increase of 10.8pp over the attendance rate in control areas (74%). For adolescent boys aged 18 to 21 the evaluation finds a strong, statistically significant, negative effect in school attendance rates (-18.6pp).[15]. No statistically significant effects on school attendance rates are found for adolescent girls in any age group of Andhra Pradesh.

In Assam the AEP had a positive impact on school attendance rates among adolescent boys and girls. When considering together adolescent boys and girls aged 10 to 19, the program had statistically significant increase of 3.8pp. For adolescent boys this effect is strongly significant and slightly higher (+4.5pp). This increase in school attendance rates is also observed when

[15]In Andhra Pradesh, the evaluation also finds an increase (+3.3pp) in marriage rates for adolescent boys in this age group (18-21), when marriage is legal for boys but illegal for girls.

considering adolescent boys in all other age groups. When considering adolescent girls aged 10 to 19, the increase in school attendance is smaller (+3.2pp) and only weakly significant. Likewise, this increase is not observed for adolescent girls in other age groups.

In Jharkhand, the AEP is associated with an increase in school attendance rates for adolescent girls aged 10 to 19. The AEP increased school attendance rates for adolescents aged 10 to 19 by 2.6pp. This increase seems to be mainly driven by the increase (+6.2pp) in school attendance rates among adolescent girls aged 10 to 19 in treatment areas. When looking at adolescent boys and girls together, the evaluation also finds a sizeable, statistically significant, increase in school attendance for adolescents aged 18 to 21 (+8.5pp).

In West Bengal, the AEP did not lead to any significant increases in attendance rates for adolescent boys and/or girls. For adolescent girls aged 18 to 21, the evaluation finds a decrease in attendance rates (-7.5pp), but this is only weakly significant.

Table 3.13 disaggregates AEP effects on current schooling into *Plus Package* and *Basic Package* effects.

The AEP *Plus Package* did not have a systematic additional effect over the *Basic Package* in increasing schooling rates. The evaluation only finds a small, weakly significant, increase of 1.2pp over the *Basic Package* effect for adolescent boys and girls aged 10 to 19. This effect seems to be driven by ABGs. Adolescent boys groups are associated with an increase of 2.0pp in schooling rates for adolescent boys and girls when disaggregating *Plus Package* effects by treatment arm. For school-aged adolescent girls, the evaluation does not find any significant effects from *Plus Package* activities. ABGs are associated with an increase in schooling rates among adolescent girls aged 18 to 21 (+6.6pp), but this is only weakly significant.

In terms of heterogeneous effects, Table 3.15 shows the AEP is associated with a small increase in school attendance rates among older adolescent girls (15-23). Tables 3.14 and Tables 3.15 report heterogeneous program effects on current school attendance. Table 3.15 shows the AEP is associated with an increase of 2.6pp in the share of older adolescent girls who report they are currently attending school, when compared to older adolescent girls in the control group.

It is important to note that as a consequence of the pandemic and resulting lockdowns, several sources report setbacks and increasing disparities in access to education. To account for this, this section also discusses AEP effects on adolescents reporting to have been **ever** enrolled in primary or secondary education (Table A.34 in Appendix A.III.C).

The evaluation only finds positive effects in the share of adolescents reporting to have been ever enrolled in primary or secondary education in Andhra Pradesh. Within the state samples, the positive effect is observed for this outcome only in Andhra Pradesh. In the state, the *Basic Package* AEP component is associated with an increase in the share of adolescent girls and boys aged 18 to 21 reporting to have been ever enrolled in education. It is important to recollect that this

is the group that was aged 13 to 16 when the AEP was operating in Andhra Pradesh. Therefore, a 4.9pp (and an even larger 7.3pp for females) higher enrollment rate is an indication of the program's success in retaining adolescents in the school system during this age.

Negative effects are observed for adolescent boys aged 10 to 19 when looking at results from all states combined. For adolescent boys aged 10 to 19, a small statistically significant reduction of 0.6pp is observed. This implies that adolescent boys aged 10 to 19 were less likely to report having ever attended primary or secondary schools. With a younger age group, of adolescent boys aged 10 to 17, the effect persists, while it is insignificant for the age group of 15 to 17. This goes in line with the declining educational outcomes observed among younger adolescents since the COVID-19 pandemic started. Older adolescents were more likely to have attended primary schooling or secondary schooling, before the pandemic related restrictions intercepted the usual educational medium for the younger sample. For adolescent girls, no statistically significant effects are observed when considering aggregate effects on adolescent girls in all states.

Negative effects are observed for adolescent girls in Assam, Jharkhand and West Bengal. These effects, averaging a reduction of 8pp, are strongly significant for adolescent girls aged 10 to 19 in the three states. In West Bengal, the reduction is also statistically significant for adolescent girls aged 18 to 21.

Table A.35 and Table A.36 in Appendix A.III.C include effects on additional education indicators.

Table A.35 includes indicators for the share of adolescents aged 10 to 14 and 15 to 21 reporting to have been ever enrolled in secondary education. Likewise, the table reports on formal years of school among adolescents and drop-out rates before grade 9.

The evaluation finds positive effects in the share of adolescent girls aged 10 to 14 who have been ever enrolled in secondary education. There is a statistically significant increase of 3.1pp for adolescent girls aged 10 to 14 who have ever attended secondary education.[16] This effect seems to be driven by adolescent girls (10-14) in Assam, where the increase is more significant 6.3pp. In Assam, there is also a statistically significant increase for this outcome among adolescent boys and girls aged 15 to 21 (4.9pp), but this is primarily driven by an increase in the outcome for adolescent boys.

Negative effects are reported in the share of adolescent boys aged 10 to 14 who have been ever enrolled in secondary education. There is a statistically significant decrease of 4.0pp for adolescent boys aged 10 to 14 who have ever attended secondary education. This seems to be driven by adolescent boys in West Bengal (-7.9pp) and Andhra Pradesh (-7.9pp). This negative effects are not present for adolescent boys aged 15 to 21 in any state. This hints that COVID-19 could have delayed or prevented access to secondary education for adolescent boys aged 10 to 14.

[16]It is important to note that given the implementation timeline (2015-2019), younger adolescents had lower chances of being exposed to the program during implementation because of their young age.

The program had positive overall effects when considering formal years of education. An increase in 0.3 years of formal education is found among adolescent boys and girls in treatment areas, when considering results from all states combined. This increase is statistically significant for both girls and boys. Regarding drop-out rates, a strong, statistically significant, decrease is observed among adolescent boys in Jharkhand (-7.9pp).

Table A.36 considers AEP effects on educational attitudes. **All in all, the program had a modest effect in shaping educational attitudes. A positive effect is found in the share of adolescents who want to continue secondary education.** A higher share of adolescent boys and girls (+2.9pp) want to continue onto secondary education in program areas. This effect is stronger for adolescent boys (+5.8pp), and even more so for adolescent boys in Andhra Pradesh (+10.4pp). For adolescent girls, there is only a significant increase in Assam (+5.2pp), coupled with a similar, statistically significant decrease in West Bengal (-4.8pp). **The program had no consistent impact in other indicators capturing attitudes towards education.** In this sense, results for males in Jharkhand appear as particularly inconsistent. The evaluation finds a statistically significant reduction in the share of men who agree with the statement "Educating boys is more important than educating girls" (-4.9pp). However, among men in treatment areas of Jharkhand, there is also a strong, statistically significant reduction in the share of men who are willing to send their daughters to secondary education - -17.9pp when compared to men in the control group.

Evidence from In-Depth Interviews

In line with quantitative evidence, the majority of study participants reported high access to education, high school attendance rates and very low or non-existent drop-out rates. Only few participants felt that access to education was limited, especially for girls, noting that "parents consider [girls] a burden" and thus do not allow them to attend schools, particularly when these are far away from home (CPC head, F, West Bengal). Parents and adults more generally compared current improvements in school attendance to their youth, remarking that, "once upon a time, rich people only attended schools and others worked in their houses, but now [. . .] everyone has the same rights in studies and all" (Parent (group member), F, Andhra Pradesh). Many also attributed the success of high attendance rates to the AEP activities. In particular, they highlighted as influential factors in high enrollment rates and increased school attendance parents' greater awareness about the importance of education and gender equality as well as girls being encouraged to attend school. Some study participants also identified marriage and increased bride value as factors contributing to favorable enrollment rates: "unlike in the early days, girls can't be married if they are illiterate, so their education is important nowadays" (Parent, M, West Bengal).

All participants agreed on the importance of education for adolescents' development. Although a few adults suggested that 10^{th} or 12^{th} standard was a sufficient level of education, most adolescents and adults alike agreed that a college degree was necessary. Notably, interviewees suggested they had held these views prior to participation in the program, which they saw as possibly reinforcing but not changing their views. **For other adolescents, however, this change in perception was clearly linked to program activities:** "We got more concerned about the importance of education and how a lack of education can affect our life. All this, we realized after attending the

adolescent group" (Adolescent (peer leader), M, 18, West Bengal).

Reflecting UNICEF's identification of affordable and good quality secondary education as one of the main drivers of change against child marriage (**?**), our study suggests that improved infrastructure plays an important role in promoting school attendance. **Although most villages have a primary school, many do not have a high school and, in the absence of proper roads or street lighting, parents do not allow their children (especially daughters) to travel further to attend high school.** Several participants stated that government schemes, which for example provide financial support or free lunches, lessen the burden on parents and play a significant role in encouraging parents to send their children to school. Some of these schemes are aimed specifically at girls, as they were traditionally more disadvantaged in terms of accessing education. Some interviewees, however, observed a reversal in this trend, noting that boys are dropping out of school more often in order to earn money with which to support their families. While girls' drop-out rates had previously been higher than that of boys (as girls were getting married early), "most of the boys are [now] migrating to other states in search of job and easy cash" and thus no longer attend school (Head teacher, F, West Bengal).

Members of parents or adolescents' groups, CPC and SMC members all agreed on their responsibility to promote equal access to education and to prevent drop-outs through awareness programs and by informing the community of available schemes. They explained that the usual course of action for the rare occurrences of drop-outs involved contacting the parents, discussing with them the possible reasons for the drop out, creating awareness regarding the importance of remaining in school and trying to convince the parents to send their children back to school. These activities were either carried out by committee members or by the NGO to which adolescents typically reported such cases. Involving district authorities or calling the helpline was, in most cases, reported as the last recourse and rarely used. In some cases, participants felt it was impossible to convince parents to send their children to school and also unfair and unrealistic to ask them to do so, as the family could not sustain it. One parent from Assam noted, "after getting a closer look at the family's financial situation, we could not force [the child] to [go] back to school" (Parent, F, Assam).

Table 3.12: Current School Attendance

	(I) Age 10-19			(II) Age 10-17			(III) Age 15-17			(IV) Age 18-21		
	All (1)	Male (2)	Female (3)	All (4)	Male (5)	Female (6)	All (7)	Male (8)	Female (9)	All (10)	Male (11)	Female (12)
Panel A: All states												
Basic package	0.010	0.003	0.017**	0.007	0.007	0.007	0.017	0.023	0.014	0.016	0.021	0.002
	(0.007)	(0.012)	(0.008)	(0.006)	(0.008)	(0.006)	(0.011)	(0.017)	(0.014)	(0.020)	(0.034)	(0.024)
Control mean	0.876	0.867	0.883	0.934	0.929	0.939	0.879	0.861	0.893	0.536	0.493	0.578
N	9,723	4,642	5,081	7,846	3,749	4,097	3,427	1,530	1,897	3,143	1,551	1,592
Clusters	72	72	72	72	72	72	72	67	69	72	71	70
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols
Panel B: Andhra Pradesh												
Basic package	-0.002	-0.041	0.038	0.011	0.035*	-0.013	0.040	0.108**	-0.014	-0.055	-0.186**	0.074
	(0.020)	(0.032)	(0.025)	(0.013)	(0.020)	(0.017)	(0.026)	(0.049)	(0.039)	(0.053)	(0.072)	(0.060)
Control mean	0.840	0.851	0.830	0.890	0.878	0.903	0.814	0.746	0.867	0.571	0.638	0.494
N	1,062	519	543	828	395	433	367	162	205	394	208	186
Clusters	33	33	33	33	33	33	33	28	30	33	32	31
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols
Panel C: Assam												
Basic package	0.038***	0.045**	0.032*	0.026***	0.033***	0.020	0.042**	0.050**	0.042	0.068*	0.115*	0.018
	(0.009)	(0.017)	(0.016)	(0.006)	(0.005)	(0.011)	(0.016)	(0.018)	(0.023)	(0.033)	(0.055)	(0.051)
Control mean	0.884	0.871	0.897	0.936	0.926	0.946	0.891	0.870	0.910	0.523	0.455	0.579
N	2,064	991	1,073	1,705	820	885	768	348	420	670	311	359
Clusters	8	8	8	8	8	8	8	8	8	8	8	8
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols
Panel D: Jharkhand												
Basic package	0.026*	-0.016	0.065**	0.007	-0.022	0.030	0.018	-0.040	0.059	0.085**	0.105	0.060
	(0.013)	(0.018)	(0.028)	(0.024)	(0.016)	(0.036)	(0.045)	(0.030)	(0.070)	(0.037)	(0.063)	(0.046)
Control mean	0.830	0.842	0.819	0.914	0.923	0.905	0.825	0.849	0.802	0.422	0.402	0.442
N	3,101	1,513	1,588	2,479	1,229	1,250	1,043	493	550	1,030	495	535
Clusters	11	11	11	11	11	11	11	11	11	11	11	11
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols
Panel E: West Bengal												
Basic package	-0.007	-0.003	-0.011	-0.005	-0.007	-0.002	-0.002	0.003	-0.007	-0.018	0.022	-0.071*
	(0.011)	(0.022)	(0.010)	(0.007)	(0.012)	(0.006)	(0.013)	(0.029)	(0.012)	(0.031)	(0.048)	(0.041)
Control mean	0.931	0.902	0.954	0.970	0.960	0.978	0.946	0.914	0.966	0.664	0.551	0.782
N	3,496	1,619	1,877	2,834	1,305	1,529	1,249	527	722	1,049	537	512
Clusters	20	20	20	20	20	20	20	20	20	20	20	20
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols

▸ *Notes*: Table 3.12 displays program effects on current school attendance for different adolescents' age groups. The dependent variable is whether a person currently attends primary or secondary school as reported in the household roster. Responses were provided by a household head or, in case absence, a knowledgeable adult. Effects from OLS estimates are reported.

▸ Sample: Endline survey. Panel A includes results for all states, Panel B includes results for Andhra Pradesh, Panel C includes results for Assam, Panel D includes results for Jharkhand and Panel E for West Bengal

▸ Part I considers adolescents age 10 to 19, Part II restricts the sample to adolescent age 10 to 17, Part III considers past educational attendance amongst the age group of adolescents aged 15 to 17, and Part IV focuses adolescents aged 18 to 21 (now 18-23) . Columns (1), (4), (7), and (10) display the full sample. Columns (2), (5), (8), and (11) display the sample for boys only. Columns (3), (6), (9), and (12) display the sample for girls only.

▸ Control variables were selected using a lasso-selection, a procedure which considers potential imbalances in key observable characteristics between treatment and control groups at baseline. All regressions also include age and gender as control variables.

▸ Estimation method: OLS regression with enumerator and state fixed effects.

▸ Standard errors clustered at the block level.

▸ Related table(s): Table A.51.

Table 3.13: Current School Attendance, *Plus Package* and Treatment Intensity

	(I) Age 10-19			(II) Age 10-17			(III) Age 15-17			(IV) Age 18-21		
	All (1)	Male (2)	Female (3)	All (4)	Male (5)	Female (6)	All (7)	Male (8)	Female (9)	All (10)	Male (11)	Female (12)
Panel A: *Plus Package*												
Basic package	0.004	-0.004	0.012	0.004	0.001	0.006	0.014	0.021	0.009	0.005	0.019	-0.014
	(0.008)	(0.013)	(0.009)	(0.007)	(0.009)	(0.008)	(0.014)	(0.020)	(0.018)	(0.022)	(0.039)	(0.023)
Plus package	0.012*	0.016	0.010	0.006	0.012	0.002	0.005	0.003	0.012	0.023	0.004	0.039
	(0.007)	(0.010)	(0.012)	(0.007)	(0.009)	(0.011)	(0.015)	(0.021)	(0.022)	(0.025)	(0.036)	(0.027)
Control mean	0.876	0.867	0.883	0.934	0.929	0.939	0.879	0.861	0.893	0.536	0.493	0.578
N	9,723	4,642	5,081	7,846	3,749	4,097	3,427	1,530	1,897	3,143	1,551	1,592
Clusters	72	72	72	72	72	72	72	67	69	72	71	70
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols
Panel B: Program Intensity												
Basic package	0.004	-0.002	0.012	0.004	0.002	0.006	0.014	0.018	0.009	0.005	0.000	-0.015
	(0.008)	(0.012)	(0.009)	(0.007)	(0.007)	(0.008)	(0.014)	(0.016)	(0.018)	(0.022)	(0.034)	(0.023)
Adolescent Boys Group only	0.020**	0.028*	0.017	0.004	0.009	0.001	-0.004	-0.010	0.003	0.039	0.019	0.066*
	(0.009)	(0.016)	(0.012)	(0.008)	(0.013)	(0.012)	(0.016)	(0.029)	(0.023)	(0.027)	(0.048)	(0.034)
Parents Group only	0.013	0.020	0.011	0.010	0.014	0.007	0.018	0.010	0.033	0.048	0.042	0.076
	(0.015)	(0.020)	(0.016)	(0.011)	(0.017)	(0.012)	(0.022)	(0.031)	(0.023)	(0.044)	(0.055)	(0.047)
Both groups	0.004	0.007	0.003	0.004	0.010	-0.001	0.004	0.002	0.004	-0.020	-0.009	-0.032
	(0.012)	(0.013)	(0.016)	(0.012)	(0.013)	(0.015)	(0.026)	(0.028)	(0.033)	(0.030)	(0.051)	(0.034)
Control mean	0.876	0.867	0.883	0.934	0.929	0.939	0.879	0.861	0.893	0.536	0.493	0.578
N	9,723	4,642	5,081	7,846	3,749	4,097	3,427	1,530	1,897	3,143	1,551	1,592
Clusters	72	72	72	72	72	72	72	67	69	72	71	70
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols

▸ *Notes*: Table 3.13 displays *Plus Package* program effects on current school attendance for different adolescents' age groups. The dependent variable is whether a person is currently attending primary or secondary school as reported in the household roster. Responses were provided by a household head or, in case absence, a knowledgeable adult. Effects from OLS estimates are reported.

▸ Sample: Endline survey.

▸ Part I considers adolescents age 10 to 19, Part II restricts the sample to adolescent age 10 to 17, Part III considers past educational attendance amongst the age group of 15 to 17, and Part IV focuses adolescents aged 18 to 21 (now 18-23). Columns (1), (4), (7), and (10) display the full sample. Columns (2), (5), (8), and (11) display the sample for boys only. Columns (3), (6), (9), and (12) display the sample for girls only.

▸ Control variables were selected using a lasso-selection, a procedure which considers potential imbalances in key observable characteristics between treatment and control groups at baseline. All regressions also include age and gender as control variables.

▸ Estimation method: OLS regression with enumerator and state fixed effects.

▸ Standard errors clustered at the block level.

▸ Related table(s): Table A.52.

Table 3.14: Current School Attendance - Heterogeneous Analysis (I)

	(I) Age 10-19			(II) Age 10-17			(III) Age 15-17			(IV) Age 18-21		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Panel A: Poverty												
	Difference	Very Poor	Poor	Difference	Very Poor	Poor	Difference	Very Poor	Poor	Difference	Very Poor	Poor
Basic package	-0.022	0.007	0.020	-0.015	0.004	0.023	-0.010	0.015	0.024	-0.043	0.006	0.023
	(0.015)	(0.008)	(0.015)	(0.012)	(0.006)	(0.015)	(0.028)	(0.012)	(0.033)	(0.045)	(0.025)	(0.045)
Control mean	0.876	0.876	0.874	0.934	0.935	0.931	0.879	0.878	0.879	0.536	0.530	0.556
N	9,701	7,628	2,073	7,831	6,169	1,662	3,420	2,703	717	3,132	2,449	683
Clusters	72	72	47	72	72	46	72	72	44	72	72	44
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols

▸ *Notes*: Table 3.14 displays heterogeneous program effects on current school attendance indicators for the following groups: Poverty (very poor vs. poor). Effects from OLS estimates are reported.
▸ Sample: Endline survey.
▸ Part I considers adolescents age 10 to 19, Part II restricts the sample to adolescent age 10 to 17, Part III considers past educational attendance amongst the age group of 15 to 17, and Part IV focuses adolescents aged 18 to 21 (now 18-23). Columns (1), (4), (7), and (10) display the difference between the two groups. Columns (2), (5), (8), and (11) display the effects for very poor individuals (Panel A). Columns (3), (6), (9), and (12) display the effects for poor individuals (Panel A).
▸ Control variables were selected using a lasso-selection, a procedure which considers potential imbalances in key observable characteristics between treatment and control groups at baseline. All regressions also include age and gender as control variables.
▸ Estimation method: OLS regression with enumerator and state fixed effects.
▸ Standard errors clustered at the block level

Table 3.15: Current School Attendance - Heterogeneous Analysis (II)

	Current school attendance		
	(1)	(2)	(3)
Panel A: Younger vs. Older Adolescents			
	Difference	Younger adolescents (10-14)	Older adolescents (15-23)
Basic package	-0.017	0.002	0.021*
	(0.031)	(0.004)	(0.012)
Control mean	0.876	0.978	0.791
N	9,723	4,419	5,304
Clusters	72	72	72
Model	ols	ols	ols
Panel B: Younger vs. Older Adolescents (Female only)			
	Difference	Younger adolescents (10-14)	Older adolescents (15-23)
Basic package	-0.022	-0.003	0.014
	(0.036)	(0.006)	(0.022)
Control mean	0.867	0.977	0.768
N	4,642	2,219	2,423
Clusters	72	72	72
Model	ols	ols	ols
Panel C: Younger vs. Older Adolescents (Male only)			
	Difference	Younger adolescents (10-14)	Older adolescents (15-23)
Basic package	-0.011	0.009*	0.026**
	(0.032)	(0.005)	(0.013)
Control mean	0.883	0.979	0.810
N	5,081	2,200	2,881
Clusters	72	71	72
Model	ols	ols	ols

- *Notes*: Table 3.15 displays heterogeneous program effects on current school attendance for younger (10-14) vs. older adolescents (15-23). Effects from OLS estimates are reported.
- Sample: Endline survey. Full sample.
- Columns (1), (4), (7), and (10) display the full sample. Columns (2), (5), (8), and (11) display the sample for young adolescents. Columns (3), (6), (9), and (12) display the sample for older adolescents.
- Control variables were selected using a lasso-selection, a procedure which considers potential imbalances in key observable characteristics between treatment and control groups at baseline. All regressions also include age and gender as control variables.
- Estimation method: OLS regression with enumerator and state fixed effects.
- Standard errors clustered at the block level.

III.B Intermediate Outcomes: Empowerment, Communication, Social Norms, and Service Provision

This section looks at the effect on the intermediate outcomes targeted by the AEP. These intermediate outcomes, were envisioned as impact pathways to shape the final outcomes addressed in the previous section. They include adolescent empowerment, communication, social norms and service provision. Were there to be no effects within these channels, through which the adolescents were to become "agents of change", the muted results observed in the previous section might become clear. Note, Appendix A.III.C includes tables for *Plus Package* and heterogeneous results for all intermediary outcomes.

Impact/ Effectiveness (Intermediate Outcomes) - Key Findings
Key findings that emerge from this section in relation to evaluation questions are:

EQ. 2.1. *Did adolescents, parents, and community members acquire an increased sense of adolescents empowerment and gender equality through the program?*

Overall results At the aggregate level, the AEP shows positive effects in terms of supporting awareness of child rights among adolescents, parents and community service providers. The share of respondents in program areas that was aware of child rights was 25%, relative to 17.7% in control areas - a 7.3pp improvement. However, improvements in other areas of adolescent empowerment were very limited or non-existent. In this sense, improvements in terms of confidence were only observed among adolescents in Andhra Pradesh. No improvements were observed in terms of well-being, self-efficacy or active support for adolescents in any state.

- In **Andhra Pradesh**, adolescent girls in program areas showed higher levels of confidence than adolescent girls in control areas. For instance, adolescent girls were 12.0pp more likely to feel confident in doing activities by themselves.
- In **Assam** the program is not associated with any positive effects in terms of adolescent empowerment outcomes.
- In **Jharkhand** the program is associated with positive results for adolescent girls but negative results for adolescent boys.
- In **West Bengal** the program is not associated with any effects in terms of adolescent empowerment outcomes.

EQ. 2.2. *Did intergenerational and intragenerational communication improve through the program?*

Overall results All in all, the Adolescent Empowerment Program had a limited effect in supporting communication outcomes. The program increased slightly intergenerational dialogue for adolescent boys

and girls. In this line, the program had a small, statistically significant, positive effect (+2.2pp) in the share of intergenerational dialogue situations that adolescent boys and girls engaged in. This positive effect was stronger when focusing on adolescent girls alone (+2.8pp) and on older adolescent girls in particular (+4.2pp). Likewise, intragenerational dialogue increased among older adolescent girls (+2.2pp). The program shows no significant results at the aggregate level on intragenerational dialogue or the number of situations in which parents consider adolescents' opinions. At the state level, program effects were also limited:

- In **Andhra Pradesh**, the AEP increased interpersonal communication competences among adolescent girls in Andhra Pradesh, but only slightly so (being around 1.38 points higher on the scale, compared to control group).
- In **Assam**, the AEP increased intragenerational dialogue among adolescent boys (+3.1pp)
- In **Jharkhand**, the AEP did not result in any significant changes in terms of any communication outcome, despite the focus the program had on supporting communication outcomes in this state.
- In **West Bengal**, the AEP increased intragenerational dialogue among adolescent boys (+4.3pp).

***EQ. 2.3.**. Did social norms and practices change in treated communities towards abolishing structural impediments to adolescents, especially girls?*

Overall results At the aggregate level, evidence from quantitative data hints that the program did not significantly shape social norms surrounding child marriage or equal opportunities for girls and boys. When looking at program effects on men, a small decrease in disagreement with child marriage is observed (-2.0pp). In qualitative interviews, respondents who took part in the program noted positive changes in regards to their attitudes about equality. This includes learning about treating girls and boys equally in relation to their educational pursuits and becoming more aware of the importance of providing girls the opportunity to attend school for the same length of time as boys. However, respondents felt equality between girls and boys was something " people just say" and that, " in real life, it's not true". At the state level, some of the indicators capturing social norms show significant changes, but these are mostly weak in size:

- In **Andhra Pradesh** female respondents in treatment areas were could recognize more child rights that female respondents in control areas (4.5pp).
- In **Assam** male respondents were slightly more likely to hold positive attitudes in relation to equality between girls and boys (2.2pp). Likewise, female respondents in treatment areas were more likely to agree with positive attitudes around child marriage (3.1pp.
- In **Jharkhand**, male respondents were more likely to disagree child marriage, as captured by the differences in the summary index on disapproval against child marriage (6.1pp).
- In **West Bengal**, negative effects are observed for respondents, who agree that "it is fine to marry off sons before 18" (0.5pp considering both male and female respondents).

***EQ. 2.4.**.Did the program improves community services to support adolescents rights and entitlements?*

Overall results Considering results from all states, access to community services within treatment areas improved slightly more than in control areas. Community leaders in treatment areas were slightly more likely to report an improvement in access to community services (4.7pp). Likewise, access to Child Protection Committees was improved in treatment areas. However results differ by state and a large majority of community leaders reported CPCs were not present in their village.

- In **Andhra Pradesh**, knowledge and access to existing government services improved among adolescent girls (+6.4pp). Adolescent girls in control areas of the state where aware of 6.68 government services provided by the government, out of 19, and adolescent girls in treatment areas were aware of 7.9 services. In Andhra Pradesh, knowledge and access to existing government schemes also increased among adolescent boys (+2.7pp).
- In **Assam**, 26% of community leaders reported the existence of a CPC (+15.1pp over control areas).
- In **Jharkhand**, program effects on knowledge and access to community services and CPCs were low.
- In **West Bengal**, access to community services within treatment areas improved by more than in control areas, as reported by community leaders (6.5pp).

III.B.1 Adolescent Empowerment

The AEP was designed to strengthen adolescent empowerment with a multi-pronged approach. The program targeted adolescents to expand awareness of adolescents' rights and to foster their confidence, self-efficacy, and psycho-social well-being. Likewise, the program targeted, parents, community members and service providers to increase their awareness of adolescent rights and to create a conductive environment to their protection.

Table 3.16 display AEP effects on selected adolescent empowerment indicators by state using OLS regressions. Part I in Table 3.16 considers *Basic Package* program effects on four indicators - awareness of child rights topics, confidence of the adolescent in day to day activities, as well as a summary indicator on overall confidence, and a Well-being scale constructed from World Health Organization (WHO)-5 items.

At the aggregate level, the AEP showed positive effects in terms of supporting awareness of child rights among adolescents, parents and community service providers. The share of respondents in program areas that were aware of child rights was 25.2%, relative to 17.8% in control areas - a 7.4pp improvement when considering both male and female respondents. At the state level, this effect is observed in the states of Andhra Pradesh and Jharkhand (14.2pp and 4.8pp, respectively). In Andhra Pradesh, awareness of child rights was higher among both male and female respondents,

(13.5pp and 14.9pp, respectively). In Jharkhand, awareness of child rights increased 6.8pp among male respondents, when compared to male respondents in control areas. In Assam and West Bengal no significant effects are observed in terms of enhanced awareness on child rights among female or male respondents.

Positive effects in terms of enhanced adolescents' confidence are only observed for adolescent girls in Andhra Pradesh and Jharkhand. Part II in Table 3.16 explores the impact of the *Basic Package* effects on adolescents' confidence [17]. The share of adolescent girls who reported feeling confident in doing activities by themselves was 11.6pp higher in program areas of Andhra Pradesh and 11.0pp higher in program areas of Jharkhand. This means that while 46% of adolescent girls in control areas of Andhra Pradesh reported feeling confident in doing activities by themselves, 57.6% did so in treatment areas. Considering the summary indicator for confidence, the AEP is also associated with positive results for adolescent boys in treatment areas of Andhra Pradesh, as captured by the increase in the share of activities that adolescent girls felt confident to engage in (+8.6pp). In Jharkhand, the AEP is also associated with negative effects for adolescent boys. For the summary indicator, in Jharkhand, negative effects are observed for adolescent boys in program areas, with a 14.3pp reduction in the share of adolescents confident to do activities by themselves. No other statistically significant results are found for adolescent girls or boys in other states.

All in all, no effects on improved mental well-being are observed, in any state among adolescent girls or boys. Part III in Table 3.16 focuses on AEP effects on adolescents' mental well-being. Mental well-being is captured using the WHO-5 Well-being Index (WHO-5).[18]

In Appendix A.III.B, Tables A.26 and Tables A.27 look at *Plus Package* and heterogeneous impacts on adolescent empowerment. Tables A.26 reports that boys and parent groups, when implemented together as part of the *Plus Package*, had an additional positive effect over the *Basic Package* effect in increasing confidence among adolescents (+6.3pp).

[17]This is captured through two indicators: Adolescents' self-reported confidence for doing day-to-day activities by themselves and a summary score indicating how confident an adolescent is in their community. In order to capture adolescents' confidence in day-to-day situations, adolescents were asked to indicate on a scale from 1 (not at all confident) to 7 (very confident) how confident they are in performing a number of activities by themselves, such as going to the local market alone or going to school. The summary variable indices of confidence is generated out of the six activities, describing the share of activities the adolescent feels (very) confident about performing on a scale from 0 to 1.The individual variables are first converted to binary variables, which are coded as 1 if the adolescent answered being confident (=6) or very confident (=7), and 0 otherwise. Thereafter, a score variable is generated which indicates the total number of activities the adolescent feels (very) confident about performing (max. six). In a final step, the summary variable is constructed by rescaling the score to range between 0 and 1, attained by dividing the score by the number of total number of questions included in the summary variable (i.e., by six).

[18]"Share of WHO-5 items Well-being scale" was constructed by asking adolescents and their parents to indicate how frequently on a scale from 1 (all the time) to 6 (at no time) they (or their child) felt certain positive emotions over the last two weeks. These variables were recoded for higher values to indicate a better state (i.e., so that 5 corresponds to "all the time" and 0 to "at no time"). Then answers were summarized across the five questions (25 being the maximum). Based on this scale, a summary indicator for well-being was constructed (dividing the total number indicated by 25) which indicates the share reached on the WHO-5 scale, with 1 representing the best imaginable well-being.

The AEP had a significant effect in expanding awareness of adolescent rights among very poor adolescents and older adolescent boys (15-23). Table A.27 shows that the AEP had a greater effect in terms of increasing awareness of adolescent rights among very poor respondents (+9.7pp) when compared to very poor respondents in control areas). Likewise, the program had a large significant effect in increasing awareness of adolescent rights among older adolescent boys, (+14.3pp) and younger adolescent boys (+17pp). Results show however, no significant changes in terms of increased awareness of adolescent rights for younger or older adolescent girls, when compared with other younger or older adolescent girls in control areas.

Tables A.37 and A.38 in Appendix A.III.C include additional results on adolescent empowerment, with a focus on non-violent environments, self-efficacy and active support for adolescents.

No statistically significant positive effects are found in terms of enhanced self-efficacy or violence reduction for adolescent girls or boys. The AEP is not associated with any positive results in terms of the share of respondents who agree it is ok to punish your daughter if she discussed marriage timing with parents. Likewise, the program did not affect the number of situations in which adolescents reported experiencing violence. No statistically significant results are captured in the summary index for self-efficacy either.

Considering results from all states, program effects in enhancing active support for adolescents was limited. Table A.38 reports no statistically significant increases in terms of the number of harms from violence to adolescents that parents can recognize or in terms of the number of actions parents took to support adolescents. The program is associated with a small increase in joint action from adolescents to uphold adolescent rights. In control areas, 10% of adolescent girls reported that adolescents in their community had come together to request local government officials or political leaders for anything benefitting adolescents. In control areas, the share of adolescent girls who did so was 12.4%, an increase of 2.4pp.

Additional indicators show the AEP had a modest impact in terms of enhancing adolescent empowerment and agency in their surroundings.. Figures 3.4 and 3.4 also visualize the impact of the AEP **Basic Program!** (**Basic Program!**) effect on various indicators of awareness and empowerment for the complete sample. For each indicator, the point estimate is depicted by the blue diamond in each line, while the confidence interval (95%) are the blue bounds to the left and right of this point. Statistical significance (5% or lower) is denoted by the blue bounds not overlapping the "No Effect" vertical dotted line. Confidence intervals that touch slightly the dotted no-effect line represent statistical significance at the 10% level. The size of the coefficient for the overall treated sample has been reported for each indicator above the blue point, while the control mean and number of observations, N, is reported under the indicator name. From the non-overlapping confidence interval, the indicators (besides reach on CR which was discussed previously) that show a significant difference compared to the control group are - confident about speaking in public (3.8pp higher, or nearly 25% of treated adolescents) and submitting requests to government bodies to benefit adolescents in the last 4 years (2.0pp higher, or around 11% in the treated group). Weak significance (at 10% level) is also observed for the indicator - choosing which clothes to wear.

The only indicator (from those presented) that appears to perform worse in the treated sample is the knowledge on what rights adolescents have to protect themselves against child labor. This coefficient is close to being weakly significant (nearly crossing the No Effect line), but suggests that around 82.2% of treated adolescents, compared to 85% in control areas, were aware of rights to counter child labor.

Construction of Summary or Index Variables

To capture broad concepts and more efficiently summarize information, the report presents summarized information of several responses on a similar topic, so-called "indices". In what follows, the general procedure of generating these indices is outlined shortly. Summary variables (or indices) are constructed by first generating score variables which summarize the responses to several individual questions, and, in a second step, by rescaling this score to range between 0 and 1. Rescaling is achieved by dividing the achieved score by the number of total subcomponents included in the summary variable.

To make this procedure clearer, please consider the following example. Imagine respondents were asked to answer a set of ten questions with yes or no. In order to aggregate the responses to the ten questions into an index, the following steps are followed:

1. Individual indicator variables (responses) for each question are generated, coded as 1 if the respondent indicated an improvement, and 0 otherwise. Thereby all responses first need then to point to the same direction (for instance that a 1 always indicates an improvement);
2. A score variable is generated which indicates the total number of questions the respondent answered with yes (max. ten);
3. The score variable is rescaled to range between 0 and 1, attained by dividing the score by the number of total number of questions included in the summary variable (i.e., by ten);

The resulting summary variable (or index) indices, out of the ten questions, the share of questions that were answered with yes on a scale of 0 to 1. If, for example, a respondent answered four questions with yes, then their corresponding summary variable would lie at 0.4, in other words the respondent answered 40% of the questions with yes.

This procedure is similar to how **?** construct their indices. For example, for their gender empowerment index, they first construct a score indicating the number of questions (out of eight) to which respondents answered that both genders should be equally responsible. Therefore, higher values represent more egalitarian gender norms. They then rescale the score to range between 0 and 100. Their gender empowerment index, thus, indicates the share of questions (out of eight) to which the answer was both genders should be responsible. Note that other approaches to index construction are possible, such as adding weights as done by **?**.

Evidence from In-Depth Interviews

In line with quantitative evidence, adolescents frequently reported increased awareness of their rights and more knowledge around education, child marriage and adolescent pregnancies. Adolescents reported increased knowledge and behavior change in relation to the core pillars

of the awareness campaigns and group sessions, that is, education, child marriage and adolescent pregnancies. Many reported having been made aware of these issues and realizing the importance of studying as well as delaying marriage and child-bearing in order to increase their family's quality of life. Adolescent study participants also recounted learning to resist family or community members' attempts to push them into early marriage or to infringe on their right to education. Some described using their newly acquired knowledge (and confidence) to convince their parents to allow them to delay marriage or to study longer. One participant described being the first in his family to continue studying beyond secondary school: "After joining the group, I see one major change in my family. In the cast which I belong to, nobody is very educated but I am getting educated and planning for higher education" (Adolescent (peer leader), M, 19, Jharkhand). Others reported advocating for adolescents' education by convincing families to send their children to school or to delay marriage. Adolescents and parents alike mentioned such changes, noting parents are now faced with children who are aware of their rights and equipped to fight for them. Indeed, one parent group member from West Bengal suggested that adolescents "have become more confident and aware. They themselves do protest against their marriage at early age. They aspire to higher education and to get established in life. They want to fulfill their dreams" (Parent group member, F, West Bengal).

In line with quantitative evidence, girls frequently reported less confidence to perform their day-to-day activities outside the household. Boys mostly reported enjoying complete freedom of mobility without restrictions, though several indicated their lack of interest in participating in political meetings where alcohol and bribes are often distributed. Girls, in contrast, reported being faced with various restrictions pertaining to their mobility outside the household. Although a few girls indicated (and some parents confirmed) they could participate in all social events, some reported not being allowed to attend certain events or locations such as cock fights, bars or the village fair. Others indicated that they were not allowed to go out on their own and/or after dark: "We don't participate in any social discussions or events. In mosque, we are not allowed and in marriage or funerals, elders participate. We are not allowed to be involved in much" (Adolescent (peer leader), F, 18, Assam). Finally, girls reported even more limited movement during menstruation, during which (with very few exceptions) parents reportedly prohibit girls from going to the temple or in some cases even to school.

Young women reported feeling more capable to report various forms of abuse since they began participating in the AEP. They suggested that their increased self-confidence and agency encouraged them to speak more openly to their parents if someone teased or abused them, or to fight back directly. Several participants described having "gained [through the AEP] that much courage to protest an abuser" (Adolescent (group member), F, 16, West Bengal). This new-found confidence also encouraged adolescents to report rights violations (e.g., an attempted child marriage) they observed among others. Some adults also recognized girls' and women's agency to protest when victimized and opined that sexual and gender-based violence was "not common nowadays. It's an educated society where girls do protest if they are tortured" (Parent (group member), M, West Bengal).

Most participants reported that parents were in charge of decision-making for the household. The father typically takes responsibility for larger decisions external to the household and the mother for daily within-household decisions. Participants mentioned that, in some cases, uncles or grandparents (or in the absence of the father, the elder brother) take decisions for the family. Most (but not all) adolescents reported having no influence on decision-making within their households, even in relation to decisions that directly concern them. Only a few adolescents study participants reported feeling completely included in the family decision-making process: "Before making any decision, discussions are done among the members of the family. Each of our opinions is counted before the final decision is made" (Adolescent (group member), M, 18, Assam).

III.B.2 Communication

The AEP supported adolescents' inter- and intragenerational communication skills to empower them by shaping attitudes towards marriage, gender roles and education. To do this, the AEP facilitated dialogue among adolescents as well as between parents and their adolescent offsprings. Likewise, adolescent and/or parent discussion groups were organized in program areas assigned to *Plus Package* components.

Table 3.17 displays *Basic Package* AEP effects on communication indicators by state, and for gender sub-samples. In Appendix A.III.C, Table A.28 displays *Plus Package* AEP effects on communication indicators while Table A.29 focuses on heterogeneous effects.

Part I of the table considers two indicators of intergenerational dialogue. The first, "share of intergenerational dialogue" is a scale (0-1) that captures the share of intergenerational dialogue situations that respondents took part in. Adolescents and parents were asked whether they (or their adolescent offsprings) did any of the following activities in the last three months: Contacted their sibling's teachers regarding their education, convinced or tried to convince their parents to send their brothers or their sisters to school (separate questions), negotiated with their parents on behalf of their sisters so that they can get skills training, talked to their parents regarding their fears and emotions, and talked to their parents about their future marriage. Likewise, if respondents attended any type of event, group session or training[19], respondents were asked whether they had discussed the topics of this activity with their parents/children[20].

The AEP encouraged slightly intergenerational dialogue for adolescent boys and girls. The program had a small, statistically significant, positive effect (2.2pp) in the share of intergenerational

[19]Not necessarily restricted to AEP trainings

[20]These individual variables are first converted to binary variables, which are coded as 1 if the adolescent answered yes, i.e., if they engaged in the dialogue, and 0 otherwise. Thereafter, a score variable is generated which indicates the total number of situations in which respondents engaged in intergenerational dialogue (max. seven). In a final step, the summary variable is constructed by rescaling the score to range between 0 and 1, attained by dividing the score by the number of total number of components included in the summary variable (i.e., by seven)

dialogue situations that adolescent boys and girls engaged in. This positive effect is stronger when focusing on adolescent girls alone (2.8pp). State-wise, positive, statistically significants, effects are observed for adolescent girls in West Bengal (4.3pp) and for adolescent boys in Assam (3.0pp). In Jharkhand, where the AEP had a particular focus on supporting intergenerational dialogue, results are not consistent and weakly significant. For adolescent girls, there is a positive, weakly significant positive effect (2.7pp). For adolescent boys this effect is negative and weakly significant (2.4pp). Regarding *Plus Package* effects, Table A.28 reports no additional effects from providing a higher intensity of treatment, involving adolescent boys and parents, through *Plus Package* activities.

The AEP *Basic Package* did not effectively increase the share of situations in which parents consider their child's opinion. Columns (4) to (6) of Table 3.17 report program effects on the index for situations in which parents consider their child's opinion. Adolescents and parents were asked in which situations their parents (or they) take their (or their child's) opinion into consideration, on a scale from 1 (fully considered or accepted) to 3 (not taken into consideration or accepted). These included, for example, the decision to go to the local market alone, the decision whether to go to the doctor or medical facility, the decision on whether to speak out in public, etc.[21] The summary index captures the number of situations, out of seven possible situations, in which parents (fully or somewhat) consider their child's opinion on a scale from 0 to 1. Only in the overall sample a weakly significant effect size of 0.6pp is observed. No effect is found within the state or gender sub-samples.

The AEP did not increase interpersonal communication competences significantly in any state. The AEP is only associated with a small, weakly significant increase in interpersonal communication competences among adolescent girls in Andhra Pradesh. Part II in Table 3.17 focuses on *Basic Package* AEP effects in supporting intergenerational communication competence. An important scale thereby is an established psychological scale on communication by **?**: The Interpersonal Communication Competence (ICC) scale. Adolescents and parents were asked to indicate whether (ten) statements such as "I allow friends to see who I really am" and "I am comfortable in social situations" fit them (or their child) on a scale from 1 (never) to 5 (always). Using this scale, different domains can be generated: Identity and self-esteem (indicator for social relaxation), empathy and respect (using the indicators for empathy, assertiveness, and altercentrism), communication and expression (with indicators for self-disclosure for interaction management, expressiveness, immediacy, supportiveness) and finally coping with stress and managing emotions (using the indicator for environmental control). Taking their answers for the ten domains together, the Interpersonal Communication Competence score indicates adolescents' overall communication competence on a scale from 10 to 50, with 50 representing full competence across 10 dimensions. **Positive significant effects in intergenerational communication competence are only observed**

[21] In a first step, the seven individual variables are converted to binary variables, which are coded as 1 if the respondent answered full (=1) or somewhat (=2) consideration, and 0 otherwise. In a second step, a score variable is generated which indicates the total number of situations in which parents (fully or somewhat) consider their child's opinion (max. seven). Thereafter, a summary variable is constructed by rescaling the score to range between 0 and 1, attained by dividing the score by the number of total number of situations included in the summary variable (i.e., by seven).

for female adolescents in Andhra Pradesh (being around 1.38 points higher on the scale, compared to control group). No significant effects are observed when looking at *Basic Package* effects at the aggregate level. This is also true for *Plus Package* effects (Table A.28).

The AEP only increased intragenerational dialogue among adolescent males in Assam. Part III of Table 3.17 considers intragenerational dialogue among adolescents (peers). To capture this, adolescents and parents were asked whether, in the last three months, they (or their child) talked to friends regarding their fears and emotions, or to their brothers and sisters regarding their future marriage. In addition, adolescents and parents were asked whether they (or their child), after the participation in program activities, usually discussed the topics covered in the classes with peers, such as adolescent family members, fiends, or acquaintances.[22] The summary variable indicates, out of the four situations, the share of situations in which adolescents engage in dialogue among peers. No significant effects are observed at the aggregate level, when looking at program effects in all states pooled together. A small increase in the share of topics that adolescents discuss with each other is only observed for male adolescents in Assam (3.1pp).

Parent groups, delivered as part of the *Plus Package*, increased slightly the share of situations in which parents consider their child's opinion. Table A.28 reports an increase of 1.6pp over the *Basic Package* effect 0.2pp in the share of situations in which parents (fully or somewhat) consider their child's opinion on a scale from 0 to 1. No other significant effects are found from increasing treatment intensity through boys and parent groups through the *Plus Package*.

Program effects on intergenerational communication are slightly higher among older adolescent girls (15-23). Table A.29 shows heterogeneous effects by adolescent age group and poverty status. Results show the program had a higher effect in supporting intergenerational communication older adolescent girls (4.2pp), when compared with program effects on other groups. The share of situations in which parents consider adolescents opinions also increases slightly among adolescent girls and boys in treatment areas, when compared to adolescent boys and girls in control areas (1.1pp). This increases when considering results separately for older adolescent boys (1.2pp) and older adolescent girls (1.1pp). Likewise, a small positive effect (3.5pp) is observed for enhanced intragenerational communication for poor households.

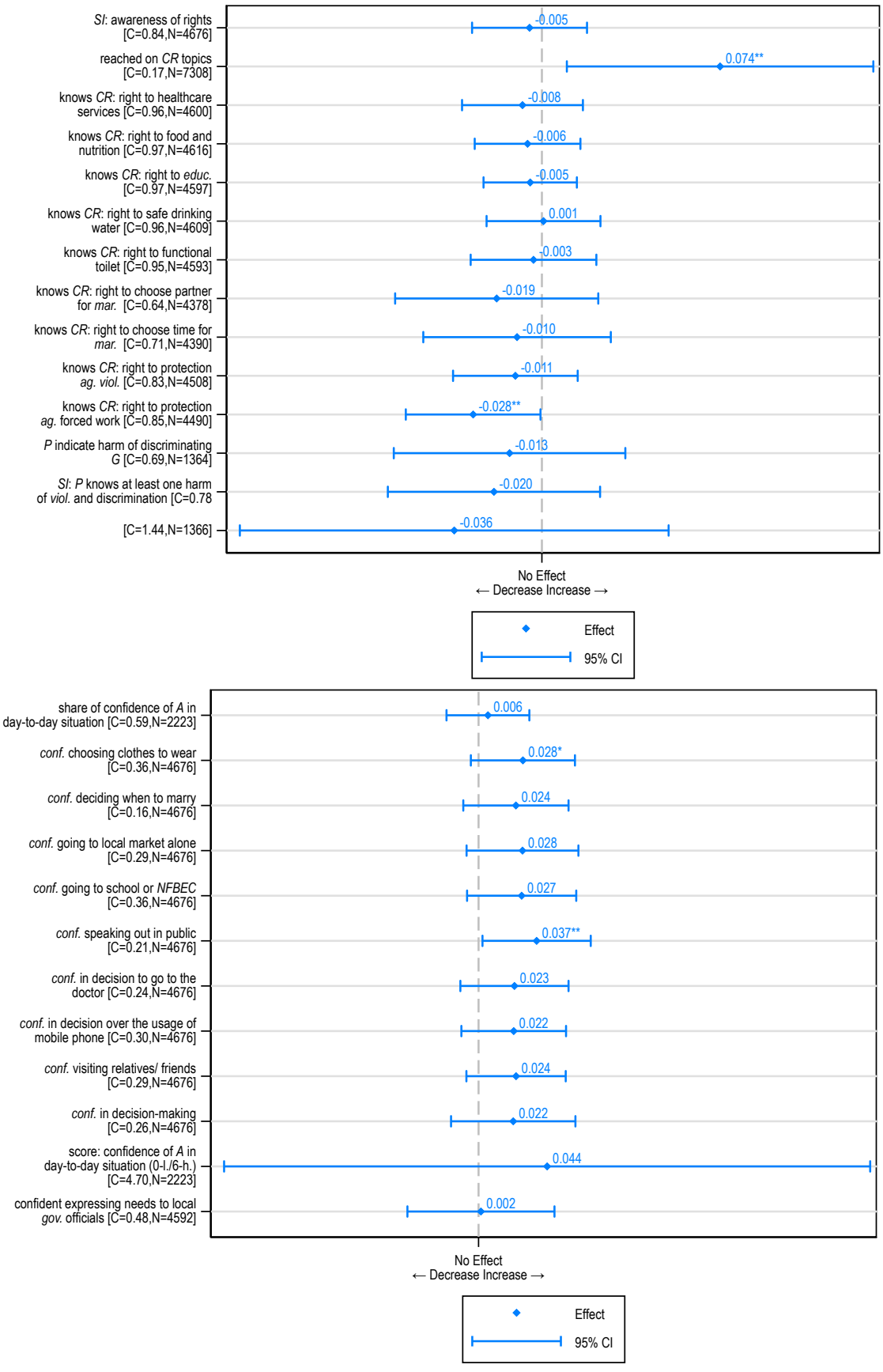
[22] Adolescents were first asked "After the participation, did you usually discuss the topics with others?", and if yes, "Who did you talk to?". Parents were asked "After the participation, did your child usually discuss the topics with others?", and if yes, "Who did your child talk to?". Taking respondents' answers to the four questions together, a score variable is generated which indicates the total number of situations in which respondents engaged in intragenerational dialogue (max. four). Thereafter, a summary variable is constructed by rescaling the score to range between 0 and 1, attained by dividing the score by the number of total number of situations included in the summary variable (i.e., by four).

Table 3.16: Adolescent Empowerment

	(I) Awareness Child Rights adolescent (A) reached on child right (CR) topics			(II) Confidence A confidence score in doing activities themselves (0-1)			(II) Confidence summary indicator (SI): A confident in community (comm.) (0-1)			(III) Well-being share of WHO 5 items well-being scale (0-1)		
	All (1)	Male (2)	Female (3)	All (4)	Male (5)	Female (6)	All (7)	Male (8)	Female (9)	All (10)	Male (11)	Female (12)
Panel A: All states												
Basic package	0.074**	0.074**	0.074**	0.006	-0.026	0.029*	0.014	0.019	0.007	0.002	0.002	0.004
	(0.032)	(0.033)	(0.035)	(0.013)	(0.020)	(0.017)	(0.013)	(0.019)	(0.014)	(0.007)	(0.012)	(0.010)
Control mean	0.178	0.165	0.190	0.588	0.663	0.534	0.278	0.261	0.291	0.680	0.732	0.643
N	7,044	3,354	3,690	2,223	938	1,285	4,652	1,987	2,665	2,327	980	1,347
Clusters	68	68	68	72	69	70	72	72	72	72	69	72
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols
Panel B: Andhra Pradesh												
Basic package	0.142**	0.135**	0.149**	0.067*	-0.017	0.116**	0.086**	0.097*	0.068	0.010	-0.004	0.013
	(0.060)	(0.060)	(0.065)	(0.034)	(0.044)	(0.044)	(0.038)	(0.054)	(0.041)	(0.018)	(0.021)	(0.020)
Control mean	0.216	0.205	0.227	0.513	0.578	0.467	0.323	0.324	0.322	0.684	0.697	0.676
N	1,475	705	770	253	106	147	506	207	299	246	96	150
Clusters	32	32	32	33	30	31	33	33	33	33	30	33
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols
Panel C: Assam												
Basic package	-0.117	-0.146	-0.094	0.001	0.017	-0.005	-0.001	0.027	-0.021	0.010	0.019	0.002
	(0.101)	(0.087)	(0.119)	(0.013)	(0.016)	(0.020)	(0.014)	(0.021)	(0.020)	(0.006)	(0.018)	(0.014)
Control mean	0.266	0.290	0.247	0.765	0.707	0.799	0.225	0.179	0.260	0.683	0.728	0.646
N	770	350	420	502	202	300	1,101	473	628	579	264	315
Clusters	6	6	6	8	8	8	8	8	8	8	8	8
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols
Panel D: Jharkhand												
Basic package	0.048***	0.068**	0.029	-0.014	-0.174***	0.110**	-0.054	-0.143***	0.012	-0.025	-0.027	-0.025
	(0.015)	(0.028)	(0.028)	(0.037)	(0.031)	(0.048)	(0.033)	(0.025)	(0.050)	(0.019)	(0.023)	(0.020)
Control mean	0.034	0.032	0.037	0.475	0.670	0.335	0.309	0.326	0.295	0.641	0.751	0.566
N	1,614	809	805	683	284	399	1,438	617	821	706	285	421
Clusters	11	11	11	11	11	11	11	11	11	11	11	11
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols
Panel E: West Bengal												
Basic package	0.086	0.095	0.077	-0.007	-0.014	0.006	0.017	0.033	0.007	-0.005	-0.011	0.009
	(0.060)	(0.058)	(0.065)	(0.024)	(0.029)	(0.029)	(0.018)	(0.030)	(0.021)	(0.015)	(0.021)	(0.021)
Control mean	0.304	0.295	0.311	0.578	0.655	0.514	0.283	0.254	0.306	0.712	0.732	0.698
N	3,185	1,490	1,695	785	346	439	1,607	690	917	796	335	461
Clusters	19	19	19	20	20	20	20	20	20	20	20	20
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols

- *Notes*: Table 3.16 displays heterogeneous program effects on several adolescent empowerment indicators for different states. Effects from OLS estimates are reported.
- Sample: Endline survey. Panel A includes results for all states, Panel B includes results for Andhra Pradesh, Panel C includes results for Assam, Panel D includes results for Jharkhand and Panel E for West Bengal.
- Program effects on the following indicators are presented: Reached on CRs topics, share of As confidence in doing activities themself, share of confidence of adolescent in community, share of WHO 5 items well-being scale. "Reached on CRs topics" was generated by asking respondents (adolescents, parents and community leaders) to indicate what the topics covered by the CP-program activity they attended were (i.e., conditional on participating in CP-program events). The "reached on child rights" indicator captures that respondents mentioned "topics on child rights and entitlements" as topics covered by the CP-event they attended. "Share of As confidence in doing activities themself" was generated by asking adolescents to indicate on a scale from 1 (not at all confident) to 7 (very confident) how confident they are in performing a number of activities by themselves. We first generated indicator variables for each activity, which indicate whether the adolescent felt confident (combines being confident (=6) and very confident (=7)) or not. We then constructed a summary indicator of overall confidence which indicates, out of six activities in total, the share of activities the adolescent feels (very) confident about performing. "Share of confidence of adolescent in community" was constructed by asking adolescents whether they express community needs to local government officials, whether they feel confident expressing their needs to the local government officials, and whether, over the last four years, adolescents in their community have gotten together to request local government officials or political leaders for anything benefiting adolescents. The summary indicator of adolescents' confidence in community indicates the share of these three questions that were answered positively. "Share of WHO 5 items well-being scale" was constructed by asking adolescents and their parents to indicate how frequently on a scale from 1 (all the time) to 6 (at no time) they (or their child) felt certain positive emotions over the last two weeks. These variables were recoded for higher values to indicate a better state (i.e., so that 5 corresponds to "all the time" and 0 to "at no time"). Then answers were summarized across the five questions (25 being the maximum). Based on this scale, a summary indicator for well-being was constructed (dividing the total number indicated by 25) which indicates the share reached on the WHO-5 scale, with 1 representing the best imaginable well-being. Columns (1), (4), (7), and (10) display the full sample. Columns (2), (5), (8), and (11) display the sample for boys only. Columns (3), (6), (9), and (12) display the sample for girls only.
- Control variables were selected using a lasso-selection, a procedure which considers potential imbalances in key observable characteristics between treatment and control groups at baseline. All regressions also include age and gender as control variables.
- Estimation method: OLS regression with enumerator and state fixed effects.
- Standard errors clustered at the block level.
- Related table(s): Table A.53.

Figure 3.4: Child Rights Awareness and Adolescent Empowerment I



► *Notes*: The treatment variable is assignment to any type of program activities.
► Sample: Endline survey.
► Control variables were selected using a lasso-selection, a procedure which considers potential imbalances in key observable characteristics between treatment and control groups at baseline. All regressions also include age and gender as control variables.

Table 3.17: Communication

	(I) Intergenerational Dialogue: share of intergenerational (intergen.) dialogue (0-1)			(I) Intergenerational Dialogue: share of situations in which parent (P) consider child's opinion (0-1)			(II) Interpersonal Communication Competence Scale (10-l./50-h.) score			(III) Intragenerational Dialogue: share of intragenerational (intragen.) dialogue amongst A (0-1)		
	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Panel A: All states												
Basic package	0.022***	0.013	0.028***	0.006*	0.006	0.007	0.334	0.223	0.262	0.006	0.006	0.004
	(0.006)	(0.008)	(0.008)	(0.003)	(0.005)	(0.005)	(0.285)	(0.415)	(0.300)	(0.008)	(0.013)	(0.007)
Control mean	0.129	0.118	0.138	0.321	0.297	0.339	30.714	31.095	30.489	0.165	0.148	0.178
N	6,002	2,637	3,365	6,025	2,646	3,379	2,092	840	1,252	6,011	2,642	3,369
Clusters	72	72	72	72	72	72	70	67	69	72	72	72
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols
Panel B: Andhra Pradesh												
Basic package	0.039	0.029	0.040	0.001	0.013	-0.011	0.755	-0.746	1.380*	-0.000	-0.007	-0.004
	(0.025)	(0.022)	(0.028)	(0.014)	(0.015)	(0.014)	(0.670)	(1.223)	(0.785)	(0.022)	(0.026)	(0.025)
Control mean	0.156	0.171	0.145	0.324	0.308	0.336	31.500	32.357	30.833	0.172	0.204	0.147
N	644	278	366	651	279	372	229	95	134	643	279	364
Clusters	33	33	33	33	33	33	31	28	30	33	33	33
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols
Panel C: Assam												
Basic package	0.013*	0.029***	0.002	0.010	0.003	0.017	0.027	0.449	-0.208	0.015	0.031**	0.002
	(0.006)	(0.005)	(0.009)	(0.006)	(0.006)	(0.010)	(0.399)	(0.501)	(0.415)	(0.009)	(0.009)	(0.013)
Control mean	0.083	0.037	0.119	0.314	0.301	0.323	29.649	30.034	29.437	0.100	0.041	0.145
N	1,394	626	768	1,404	630	774	472	175	297	1,404	629	775
Clusters	8	8	8	8	8	8	8	8	8	8	8	8
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols
Panel D: Jharkhand												
Basic package	0.010	-0.024*	0.027*	0.007	0.022	-0.001	0.053	-0.985	0.723	-0.011	-0.025	-0.007
	(0.007)	(0.012)	(0.015)	(0.006)	(0.020)	(0.014)	(0.594)	(1.061)	(0.496)	(0.021)	(0.027)	(0.019)
Control mean	0.152	0.167	0.139	0.311	0.243	0.363	29.595	31.279	28.851	0.162	0.154	0.169
N	1,911	836	1,075	1,913	838	1,075	623	252	371	1,908	834	1,074
Clusters	11	11	11	11	11	11	11	11	11	11	11	11
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols
Panel E: West Bengal												
Basic package	0.027**	0.008	0.043***	0.005	0.000	0.010	0.480	0.745	0.142	0.007	0.001	0.012
	(0.011)	(0.016)	(0.012)	(0.005)	(0.008)	(0.006)	(0.564)	(0.706)	(0.585)	(0.013)	(0.026)	(0.007)
Control mean	0.142	0.126	0.154	0.337	0.344	0.331	32.395	31.346	33.139	0.231	0.229	0.233
N	2,053	897	1,156	2,057	899	1,158	768	318	450	2,056	900	1,156
Clusters	20	20	20	20	20	20	20	20	20	20	20	20
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols

▸ *Notes*: Table 3.17 displays heterogeneous program effects on several communication indicators for different states. Effects from OLS estimates are reported.

▸ Sample: Endline survey. Panel A includes results for all states, Panel B includes results for Andhra Pradesh, Panel C includes results for Assam, Panel D includes results for Jharkhand and Panel E for West Bengal.

▸ Program effects on the following indicators of intergenerational dialogue are considered under part I: Share of intergen. dialogue and share of situations in which Ps consider child's opinion. Part II of the table reports program effects on the score on the ICC scale (10-l./50-h.). Finally, part III considers program effects on the share of intragen. dialogue amongst As. "Share of intergen. dialogue" was generated by asking adolescent and parents a series of questions. Conditional on participating in any child protection or educational interventions, adolescents and parents were asked whether they (or their child) usually discussed the topics covered in the classes with others. Moreover, we asked whether they (or their child) did any of the following activities in the last three months: Contacted their sibling's teachers regarding their education, convinced or tried to convince their parents to send their brothers or their sisters to school (separate questions), negotiated with their parents on behalf of their sisters so that they can get skills training, talk to their parents regarding their fears and emotions, and talked to their parents about their future marriage. The corresponding summary indicator indicates, for these seven activities, the share of intergenerational dialogue adolescents engaged in on a scale from 0 to 1. "Share of situations in which Ps consider child's opinion" was generated by asking adolescents and parents in which situations their parents (or they) take their (or their child's) opinion into consideration, on a scale from 1 (fully considered or accepted) to 3 (not taken into consideration or accepted). These included, for example, the decision to go to the local market alone, the decision whether to go to the doctor or medical facility, the decision on whether to speak out in public, etc. We first generated indicator variables for each situation, which indicate whether the child's opinion was considered (which combines full (=1) or somewhat (=2) consideration) or not (zero). We then constructed a summary variable which indicates, out of the seven situations, the share of situations in which parents (fully or somewhat) consider their child's opinion from 0 to 1. "Score: ICC scale (10-l./50-h.)" was constructed by asking adolescents to indicate whether (ten) statements such as "I allow friends to see who I really am" and "I am comfortable in social situations" fit them on a scale from 1 (never) to 5 (always). Taking their answers for the ten domains together, the ICC score indicates adolescents' overall communication competence on a scale from 10 to 50, with 50 representing full competence across 10 dimensions. "Share of intragen. dialogue among As" was captured by asking adolescents and parents whether, in the last three months, they (or their child) talked to friends regarding their fears and emotions, or to their brothers and sisters regarding their future marriage. In addition, we asked adolescents and parents whether they (or their child), after the participation in CP activities, usually discussed the topics covered in the classes with peers, such as adolescent family members, fiends, or acquaintances. Taking their answers to the four questions together, the summary variable of intragenerational dialogue indicates the share of dialogue among peers that adolescents engaged in from 0 to 1. Columns (1), (4), (7), and (10) display the full sample. Columns (2), (5), (8), and (11) display the sample for boys only. Columns (3), (6), (9), and (12) display the sample for girls only.

▸ Control variables were selected using a lasso-selection, a procedure which considers potential imbalances in key observable characteristics between treatment and control groups at baseline. All regressions also include age and gender as control variables.

▸ Estimation method: OLS regression with enumerator and state fixed effects.

▸ Standard errors clustered at the block level.

▸ Related table(s): Table A.54.

Evidence from In-Depth Interviews

Following their participation in the AEP, adolescents reported feeling less shy, more knowledgeable and thus more confident to express themselves and communicate with their parents or even with other community members in public spaces: "I used to be afraid of speaking to people. I used to think before, speaking in front of 2-3 people, what if they scold me by saying I am too young to speak? But now, if I have something to say, I ask for their permission and speak up" (Adolescent (group member), F, 18, Assam). Parents and adolescents alike reported communicating about previously taboo issues and enjoying overall improved communication within their families. One peer leader from Assam explained: "Before we were a part of the NGO, we hardly discussed about such issues at home. But now we talk about topics like menstruation without any awkwardness. I have come to know that it's nothing to avoid, it's just a biological process" (Adolescent (peer leader), M, 18, Assam). Another peer leader from West Bengal elaborated how, after being part of the program, she began discussing issues with her parents thanks to her newfound "courage to believe that whatever [she] does is wise and correct" and does not need to be hidden from her parents (Adolescent (peer leader), F, 18, West Bengal). Adolescents reported recognition of the importance of communication and sharing information in order to solve problems, including issues relating to education or child marriage.

Parents and adolescents alike agreed that participating in parent groups had positively influenced parents in three primary ways. Parents identified strengthened communication between themselves and their (adolescent) children as particularly important. They reported feeling more knowledgeable and confident to speak freely and to communicate with their children, discussing issues in a calm rather than agitated or angry manner and thus being more likely to achieve desired results (i.e., getting their children to listen to them): "Whenever we talk to them, we should say it in a positive manner for them to accept our words" (Parent (group member), F, Andhra Pradesh).

III.B.3 Social Norms

The AEP supported change in social norms to favor a positive environment for upholding adolescents' rights. Following the ToC, the program expected to shape positively, among others, social norms in relation to child marriage and equal opportunities for girls and boys.

Table 3.18 depicts the impact of the *Basic Package* on social norms with a focus on child marriage. **At the aggregate level, evidence from quantitative data hints that the program did not significantly shape social norms surrounding child marriage.** Only in the summary index on disapproval against child marriage, a small reduction (-2.0pp) is observed among male respondents in program areas. To capture the level of (dis)agreement with the practice of child marriage, parents and adolescents were asked to indicate to what extent they agree with the following four statements: "It is ok for parents to marry their sons before their 18th birthday", "It is ok for parents to marry their daughters before their 18th birthday", "It is ok for parents to marry their daughters before their 16th birthday" and "It is best to marry off an adolescent girls before 20 years of age to help

them settle down in their family." For each of these statements, indicator variables are generated which indicate agreement (combines full and somewhat agreement) with the statement. The index counts the number of statements that respondents agreed or somewhat agreed with, so that a lower score in the index entails that respondents disagreed with more statements on child marriage.

At the state level, results varied. Assam and Jharkhand showed small positive results in social norms relating to child marriage. In West Bengal, program results were negative. In Assam, positive changes in social norms relating to child marriage are observed for the sub-indicators that make the summary index on disapproval against child marriage. In this line, individuals in program areas are more likely to disagree with the statement: It is fine to marry my daughter/sons before 18. In Jharkhand, there is a reduction among male respondents in the average number of statements about child marriage that respondents agreed with, as captured by the differences in the summary index on disapproval against child marriage (-7.6pp).

In West Bengal, negative effects are observed for respondents, who agree that "it is fine to marry off sons before 18" (5.1pp considering both male and female respondents). The results for the same indicator but for daughters is not statistically significant.

Table A.30 and Table A.31 report *Plus Package* and heterogeneous program effects on social norms indicators with a focus on child marriage. Tables A.30 shows no *Plus Package* activities had any significant positive effect over *Basic Package* activities in shaping social norms around child marriage.

The program had a small effect in reducing negative attitudes about child marriage among very poor respondents and older adolescent boys (15-23). Results in Table A.31 show a reduction in the average number of statements about child marriage that respondents agreed with (summary index on disapproval against child marriage), for very poor respondents (-1.4pp) and older adolescent boys (-1.7pp). This means that while older adolescent boys in control areas tolerated child marriage in 2.44 scenarios, out of four scenarios, older adolescent boys in treatment areas did so in 2.35.

In Appendix A.III.C, Table A.39 introduces additional results on social norms in relation to equal opportunities for girls and boys.

Considering results from all states combined, the program is not associated with any significant changes in terms of social norms leading to more equal opportunities for girls and boys. Table A.39 presents results on child rights which respondents could recognize[23] and on positive gender roles which respondents could mention[24].

[23]"Share of recognized child rights" was generated by asking adolescents, parents, and community leaders to correctly identify four rights which exist for children under the age of 18: A right to have birth registration, a right to education, a right to get information that is important to their health and well-being, and a right to be protected from violence and abuse.

[24]"Share of positive items on gender role models mentioned" was generated by asking adolescents and parents about their view on gender roles. Adolescents and parents were asked about their agreement, on a scale from 1 (disagree) to

In Andhra Pradesh, female respondents in treatment areas were slightly more familiar with child rights than female respondents in control areas. Female respondents in the state could recognize a slightly higher share of child rights. Respondents in control areas could identify 81% of the child rights included in the survey (3.2/4), while female respondents in treatment areas could identify 85.5% (3.42/4).

In Assam, male respondents were slightly more likely to hold positive attitudes in relation to equality between girls and boys. Male respondents in treatment areas of Assam were slightly more likely to adhere with statements around positive gender roles (2.2pp). Table A.39 reports no other statistically significant results in relation to social norms for equal opportunities for girls and boys.

4 (agree), with 14 statements, such as: "It is important that sons receive more education than daughters".

Table 3.18: Social Norms on Child Marriage

	(I) Child Marriage											
	disagr.! (disagr.!): fine for P to marry sons before 18			disagr.!: fine for P to marry daughter (dau.) before 18			disagr.!: fine for P to marry dau. before 16			summary indicator: (0-1) disapproval against child marriage		
	All	Male	Female	All	Male	Female	All	Male	Female	All	Male	Female
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Panel A: All states												
Basic package	-0.011	-0.023*	-0.001	-0.007	-0.013	-0.004	-0.005	-0.019*	0.006	-0.013*	-0.020**	-0.007
	(0.011)	(0.013)	(0.013)	(0.009)	(0.012)	(0.011)	(0.008)	(0.010)	(0.008)	(0.007)	(0.009)	(0.008)
Control mean	0.080	0.086	0.076	0.129	0.144	0.117	0.052	0.059	0.047	0.574	0.571	0.576
N	5,974	2,613	3,361	5,976	2,611	3,365	5,993	2,626	3,367	6,043	2,659	3,384
Clusters	72	72	72	72	72	72	72	72	72	72	72	72
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols
Panel B: Andhra Pradesh												
Basic package	-0.017	-0.015	-0.008	-0.028	-0.025	-0.031	-0.018	0.003	-0.031*	-0.015	-0.036*	0.002
	(0.020)	(0.034)	(0.033)	(0.023)	(0.038)	(0.025)	(0.017)	(0.025)	(0.018)	(0.015)	(0.018)	(0.019)
Control mean	0.089	0.107	0.075	0.096	0.107	0.087	0.060	0.049	0.069	0.604	0.617	0.594
N	648	278	370	645	275	370	645	276	369	652	280	372
Clusters	33	33	33	33	33	33	33	33	33	33	33	33
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols
Panel C: Assam												
Basic package	0.019*	0.010	0.026**	0.011***	0.001	0.018**	0.007	-0.010	0.020***	-0.018*	-0.010	-0.025**
	(0.009)	(0.009)	(0.010)	(0.003)	(0.005)	(0.005)	(0.004)	(0.006)	(0.005)	(0.008)	(0.007)	(0.009)
Control mean	0.014	0.007	0.020	0.014	0.013	0.015	0.014	0.017	0.013	0.597	0.604	0.591
N	1,382	616	766	1,384	615	769	1,390	621	769	1,407	631	776
Clusters	8	8	8	8	8	8	8	8	8	8	8	8
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols
Panel D: Jharkhand												
Basic package	0.041	0.014	0.061*	0.013	0.021	0.004	-0.018	-0.042	0.004	-0.030	-0.076***	-0.002
	(0.028)	(0.056)	(0.028)	(0.035)	(0.057)	(0.028)	(0.014)	(0.037)	(0.005)	(0.021)	(0.016)	(0.032)
Control mean	0.062	0.092	0.041	0.229	0.279	0.192	0.018	0.035	0.005	0.480	0.443	0.508
N	1,900	826	1,074	1,902	827	1,075	1,907	832	1,075	1,923	846	1,077
Clusters	11	11	11	11	11	11	11	11	11	11	11	11
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols
Panel E: West Bengal												
Basic package	-0.051**	-0.066***	-0.042*	-0.021	-0.033*	-0.017	-0.007	-0.030	0.007	-0.001	-0.004	0.003
	(0.018)	(0.017)	(0.022)	(0.017)	(0.018)	(0.022)	(0.018)	(0.019)	(0.019)	(0.013)	(0.018)	(0.015)
Control mean	0.163	0.151	0.172	0.151	0.148	0.154	0.124	0.130	0.119	0.639	0.655	0.626
N	2,044	893	1,151	2,045	894	1,151	2,051	897	1,154	2,061	902	1,159
Clusters	20	20	20	20	20	20	20	20	20	20	20	20
Model	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols	ols

▸ *Notes*: Table 3.18 displays program effects on social norm indicators. Effects from separate OLS estimations are reported.
▸ Sample: Endline survey. Panel A includes results for all states, Panel B includes results for Andhra Pradesh, Panel C includes results for Assam, Panel D includes results for Jharkhand and Panel E for West Bengal.
▸ Program effects on the following child marriage-related indicators are presented in Part I and II of the table: Agrees: Ok for Ps to marry sons before 18, agrees (agr.): Ok for Ps to marry dau.s before 18, agr.: Ok for Ps to marry dau.s before 16 and summary indicator: Disapproval against child mar. "Agrees: Ok for Ps to marry sons before 18", "agr.: Ok for Ps to marry dau.s before 18", and "agr.: Ok for Ps to marry dau.s before 16" were generated by asking parents and adolescents to indicate to what extent they agree, on a scale from 1 (fully agree) to 4 (fully disagree), with the following three statements: "It is ok for parents to marry their sons before their 18th birthday", "It is ok for parents to marry their daughters before their 18th birthday", and "It is ok for parents to marry their daughters before their 16th birthday". For each of these statements, we generated indicator variables which indicate agreement (combines full (=1) and somewhat (=2) agreement) with the statement."Summary indicator: Disapproval against child mar." was generated by asking adolescents, parents, and community leaders about 4 questions regarding their tolerance of child marriage. A summary indicator capturing the number of questions in which respondents showed tolerance of child marriage was then created. Columns (1), (4), (7), and (10) display the full sample. Columns (2), (5), (8), and (11) display the sample for boys only. Columns (3), (6), (9), and (12) display the sample for girls only.
▸ Control variables were selected using a lasso-selection, a procedure which considers potential imbalances in key observable characteristics between treatment and control groups at baseline. All regressions also include age and gender as control variables.
▸ Standard errors clustered at the block level.
▸ Related table(s): Table A.55.

Evidence from In-Depth Interviews

Quantitative evidence hints that the AEP did not led to any drastic changes in social norms between treatment and control areas. Qualitative evidence, however, hints that participants in program activities learnt positive attitudes in terms of gender equality after taking part in activities, although these may no have been enough to trigger a wider change. Parents that took part in AEP activities generally reported learning to treat boys and girls equally: "A mother goes through equal hardships while giving birth to a boy or a girl. I don't see any reason why they should be given different treatment" (Parent (group member), F, Assam). Participants described the previously common discrimination in favor of boys (who they reported traditionally stayed home to take care of parents) over girls (who they reported typically married and moved to another family and were thus seen as someone else's asset, into whose future they described was wasteful to invest).

Some described the change and treatment of girls and boys as a direct consequence of having participated in the group sessions. They noted in particular learning about treating girls and boys equally in relation to their educational pursuits and recounted becoming more aware of the importance of providing girls the opportunity to attend school for the same length of time as boys. As was evident in the adolescents' integration of this perspective of gender equity. **However, some parents (particularly mothers) also felt equality between girls and boys was something "people just say" and that, "in real life, it's not true" (Parent (group member), F, West Bengal).**

Finally, for some parents, participating in the program lifted taboos, particularly with regards to menstruation. Parents learned that girls should not be ostracized but should rather be supported while menstruating, through teaching them how to use pads properly and maintain good hygiene. Some adolescents also observed this change in their parents: "Earlier, my parents didn't allow me to go out during my menstruation but now they have realized that it's okay to go out if I maintain the hygiene" (Adolescent (peer leader), F, 18, Assam). These changes in perception regarding menstruation were not common to all, however, and some parents reported that girls were still prohibited from attending temple during menstruation.

III.B.4 Service Provision

The final impact pathways that is explored for the AEP are those related to reported improvements in service provisions, such that adolescents and parents have better access to health services, in order to address health related challenges.

Table 3.19 investigates results for four indicators on access to services, by state. The first indicator reports whether communities lack access to schools in their village. The second indicator is a standardised scale that captures whether community leaders believe that access to services in their communities has improved over the past four years. The next indicator reports whether a CPC exists in the community, according to the community leader. The last indicator displays the number of

reported cases of sexual abuse and exploitation by adolescent girls in the last four years. Additional results tables are reported in Appendix A.III.C.

Considering results from all states, access to community services within treatment areas improved slightly more than in control areas. Community leaders in treatment areas were slightly more likely to report an improvement in access to community services (4.7pp). This includes services like "access to information regarding the community members' rights and entitlements" or "life-skills trainings". However, this result is only weakly significant. This effect appears to be driven by West Bengal where the effect is stronger and more significant (6.4pp).

Overall, access to CPCs was improved in treatment areas. However results differ by state and a large majority of community leaders reported CPCs were not present in their village. Overall, a higher share of community leaders in treatment areas reported there was a CPC in their communities (8.4pp). In control areas, 13% of community leaders reported the existence of a CPC in their communities, while 21% did so in treatment areas. CPCs were more frequently reported in treatment areas of Assam and West Bengal. In Assam, 26% of community leaders reported the existence of a CPC (15.1pp over control areas), while 6.8% of community leaders in West Bengal reported the existence of a CPC (4.2pp over control areas). In other states, there were no significance differences in the presence of CPCs, as reported by community leaders.

Table A.40 in Appendix A.III.C reports results on awareness and access to government services. The first indicator is an index capturing the knowledge reported by adolescents on existing services provided by the government. This index summarizes 19 services which adolescents were asked about, including deworming tablets, anaemia testing, free uniforms or money or cash award for not being married before 18 years of age. The next two indicators show adolescents reported access to these services and acess to iron-folic tablets in particular. Finally, Table A.40 reports on whether adolescent girls received a monetary compensation for the government for not marrying before the age of 18.

Considering results from all states, knowledge about existing government services improved slightly among adolescent girls. The AEP is associated with a small, statistically significant, increase in the share of government services that adolescent girls were aware of (+2.0pp). In Andhra Pradesh, the increase in awareness among adolescent girls was steeper (6.4pp). Adolescent girls in control areas of the state were aware of 6.68 government services provided by the government, out of 19, and adolescent girls in treatment areas were aware of 7.9 services. In Andhra Pradesh, knowledge about existing government schemes also increased among adolescent boys (+2.7pp).

Considering results from all states, access to government services improved slightly among adolescent girls. The AEP is associated with a small, statistically significant increase in the share of government services that adolescent girls received (2.1pp). This increase was also driven primarily by adolescent girls in Andhra Pradesh for whom the increase in access to government services is higher, when compared to adolescent girls in the control group (5.0pp).

Adolescent boys and girls in treatment areas of Andhra Pradesh had considerably more access to iron-folic tables. Results from Table A.40 show the AEP is associated with higher access to iron-folic tables for adolescent girls and boys in treatment areas (9.8pp). When considering adolescent girls alone, this increase was higher and more significant (10.9pp). In control areas, 71% of adolescent girls reported having access to iron-folic tables, compared to 82% in treatment areas. Adolescent boys in Jharkhand and adolescent girls in Assam also experienced an increase in access to iron-folic tables, by 6.4pp and 6.6pp, respectively.

Heterogeneous and *Plus Package* program effects show small benefits in terms of improved access to government services for adolescent girls. Table A.32 and Table A.33 show *Plus Package* and heterogeneous program effects on awareness and access to government services. Table A.32 shows that adolescent girls in villages that were exposed to both boys and parent groups report a slightly higher access to government services than adolescent girls in the control group (2.6pp). Table A.33 shows the AEP is associated with a small increase in knowledge and access to government services among older adolescent girls (15-23), 2.1pp and 2.3pp respectively, when compared to older adolescent girls in the control group.

Table 3.19: Service Provision (Community level)

	community challenge: non-existence of schools /learning centers	improvement in access to community services (over the last 4 years)	community has CPC CPC	reported violence, abuse and exploitation against adolescents (over the last 4 years)
	(1)	(2)	(3)	(4)
Panel A: All states				
Basic package	-0.001	0.047*	0.084***	-0.011
	(0.009)	(0.027)	(0.027)	(0.014)
Control mean	0.030	0.631	0.129	0.052
N	20,708	603	669	675
Clusters	72	70	72	71
Model	ols	ols	ols	ols
Panel B: Andhra Pradesh				
Basic package	-0.000	0.123	-0.018	-0.027
	(0.024)	(0.081)	(0.114)	(0.033)
Control mean	0.036	0.647	0.531	0.028
N	2,094	76	78	85
Clusters	33	31	33	32
Model	ols	ols	ols	ols
Panel C: Assam				
Basic package	-0.023	-0.027	0.151***	-0.033
	(0.017)	(0.056)	(0.040)	(0.020)
Control mean	0.054	0.580	0.115	0.026
N	3,132	149	158	153
Clusters	8	8	8	8
Model	ols	ols	ols	ols
Panel D: Jharkhand				
Basic package	-0.001	0.037	0.169	0.021
	(0.011)	(0.065)	(0.099)	(0.014)
Control mean	0.011	0.728	0.079	0.013
N	7,541	186	202	204
Clusters	11	11	11	11
Model	ols	ols	ols	ols
Panel E: West Bengal				
Basic package	0.006	0.064**	0.042**	-0.010
	(0.015)	(0.028)	(0.018)	(0.028)
Control mean	0.035	0.581	0.026	0.127
N	7,941	192	231	233
Clusters	20	20	20	20
Model	ols	ols	ols	ols

- *Notes*: Table 3.19 displays program effects on several service provision indicators. Effects from OLS estimates are reported.
- Sample: Endline survey. Panel A includes results for all states, Panel B includes results for Andhra Pradesh, Panel C includes results for Assam, Panel D includes results for Jharkhand and Panel E for West Bengal.
- Control variables were selected using a lasso-selection, a procedure which considers potential imbalances in key observable characteristics between treatment and control groups at baseline. All regressions also include age and gender as control variables.
- Estimation method: OLS regression with enumerator and state fixed effects.
- Standard errors clustered at the block level.
- Related table(s): Table A.56.

Evidence from In-Depth Interviews

Qualitative evidence reveals that in general, in depth knowledge regarding the availability of services and committees available to support adolescents was not widespread. Most participants (adolescents and parents) knew of and could describe only the roles, responsibilities and locations of ASHA and Anganwadi workers, especially in relation to prenatal care. Study participants mentioned that such workers often took part in AEP group sessions and functioned as resource persons to help increase awareness on health and hygiene issues. In contrast, adolescents and parents were less aware of CPC and SMC. Many adolescents in particular reported having no knowledge of either of these committees in their villages. Some had heard of CPCs and SMCs but were unaware of their aims and activities, and others (more parents than adolescents) had encountered CPCs and SMCs and were able to describe their roles, although not as thoroughly as those of the Anganwadi and ASHA workers.

The availability and location of sexual and reproductive health services for adolescents was unknown or unclear to most adolescents. They most commonly mentioned such services were available from NGO staff or Anganwadi workers but also mentioned hospitals, family (parents, siblings), teachers and the internet as possible points of reference. Some, however, felt nobody was available to discuss these subjects and reported having no idea to whom to turn in order to access sexual and reproductive health information or services. A frontline worker confirmed this view, noting that "there is no such knowledgeable person to whom they can approach" for support related to sexual and reproductive health (CPC Member, F, Assam).

Given the limited awareness of services offered by CPC and SMC, their limited use by adolescents is not surprising. Although ASHA/Anganwadi services were better known, adolescents' perceptions that these are mainly services for pregnant women also limited their use. Only a handful of study participants reported making use of the services provided by these frontline workers, one young participant recounting an ASHA worker providing iron tablets in schools, another describing her complaint to an NGO staff member after her mother threatened to take her out of school and others, still, relating experiences of reporting to ASHA/Anganwadi workers some attempted child marriages or school drop-outs. Overall, however, the primary point of contact for most adolescents and many parents was NGO staff, who seem to have an important role and presence in communities. Adolescents' comfort contacting NGO staff with concerns regarding sexual and reproductive health information or reporting any form of child abuse likely reflects the close rapport built between adolescents and NGO staff during group sessions as well as NGOs' presence and level of engagement with adolescents, which makes them more approachable than others.

In stark contrast, most study participants mentioned law enforcement as the last resort as a point of contact. They recounted calling police only if and when an issue was not successfully handled within the community (with those involved, with the help of NGO staff or existing committees): "The cases that cannot be solved within the village are sent to the station" (Parent (group member), F, Assam). Many study participants reported having never contacted law enforcement. Among those who spoke of existing laws being enforced by the police, they usually felt the laws protecting children were sufficient and adequately enforced by those in charge.

Support for increasing sexual and reproductive health services was not widespread among parents and adolescents. Adolescents offered varying suggestions regarding where to avail sexual and reproductive health services, likely based on personal views and experiences rather than knowledge of availability of such services. Aside from a few exceptions, adolescents reported not yet having accessed or needing to access such services. Some indicated they felt there was no need to have sexual and reproductive health knowledge and that they preferred to remain uninformed: "Some amount of sexual and reproductive health information is necessary to know the boys and girls but a very wide range of sexual information is not needed" (Adolescent (group member), M, 17, Andhra Pradesh). A number of adults shared this view, elaborating that any knowledge of sexual and reproductive health should be gained only after marriage: "Some extent has to be given but don't go deep on it. Only basics. [. . .] There is no need to inform about sex and reproduction to the adolescent before the age of 21" (Head teacher, M, Andhra Pradesh).

IV. Robustness Specifications

Results on three additional robustness checks are provided in Appendix A.III.E:

IV.A Local Average Treatment Effects

The non-compliance within program areas, i.e., the low or (close to) no reported implementation as per assignment, as shown in Section II., implies that there might be a bias in the computation of the ITT estimate. This bias might arise because of the non-random nature of this non-compliance. For instance, it might be that villages that might have had a large effect of the program, might not have received implementation. This non-random selection of compliers (those who received the program as per assignment) is what LATE tries to address. Since very little contamination in our control sample is observe, only one-sided non-compliance has to be dealt with. In the report, the LATE is calculated for final outcomes of interest for this evaluation: Child marriage, early pregnancy and school enrollment.

Assignment is estimated using the original treatment assignment indicator for the sample. Implementation on the other hand is measured via self-reported awareness of programs that are similar to the AEP within the endline sample. The LATE is effectively a instrumental variable regression. This method assumes that regardless of treatment assignment, the eventual treatment (based on) status leads to a change in the outcome. There is an important condition, the so called exclusion restriction, that should be satisfied, to maintain the validity of this method. For the exclusion restriction to be fulfilled, the treatment assignment should only affect the outcomes via the treatment status, and no other additional channel or mechanism. Moreover, it should be sufficiently correlated to the treatment assignment variable. The F-statistic, which determines the strength of the instrument

(i.e., treatment status is only channel that explains effect of treatment assignment on outcome) does not cross the rule of thumb threshold of 10 for all three outcomes, implying that the instrument does not satisfy the exclusion restriction in any case. Alternatively, they may cross this threshold, but no sufficient correlation between treatment assignment and status is established.[25]

Consequently, the main conditions to hold the validity of the LATE estimation are not fulfilled and the results are not free from bias. Therefore, they are not reported in the main text, although the tables can be found in the Appendix (Tables A.41, A.42, and A.43 in Appendix. A.III.D).

IV.B Village Level Clustering

Following block-level assignment of *Basic Package* activities, regressions in the main body of this report include standard errors clustered at the block level. Section A.III.E.1 in Appendix A.III.E includes all regression models with standard errors clustered at the village level as a robustness check. All in all, results from regression models with standard errors clustered at the village level do not present any sizable differences from results with standard errors clustered at the block level. In this line, results with standard errors at the village-level are aligned with all key findings reported for final and intermediate outcomes, with no sizable differences. This reinforces the statistical robustness of key findings for the evaluation.

IV.C Results excluding Andhra Pradesh

Following deviations from the original evaluation design in Andhra Pradesh, Section A.III.E.2 in Appendix A.III.E shows results for main outcomes excluding Andhra Pradesh. All in all, evaluation results for final outcomes hold when excluding from the analysis treatment and control areas of Andhra Pradesh. This reinforces the robustness of findings at the aggregate level.

V. Relevance of the Program

Program Relevance - Key Findings
Key findings that emerge from this section in relation to evaluation questions are:

EQ. 4.1. *Was the program considered relevant by beneficiaries?*

[25]This is indicated by non-significant results of the implementation variable on the outcome variables.

- The beneficiaries overwhelmingly considered the program relevant.
- There were some criticisms that no specific efforts were made to include groups such as partcipants of scheduled castes, out of school youth and already married adolescents.

EQ. 4.2. *Was the program considered relevant by other stakeholders, e.g. governments?*

- UNICEF's success in aligning with government priorities was confirmed by state and district level officials.
- Efforts to harness government support through integrating the AEP into national agendas along with the experience of UNICEF staff was appreciated by many key informants.

EQ. 4.3. *Was the well aligned with policies and strategies of national and local governments, other UN organizations and other donors?*

- Key informants overwhelmingly reported a strong integration and explicit alignment of AEP programing with existing government goals, schemes and initiatives.
- Key informants noted that the strong integration of the AEP into government initiatives encouraged government representatives to feel a considerable level of ownership of the programming and trust between sectors.

Intervention logic and internal consistency

UNICEF staff members described a process of conceptualizing their programming approach through integrating evidence (in large part from studies carried out by UNICEF India and partners as well as pilot studies) with the Theory of Change and making adjustments and regionally-specific adaptations to their design, as necessary. This consisted of examining evidence regarding what works and what doesn't work in various contexts and then rearticulating "broad level strategies" into operationalizable approaches and activities on a state-by-state basis, each presenting a different "operating environment" as well as diverse opportunities and partnerships (UNICEF Staff2, Delhi).

Within the four states identified for AEP intervention, districts were chosen based on a vulnerability analysis that considered data pertaining to "child vulnerability, poverty, Multidimensional Poverty Index" in order to identify the most vulnerable districts within the state (UNICEF 1, West Bengal). Decisions pertaining to the types of packages provided in each region were made according to analysis of the main issues facing children in each district and/or village as well as "many referrals from villages" with particularly high rates of child marriage, child labor or school dropouts (District **CPO!** (CPO!), Andhra Pradesh). In collaboration with a District Collector in each district (i.e., a "senior level official from government in charge of the revenue and law and order administration and all developmental activities in the district"), meetings were held across line departments (i.e., department of health & welfare, department of women & children, department of education, department of rural, water and sanitation etc.) to determine the precise programming activities to be implemented in each district and village (UNICEF Staff 2, Andhra Pradesh).

Efforts to harness government support through integrating the AEP into national agendas remained central to the program's intervention logic, which sought to build on existing schemes (such as the national National Service Scheme (NSS) through which senior high school students meet regularly as well as other "ready-made platforms" of, for instance, women meeting to discuss microfinance and empowerment issues (UNICEF Staff 2, Andhra Pradesh). Through collaboration with Panchayati Raj Institutions, which are constituted by elective membership from the village level, the program was adapted to address even village-specific needs and conditions (UNICEF Staff 2, Andhra Pradesh). This approach, coupled with UNICEF staff's "international experience" and technical expertise, enabled a well-informed and contextually relevant conceptualization and implementation of the AEP (UNICEF 1, West Bengal). UNICEF paid particular attention to ensuring the AEP was well integrated into existing efforts to implement adolescent programming across a range of needs and vulnerabilities (e.g., health, nutrition, protection etc.), endeavoring through close collaboration with various levels of government to channel their programming to align with existing interventions and ensure the AEP "collaborate[s] and converge[s]" with adolescent programming, thereby acknowledging the interrelatedness of child and adolescent health issues and promoting "vertical programs" instead of siloed issue-by-issue horizontal programs (UNICEF Staff 2, Andhra Pradesh).

Issues of gender barriers, such as some boys' and fathers' discomfort discussing menstruation, limited the involvement of some prospective participants in the AEP. Adolescents requested teachers of their own gender in order to address this challenge. In Assam, mixed teams of teachers (one male and two female teachers for every co-educational school) helped to successfully address this barrier, as it accounted for the greater number of girl children and at the same time allowed boys to talk with male teachers about their own issues. In general, a focus on girls may have limited the benefits accruing to boys: "They sent adolescent girls for further study to [name of residential school for girls] but there is no scheme or services available for their boys to study further. I think government should do something for their boys' education." (AWW, F, Jharkhand). Another issue of equity was reported in some cases where no explicit attempts were made to include adolescents from disadvantaged groups such as scheduled castes, although the inclusion of adolescents from scheduled tribes appeared to have been carried out well, especially in Jharkhand.

External consistency - Alignment with Government Priorities

Key informants overwhelmingly reported a strong integration and explicit alignment of AEP programming with existing government goals, schemes and initiatives. In addition to ensuring the AEP's alignment with international frameworks such as the UNCRC, they emphasised that the AEP program had been "well integrated with the government" (District Child Protection Officer (DCPO), Andhra Pradesh), engaging in dialogue and discussion with state-level officials responsible for programming "right from the beginning" (UNICEF Staff1, Delhi), with the exception of Assam state, where UNICEF initially worked with tea garden management authorities rather than the government of Assam itself. In Jharkhand, for example, this involved the explicit alignment with the Chief Minister's declaration to prioritize the end of child marriage or, in West Bengal, aligning with drafting guidelines in collaboration with Purulia District level officials and in consultation

with the State Department of Child Development and Social Welfare. According to KIs, the AEP coincided constructively with changes in state level programming that has, over time, shifted from a model of providing handouts ("whether it is some kind of a cash or just an iron tablet", UNICEF Staff 2, West Bengal) to conceptualizing comprehensively adolescents' needs, including their "need for empowerment" (ibid.).

This new "empowerment kind of lens" now promulgated by government was, in part, demonstrated through UNICEF's "holistic development" approach to adolescence that involves a convergence of cash transfer programs, the SAG scheme, and Kanyashree (UNICEF Staff 2, West Bengal). UNICEF's success in aligning with government priorities was confirmed by state and district level officials, who commented that "UNICEF is doing a wonderful job" in supporting government's goal to create an "environment where these children actually can be free from any kind of victimization", that is, "a society free of child marriages, a society free of any kind of myth, any kind of superstitions, which, in turn, force a girl to be a victim" (District Officer 3, West Bengal). Often highlighted by district officers and UNICEF staff alike was the AEP's strong alignment with the Kanyashree scheme, which many suggested was "perfectly integrated" and "implemented by the Block Development Officers . . . and Panchayat personnel", enabling the AEP to use the existing structure of the Kanyashree groups (District Officer 1, West Bengal).

AEP Integration in Government

All key informants felt the AEP was well supported by and integrated throughout various levels of government. Nevertheless, although a range of individuals and government representatives (spanning frontline workers, elected Panchayat personnel, block officials and district officials) supported the implementation of the AEP, a District Coordinator in Jharkhand suggested that even more could be done to integrate such representatives into program implementation in order to strengthen the program's function and ensure its success.

Government representatives echoed the KIIs' praise, suggesting that the existing government structures readily facilitate integration of programs such as the AEP. Indeed, a Deputy Commissioner (1) explained at length the organizational flow of the Government of India that enables such integration of complex programming, highlighting in particular the involvement of the Ministry of Women and Child Development (which tends broadly to issues affecting children and adolescents and functions as a "nodal ministry") as well as the state governments, each with their own social welfare department that, in turn, become the nodal department for their respective states. At the district level, District Commissioners function like a "**CEO!** (**CEO!**) of the district . . . under whom all the departments (education, health, police, . . . labor department) . . . can converse" (Deputy Commissioner 1). A District Officer expanded on this description, suggesting that "government is in a position to handle the whole thing alone", as long as districts receive (financial) support to do so, which - the District Officer lamented - was not consistently the case across all districts. This District Officer suggested that, . . . we can run it well" (District Officer 2, West Bengal).

Key informants noted that the strong integration of the AEP into government initiatives encouraged

government representatives to feel a considerable level of ownership of the programming and trust between sectors. They were optimistic that AEP programming could not only continue but also be scaled up following its official end. An important component in this success was the AEP's "development of a district implementation plan for ending child marriage" (UNICEF Staff 3, Jharkhand) and actively involving in its development multiple stakeholders (including, among others, District Child Protection Officers, Joint Directors of Health, Labour Department, Police Department, Education Department, District Collectors and Department Heads) (UNICEF Staff 3 Assam). According to a UNICEF staff member, this ultimately played a "very critical role in raising voices, in securing the rights of children" (UNICEF Staff 3, Jharkhand). The AEP's intentional and explicit involvement of multiple government and non-government stakeholders throughout the design and implementation process also reportedly helped to ensure the AEP interventions were well integrated into district implementation plans and thereby contributed the program's overall success (UNICEF Staff 3, Jharkhand).

Finally, UNICEF staff suggested that the strong district convergence platform of government line departments, which yielded similar models (yet distinct concrete implementation approaches) across all districts within an implementing state and the institutionalization of the programming that was involved throughout, helped contribute to the desired longevity of the AEP beyond its official funding period (UNICEF Staff 2, West Bengal). Illustrating the importance of this institutionalization is the continued spreading of child marriage and child protection messages to girls in Jharkhand through parent groups as part of the SAG, despite UNICEF's cessation of support in December 2019 (District Coordinator, Jharkhand). As we saw earlier, KIs most frequently identified the state government's Kanyashree scheme as exemplary of the strong institutionalization and integration of the AEP objectives into long-lasting, sustainable government initiatives.

Key informants' suggestions to continue to build on integrative efforts in future adolescent-centered programming draw from their unanimous agreement that the AEP was well integrated into government structures and initiatives. Specifically, KIs recommended beginning by "identifying the existing social protection schemes and [. . .] if there is a gap, [. . .] then you do advocacy with the government to come up with new schemes" (UNICEF Staff 2, Assam). To further improve the integration of programming with government initiatives and planning, they recommended working on "strengthen[ing] the structures where there is [government] provision of children's participation and there is no mandate from the state side" and helping to support and strengthen the Social Welfare Department (UNICEF Staff 1, Assam). Furthermore, KIs identified the importance of advocating for government to take policy decisions on important issues affecting children and adolescents, including among others adolescent empowerment, child marriage, child labor and child trafficking. Finally, in order to fill the government's gap in strong community mobilization efforts, a UNICEF staff representative from Assam suggested more actively engaging with civil society organizations, which typically have stronger human resources and community awareness and are seen as better positioned to "ensur[e] true community participation in the program implementation" (UNICEF Staff 1, Assam). Moving forward, key informants requested district leaders to prioritize efforts to address child marriage and child protection (Women Development and Child Welfare (WDCW)

Staff, Andhra Pradesh).

Although integration with government programmes was found to be strong, there were problems reported such as lack of resources (Implementing partner 1, Assam); lack of manpower and large number of vacancies in government positions (WDCW staff, Andhra Pradesh) and large turnover of government staff (UNICEF Staff 1, Assam). These problams create challenges to continuation and sustainability of programs from the government due to lack of manpower and loss of institutional memory.

Adaptation and Responsiveness to Local Context

Study respondents had very little to say regarding the responsiveness of the AEP to feedback or regarding its internal and external consistency. Only one UNICEF staff member in West Bengal suggested that piloting the program in diverse settings could be helpful, such that recommendations for ways forward or future similar programming are not reliant upon findings stemming from a region that may be considerably unlike other regions, e.g., a "tribal" or "minority dominated" district (UNICEF Staff 2, West Bengal).

The considerable diversity across and within Indian states meant that there was no single prototype of AEP objectives and design suitable for all contexts, but rather programming required considerable adaption, state by state. "There are clear state level issues because of the diversity that we have in India", explained one UNICEF staff member in Delhi (UNICEF Staff1, Delhi). Within states, programming required further adaptation, "rethinking and readjusting" both in terms of "demand generation" as well as "in terms of the supply of services" according to whether it was being implemented in an urban or rural setting (UNICEF Staff2, Delhi). Indeed, given the large size and considerable diversity of populations even within states, considerable distinctions in programming had to be made at a fairly localized level, some of the districts being "split up" following the commencement of programming and those implementing the programming at local levels often devising "their own ideas of how that should be operationalized" in one part of the district while not in another (UNICEF Staff2, Delhi).

Specific adaptations to AEP design and programming were required in order to adapt to working in contexts of civil strife which, according to a UNICEF staff member, affected all four states studied (Assam, West Bengal, Andhra Pradesh and Jharkhand) and each of which contained "certain nuances" that required adaptation (UNICEF Staff2, Delhi). Further considerations involved the adaptation of AEP programming to what KIs referred to as "tribal" areas, which many respondents identified as considerable barriers. One UNICEF staff member explained: "there are different tribes and each of the tribes has their own culture, own taboos and superstitions, all those things", pointing out the challenge in trying to influence "their culture and traditions which are 500, 600 or 700 years [old]" while simultaneously being faced with "political challenges also in the district" (UNICEF 1, West Bengal).

In West Bengal, Purulia District in particular was frequently mentioned as a "tribal dominant

district" containing a sub-district (Murshidabad) that has a "66% muslim minority" with a "completely different" culture and setting, requiring a "different strategy and different [program] design" that takes into consideration "local contexts [and] the local culture" (UNICEF 1, West Bengal). Adaptation to diverse "tribal" contexts may involve working with Panchayat level workers rather than "bring[ing] people from outside to work in those communities" UNICEF Staff 2, Jharkhand). It may also consist of facilitating discussion "with community leaders and other Anganwadi Workers or somebody from the same village who was very pro child right[s] and pro adolescent[s] and understood the issue and spoke similar language in terms of broad understanding of issue[s]" by specifically identifying community volunteers who speak the same language (UNICEF Staff 2, Jharkhand) and/or "develop[ing] scripts to improve the capacities of children as well as adolescents" (WDCW Staff, Andhra Pradesh).

Although the sample is insufficient to make any definitive conclusions, the wide variety of contexts and conditions that the intervention needed to adapt to may have lowered its impact. In many cases, the adaptations eventually undertaken were dependent on individual initiative and responsiveness to feedback and good monitoring. As discussed below, this was not always optimal. The local factors that required adaptation related to language, culture, religion, security situation, need for inclusiveness and much more. This means that apart from increased responsiveness, greater participation in program design and flexibility of intervention may help provide the necessary adaptability to account for the immense diversity of local contexts.

Relevance at community level

In spite of the apparently close integration and ownership by the government many study participants felt they were incapable of continuing program activities in the absence of NGO and/or UNICEF support and guidance. According to them, this was due to lacking financial support, lack of knowledge and training as well as limited motivation among facilitators and group members. Despite these apprehensions, a few participants reported undertaking efforts to continue the programming within their capacities and available human resources. A handful of participants mentioned activities were ongoing but recounted the challenges of continuing activities outside the AEP framework and questioned the value of participating following the program's end. All agreed, however, that continuing the program would be very useful. They worried that the achievements (regarding adolescents' and parents' learnings and changes in behavior) may be lost should the program not resume, yet simultaneously felt it was important for the younger generation and those entering adolescence to also benefit from the teachings they had received. This mixed picture suggests that while the community appreciates the AEP and there are attempts to continue some activities, there is a lack of confidence in their ability to do so.

An implementing partner was considerably sanguine about the feasibility of handing the program over to the community: "... if we continue this programme, like if we cut our support, handover our responsibilities to the community and leaders, monitor them closely and strengthen them whenever possible, then I think it can be carried forward easily. A project cannot be continued forever so we have to transfer it to the community, and give the responsibility to our community workers like

teacher, heads, NMs, Angan Badi workers etc. so if they conduct it on their own and make the rules and regulations themselves then it can work. If we invite the key persons and word members to the Panchayat meetings and discuss the issues like, importance of education, gender equality etc in such meetings then no one will neglect it then a solution will be found." (Jharkhand Implementing Partner, Pos. 56)

However, the picture emerging from adolescents was quite mixed. One peer leader reported not facing any challenge in continuation: "yes, we used to conduct meetings even after discontinuation of the UNICEF program. We never faced any challenges while we conducted the meetings and we were supported by all." (Adolescent (peer leader), M, 17, Andhra Pradesh). Another adolescent leader reported a considerable decline in activities: "yes, it continued but not as much as during the project period. [Continuation was] very challenging. No one came to participate in meetings. They were saying, "The program has ended. Why should we come?" (Adolescent (peer leader), M, 19, Jharkhand). This may have been due to a lack of resources as pointed out by a parent: "It's difficult to continue the group meeting without fund. To manage group meetings and transportation one needs funds." (Parent (group member), M, West Bengal).

There was a clear desire for the continuation of the program and an appreciation of its relevance: "Although the program has ended, I would want it to happen again because I want the generations after us to get this opportunity to learn as well." (Adolescent (group member), F, 18, Assam). Another adolescent leader in Assam was equally appreciative but stated "no, we haven't started anything on our own since the students don't come as there are no teachers." (Adolescent (peer leader), F, 17, Assam). In Andhra Pradesh, the lack of continuation was blamed on a lack of resources but there were continuing attempts to increase awareness in other ways: "We don't have enough resources to continue the AEP program, but still, we provide awareness to adolescents using our school teachers and Anganwadi workers." (Head Teacher, M, Andhra Pradesh).

It appears that continuation of programs could have been ensured by a gradual tapering of activities with a phase focused on capacity building and institutionalisation. In the absence of the necessary capacity and the resulting lack of confidence arising from it, even though the willingness and desire for continuation was there, community efforts were haphazard and easily frustrated. Community mobilisation was considered a weak point by a key informant and a priority area for greater involvement by UNICEF: "one area where government is struggling is the community mobilisation. They do not have adequate human resources, so here I see the role of civil society organisations is very critical in terms of community mobilization, community awareness, you know, ensuring true community participation in the program implementation is one area where maybe UNICEF can take a lead and bridge that gap between government and community" (UNICEF Staff 1, Assam, Pos. 23).

Monitoring and Feedback Mechanisms

With few exceptions noting a "lack in monitoring" (Deputy Commissioner 2, Part 2), particularly in relation to the number of student (temporary and permanent) dropouts (WDCW Staff, Andhra

Pradesh) or the insufficient independent midterm evaluation to methodically assess (rather than rely on NGOs' declarations) "whether the program is reaching [the] most vulnerable adolescents" (Deputy Commissioner 2), key informants generally agreed that the third-party monitoring system put in place to keep track of the AEP on a quarterly basis throughout its implementation was a "very strong" (UNICEF Staff 2, Delhi) and effective platform for promoting and informing dialogue throughout the program implementation. They particularly lauded its application in facilitating knowledge sharing across the states, its contribution to informing "further reprogramming" in relation to adolescent empowerment (UNICEF Staff 2, Delhi) and the system's encouragement for stakeholders "to reflect and understand where [the AEP] is lagging and what corrected action [needs] to be taken" (UNICEF Staff 2, Jharkhand). Indeed, a UNICEF staff member in Jharkhand described a number of "mid-cut corrections" that resulted in relation to the involvement of boys in the AEP, based on the communication resulting from the monitoring data (UNICEF Staff 1, Jharkhand).

Key informants spoke of multiple levels of government, community leaders and other stakeholders involved in modifying and rectifying programmatic approaches based on feedback drawn from the monitoring data. In addition, some reported employing more frequent mechanisms of monitoring AEP implementation, using, for instance, the WhatsApp messaging system in order to remain informed on a "real time basis" about the number of adolescent participants (by gender) in tea garden adolescent and parent groups, technical consultants sporadically visiting intervention sites, fortnightly meetings involving adolescents providing feedback on the programming and monthly meetings between block, Panchayat and district levels officials to review and discuss necessary adaptations to the programming (UNICEF Staff 3, Jharkhand). These latter monthly meetings, in particular, enabled those involved (program team, field officers, block officers) to regularly gather and share feedback "so that everybody could know each other['s] learning, issues and problems" allowing them to collectively "address the problem" and fill the gap identified (UNICEF Staff 3, Jharkhand).

One key informant described the occasional attendance of children at these coordination meetings, which sometimes involved "dramatic" gatherings in which "thematic deliberations" at times involved reports of very young children engaging in child marriage and the "children narrating their experience and their decisions" (UNICEF Staff 3, Andhra Pradesh). Complementing these regular meetings were field visits, typically by UNICEF staff (from Delhi and state offices) to engage directly with implementing NGOs, district officials, frontline and Anganwadi workers as well as adolescents, in an effort "to create space for feedback and getting on-the-ground perspectives" to complement the official reporting channels between the NGOs and UNICEF in order to better understand the obstacles faced in AEP implementation (UNICEF Staff 1, Andhra Pradesh).

A UNICEF staff member in West Bengal noted the value of direct feedback mechanisms made available for adolescents, through which adolescents "cut out the layers" of teachers and Anganwadi workers situated between themselves and high-level program administrators and, instead, "come to the district and directly interface with the district magistrate and his team" and "really be able to talk to the district magistrate and say that, look, these are the issues which we are facing" (UNICEF Staff 2, West Bengal). This UNICEF staff member reported that the use of such a feedback mechanism

was “kind of an eye opener” for UNICEF, as it enabled adolescents to openly voice their opinions and raise issues related not only to their personal lives but to their communities, such as lacking toilets at schools or playgrounds etc., in best case scenarios also enabling the district magistrate to “take immediate action” on such matters (UNICEF Staff 2, West Bengal).

Despite these generally positive assessments of the monitoring mechanisms in place throughout the AEP, one District Officer nevertheless requested stronger coordination and more regular meetings between AEP and other service providers in order to ensure transparency in data sharing, for instance in relation to adolescent healthcare seeking behavior, in the absence of which service providers “are missing the opportunity of giving the service to those adolescents who are actually referred or who actually need the service” (District Officer 2, West Bengal). One implementing partner also stated that the monitoring may have been inadequate or inconsistent due to misreporting: “Moreover, for the life skill training when the teachers were trained we were told to take the classes once or twice weekly. But when we go the ground level we find that no such classes happen. It is only when we go to the schools; the teachers tell their students that when the NGO people will ask about the classes they have to say that the classes are being taken regularly. But when we interact directly with the students we come to know the reality that no such classes are being taken by the teachers” (Implementing Partner 1, Assam).

CHAPTER 4

Conclusion and Outlook

I. Conclusion

The AEP performed an ambitious undertaking, that of improving the lives of one of the most overlooked, albeit critical part of the Indian population - the adolescents. Between the ages of 10 to 19, adolescents take several steps towards shaping their futures and undergo many transformations that define their entire lives. The AEP provided a critical framework for adolescents to facilitate their empowerment. It did so by increasing their awareness with regards to their rights and entitlements, as well as arming them against issues plaguing them, via increased dialogue and discussion with their peers. The second component of the AEP engaged with parents and other community members to alter the structures within which adolescent grow and to better understand of key barriers towards adolescents' development and empowerment, most importantly, the normative ones, by enabling a dialogue between the adolescents and parents. Finally, by developing adolescent-friendly and protective services, the program aimed to build a protective environment for the adolescent girls and boys, to strengthen their agency.

The evaluation serves to indicate improvements reflecting areas where the program served its beneficiaries most constructively. It highlights whether the lives of adolescents girls and boys indeed improved as a results of the program. The AEP evaluation adopted a mixed-methods approach and followed a theory of change to assess the reach of the program, to examine the hypothesized impacts, with the ultimate goal of achieving the main goals of reducing child marriage and early pregnancy, and improving school enrollment.

The endline evaluation for the AEP was particularly challenging on account of the COVID-19 pandemic affecting several aspects of the data collection. While the AEP wound down around the start of the pandemic, in 2020, the evaluation was delayed by the same. The lockdowns and multiple

waves of the pandemic, spread differently across the various states, implied that the data collection did not take place in a singular format or even within the same time period. In particular, for the quantitative data collection, respondents were reached two years after the end of the program in some cases. As a result, the evaluation provides a snapshot of medium to even long term impact of the program (two years after program completion).

Additional issues that introduced complexities in the evaluation were the low implementation fidelity, the absence of good baseline data and the variation in program MIS data. The block level design suffered from two main concerns, i) the lack of power, implying that large samples might not be able to tease out program effects, even if these exist, and ii) threats to the randomization validity, due to failure in randomization with few clusters. To mitigate these issues, the village level randomization design was added, improving power for several variables, and enabling the design to test the effectiveness of different program modalities. However, at endline, it became clear that implementation at village level was not followed by all states except West Bengal. Hence, the analysis has to be carried out at the original block level, due to contamination and selection bias related concerns. However, even at block level the implementation was not ideal, where Andhra Pradesh implemented heavily in five blocks, and only lightly in the remaining 17 blocks. These deviations in both design-levels created biases, which imply that the validity of some of the results is uncertain. Some of these changes could have been mitigated, were the evaluation team, provided regular MIS data between 2017 and 2019. With the MIS data, changes in the implementation design would have been visible quickly, allowing the evaluation team to instigate mitigation measures, and regular communication with UNICEF county and state teams. The presence of baseline data would have also allowed the evaluation to estimate a more reliable baseline status in treatment and control areas. The census data was outdated by at least five years at the time of implementation, implying that imbalances in outcomes occurring post 2011 would not have been detected. Moreover, the baseline level for many relevant intermediate outcomes for adolescents and parents, specifically related to empowerment were missing, besides the reduce baseline conducted in 2016. A large baseline would have allowed a more precise estimation of outcomes values at baseline, and the change in these as a result of the program, at endline. Despite these issues, the evaluation team was able to conduct the evaluation, and overcome some of these shortcomings. These are however, important lessons for future evaluations, especially those as large as the AEP.

Largely, the findings from the qualitative and quantitative components should not be examined at the meta-level, but rather within the various sub-samples that are described. The implementation of the AEP differed across the four states to fit in with existing government programs, structures and additional implementation challenges. These provided different contexts and platform for the program to function in, and to reach adolescents. Likewise, UNICEF worked alongside different Implementing Partner within states during the time of the program. This too added to the diversity of implementation approaches within states themselves. Therefore, the reader needs to be cautious about interpreting an overall effect of the program, or the overall mechanisms that might have led to these effects.

In terms of **implementation fidelity**, implementation reach in treatment areas was modest. At least

one person per village reported to be aware of AEP activities in 64% of villages. Triangulating information from both MIS data and endline survey data, the AEP would have reached 94% of treatment villages.

Among individuals, program awareness of AEP events in treatment areas was low (16%). While revealing, it is important to note that only respondents who could identify the name of the implementing organization that carried an event, training, group activity of workshop in their village was identified as "reached by the program". Given that activities could have been implemented more than three years before the survey, and given the delays in data collection caused by COVID-19, recall bias could play an important role in low levels of reported program awareness. Together with this, the diversity of local approaches implemented as part of AEP may entail that some activities were not captured by the endline survey. In any case, low levels of awareness reveal that the breadth of program implementation, the number of villages that were reached, was more significant than the depth of program implementation, the number of individuals reached within each village.

Among respondents who were aware of the AEP activities in their village, a majority of them took part in them (86%) and all respondents who took part in them reported to be satisfied. However, qualitative findings discuss below discuss that participants frequently had challenges in continuing with AEP activities, such as adolescent groups, once IPs had left the area.

Regarding program effectiveness, considering results from all states combined, there is no evidence that the AEP led to a reduction in the incidence of child marriage or early pregnancy among adolescent girls. No effects were also found in terms of reduced child marriage rates for adolescent boys. Respondents in qualitative interviews reported a general decrease in child marriage rates over the past decade. However, in line with quantitative evidence, they reported this was not necessarily linked to the AEP. During qualitative interviews, financial reasons appeared an important factor that continued driving child marriage. Early pregnancy was rare among adolescent girls in both control and treatment areas of the sample. Consequently, results for early pregnancy are thus affected by low statistical power and are not discussed below for individual states.

In terms of School Education, the AEP had a very limited effect. Overall results only showed a small, statistically significant increase in school attendance among adolescent girls aged 10 to 19, compared to adolescent girls in control areas (+1.7pp). Likewise, the share of adolescent girls aged 10 to 14 who reported to attend secondary education was 3.1pp higher in treatment areas, when compared to the share of adolescent girls of the same age in control areas. The program also had positive effects when considering formal years of education. An increase in 0.3 years of formal education is found among adolescent boys and girls in treatment areas, when considering results from all states combined. This increase is statistically significant for both girls and boys. At the state level, more significant results are found:

These results can be partly explained by low level of awareness among respondents in treatment areas of AEP-activities, which suggest the program did not effectively reach all respondents as intended.**On the state level, however, program effects present a more assorted picture.**

Andhra Pradesh showed encouraging results with reduced child marriage rates within the treated villages. Results for Andhra Pradesh showed a statistically significant reduction in child marriage rates among all adolescents in the ages of 10 to 19 (-3.0pp). This reduction was stronger for adolescent girls aged 10 to 19) 4.2pp) than for adolescent boys (1.6pp). No statistically significant effect on school attendance rates was found for adolescent girls in any age group within treatment areas of the state. An important limitation for the interpretation of the results is that Andhra Pradesh was the state with the largest deviations in implementation and sampling from the original evaluation design. Therefore, results for the state need to be considered with care.

Assam was the state where program results were weaker, and even appear to have deteriorated for child marriage outcomes. In Assam, the AEP is associated with a higher incidence of child marriage among adolescent girls aged 10 to 19 (+2.8pp). Among older adolescent girls, those aged 18 to 21, the program was also associated with higher child marriage rates in treatment areas (+7.2pp). In terms of education outcomes, the program is associated with an increase in the school attendance rate of adolescent girls in treatment areas, which was 3.2pp higher when compared to the attendance rate of adolescent girls in control areas. However, this result is only weakly significant.

Jharkhand, depicts good results in terms of increased school attendance and a, marginally, lower incidence (2.5pp) of child marriage among adolescents. In Jharkhand, the AEP is associated with a lower incidence of child marriage rates among adolescents aged 10 to 19, when compared to adolescent boys and girls in control areas. However, this reduction is not statistically significant when comparing only adolescent girls in treatment and control areas. In terms of education, the program increased school attendance rates for adolescents aged 10 to 19 by 2.6pp. This increase was larger when comparing adolescent girls alone, (6.2pp).

Results for West Bengal were similarly unfavorable as those in Assam. The program in not associated with any statistically significant changes in terms of reduced child marriage or improved schooling. That is, there were no perceptible differences among adolescent girls and boys in treatment and control areas in terms of final outcomes.

Comparing the various treatment modalities, **treated villages with parent groups in addition to the basic package performed best with respect to reducing child marriage and early pregnancy** when compared to the other treatment arms. The other treatment arms do not show results as consistent, as in the case of the parent groups.

The evaluation also considered intermediate outcomes that were to be influenced by the AEP. Change (or lack thereof) in intermediate outcomes can help to understand the limited effect of the AEP on final outcomes. The program was successful in improving awareness of adolescent rights among respondents (adolescents, parents and community leaders) in treatment areas. Likewise, community service provision and access to CPCs was also improved in treatment areas. Nevertheless, results differed by state and a large majority of community leaders reported CPCs were not present in their village.

Communication outcomes were marginally improved. The program increased slightly the share of intergenerational dialogue situations that adolescent boys and girls engaged in. This positive effect was stronger when focusing on adolescent girls alone (2.pp) and on older adolescent girls in particular (4.2pp).

In terms of other intermediate outcomes, effects were more limited. The program was not associated with any significant effects in terms of improved well-being, self-efficacy or active support for adolescents in any state. In terms of improved confidence, positive program effects were only seen among adolescent girls in Andhra Pradesh. Finally, the program did not create any perceptible changes between treatment and control areas in social norms relating to child marriage or equal opportunities for girls and boys.

Considering the *Relevance* of the program, key informants frequently reported a strong integration and explicit alignment of AEP programming with existing government goals, schemes and initiatives. In addition to ensuring the AEP's alignment with international frameworks such as the UNCRC, they emphasized that the AEP had been well integrated with existing government activities. However, in spite of the apparently close integration and ownership by the government **many study participants felt they were incapable of continuing program activities in the absence of NGO and/or UNICEF support and guidance. According to them, this was due to lacking financial support, lack of knowledge and training as well as limited motivation among facilitators and group members.** Despite these apprehensions, a few participants reported undertaking efforts to continue the programming within their capacities and available human resources. A handful of participants mentioned activities were ongoing but recounted the challenges of continuing activities outside the AEP framework and questioned the value of participating following the program's end.

Although this finding is derived from qualitative interviews, the wide variety of contexts and conditions that the intervention needed to adapt to may have lowered its impact. In many cases, the adaptations eventually undertaken were dependent on individual initiative and responsiveness to feedback and good monitoring. As discussed below, this was not always optimal. The local factors that required adaptation related to language, culture, religion, security situation, need for inclusiveness and much more. This means that apart from increased responsiveness, greater participation in program design and flexibility of intervention may help provide the necessary adaptability to account for the immense diversity of local contexts.

Finally, despite generally positive assessments of the monitoring mechanisms in place throughout the AEP, one District Officer requested stronger coordination and more regular meetings between AEP and other service providers in order to ensure transparency in data sharing, for instance in relation to adolescent healthcare seeking behavior, in the absence of which service providers are unable to provide the required services despite the need for it. Qualitative interview also suggested that clear and structured coordination mechanisms were not implemented and/or followed by all frontline workers. Most adolescents and parent study participants that mentioned coordination described this as an ad hoc process. These coordination challenges arose mostly due to lacking information and databases, which implied that coordination between implementation levels was

compromised.

II. Lessons Learned

This section outlines lessons learned that emerged through the evaluation process. These include approaches and strategies that could enhance the implementation, and evaluation, of complex cross-sectoral programs like AEP. First, lessons learned on program implementation are presented, followed by lessons learned on program monitoring and evaluation.

Program Implementation

- **Facilitating communication among frontline workers and other IPs can enhance program implementation.** A key informant suggested that clear and structured coordination mechanisms were not implemented and/ or followed by all frontline workers. In this line, most adolescents and parent study participants that mentioned coordination described this as an ad hoc process. These coordination challenges arose mostly due to lacking information and databases, which implied that coordination between implementation levels was compromised. As a lesson learned, improving coordination and information sharing between village and district level committees could enhance implementation at the ground level. As part of the AEP, this was done by IP and frontline workers by introducing fortnightly coordination meetings, and by the creation of a reporting mechanism that ensured frequent sharing of information and referrals. Quick feedback mechanisms, such as "WhatsApp" were used by some key informants, and could also be incorporated within communication strategies of similar programs in the future, to allow real time improvements in programming.

- **Regular training and capacity building of government officials' at different levels is needed to ensure adequate coordination with IPs.** Quantitative and qualitative evidence hints that program implementation differed considerably across communities. Likewise, perceptions regarding the receipt of support (in terms of trainings or resources from UNICEF and/ or their partnering IP) differed across frontline workers (head teachers, Anganwadi workers, CPC members) and across states, with some key informants feeling that they received sufficient support, while others indicating that they received no support at all. Stronger coordination and support from stakeholders at all levels would facilitate the effective implementation of program adaptations to meet local contexts.

- **Gender barriers can create challenges to the participation of adolescent boys and parents.** Gender barriers such as some boys' and fathers' discomfort discussing menstruation, limited the involvement of some prospective participants in the AEP. Adolescents requested

teachers of their own gender in order to address this challenge. In Assam, mixed teams of teachers (one male and two female teachers for every co-educational school) helped to successfully address this barrier, as it accounted for the greater number of girl children and at the same time allowed boys to talk with male teachers about their own issues.

- **Programming activities at suitable timing facilitates participation of adolescents and parents.** The convenience of the adolescent groups' timing, (typically on weekends or after school) and location (always in a central and easily accessible venue such as a school, temple or community center) was appreciated by participants and should be seen as critical to successful participation. Similarly, for parents, the timing of the group meetings in the evening was beneficial for participation, especially of fathers.

- **The peer educator role was beneficial in more aspects than initially anticipated.** Although the original focus of the peer education was to be on adolescents, in Jharkhand they additionally took on the function of facilitating intergenerational dialogues regarding child marriage with parents.

- **Context-dependent state-level variation** There is no "one glove fits all" approach possible for the diverse contexts program operates in. Each state team operated in line with existing government bodies and programs, to leverage and improve upon existing structures that promote adolescents and their rights. However, results from Assam suggest that many key indicators did not improve within program areas. **Pay particular attention to unique regions or populations (such as tea garden communities) where challenges are greater and the risk of drop-outs, child labor or early marriage and subsequently early pregnancies are higher.**

Program Monitoring & Evaluation

- **Focusing the evaluation on a smaller set of activities can help to pinpoint specific approaches that work to reduce child marriage.** Variations in program implementation, by location and by IPs, created challenges to capture expected outputs from all different program activities comprised within the AEP. A more standardized approach, where key program aspects are similar, such as mode of selection of adolescents within groups (school based or sport group or employment program), role and engagement with CPCs, use of radio program, etc. would have facilitated the evaluation process. In this sense, focusing the evaluation on a pilot program, with a smaller set of program activities, would have improved the external validity of the evaluation results, and would have allowed for concrete recommendations on which modalities perform best to inform further upscaling of the program.

- **Baseline data can help to mitigate deviations in implementation from the evaluation design.** A drawback of the endline evaluation to mediate changes in implementation was the absence of baseline data. This would have enabled the evaluation team to better mediate the effect from changes to the design during implementation, and eventually on the final endline sampling. Baseline data can also allow the confirmation of baseline values of most indicators, information that was not available to the evaluation team at endline. These differences become even more critical with several threats to the design validity, as in the case of this evaluation. Future evaluations should account for this in their planning and budgeting.

- **Providing real-time access to monitoring information to the evaluation team can help to track the state of program implementation more effectively.** Despite several attempts to acquire MIS data over the evaluation period, the evaluation team did not have real-time access to monitoring information, implying regular monitoring of the implementation, i.e., treatment compliance, was not possible. The biggest drawback to this was that quality and intensity of implementation could not be checked regularly, and the course and incidence of contamination between the various program groups was not available to the evaluation team until the endline. Providing real-time monitoring data access for the evaluation team, to ensure a more rigorous evaluation would have avoided communication challenges or gaps in knowledge between evaluation and implementation team. Likewise, a straightforward knowledge management strategy, including communication plans for all key actors in the evaluation, could have facilitated communication between states, and within program activities.

III. Recommendations

The recommendations outlined below stem from the evaluation process, implementation data, quantitative and qualitative findings and lessons learned, and should be considered in programmatic decision-making in the future. Therefore, these are all targeted at UNICEF country and region office staff. The recommended actions are not listed on the basis of their relative importance. Consequently, the sequence of suggested actions below does not suggest one recommendation has higher priority than the other, but are all actionable within the next few years.

1. **Enhancing communication strategies is needed to boost awareness of available programs on child marriage and education.** Communication approaches that were followed were not sufficient to generate awareness of program activities among respondents. In this sense, future programs on child marriage, education and adolescent empowerment can benefit from increasing awareness of the services available, particularly in relation to child protection and school management committees. **The evaluation team, thus, recommends creating**

a communication strategy for child marriage and education programs that includes a variety of methods for outreach, e.g., engaging with digital media outreach as well as collaboration with the private sector. The development and deployment of an expansive communications strategy would ensure higher visibility, increased participation and higher longevity of results.

2. **Targeting boys and parents can help to reduce acceptance of child marriage within communities.** The evaluation results hint at the inclusion of parents and adolescent boys into program activities as beneficial. The inclusion of parents' and boys' group seems to lead to improvements in core outcomes, potentially by creating a supportive environment for girl's empowerment, and should be included in future programming. Parent groups, especially, should be considered for inclusion into programs related to adolescent empowerment and wellbeing. Qualitative evidence shows that male parents are, however, harder to reach due to activities falling within their working hours. Likewise, gender barriers had to be overcome to engage parents and adolescent boys in program activities that addressed culturally sensitive topics. **The evaluation team, thus, recommends creating a strategy for the effective engagement of parents and adolescent boys in child marriage prevention programs. This should include strategies and recommendations to overcome gender and availability barriers for the participation of boys and parents in child prevention programs.**

3. **Standardizing monitoring information across states in child marriage programs can help to track and enhance program implementation.** During the implementation, regular structures of monitoring were set up to monitor the program, to share information and to identify challenges in implementation, and thereby help address these shortcomings. The use of this monitoring information was critical in improving program implementation and enhancing programmatic approaches. Additionally, the monitoring information was helpful for the quantitative analysis, though it would need to be unified across states (units of reporting and type of information collected). This is important to ensure that the extent and scale of program implementation can be compared across states, and to conduct analysis of implementation reach at the aggregate level, combining monitoring information from all states. **To avoid variation in reporting, the evaluation team recommends the development of a toolkit for programs targeting child marriage of (qualitative and) quantitative research tools, techniques and standardized indicators for monitoring changes in knowledge, practices and gender equitable attitudes.** This can facilitate a singular approach of measuring program implementation despite varying modalities, over a similar unit of reporting.

4. **Ensuring the sustainability of programs is needed to create long-lasting impact.** Qualitative evidence suggests that study participants felt they were incapable of continuing program activities in the absence of an NGO and/or UNICEF support and guidance, due to lacking financial support, knowledge and training as well as limited motivation among facilitators

and group members. All agreed, however, that continuing the program would be very useful. They worried that the achievements (regarding adolescents' and parents' learning and changes in behavior) may be lost if the program does not resume. Simultaneously, they felt it was important for the younger generation and those entering adolescence to also benefit from the teachings they had received. The continuation of the program is encouraged by the communities, but can only take place under a revised program. **The evaluation team, thus, recommends embedding sustainability of programs as a key aspect of future programming, for instance, embedding programmatic approaches into existing government schemes based on representative and rigorous evidence.** Potential improvements include creation of parents groups, standardized use of CPCs, and adoption of programmatic approaches into existing government schemes based on representative and rigorous evidence. **It is also important to develop and implement an exit strategy to be rolled out at least a year before the end of the program.**

5. **Creating capacity among UNICEF for more rigorous evaluation** Some critical barriers that hindered the easy completion of the evaluation stemmed from the deviations in evaluation design. Other issues relating to the lack of baseline data, the misalignment of program approach to evaluation approach, and other challenges in reporting implied that the UNICEF staff are not aware of frontier evaluation techniques, that would provide rigorous evidence for improved policy and programming. **A workshop targeted a building capacity of UNICEF program staff at country and regional level, and potentially key IP would ensure the understanding and use of highly rigorous evaluation approaches, such as randomized control trial and quasi-experimental methods.** More so, enhanced understanding of these methods can allow UNICEF to imbibe other studies on adolescent empowerment, which use such methods and may not explain them in a non-technical manner.