Title

Developing a Curriculum for a Formal Education Setting to Prevent Child Marriage in Rural Areas of Honduras: A Design-Based Research Study

Author

pacheco, Diana

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Developing a Curriculum for a Formal Education Setting to Prevent Child Marriage in Rural Areas of Honduras: A Design-Based Research Study

By

Diana P. Pacheco Montoya

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Committee in charge:

Associate Adjunct Professor Erin Murphy-Graham
Professor Heinrich Mintrop
Associate Professor Julianna Deardorff

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Abstract

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Diana P. Pacheco Montoya

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Associate Adjunct Professor Erin Murphy-Graham, Chair

Latin America and the Caribbean is the only region in the world where child marriage (CM) is not decreasing. Growing levels of education and legislation to ban this practice have not been associated with CM reduction. This dissertation is grounded on the belief that the educational sector can contribute to CM prevention by going beyond expanding access to secondary education. Schools can also contribute to CM prevention by focusing on challenging social norms, understanding the role of the different changes that occur during adolescence, and recognizing the structural limitations that drive CM. This design-based research study provides a deeper understanding of the factors that shape adolescents' decisions to marry in rural areas of Honduras and uses this knowledge to develop a theory of action to design, implement, and evaluate a school-based curriculum to prevent CM. The results and experience of this investigation advanced the development of design principles that can guide the implementation of interventions in similar contexts throughout Latin America.

Keywords: child marriage, Latin America, design-based research

To my parents Julián and Nolvertina, the most resilient, selfless, courageous, inspiring, and loving persons I know.

To my siblings Leonel and Julia.

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Chapter 1:
Framing the Design Challenge: Addressing Child Marriage through Secondary Education in Rural Areas of Honduras

Ana lives in a rural community in the northern coast of Honduras. When she was 14 years old, she ran away with her then-19-year-old boyfriend, Raúl. Ana's decision to elope was motivated by a combination of tense relationships with her family members and the desire to be with Raúl without having to hide from her parents and community members. Her parents did not have many resources, but always supported her education and were disappointed and sad when she ran off with Raúl. Ana did not elope with Raúl because she thought she would be better off economically, nor was she pressured by her partner, parents, or peers. After running off with Raúl, Ana moved in with her in-laws who did not treat her well. Ana became pregnant two years later and had a child when she was 17 years old. Ana and Raúl were not very happy, and they eventually split up after 7 years together. At 21, Ana moved back with her parents and was able to go back to school because of their financial and emotional support (a rare opportunity since most girls who drop out and marry do not return to school). She eventually remarried and had a second child. However, this time she made it clear to her partner that she would not quit school. Ana is now 26 years old and is in 10th grade. She works part time to pay for her studies and attends school during the afternoon. She is an honors student and is very motivated to finish high school and continue with her post-secondary education. She deeply regrets marrying so young and recognizes that entering a union at that age not only disrupted her education, but also brought her a lot of pain. She wishes she were more informed about the decision she made when she was just a girl. Ana's story is commonplace in Honduras. Thirty-four percent of Honduran girls marry before the age of 18 and 8% before the age of 15 (UNICEF, 2014).

Like Ana, there are millions of girls whose opportunities to study, play, and enjoy their adolescence are cut short. Instead, they engage in adult roles and become wives and mothers. According to the International Center for Research on Women (ICRW), more than one-third of girls in developing countries are married before the age of 18 and one in nine are married before their fifteenth birthday. If current trends continue, 150 million girls will marry before the age of 18 over the next decade (2015). Child Marriage (CM) is defined as "a marriage of a girl or boy before the age of 18 and refers to both formal marriages and informal unions in which children under the age of 18 live with a partner as if married" (United Nations International Children's Emergency Fund [UNICEF], 2017, p.1). CM constitutes a human rights violation because it impedes girls from exercising their right to develop to their fullest potential, be protected from harmful practices, and participate fully in family, cultural, and social life, as stated by *Convention of the Rights of the Child* (CRC). Importantly, CM violates the civil, political, economic, social, and cultural rights (such as the right to be equal before the law, the right to employment, and the right to access health care) of girls based on age, sex, and gender (Silva-de-Alwis, 2008). South Asia has the largest number of girls married as children (56%), followed by

West and Central Africa (46%), Eastern and Southern Africa (38%), and Latin America and the Caribbean (LAC) (30%) (UNICEF, 2014).[1]

Although the LAC does not have the highest rates of CM, it is the only region in the world where it is not decreasing. If this trend continues and no tangible efforts and investments take place, LAC will have the second highest CM rates by 2030 (The United Nations Entity for Gender Equality and the Empowerment of Women [UN Women], UNICEF & United Nations Fund for Population Activities [UNFPA], 2018). Growing levels of education have not affected reproductive outcomes in LAC as much as they have in other regions in the world. Bongaarts et al. (2017) found that rising levels of education contributed to older age at first sex, first marriage, and first birth in sub-Saharan Africa and in Asia and Northern Africa. In contrast, in Latin America, despite improvement in education levels, age at time of first sex decreased by almost a year, age at marriage increased by less than a year, and the age at first birth remained constant. LAC is the only region in the world that has experienced a fecundity increase in the last 30 years and most of these births occur in the context of early unions (UNFPA, 2013). According to Bongaarts et al. (2017), for this reason, "it is difficult to speculate how future increases in educational attainment might affect the timing of early reproductive events in Latin America" (p. 151).

In the same way that educational expansion has not been associated with CM reduction, legislation that prohibits this practice has also been insufficient. There has been an important movement in Latin America to legally ban CM (Girls Not Brides, 2017; Plan International, 2017). In recent years, countries like Honduras, Guatemala, El Salvador, and The Dominican Republic have modified their legislations to eliminate exceptions that allowed underage individuals to marry. Although these legislative efforts are important, meaningful, and historic (Congreso prohíbe el matrimonio [Congress bans marriage], 2017), the effects that these legal efforts appear to be limited. For instance, in Honduras, only 10 percent of unions formed by adolescents are legal (Remez et al. 2009). In Honduras, although the term "child marriage" is used, these marriages are in most of the cases informal unions.[2] That is, in most cases, no legal or religious ceremony takes place. Socially, cohabitation marks the moment when a couple "is married" (Murphy-Graham & Leal, 2015). Consequently, legislation alone is insufficient to reduce CM in this context.

A School-Based Intervention to Prevent Child Marriage: Motivation and Brief Overview

The educational sector can contribute to CM prevention by going beyond expanding access to secondary education. Schools can also contribute to CM prevention by focusing on challenging social norms, understanding the role of the different changes that occur during adolescence, and recognizing the structural limitations that drive CM. This dissertation, *Developing a Curriculum for a Formal Education Setting to Prevent Child Marriage in Rural Areas of Honduras: A Design-Based Research Study* describes the design, development,

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[1] The following 10 countries have the highest rates of CM in the world: Niger (77%), Bangladesh (74%), Chad (69%), Mali (61%), the Central African Republic (60%), India (58%), Guinea (58%), Ethiopia (58%), Burkina Faso (52%), and Nepal (52%) (UNICEF, 2014).

[2] It is important to note the definition of CM provided at the beginning of this chapter includes both formal and informal unions. Throughout this dissertation the term CM is used to refer to both formal and informal unions. Therefore, when the term CM is used in the LAC context, and more specifically in the Honduran context, it is making reference to informal unions.

implementation, evaluation, and results of the intervention *Addressing Child Marriage through Holistic Education: A design-based research study* (ACMHE). ACMHE focuses on the development and implementation of a school-based curriculum to prevent CM in rural areas of Honduras. This intervention provides adolescents like Ana with exposure to learning opportunities and content that can influence their knowledge, attitudes, and behaviors so that they can make informed decisions about CM.

Ana's story helps us understand why expanding educational access and legislative efforts are not successful in preventing CM. First, Ana had access to secondary education and her parents were supportive of her schooling. That is, the reason Ana got married was not because she dropped out of school or lacked access to educational options. Second, Ana did not claim to be forced to elope by her partner or her parents. On the contrary, she did so against her parents' will. Poverty was not a direct factor that influenced her decision. Finally, Ana did not get legally married– she entered an informal union like 90% of young Hondurans (Remez et al., 2009). There is no legal way to forbid this type of union and it is nearly impossible for authorities to track informal unions (that are socially perceived to have the same validity as formal marriages) in remote rural areas. Therefore, Ana's decision to elope was not influenced by, and therefore could not be prevented by, the existing educational resources or legislation.

Murphy-Graham and Leal (2015) found that, like Ana, many girls in rural areas of Honduras exercise agency in their decision to marry. These authors used Ahearn's definition of agency as the "socio-culturally mediated capacity to act" (2001, p. 112) to explain their findings. Murphy-Graham and Leal's (2015) results suggest that girls are not always forced to marry by their parents, community members, or their partners. Instead, in some cases, girls choose to run away with their partners in the absence of any coercion. This finding challenges assumptions about CM as forced marriage in the LAC region. Other studies in Mexico and Brazil reported similar conclusions (see Summers, 2017; Taylor et al., 2015). However, in most cases, this decision to marry at a young age is usually influenced by poverty, the lack of alternative life options available for girls, and social norms that promote gender inequality (Murphy-Graham & Leal, 2015; Summers, 2017; Taylor et al., 2015; Taylor et al., 2019; UNICEF, 2014; UNFPA, 2012). Programs that aim to prevent CM in LAC need to acknowledge the inability of increased educational access to decrease CM rates, the limitations of legal prohibitions to prevent CM, and address the role that social norms and limited alternative life options have in the agency exercised by girls in this region.

Furthermore, there is another important element to consider when trying to understand and address CM – the changes that individuals experience during adolescence and how these are perceived by the society they live in. Understanding the developmental stage that Ana was experiencing and the biological, cognitive, and psychosocial changes she was going through can help explain why a young girl like Ana would make such a life-changing decision. The ways in which these changes that occur during adolescence influence girls' decisions to marry have been under examined in studies of child marriage globally. Only a small body of research examines (not comprehensively, nonetheless) some of these aspects of adolescence (see for example Perczynska, 2019; Greene, Perlson, & Hart, 2017; Murphy-Graham & Leal, 2015). However, research in the U.S. suggests that the ways these biological, cognitive, and psychosocial changes affect adolescents' lives vary from context to context (Deardorff, Hoyt, Carter, & Shirtcliff,

2019). Therefore, a contextual understanding of how these changes that occur during adolescence influence a girl's decision to marry is needed to expand the understanding of CM in rural areas of Honduras.

Addressing CM in schools can help target the social norms and the biological, psychosocial, and cognitive changes involved in adolescent development to reduce CM prevalence in LAC. Schools can be strategic sites to address CM and gender inequality because they are powerful socialization settings where girls and boys can be exposed to learning opportunities that can influence their "knowledge, behavior, and attitudes toward gender, equity, and power" (Achyut et al., 2016, p.1). This study seeks to: a) develop a deeper understanding of the factors that shape adolescents' decisions to marry; and b) use this knowledge to design, implement, and evaluate a school-based intervention to prevent CM. The following research questions guide this study:

1. In what ways do social norms, the biological, psychosocial, and cognitive changes that individuals experience during adolescence, and limited life opportunities for women converge to act as causal factors of CM, shaping adolescent girls' decisions to enter CM?
2. How can a school-based intervention address the causal factors of CM in rural areas of Honduras and enhance adolescents' ability to make informed decisions about CM?
3. Finally, what are the design principles of developing a school-based intervention aimed at addressing CM in the Latin American and Caribbean context?

As such, ACMHE's design challenge consists of:

1. Developing a deep understanding of the causes of CM in rural areas of Honduras.
2. Establishing strong relationships with participants and collaborators in order to allow for a deep understanding of their needs and realities to co-design a strong and relevant intervention.
3. Designing and developing an intervention that combines local knowledge, needs, and values with research and empirical evidence.
4. Implementing an intervention that provides the context to promote effective learning that can inform adolescents' decision-making processes and attitudes and behaviors towards CM.
5. Developing design principles that can guide other interventions in similar contexts.

ACMHE is situated within a design-based research (DBR) study. DBR is a "methodology designed with and for educators that seeks to increase the impact, transfer, and translation of education research into improved practice" (Anderson & Shattuck, 2012, p.16). "Design" refers to the creation of a solution to a particular need/problem by "building deep empathy with people you are designing for, generating tons of ideas, building a bunch of prototypes, sharing what you have made with the people you're designing for, and eventually putting your new innovative solution out there into the world" ("Design Kit", n.d.). In this case, the problem being addressed is that educational expansion and legislative efforts have had little impact on reducing CM in Honduras. Therefore, there is an opportunity to create a school-based intervention that addresses

the root causes of CM in rural areas of Honduras to provide students with the necessary knowledge to make informed decisions about CM.

To develop this intervention, the University of California, Berkeley (UC Berkeley) partnered with Bayan and the Summit Foundation. This collaboration began in January of 2016 and is scheduled to continue until December 2021. Bayan is a non-governmental organization that administers the Sistema de Aprendizaje Tutorial (SAT; [Tutorial Learning System]). The Summit Foundation is a Washington D.C.-based philanthropic organization whose main areas of action include girl's empowerment in Central America. SAT is an alternative secondary education program for rural areas of Honduras whose populations aren't covered by the traditional public-school system. Although SAT is administered by Bayan, SAT is fully funded by the Honduran government and SAT students receive the same academic credentials as those from traditional schools (e.g. they receive the same high school diploma and cover the same core subjects as established by the national curriculum). The collaboration between the UC Berkeley and Bayan teams is a consultative co-design partnership (Mintrop, 2016). In this type of partnership, researchers work directly with schools and district authorities. In this collaboration, most of the intellectual work is done by the university researchers and the practitioners offer their practical knowledge and intuition. In this partnership, Bayan implements the program, the UC Berkeley team leads the ongoing design, research, and evaluation in collaboration with Bayan, and the Summit Foundation provides the funds and guidance for Bayan and the UC Berkeley teams' work. This dissertation describes the different stages of this DBR study from January 2016 to January 2019.

The design challenge of ACMHE can be summarized as: the need to develop an intervention that can provide adolescents with learning opportunities and content that can influence their knowledge, attitudes, and behaviors so that they can make informed decisions about CM. In the next chapters, I focus more deeply on the different facets of this design challenge. Chapter 2 describes the methodology used in this dissertation which includes a detailed description of DBR as well as the main phases of data collection. Chapter 3 summarizes the consultation of the knowledge base that was conducted to understand CM and the processes needed to achieve the desired outcomes. Chapter 4 presents the findings of the needs assessment conducted to understand how social norms, the biological, psychosocial and cognitive changes that occur during adolescence, and contextual limitations converge to promote CM in rural areas of Honduras. Chapter 5 describes the theory of action used to design the curriculum for ACMHE. Chapter 6 discusses the findings of the evaluation conducted. Finally, Chapter 7 discusses the design principles that emerged from this study and suggests next steps forward both for ACMHE and for other interventions in similar contexts.

Chapter 2:
A Design-Based Approach

There are two main reasons design-based research (DBR) was chosen as a methodology to design and implement ACMHE. In the first place, to our knowledge, there are no interventions that address agency and its connection to CM in educational settings in Latin America. Therefore, there were no resources or previous experiences to draw from to design ACMHE. ACMHE needed a methodology that allowed for trial and error, or what Anderson and Shattuck called, "research through mistakes" (2012, p.17). There was also a need to ground CM interventions in theory to develop a more nuanced understanding of the process of change in Latin American settings. Most of the interventions reviewed in the previous chapter took into consideration the causes and consequences of CM, but their designs or evaluations were not always grounded on theory. DBR also provides ACMHE with the opportunity to contribute to the knowledge base of the fields of international development and education as DBR emphasizes the development of theories and/or descriptions of why designs work. That is, by using DBR, the purpose of this study goes beyond establishing whether an intervention was successful or not. It attempts to advance knowledge that can inform future interventions in similar settings.

In second place, its collaborative nature guaranteed the development of a contextually relevant intervention. Addressing CM means engaging with different themes and issues that are difficult to address in a school-based setting such as gender norms, sexual reproductive health (SRH), and religious beliefs. In Latin America, conservative political movements have consistently blocked gender education (Gianella, Rodriguez de Assis Machado, & Peñas Defago, 2017) and the provision of SRH is highly contested and a sensitive subject in Honduras (Iglesia Católica tampoco avala guías sexuales [Catholic Church does not endorse sexual guides either], 2018). By collaborating with practitioners, parents, and students, we ensured that the workbooks developed were approved not only by practitioners, but also by parents and community members. Given the iterative and collaborative nature of DBR, any tensions, disagreements, or concerns were addressed during the several iterations until there was a consensus around the content of the materials developed. Other methodologies would not allow for the flexibility, openness to the views and participation of different stakeholders, and opportunities to re-design. The establishment of a partnership with Bayan and its high school program SAT, ensured that we as researchers did not impose our own views and understanding of the context while it allowed practitioners to use theoretical lenses to enrich their practical expertise.

What is Design-Based Research?

Design-Based Research (DBR) is a "methodology designed with and for educators that seeks to increase the impact, transfer, and translation of education research into improved practice" (Anderson & Shattuck, 2012, p.16). DBR in educational settings can be traced back to Anna Brown's (1992) design experiments through which she attempted to engineer interventions that responded to research standards as well as to the contextual settings of classrooms. Brown was critical of the gap that existed between the implications of research from experimental classrooms to the reality of the average schoolroom. She argued that the contributions of research to practice in the everyday classroom were limited given that they did not take into consideration the complexity of naturalistic settings. This gap between research and educational

practice is still prevalent. The lack of relevance of educational research and practice calls for the use of new methodologies to address this gap. For instance, the Design-Based Research Collective (2003) advanced that " educational research is often divorced from the problems and issues of everyday practice– a split that resulted in a credibility gap and creates a need for new research approaches that speak directly to problems of practice and that lead to the development of 'usable knowledge'" (p. 5). DBR attempts to close this gap by designing and developing interventions that aim to create solutions to complex educational problems. However, its purpose is not limited to creating these programs or interventions, it also seeks to advance knowledge about the characteristics of these strategies and the processes to design and develop them with the intention of developing or validating theories (Plomp, 2010). According to Barab and Squire (2004) DBR is "not so much an approach as it is a series of approaches with the intent of producing new theories, artifacts, and practices that account for and potentially impact learning and teaching in naturalistic settings" (p. 2).

Characteristics of DBR

According to Anderson and Shattuck (2012) a quality DBR study is defined by:

1. Being situated in a real educational context: DBR studies attempt to capture the complexities and realities of everyday classrooms. There is a need to understand the ecology of learning to address all possible elements involved in a problem.
2. Focusing on the design and testing of an intervention: DBR studies evolve through the creation and testing of prototypes. The design is meant to evolve continuously as a result of iterative refinements of prototypes tested in authentic practice.
3. Using mixed methods: DBR interventions are assessed using different methods. This will depend on the characteristics of the problem addressed and the purpose of the DBR study.
4. Involving multiple iterations: DBR studies include different cycles of intervention and revision as a result of testing and trying prototypes.
5. Involving a partnership: DBR recognizes the gap between researchers and teachers. Too often, teachers do not have time to engage in research and researchers rarely can be in a classroom setting to test and refine designs or theories. DBR brings the strengths and advantages of researchers and teachers together to solve educational challenges.
6. Developing design principles: Design principles are lessons learned, patterns, and/or grounded theorizing that emerges from the design, implementation, and evaluation of an intervention. The purpose of developing design principles is to provide guidance in other contexts by explaining why designs work and suggesting how they may be adapted to new circumstances (Cobb, Confrey, DiSessa, Lehrer,and Schauble, 2003). Design principles are heuristic statements; they are meant to provide guidance and direction but do not give certainties (Plomp, 2010).

In addition to Anderson and Shattuck's characteristics, we draw from Plomp's (2010) characterization of DRB. According to Plomp (2010), DBR is also:

1. Process oriented: The focus is on understanding and improving interventions. The design is expected to change and evolve. There is not an expectation that a design will work and be efficient after the first attempt/implementation.
2. Utility oriented: The merit of a design or intervention is measured by how practical and useful it is for users in real contexts.
3. Theory oriented: The design should be based on a conceptual framework and theoretical propositions in addition to knowledge from the context and the knowledge gained through the testing of prototypes.

Stages of DBR

According to Mintrop (2016), there are six stages in a DBR intervention as shown in Figure 2.1:
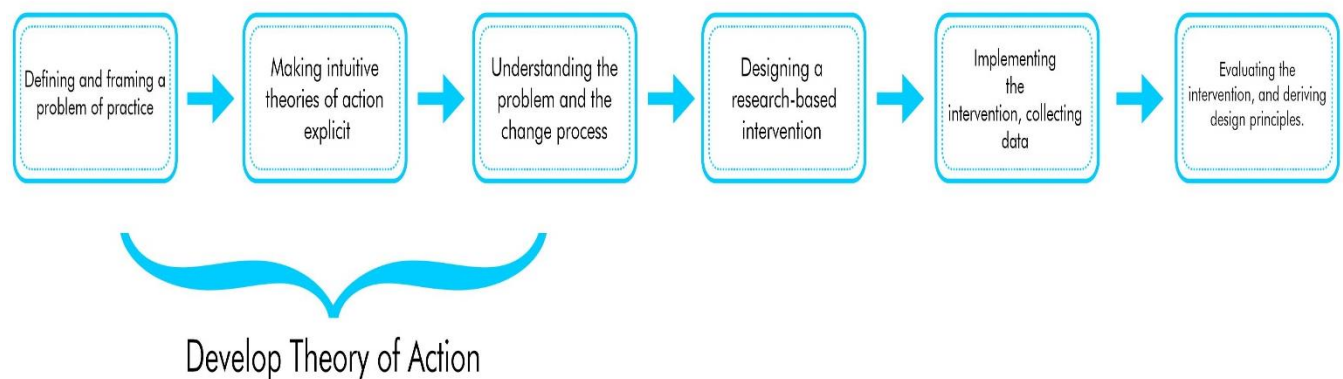
Figure 2.1. Stages of a DBR study.

In the first stage, researchers and educational leaders define and frame a problem of practice. That is, they identify a weakness, issue, problem, or need in the classroom/educational context that needs to be addressed in order to improve the educational experience of students. This also includes the practitioners'/researchers' ideas about what causes the problem and what changes need to be made and by whom. In the second stage, practitioners and researchers engage in developing possible avenues to address the problem based on their personal experiences, observations and intuition. Intuitive thinking plays an important role in this stage. Davis and Davis (2003) defined intuition as the "immediate, novel, and striking synthesis of what was previously unrelated that springs into the conscious awareness without mediation of logic or rational thought process" (p.76). Intuition from practitioners is particularly rich and pertinent as they are the ones who are present in the classrooms and are closer and more connected to the needs of their students, unlike researchers who in most cases do not have that immediacy with the educational context. The third phase revolves around understanding the problem and the change process. Here, needs assessments play an important role. According to Mintrop (2016),

> Needs assessments, a critical element of design development studies, help researchers question assumptions and collect data to inform the solutions and interventions best

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suited to address a specific problem of practice. In literature on design research, needs assessments are described as 'mini-studies' and can be conducted in a variety of ways using various methods (p. 61)

Before and after conducting a needs assessment, researchers lead the consultation of the knowledge base to give theoretical explanations about the patterns identified in the framing of the problem and the needs assessment. The purpose is to develop an understanding in the problem that is both practice-oriented and theory-based, in order to provide high-inference explanations of the problem of practice that is being addressed. The next step in this third stage is to understand the change process to comprehend the environment in which the designed intervention will take place and the activities and resources needed to promote change. With this information in place, researchers and practitioners develop a theory of action. A theory of action consists of a plan that seeks to address a specific problem of practice and promote changes to improve educational practices (these can include behaviors, beliefs, lack of resources to aid learning, etc.). This plan of action is based on a deep understanding of the problem, the understanding to the changes that need to occur in order to improve the problem of practice, and the context in which this problem exists and in which it will be addressed.

Once researchers and practitioners have developed a theory of action, they can design the intervention. An intervention design consists of "a sequence of activities that together or in combination intervene in existing knowledge, beliefs, dispositions, or routines in order to prompt new learning of new practices…Intervention designs are artifacts or concrete expressions of underlying theories of action" (Mintrop, 2016, p.133). Before implementing the fully designed intervention, it is advised that quick trials or mini experiments take place in order to test prototypes and improve them before the first full implementation. Once the design is ready, and several iterations of the prototypes have taken place, the next stage is implementing the intervention. Finally, evaluation of the implementation follows, and from the lessons learned and outcomes documented, researchers develop design principles to guide similar interventions in other contexts. The purpose of conducting an evaluation is to inform the upcoming iterations and make necessary changes and improvements.

This dissertation covers all 6 stages of a DBR study. It frames the problem, describes the result of a needs assessment or "mini-study" conducted, and explains the design process, implementation, and evaluation of the first prototypical implementation of ACMHE. A prototypical implementation refers to a stage where the intervention is in the process of being tested and adjusted in practice (Mintrop, 2016). That is, I followed the six stages suggested by Mintrop from framing the problem to evaluation of the intervention. This was the first of several full implementations of ACMHE that will take place, until we develop a final prototype (in this case of a curriculum), that is ready for scale-up across all the regions nation-wide where SAT (the secondary program ACMHE is being implemented) has presence in Honduras. Table 2.1 describes how these different stages are developed throughout the chapters of this dissertation.

Table 2.1.
Stages of ACMHE Developed throughout this Dissertation.

Stage of DBR	Chapter in this Dissertation
Defining and framing the problem	Chapter 1: Framing the design challenge: Addressing child marriage through secondary education in rural areas of Honduras
Making intuitive theories of action explicit	Chapter 1: Framing the design challenge: Addressing child marriage through secondary education in rural areas of Honduras
Understanding the problem and the change process.	Chapter 3: Understanding child marriage and the necessary processes to enhance adolescents' agency to make informed decisions about CM in a school-based setting. Chapter 4: Understanding how social norms, the biological, psychosocial, and cognitive changes that individuals experience during adolescence, and limited life opportunities for females converge to act as causal factors of child marriage.
Designing a research-based intervention	Chapter 5: Theory of action, design, and implementation of ACMHE.
Implementing the intervention	Chapter 5: Theory of action, design, and implementation of ACMHE.
Evaluating the intervention and deriving design principles.	Chapter 2: A design-based approach. Chapter 6: Testing ACMHE's theory of action. Chapter 7: Conclusions: Design principles of ACMHE.

Partnership, Timeframe, and Location of ACMHE

In this intervention, UC Berkeley partnered with Bayan and the Summit Foundation. This collaboration began in January of 2016 and is scheduled to continue until August 2020. The collaboration between the UC Berkeley and Bayan teams is a consultative co-design partnership (Mintrop, 2016). In this partnership, Bayan implemented the program, the UC Berkeley team (composed by the author of this dissertation, Diana Pacheco Montoya and her advisor Dr. Erin Murphy-Graham) led the ongoing design, research, and evaluation in collaboration with Bayan, and the Summit Foundation provided the funds and guidance for both teams.

This study took place in the Department of Atlántida, located in the northern Caribbean coast of Honduras. This implementation was designed, implemented, and evaluated in this

Department because the headquarters of Bayan, our collaborators, is in this Department. In this way, we were able to engage in our collaborations with Bayan and SAT tutors while we also had access to the schools and communities where we implemented ACMHE. The Department of Atlántida is one of the Departments with greater number of SAT schools in Honduras. Implementing in this Department allowed us to have access to a greater number of schools in the same geographic location. The different activities that were part of these six stages and that are described in this dissertation, took place from January 2016 to January 2019. This study completed the Internal Review Board (IRB) process of the University of California, Berkeley.

Research Design

Data Collection

To describe the data collection process and phases of ACMHE, I follow the phases suggested by Plomp (2010) during the development of a DBR study:

1. Preliminary research: Needs assessment and consultation of the knowledge base.
2. Development or prototyping phase: Iterative design phase, iterations of prototypes, micro experiments, piloting of prototypes, with formative evaluation as the most important research activity aimed at improving and refining the intervention.
3. Assessment phase: Semi-summative evaluation to determine if the intervention addressed the problem of practice in the way it is designed to. This assessment results in recommendations for improvement of the intervention.

Table 2.2 describes how these three phases cover the data collection process of the stages suggested by Mintrop (2016).

Table 2.2.
Data Collection Phases of ACMHE

Stages according to Mintrop (2016)	Data collection phase following Plomp's (2010) phases
Defining and framing the problem of practice	No data collection
Making intuitive theories of action explicit	No data collection
Understanding the problem and change process	Preliminary research phase
Designing a research-based intervention	Development or prototyping phase
Implementing the intervention, collecting data	Development or prototyping phase
Evaluating the intervention and deriving design principles	Assessment phase.

Preliminary research (January 2016- May 2016).

In this stage, we engaged in an exploratory needs assessment. The goal was to conduct an exploratory research that would help us:

1. Respond to the following research question:

In what ways do social norms, the biological, cognitive, and psychosocial changes that individual experience during adolescence, and limited life opportunities for females converge to act as causal factors of child marriage, shaping adolescent girls' decisions to enter CM?

2. Understand the organizational context in which ACMHE took place.

During this stage, 7 schools from the Department of Atlántida participated in the data collection process. In this preliminary research, we used the following data collection methods:

- 5 focus groups
- 1 workshop
- 7 interviews
- 2 document analysis
- 1 data analysis of previous study

Table 2.3 describes the activities, methods, and participants of this first phase:

Table 2.3. *Activities that took Place during the Preliminary Research Phase*				
Participants	**Number of participants**	**Method**	**Purpose**	**Location/Date**
District supervisors	15	Focus Group[3]	Understand the problem and change process.	La Ceiba / March 2016
SAT Tutors	10	Focus Group	Understand the problem and change process.	La Ceiba/ March 2016
Students, parents, teachers, community members	25	Focus Group	Understand the problem and change process.	Community 2/ May 2016
Students, parents, teachers, community members	25	Focus Group	Understand the problem and change process.	Community 0/ May 2016
Students, parents, teachers, community members	25	Focus Group	Understand the problem and change process.	Community 4/ May 2016
Former students *Key informants*	2	Interviews[4]	Understand the problem and change process.	Community 4, Community 5/ May 2016

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[3] See appendix 2 for instruments for focus groups in this table.

[4] These interviews happened spontaneously. They were not planned. We were directed to these girls as a result of our discussions in the focus groups. One of them was a girl who their community members thought was a role model and an example for other girls since she was in college, had her own business, and was single despite being in her early 20's (a rare thing in these communities). During this interview, I asked her what motivated her to postpone

Students, parents, teachers, community members, Bayan staff members, public health expert, youth expert	20	Workshop[5]	Understand the problem and change process.	Comayagua/ March 2016
First lady office staff members/ UNFPA gender specialist	3	Interview[6]	Understand the problem and change process.	Tegucigalpa/ May 2016
Sexual reproductive health youth activist	1	Interview	Understand the problem and change process.	Tegucigalpa /May 2016
UNFPA gender specialist	1	Interview	Understand the problem and change process.	Tegucigalpa/ May 2016
Bayan Staff members	5	Review of SAT's curriculum	Understand the organizational context in which the intervention would take place.	La Ceiba/ March-June 2016
UC Berkeley members	2	Review of articles and reports of SAT.	Understand the organizational context in which the intervention would take place.	Berkeley March - June 2016
UC Berkeley team	2	Analysis of interviews from longitudinal study (Interviews of girls who entered unions).	Understand the problem and change process.	Berkeley, California/July 2016

The results of this phase are discussed in Chapter 4. These results contributed to the refinement of the theory of action, explained in detail in Chapter 5.

Development or prototyping phase.

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marriage and follow goals that are not common for girls in her community. The other girl was a 16-year-old student who had dropped out of school due to CM and was pregnant at that time. I interviewed her to understand her reasons for eloping with her boyfriend and her thoughts about having to drop out of school. I did not have an interview instrument, so the questions were spontaneous. The first interview was recorded and transcribed. The second girls did not want to be recorded, so I relied on my field notes for analysis.

[5] See appendix 3.

[6] For all interviews with stakeholders see appendix 4.

With the results of the exploratory study, the following research question was addressed:

How can a school-based intervention address the causal factors of CM in rural areas of Honduras and enhance adolescents' ability to make informed decisions about CM?

To answer this question, researchers, practitioners, parents, and students engaged in the development of a theory of action that guided the design, development, and implementation of ACMHE's curriculum. Once the theory of action was in place, we created two prototypes of the curricular materials and piloted them.

During this second phase, three main activities took place:

- Design and development of curricular products.
- 2 rounds of quick trials where initial prototypes were piloted.
- The first prototypical implementation of ACMHE.

In this prototyping phase we used the following data collection methods:

- 11 interviews
- 11 hours of class observations
- 7 focus groups

Design of ACMHE

From June to August of 2016, the UC Berkeley team, Bayan Staff, and tutors of SAT worked together to use the data collected during the exploratory phase to develop the first workbook prototype. The first workbook developed was titled *Living my youth with purpose* (from now on Living my Youth). This first prototype was piloted in 7 schools from September to November of 2016. Then, the prototype of the second workbook for students called *Youth with Equality* was developed from February to July of 2017. The Youth with Equality workbook was piloted in two schools in September 2017. From October 2017 to March 2018 the two workbooks Living my Youth and Youth with Equality were modified using the data collected and lessons learned during the pilot implementations. The prototypical implementation took place from July to November 2018. Below, the data collected during each trial/implementation are described.

The third workbook was the material developed for parents called *How to guide our adolescent children* (from now on parent workbook). Although the parent workbook is mentioned and described throughout this dissertation, because it is an important part of ACMHE, the implementation of this workbook was not evaluated during this first prototypical implementation. The unit of analysis of this first implementation were students. Therefore, we focused on piloting, observing, and evaluating the materials that were created for students: Living my Youth and Youth with Equality.

Quick trial #1.

From September to November of 2016, the first text was implemented in 11th and 8th grades, with the participation of approximately 150 students. After the prototypes were used in these seven schools, we used the following data collection methods to gather feedback about this first trial described in Table 2.4.

Table 2.4
Data Collected During Quick Trial 1.

Participants	Approximate number of participants	Activity/Method	Purpose	Location//Date
Students, tutors, parents, Bayan staff, Berkeley team	50	1 focus group[7] with 40 students, 8 tutors, 2 parents	Gather feedback on workbooks	Community 3, Atlántida, Honduras. November 2016
Students, tutors, parents, Bayan staff, Berkeley team	11	11 interviews[8]: 8 interviews with students 2 interviews with parents 1 interview with Bayan staff	Gather feedback on workbooks	Community 3, Atlántida, Honduras. November 2016
Tutors, Bayan staff	10	1 Focus group[9]	Gather feedback on workbooks	Community 3, Atlántida, Honduras. November 2016

Quick trial #2.

During this quick trial, researchers of the UC Berkeley team paired with tutors to participate as participant observers of the implementation of the second text (researchers observed but also intervened to ask questions and make comments about the workbook). The purpose was to identify areas that needed improvement and examine students' and parents' reaction to the study of lessons that developed sensitive themes such as puberty and sexual reproductive health. A total of 11 lessons were observed. The workbooks were used with 11th, 9th, and 7th graders, with an approximate participation of 50 students, 2 parents, and 3 tutors. This

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[7] See appendix 5
[8] See appendix 6
[9] See appendix 7

quick trial took place on October 2017. Table 2.5 describes the data collection methods to gather feedback about this second quick trial.

Participants	Approximate number of participants	Activity/Method	Purpose	Location/Date
Table 2.5. *Data Collected During Quick Trial 2.*				
Students, tutors, parents, Berkeley team	52	Observation of 11 lessons (researchers along with tutors) of workbooks (11th, 9th, and 7th grade). Researchers took field notes.	Gather feedback on workbooks.	Community 2, Atlántida, Honduras. October 2017.

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Prototypical implementation.

After analyzing the data collected during the first two quick trials, we made the necessary changes to the workbooks and finalized a draft to use during the first prototypical implementation of ACMHE. The first prototypical implementation took place in 21 schools in the Department of Atlántida from July to November 2018. During this prototypical implementation, we collected the following **process data**:

- 5 focus groups
- 21 hours of class observations

Participants	Approximate number of participants	Activity/Method	Purpose	Location/Date
Table 2.6. *Process Data Collection for Prototypical Phase.*				
11th, 9th, 7th grade students.	15 participants per focus group	5 focus groups (5 schools).	Gather feedback about satisfaction with first prototypical implementation	Department of Atlántida, Honduras June- August 2018
11th, 9th, 7th grade students.	Approx. 150 students	21 class observations	Gather feedback on	Department of Atlántida, Honduras

			text implementation.	June- August 2018

All the focus groups and observations used as process data were conducted by the author of this dissertation, Diana Pacheco.

Assessment phase.

After designing and developing the content of the curricular products, doing quick trials, and implementing the first prototypical implementation, the UC Berkeley team conducted an evaluation to examine if the workbooks were eliciting the desired learning processes and outcomes. During the assessment phase, data were collected from two main activities:

- Post-intervention interviews with students, tutors, and parents of all 21 schools participating in ACMHE.[10]
- Collection of pre- and post-surveys (in 2018[11] and 2019[12]) administered to tutors to determine the number of students that dropped out due to marriage or got married but remained in school pre and post intervention.

Table 2.7.
Activities and Methods used during the Assessment Phase.

Participants	Number of participants	Learning/experience measured	Method	Date and location
Tutors from 8th-12th grades	100 Tutors (2018) 104 Tutors (2019)	# of students that either dropped out of school due to CM or students who got married but continued their education	Survey	February 2018 (retroactive to 2017 school year). November 2019
7th, 9th, 11th graders	58 students	Knowledge of 8 main themes of ACMHE. Attitudes towards these 8 themes.	Semi structured interview which guided by case studies/scenarios so that students could reflect upon and react to the scenarios presented.	Atlántida, Honduras November 2018
Tutors	20	Report on their	Semi-structured	Atlántida,

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[10] See appendix 9 for instruments used for these interviews.
[11] Survey can be found here:
https://docs.google.com/forms/d/117XyeE9TmtWMX6GeNpo4lf0_ZjH8utxIcQcnTUNMDRY/edit
[12] Survey can be found here:
https://docs.google.com/forms/d/1_IDCnSJjBjWaQO6Jlxx_BhxRTBMM2uj5Fj_tGwKBiMU/edit

		experience accompanying peer educators and their perception about the quality of the curriculum and its implementation.	interview.	Honduras November 2018
Parents	18	ACMHE and their perceptions on the need/lack of need of addressing CM.	Semi-structured interview.	Atlántida, Honduras November 2018

Assessment phase sampling and recruitment.

Interviews.

Bayan conducted reflection sessions about the use of the new curriculum. Parents, tutors and students participated in these sessions. These meetings took place by "zones". Schools that were located nearby came together to have the reflection session. SAT schools conduct these types of meetings at the end of the year to reflect upon the school year and the activities that took place. During the 2018 school year, the focus of these meetings was to appraise the experience of implementing ACMHE in their schools. A total of 7 reflection sessions took place. Each school chose at least 7 participants to represent them at these meeting: 5 students (1 from each grade from 7-11th grade), 1 parent, and 1 tutor. To recruit students and avoid coercion to participate in these meetings, tutors asked students to raise their hands if they were interested in participating in the sessions. Once the students interested in participating were identified, tutors wrote their names separately in small pieces of paper. The tutors then folded these pieces of paper so that the names could not be read. Then the tutors proceeded to put them in a small box and mix these papers. Then, in front of all students present, the tutors pulled out one name. The name of the person on the paper chosen participated in the reflection session. If only one student volunteered, she/he was automatically chosen. If no student volunteered, nobody from this class participated in the session. This selection process took place in every section in which students studied the new curriculum implemented.

The reflection sessions were organized and led by Bayan as a yearly activity. The Berkeley team used this opportunity where all participants (parents, tutors, students) were in one same place to conduct interviews. During each reflection session, we aimed at interviewing at least one student from 7th, 9th, and 11th grade from each school (21 total). We also tried to interview one tutor and one parent from each school. Table 3.8 describes the number of students per grade as well as the number of parents and tutors that were interviewed. In some schools we were not able to interview all the participants we planned to. The interviews were conducted by two members of the UC Berkeley team, Erin Murphy-Graham and Diana Pacheco.

A total of 96 interviews took place:

- 58 student interviews (36 female students and 22 male students).
- 20 tutors (13 male tutors and 7 female tutors).
- 18 parents (3 fathers and 15 mothers).

Surveys.

All teachers from the participating schools were asked to participate in the surveys to monitor the number of students who dropped out as a result of CM or those who get married and remain in school.

Table 2.8.
Interviews that took place during the Assessment Phase.

Name of school	S-7-M	S-7-F	S-9-M	S-9-F	S-11-M	S-11-F	Tutor (M)	Tutor (F)	Father	Mother	Total
School 1	1					1	1				**3**
School 2	1		1			1	1		1		**5**
School 3		1		1	1			1		1	**5**
School 4		1		1	1		1			1	**5**
School 5		1		1		1		1		1	**5**
School 6		1		1		1	1		1		**5**
School 7		1				1	1			1	**4**
School 8	1			1	1		1			1	**5**
School 9		1	1			1		1		1	**5**
School 10		1		1		1		1			**4**
School 11		1	1			1	1			1	**5**
School 12		1			1		1			1	**4**
School 13	1					1	1			1	**4**
School 14	1		1		1			1		1	**5**
School 15		1		1		1		1		1	**5**
School 16		1		1		1		1			**4**
School 17		1		1		1	1			1	**5**
School 18	1			1		1	1			1	**5**
School 19	1				1		1			1	**4**
School 20	1		1		1				1		**4**
School 21	1			1	1		1			1	**5**
Total	**9**	**12**	**5**	**11**	**8**	**13**	**13**	**7**	**3**	**15**	**96**

Data Analysis

Interviews.

All interviews were audio-recorded and later transcribed. The qualitative research software MAXQDA was used to analyze and archive the data. During the data analysis "codes" (Miles, Huberman, & Saldaña, 2014, p. 72) were used to categorize, organize, and find patterns in the data. To create the codes, both deductive and inductive coding were used (p. 81). A list of codes was developed prior to doing the formal coding. This list of deductive codes came from the research questions and design challenge described in Chapter 1 and it was also informed by the literature review conducted before analyzing this data. Other codes then emerged inductively as patterns were found during the data analysis. Matrix displays were created to organize the patterns that were identified. After organizing the inductive and deductive codes, the theoretical framework and theory of action were used to frame these findings. Additionally, analytic memos were written about key interviews and focus groups. Data was condensed to note emergent patterns, themes, and concepts.

Focus groups / Workshops.

All focus groups and workshops were audio-recorded. The software MAXQDA was then used to upload these audios and followed the same coding and analysis process described for interviews with the exception that this coding was not done with transcriptions. Instead, this coding was done using audios files as this software also enables coding audios.

Observations.

All observations were audio recorded. The focus of these observations was to capture interactions between students that could provide evidence of the desired dialogues/discussions (e.g. discussions around social norms, evidence of cognitive dissonance, etc.) intended to be fostered by the curriculum. These recordings were also uploaded to MAXQDA and analyzed and coded using the same procedures as those used for interviews. One of the researchers (the author of this dissertation) also wrote field notes during these observations.

Surveys.

The surveys conducted were developed using Google Forms. The surveys were distributed through WhatsApp to tutors and were completed online. Survey results were manually entered and tallied in an MS Excel spreadsheet.

Researcher Positionality and Validity Threats of the Study

There are two main validity threats in this study: researcher bias and reactivity (Maxwell, 2013). Researcher bias refers to the threat that conclusions are the result of researcher's preconceptions or existing theories and the possibility that researcher only uses data that "stands out" to her. To address this threat, we engaged in intensive and long-term involvement, collection of rich data, triangulation of data, and the use of quasi-statistics (Maxwell, 2013).

This dissertation draws from 3 years of data collection in the form of interviews, focus groups, observations, and interaction with the different actors. These long-term (and ongoing) relationships with the different actors and the context has allowed us to gather a wide range of data. As Maxwell argued, "repeated observations and interviews, as well as sustained presence of the researcher in the setting studied, can help rule out spurious associations and premature theories" (p. 126). By rich data we mean a) the quantity of the data collected (114 interviews, 10 focus groups, 31 hours of classroom observations, 1 workshop, and 2 surveys); and b) the depth and variation of the methods and instruments used for data collection. This rich data allowed for a full revealing picture of what happened before, during, and after the first prototypical implementation. Having rich, varied, and long-term data allowed me to triangulate data from a diverse range of individuals, settings, methods, and time periods. Finally, we also used "quasi-statistics" (Becker, 1970 as cited in Maxwell, 2013, p. 128) to derive numerical results from qualitative data.

Additionally, to address my own personal biases, I[13] engaged in a personal analysis to acknowledge with my own perceptions about CM that have been shaped by my experiences as an urban, middle-class, Protestant, Honduran, married woman. However, I also consider that my experience as a Honduran woman with strong family ties to rural areas has also helped me analyze this data in a more culturally sensitive way. To address my researcher bias, I engaged in reflection and discussion with other Honduran natives (CM experts and non-experts) who investigate CM. This process helped me to identify my own preconceptions and misconceptions around CM and gender (in)equality.

Reactivity refers to the influence of the researcher on the setting or individuals studied (Maxwell, 2013). Reactivity becomes even more important in a DBR study as the researcher collaborates as the designer, implementer, and evaluator. Eliminating the influence that the researcher has on the setting and its participants is impossible (Plomp, 2010). Although it is evident that this is a clear concern about how "correct and credible" the conclusions of a researcher are, reactivity can also be used positively to improve the participants' experience and the quality of data that is collected (Plomp, 2010). For example, given the long-term nature of our project, researchers have become "familiar faces" to students, parents, and tutors. These different actors (parents, teachers, students) have also participated in the design of the material and we asked for their feedback continuously throughout the design and implementation of the new curricular materials. This has allowed us to establish rapport and receive rich feedback from participants and use the rapport we have with participants to inform our work. Acting as the designers and evaluators of the materials has helped us have an in-depth knowledge of the curriculum, allowed us to ask specific questions to students, and understand the reality of the context it is implemented in. This also gives us the opportunity to have positive interventions. For example, when we observed the trainings or peer-to peer sessions we were able to provide feedback to tutors and students. Consequently, we used our access to participants and activities to improve our intervention.

DBR is a methodology that provides many advantages. It allows researchers and practitioners to collaborate, addresses educational problems and takes naturalistic settings into

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[13] This section refers to the author's positionality and does not include the Principal Investigator (PI), Dr. Erin Murphy-Graham. For insights on the PI's positionality, see Murphy-Graham and Leal (2015).

account, closes the gap between academia and educational practice, converges theory with practice, and aims to frame studies such that design principles can be transferable to and useful in other contexts. All these characteristics were needed to develop ACMHE given the sensitive nature of CM, the need for close collaborations between different stakeholders, the need to develop a theoretical understanding of this issue, and the urgent need to develop interventions that are contextually sensitive and relevant. DBR is a promising methodology to address complex challenges like CM.

Chapter 3:
Understanding Child Marriage and the Necessary Processes to Enhance Adolescents'
Decision-Making Processes to Make Informed Decisions about CM in a School-Based
Setting.

The first task that needs to take place in a design-based research (DBR) study after identifying a problem is understanding it as profoundly as possible. To develop this comprehension, designers must develop a deeper awareness of the problem they are addressing by seeking the help of knowledge amassed by research and the documentation of professional practice (Mintrop, 2016). This chapter explores the causal factors and consequences of CM both globally and locally in Honduras as well as an examination of the theories that inform and guide the processes that need to take place in ACMHE in order to enhance adolescents' agency to make informed decisions about CM. This understanding of CM and the identification of the processes necessary to achieve the desired outcomes are used to inform ACMHE's theory of action.

Understanding the Problem

CM is a complex phenomenon that is caused by a myriad of factors, and its characteristics vary across regions, countries, and even communities which makes it difficult – if not impossible – to provide a universal description of child marriage around the world. Nevertheless, common characteristics, causes, consequences, and legal implications of CM across the globe can be identified. CM occurs across countries, cultures, and religions and shares some general defining characteristics. CM is a reality for both girls and boys around the world, but females are affected disproportionately: 720 million women around the world have been married before the age of 18, compared with 156 million men[14] (United Nations International Children's Emergency Fund [UNICEF], 2014). Furthermore, when boys marry early, marriage does not "mean an end of investments in their human capital" as it often does for girls (Greene, 2014, p.10). CM is mostly prevalent in developing nations, (Greene et al., 2015; Vogelstein, 2013). However, immigrant and diaspora populations are also practicing CM in Western countries such as Canada, United States, Australia, and the United Kingdom (Vogelstein, 2013).

Across all regions, girls who are poor, live in rural areas, and have little or no education are more likely to become child brides (UNFPA, 2012). Girls enter marriages either because they are forced into matrimony due to social, emotional, or economic pressures from families and communities (UNFPA, 2012) or because they agree to marry without actually being able to make an informed decision because of their age.[15] More importantly, it is vital to recognize that this decision to marry at a young age is usually made as a result of a lack of alternative life options (Murphy-Graham & Leal, 2015; Taylor et al., 2015). Finally, young girls usually marry much older men, which weakens girls' bargaining power and increases the risk of marital violence as a

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[14] Estimates are based on a subset of countries covering around 50% of the global population of women and men aged 18 years and older.

[15] Using a criteria based on the physiological maturation of the body, cognitive capacity for making informed decisions, and legal frameworks and international standards, Dixon-Mueller (2008) concluded that "boys and girls aged 14 and younger are universally too young to make safe and consensual transitions; that 15–17 years old may or not be too young, depending on circumstances, and that 18-year-olds are generally old enough" to make informed judgments regarding their sexual, marital, and reproductive transitions (p. 247).

result (World Bank, 2011). For example, demographic health data and qualitative research from Africa and Latin America shows that girls in these regions tend to marry men who are 5 to 14 years older than they are (Clark, Bruce, & Dude, 2006).[16] Figure 3.1 describes the causes, characteristics, and consequences of CM around the globe that are discussed in greater detail throughout this chapter.

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[16] Studies in Ethiopia and Brazil have found similar results (Pathfinder, 2016; Taylor et al., 2015).
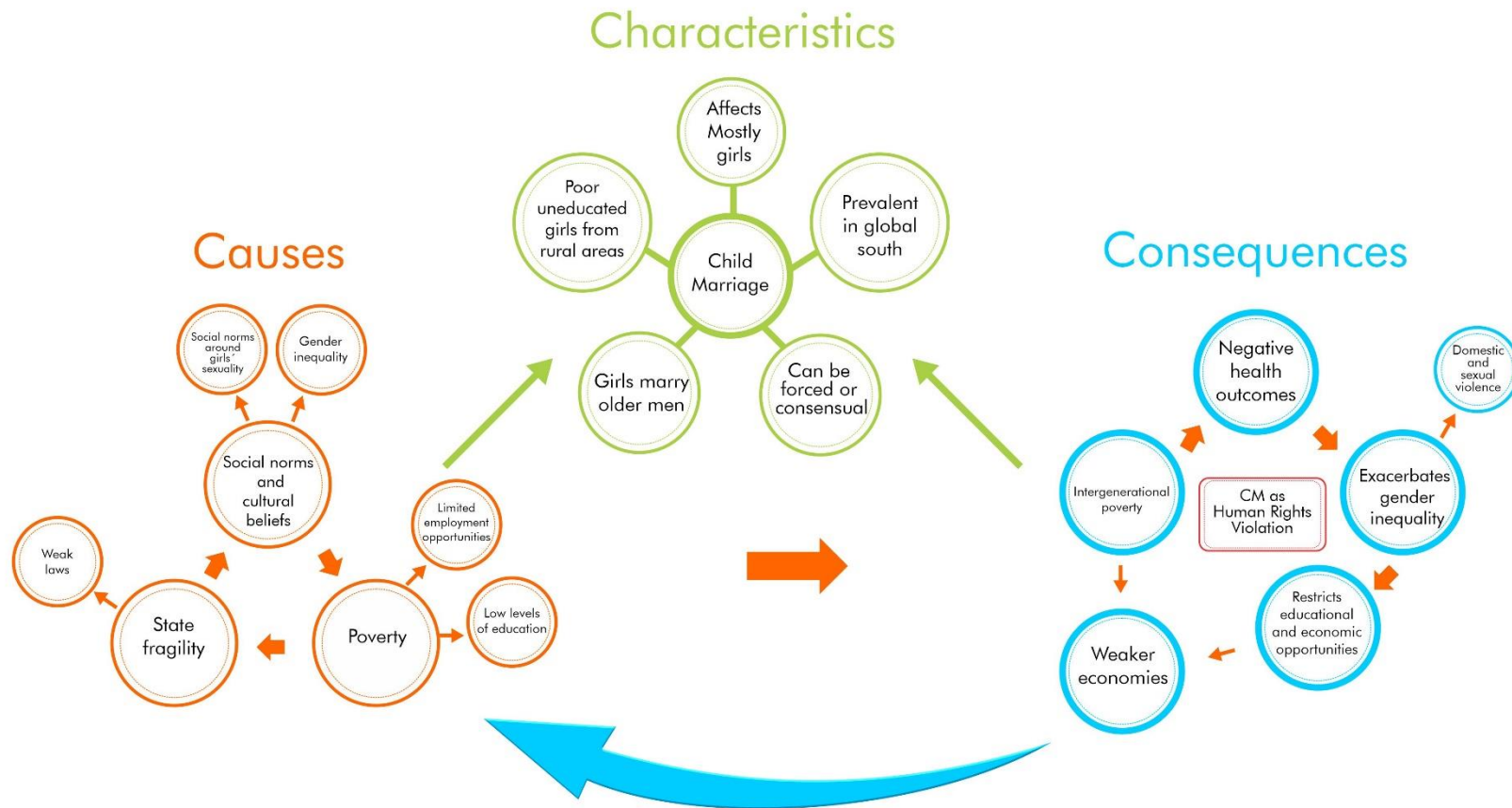
Figure 3.1. Causes, Characteristics, and Consequences of CM Globally.

Causes of CM around the Globe

Poverty, lack of educational and economic opportunities, gender inequality and state fragility are factors that often drive CM and, in many cases, several of these factors converge in girls' lives creating dire living circumstances for girls. An under explored causal factor discussed in this section is the role of changes that individuals experience during adolescence such as puberty and desire for intimacy have on CM.

Poverty.

Poverty is powerful causal factor of CM. Girls in the poorest quintile are two and a half times more susceptible of becoming married than girls in the wealthiest quintile (UNICEF, 2014). In some contexts, poorer parents can be driven by poverty to push their young daughters into marriage, either to ensure their girls' economic well-being by marrying them to men who are better off or to relieve their financial plight by having fewer mouths to feed. In cultures where a dowry system prevails, the younger the girl is, the lower the dowry (Vogelstein, 2013). Therefore, poor families marry their daughters at a very young age to avoid the financial strain. It is important to note that even in contexts of poverty, boys do not marry as early as girls (World Bank, 2011) which illustrates that although poverty is an important cause of CM, this phenomenon is embedded within social norms that discriminate against girls.

Lack of Educational Opportunities.

Impoverished girls usually have little or no access to educational opportunities. There is a correlation between low levels of education of girls and high levels of CM. Girls with no education are three times more likely to marry before the age of 18, compared with their counterparts who have access to secondary education. Girls who only complete primary school are two times more likely to become child brides than those who attended high school (UNFPA, 2012). Additionally, girls with low academic attainment are also more vulnerable to child marriage, as their academic struggles can diminish their interest in continuing to study and can contribute to them dropping out of school even in the absence of a marriage prospect (Cong Nguyen & Wodon, n.d.; Dixon-Mueller, 2008) Once out of school, these girls are more vulnerable to CM as their life options are limited and marriage can be seen as the most appealing possibility.

Limited employment opportunities.

Similarly, poor girls with limited employment prospects are more likely to marry and have children before the age of 18 (World Bank, 2011). Poor girls with few or no educational or employment opportunities can see CM as an option to advance their economic well-being as they are usually courted by older men with greater social and economic capital. Because they have few educational and financial options, many girls exercise agency in their decision to marry. Yet, this agency operates within a context of limited life options for girls (Murphy-Graham & Leal).

Social norms that promote gender inequality.

CM is caused by social norms and cultural beliefs that promote gender inequality. CM is often reinforced by social norms and cultural beliefs that "put a much higher value on boys and men than on girls and women," dictating that it is acceptable and normal for girls to marry at a young age (UNFPA, 2012, p.12). These norms and customs are based on the power exercised by men in most societies and their disregard for women and girls' inherent worth. Child marriage is a manifestation of gender inequality and is a pervasive form of gender discrimination (UNICEF, 2014). This discrimination is profoundly entrenched in tradition, history, religious beliefs, patriarchal norms, and the legal, social, political, and economic inequalities between men and women (Human Rights General Committee, 2008; Raj, 2010). Detrimental notions about the lower status of women have direct and negative effects on girls' education, nutrition, skills, safety, and economic opportunities[17] (Vogelstein, 2013). In some contexts, girls are considered someone else's wealth, as she will eventually be in service of her husband's family once she marries. Therefore, educating and nourishing girls can be considered as a poor investment, whereas investing in boys can be thought of as an effective one because his earnings are thought to will eventually benefit his parents (Nirantar Trust, 2015). In other instances, girls can be viewed as mere commodities that can be exchanged for economic benefit[18] (Human Rights Watch, 2013).

In many settings, the social roles of women are restricted to wife and mother. Therefore, marriage and motherhood at a young age is culturally acceptable and even reinforced to establish their worth as wives and mothers within their families and communities (UNFPA, 2012). For this reason, some parents do not see a reason to postpone the traditional gender roles that, sooner or later, their daughters will eventually have to assume. Similarly, due to the limitations that patriarchal social norms impose, sometimes girls see marriage and motherhood as their only life path and it is common for girls in some regions to exercise agency in their decision to marry "challenging assumptions around child marriage" as forced unions (Taylor et al., 2015).

Social norms and cultural beliefs regarding girls' sexuality play an important role in fostering CM. When girls reach puberty, their emerging sexuality generates anxiety in their families and communities. This anxiety stems from the fear that girls, by engaging in premarital sex, will lose their virginity (a valued trait in many societies), become pregnant out of wedlock, or express the sort of sexual autonomy that is perceived to damage a family's honor (International Women's Health Coalition, Nirantar Trust, American Jewish World Service, GreeneWorks, & CARE International, 2015; Taylor et al., 2015; UNFPA, 2012). In some

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[17] In Bangladesh, for example, in a context in which the population faces high food insecurity and/or drought, male children are seen as more valuable household assets than girls, who are seen as a burden (World Vision, as cited in Tzemach Lemmon, 2014). A study in Bangladesh and India in the 1980s found consistent discrimination against women. Girls were found to have higher levels of malnutrition and boys received better health care than girls (e.g., vaccines and treatments) (Chen, Huq, & D'Souza, 1981).

[18] For example, in Sudanese communities it is common to see CM as a way for families to access resources, such as cattle, money, and other gifts via the transfer of wealth through the payment of dowries (Human Rights Watch, 2013).

cultures, girls' puberty and their biological capacity to have children is seen as an indication that girls are ready to assume their roles as wives and mothers. In others, CM is seen as "the most socially acceptable pathway to womanhood" (Taylor et al., 2015). In addition, in some cases, parents often choose to marry their daughters for fear of rape,[19] harassment, or abduction (Vogelstein, 2013; World Bank, 2011). This fear and anxiety generated by female sexuality affects girls' decision-making processes, sense of autonomy, mobility, and social, academic, and economic opportunities (Greene et al., 2015). However, marriages can constitute a transfer of control of girls' sexuality (International Women's Health Coalition et al., 2015; Nirantar Trust, 2015) from their original nuclear families to their new in-law families, meaning that girls' sense of autonomy, independence, and well-being will remain stagnant. As Greene et al. (2015) states, CM "is a business transaction, an agreement between families that regulates girls' sexuality and reproduction" (p. 5). In contexts where sexual intercourse is viewed as inextricably linked to marriage, girls can also see CM as the only way to express their sexuality (Murphy-Graham, 2015; Taylor et al., 2015).

State fragility.

CM is also associated with instability and state fragility. The Organization for Economic Co-operation and Development (OECD) defines a fragile state as one that has "weak capacity to carry out basic governance functions and lacks the ability to develop mutually constructive relations with society. Fragile states are also more vulnerable to internal or external shocks such as economic crises or natural disasters" (OECD, 2012, p. 15). Armed conflict, natural disasters, humanitarian crises, and social instability contribute to a weakening of social institutions and legal safeguards, increasing the vulnerability of the general population, particularly women and children (International Women's Health Coalition et al., 2015). The poorest and least stable countries that have scarce access to education, higher levels of unemployment, and limited health-care access, have some of the highest rates of CM[20] (Tzemach Lemmon, 2014). CM is prevalent in the context of conflict and natural disasters,[21] as families often accept child marriage as a way to protect their daughters from conflict-related sexual violence and/or economic calamity (Vogelstein, 2013). By marrying their young daughters, parents attempt to protect the girls' well-being or ameliorate the economic burden of the family by having less family members to look after. State fragility is also reflected in a state's incapacity to create and enforce laws that protect its citizens. Weak laws across the globe and unenforced legislation allow CM to be practiced widely and with impunity.[22] A clear example of this is that convictions related to CM are almost inexistent around the world (Silva-de-Alwis, 2008). Furthermore, even in contexts where laws prohibit CM, it is common that girls, families, and entire communities ignore the existence of these laws (UNFPA, 2012).

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[19] In India, for example, if a girl is raped, her rapist can avoid criminal sanction by marrying his victim (World Bank, 2011). This can create anxiety in parents, as they may fear that their daughter would have to marry her rapist.
[20] Such as Niger, Chad, Bangladesh, Guinea, and Central African Republic.
[21] In Niger, for instance, rates of CM increase during times of drought. Families marry their daughters to wealthier men in hopes of ensuring a better future for their daughters and reducing the economic burden of the family (Tzemach Lemmon, 2014).
[22] A broader legal discussion is included later in this paper.

Agency and the changes that occur during adolescence.

As previously mentioned, in some regions including Latin America, many girls choose to enter unions. This behavior has also been noted in other regions like Asia where arranged marriages are also prevalent. For instance, in Nepal, where 41% of girls marry before the age of 18, researchers found that up to 25% of these marriages are "love marriages" (Perczynska, 2014). That is, girls choose to elope with their partners. As researchers in Latin America have warned (Murphy-Graham & Leal, 2015; Taylor et al., 2015), this decision to elope should be understood as a choice that is influenced by the dire circumstances these girls live in (Girls Not Brides, 2016). There is, however, an important factor that has been identified in most of the previous qualitative research that discusses agency: the desire to be in romantic relationships. For instance, researchers found that in Honduras as well as in Nepal, if girls wanted to be in a romantic relationship, their only choice was to elope against their parents' wishes because courtships and relationships with boys are highly restricted (Murphy-Graham & Leal, 2015; Perczynska, 2014). Parents and community members explain this desire as a result of increased literacy, access to mass media, and mobile phones (which adolescents use to communicate with others without supervision) (Perczynska, 2014), sexual desire, and as a way of "speeding things up" or getting ahead to their next step in life which is becoming wives and mothers (Murphy-Graham & Leal, 2015). However, little has been discussed about factors such as puberty and the biological, psychosocial, and cognitive implications that these changes have on individuals. Interventions are starting to include components related to these biological, psychosocial, and cognitive changes (e.g. see Bennet, 2017). However, a scholarly discussion about these implications is needed. An analysis about the biological, cognitive and psychosocial changes that individuals experience during adolescence and how these intersect with the social context in which they live in is necessary to understand better the decision-making processes of girls who choose to elope. This dissertation aims to examine these changes and how they intersect with girls' agency in the rural Honduran context.

Consequences of CM around the globe

CM has disastrous consequences for girls and their families, communities, and entire countries. Consequences of CM include negative health outcomes for girls and their offspring, exacerbated gender inequality (frequently accompanied by increased rates of domestic violence), and curtailed educational and economic opportunities that perpetuate intergenerational poverty which ultimately results in weaker local and national economies.

Negative health outcomes.

Child brides are less likely to make or negotiate their own decisions in relation to their sexual life and their reproductive choices[23] (Raj, 2010). Additionally, girls are expected to

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[23] Such as negotiating condom use or refusing sex. This lack of voice in their sexual and reproductive choices mainly due to the wide age gap that characterizes CM.

become mothers soon after they marry, as motherhood is often highly regarded in many cultures (UNFPA, 2012). Hence, CM is associated with the lack of contraceptive use, high fertility, repeated childbirth in less than 24 months, and multiple unwanted pregnancies (Raj, Saggurti, Balaiah, & Silverman, 2009). Therefore, CM and early motherhood put girls' lives at risk. Complications during the prenatal period and labor are the second most common cause of death for 15-to-19-year-old girls worldwide (World Health Organization [WHO], 2104). Child spouses are less likely to give birth in health facilities (Santhya et al., 2010) and are more exposed to cervical cancer, sexually transmitted diseases, HIV, obstetric fistulas, and depression (Nour, 2009; Raj, 2010). All these negative health outcomes are exacerbated by the poverty, isolation, low educational levels, and violence that these young mothers endure (UNICEF, 2012).

Maternal deaths are also linked to child mortality, as newborns whose mother died during the first weeks of their lives are more likely to die before their second birthday (UNICEF, 2012). Also, babies born to young mothers[24] are at a higher risk of prematurity, low birthweight, being stillborn, or dying in the first weeks of life (Raj, 2010; WHO, 2014). These infants also have a higher risk of malnutrition than their counterparts born to adult mothers (Raj et al., 2010). Furthermore, child wives often lack access to sexual reproductive health (SRH) information and services (Raj & Chandra-Mouli, 2016; Santhya et al., 2010), which limits their ability to control the number and spacing of their offspring. This subsequently compromises the quality of life and survival of their children, who usually have to compete for resources and care[25] from their mother with numerous siblings (Raj, 2010). Another less discussed aspect of the impact of CM on girls' health is related to the politics of nutrition. The nutritional needs of the husband and his nuclear family are prioritized above those of the child bride. Additionally, it is common for child brides to underreport diseases for fear of being a liability instead of an asset by their in-laws, which only results in their deteriorated health (Nirantar Trust, 2015).

Exacerbated gender inequality.

CM also exacerbates gender inequality. Girls often marry much older men with greater economic and social capital, and, as such, girls are more likely to be economically dependent on their husbands, have less autonomy, and have lower bargaining power in their marriages (UNFPA, 2012; Greene, 2014). CM is also associated with poor communication between couples, as child brides are often incapable of communicating on an equal playing field with their partners (Raj & Chandra-Mouli, 2016). In part, the attraction of older men to younger women stems from the perception that younger girls are "docile and malleable" (Vogelstein, 2013). Although the inequality prevalent in these relationships is a reflection of the inequalities that generally prevail in societies across the globe, CM aggravates these inequalities (Nirantar Trust, 2015). Thus, the issue with early marriage is not only related to age but also to the vulnerability that girls face in these relationships due to the inequalities that characterize these marriages.

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[24] Under 20 years old.
[25] Such as food, health care, and hygiene.

Because inequality is so pervasive within CM, child brides are also more susceptible to marital physical and sexual violence (Raj, et al., 2010; Santhya, Ram, Acharya, Jejeebhoy, Ram, & Singh, 2010) and are often isolated from their families and friends (Green et al., 2015; UNICEF, 2014). For example, child spouses in India are twice as likely as married adults to report domestic violence and three times as likely to report instances of rape (ICRW, 2007). Furthermore, child brides are more likely to view domestic violence as acceptable. It is also common for in-laws to perpetrate violence against child brides (Santhya et al., 2010). Child wives are also victims of human trafficking. In some instances, girls are traded for cheap labor or sexual purposes (Silva-de-Alwis, 2008). For example, a study in Mexico found that child brides from low-income and rural backgrounds were at greater risks of sexual exploitation and trafficking (Raj & Chandra-Mouli, 2016).

Curtailed educational and economic opportunities.

Low educational attainment is both a cause and consequence of CM.[26] According to Cong Nguyen and Wodon (2014) stated that "each additional year of early marriage reduces the probability of literacy among women who married early by 5.7 percentage points, the probability of having at least some secondary schooling by 5.6 points, and the probability of secondary school completion by 3.5 points" (p. 9). In contrast, delaying marriage for girls is associated with improved literacy rates and increased years of schooling (Field & Ambrus, 2008). Once married, child spouses are burdened with the social pressure to fit into their new roles as wives and mothers (UNFPA, 2012), and these roles are socially viewed as incompatible with schooling (Clark & Mathur 2012). The reduced access to education that results from CM also affects these girls' valued role as mothers, as low education levels is correlated with high child mortality (UNICEF, 2012).

Intergenerational poverty.

CM restrains educational achievements of girls and therefore limits girls' employment opportunities inhibiting their financial autonomy in adult life and perpetuating intergenerational poverty (UNFPA, 2012; Vogelstein, 2013Tzemach Lemmon & El Harake, 2014; WHO, 2014). Overall, the average rate of return per each dditional year of schooling is 10% for both men and women. However, women experience higher returns to secondary education than men (18% vs. 14%) (Psacharopoulos & Patrinos, 2004). Therefore, access to secondary education is crucial to foster girls and women's economic empowerment. Girls' education and economic progress are not only good for them and their families but also for entire nations. As Dollar and Gatti (1999) quantify, "An increase of 1 percentage point in the share of adult women with secondary school education implies an increase in per capita income growth of 0.3 percentage points" (p. 20). In other words, girls' education means economic growth for entire nations, especially for poor and

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[26] For example, in Mexico, researchers found that 83% of married girls had dropped out of school, whereas only 15% of girls that were not married left school (Summers, 2017).

middle-income nations. Thus, countries that do not work towards addressing and preventing CM are destined to have "slower economic growth and reduced income" (p. 1).

Girls' health and their social, economic, educational, and personal development are restrained by CM because it robs girls' childhoods, keeping them from enjoying healthy and dignified lives by limiting their life choices and trapping them in a cycle of poverty, violence, and discrimination. Every consequence discussed above constitutes a violation to girls' fundamental human rights. CM can be so detrimental that some argue it can be considered a form of slavery (Turner, 2013).

Legal Implications of CM: CM as a human rights violation

The Universal Declaration of Human Rights[27] (UDHR) (United Nations, 1948) states that all human beings are "born free and equal in dignity and rights" (art. 1) and that sex should not be a factor in denying anyone the rights and freedoms established in this declaration (art 2). CM constitutes a human rights violation, as it hinders young girls from exercising their fundamental freedoms on a ground of equality with men (Silva-de-Alwis, 2008).

The UDHR acknowledges the rights of individuals to marry and start a family as well as establishes that marriage should be entered by individuals "of full age[28]…with the free and full consent" (art.16). Experts ponder that consent "cannot be 'free and full' when one of the parties involved is not sufficiently mature to make an informed decision about a life partner" and therefore there "is a violation of the UDHR" (Silva-de-Alwis, 2008, p. 4). The Convention of the Rights of the Child (CRC) (United Nations, 1989) also protects children from discrimination based on their sex (art 2). CM undermines several rights guaranteed by the CRC. Among these rights are the right to education (art 28); protection from physical, mental, and sexual abuse (art. 19; 34); and the right to health care (art 24). Similarly, the Convention on the Elimination of Discrimination against Women (CEDAW)[29] (1979) states that both men and women have the right to freely choose their spouses and to enter marriage only with their free and full consent. It also states that CM should bear no legal effect and calls for legislations to establish a minimum age for marriage and make official registration of marriages compulsory (art 16).

Because of international legislation urging countries to establish a minimum age to marry and ensure that individuals enter these marriages with free and full consent, most countries around the world now have laws that set a minimum age of marriage. Nonetheless, these laws are not always in accordance with international human rights legislation, do not equally protect boys and girls, do not reflect the realities of women, and lack legal enforcement. As of 2016, six

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[27] The Universal Declaration of Human Rights does not have legal effect in all countries. However, it is morally persuasive and is considered part of customary international law (Silva-de-Alwis, 2008).
[28] According to the CRC (United Nations, 1989), "a child means every human being below the age of 18 years unless under the law applicable to the child, majority is attained earlier" (Article 1).
[29] Considered the Bill of Rights of Women. "The CEDAW seeks to enforce women's rights to equality in areas ranging from political participation to employment to women's reproductive rights and articulates the importance of ensuring women's social and cultural equality by revising social and cultural patterns of conduct that lead to stereotyped roles and hierarchies between the genders" (p.8)

countries do not specify a minimum age for marriage,[30] over 40 countries allow girls below the age of 15 to marry[31,32] (Mortimer, 2015), and at least 117 nations[33] permit children to marry by including exceptions in their legislations that allow minors to enter into marriage before the age of 18, (Sandstrom & Theodorou, 2016). Examples of these exemptions include parental permission, judicial approval,[34] and religious affiliation.[35] Moreover, due to the lack of legal enforcement, minimum age restrictions are overlooked across most countries around the globe (Gray, 2016).

Although the law is a powerful instrument to combat CM (Silva-de-Alwis, 2008), legislations continue to be used as a tool to perpetuate inequalities between girls and boys. For instance, around one in five countries provide different minimum ages of marriage for girls and boys, establishing older ages for boys[36] (Sandstrom & Theodorou, 2016). This differentiation in legal protection between girls and boys reflects the unequal power relations between females and males, the lower status of women in many societies, and a clear violation to girls' fundamental right to be equal before the law (UDHR, art. 6). For this reason, the CEDAW has recommended to abolish such provisions ("General Recommendations made by the CEDAW", 1994, p. 38). Feminist scholars argue that these biases in the law have "grown on account of women's absence from lawmaking. Traditionally, law and practice are replicated in the image of the male," (Silva-de-Alwis, 2008, p. 2) resulting in girls being *de facto* unequal before the law.

According to the CRC (United Nations, 1989), "in all actions concerning children…the best interest of the child shall be a primary consideration," (art. 3) and the human rights treaty urges states to take all necessary measures to protect children from all forms of abuse (art. 19). However, because CM has such detrimental consequences for girls, protecting them from the negative outcomes of CM should be a central concern for states and non-state actors alike. Legislating against CM is one of the many necessary ways to fight the practice. Although law-related strategies alone are not enough to eradicate CM, laws have the potential to raise awareness, establish criterions, make states accountable, and legitimize penalties for violations of laws aimed at preventing CM (Silva-de-Alwis, 2008). As Uvin (2007) suggests, a rights-based approach can foster "rhetorical gains that sometimes turn out to be the snowballs that set-in motion fresh avalanches" (p. 604). Laws are not the absolute answer to ending CM,[37] but they

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[30] Equatorial Guinea, Gambia, Saudi Arabia, Somalia, South Sudan, and Yemen.

[31] Some of them as a result of the legal exceptions contemplated in laws.

[32] Some of these countries include the United States, Uruguay, Mexico, Venezuela, Colombia, Iran, and Cuba.

[33] Data on 198 countries.

[34] "For instance, in Australia, if a person is at least 18, their spouse can (with judicial approval) be as young as 16. And in many other countries, such as Iraq, Jamaica, and Uruguay, children can marry with parental permission" (Sandstrom & Theodorou, 2016).

[35] Minimum age restrictions don't apply for Hindus and Muslims in countries such as the Philippines and Trinidad and Tobago (Sandstrom & Theodorou, 2016; Mortimer, 2015).

[36] For example, in Vietnam, the minimum age of marriage is 20 for boys and 18 for girls. In Venezuela, the minimum age of marriage for boys is 16 and 14 for girls (Mortimer, 2015).

[37] As a matter of fact, the relationship between marriage laws and prevalence rates is not predictive. Some countries have strong laws against CM but have high prevalence rates, while others have low prevalence rates, in spite of having weak laws (Vogelstein, 2013).

can set forward a path toward that goal. States must 1) ensure that their legislations prohibit CM in accordance with international human rights legislation, 2) guarantee equal protections for boys and girls, 3) avoid exceptions to the established minimum age restrictions, 4) include female legislators and the most vulnerable women's experiences and voices in the laws, 5) take appropriate steps and measures to enforce laws aimed at preventing CM, and 6) socialize these laws among community members of regions affected by CM.[38] Failure to achieve these five goals violates its commitment to ensure the enjoyment of girls' fundamental rights and freedoms in equality with boys. CM is not only a human rights violation but also a key obstacle for the development and prosperity of entire nations. Legislative action is a first step to fight CM, but it is also crucial to address CM through interventions that address the root causes of this issue.

Understanding Child Marriage in Honduras

Honduras has the fourth highest prevalence of CM (34%; 8% are married by the age of 15) in Latin America and the Caribbean (LAC) after Brazil (36%), Dominican Republic (41%), and Nicaragua (41%) (UNICEF, 2014). On average, Honduran girls from the richest quintile marry 1.4 years later than girls in the lowest quintile and girls in rural areas marry an average of 1.6 years earlier than girls in urban areas (Honduran Secretary of Health et al., 2013), with indigenous girls being the most disadvantaged (Remez et al., 2009). Finally, girls with secondary education marry 3.2 years later than girls with no education and 2.2 years later than girls with primary education (Honduran Secretary of Health et al., 2013). According to Remez et al. (2009), although fertility rates have decreased the past decades, age at first union remains relatively constant in Honduras despite CM reduction in neighboring countries. In El Salvador, Guatemala, and Nicaragua there were reductions of 10-15% versus just 6% in Honduras. Despite alarming CM rates, this phenomenon is still an "invisible" issue in LAC countries (Griffin, 2015). In the case of Honduras, most of the focus is placed on addressing teen pregnancy (TP). For example, the current Honduran government has developed a strategic plan to prevent and reduce TP, the *Multi-Sectoral Plan to Prevent Teen Pregnancies* (Office of the First Lady of Honduras, 2014). Although this constitutes an important effort, CM is not recognized as a causal factor of TP in this strategy and therefore there are no actions to address CM in this plan. Latin America is the only region in the world that has experienced a fecundity increase in the last 30 years and most of these births occur in the context of early unions (UNFPA, 2013). Therefore, not addressing CM in a strategic plan to reduce TP reflects the lack of awareness of the connection between CM and TP. CM rates in Honduras are considerably higher (34%) than TP rates (26%), which suggests that CM precedes teen pregnancies. Hence, reductions in early childbearing are mainly obtained by postponing early unions (Honduran Secretary of Health, et al., 2013). Consequently, there is a need to promote awareness about CM in Honduras and its impact on young girls.

Until very recently, the Honduran legislation granted exceptions that allowed individuals to marry as young as 16 years old or even younger in case of pregnancy. However, in July 2017,

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[38]It is common that families do not know that laws against child marriage exist; therefore, enforcement is nonexistent (UNFPA, 2012).

the Honduran Congress modified the law to prohibit CM without allowing any exceptions. Although this legal modification was a notable ("Congreso prohíbe el matrimonio entre menores de edad" [Congress bans marriage between minors], 2017) and constitutes an important step towards recognizing the importance of addressing CM, this change is a very recent one and therefore it is too soon to determine the effect it will have in the efforts of reducing CM. More importantly, most unions in Honduras are not legal ones and legislation alone is therefore insufficient to reduce CM in this context. In Honduras, only 10 percent of unions formed by adolescents are legal (Remez et al. 2009). However, despite the lack of ritualization and legalization, consensual unions are socially perceived as formal marriages. That is, once a couple lives together, they are considered husband and wife (Murphy-Graham & Leal, 2015). Reducing CM in Honduras through legislation alone is not viable because a) for the most part, these unions are not legally registered, and therefore authorities cannot know when these are taking place; b) if girls start cohabitating with their partners, they are socially considered as a married couple, they do not require legal recognition to be socially considered to be married; and c) most girls are not forced to marry; they exercise agency in this decision.

Murphy-Graham and Leal (2015) described girls' agency as simultaneously "thin, opportunistic, accommodating, and oppositional" (p. 25) when they chose to marry. Thin because they are driven to marriage by the limitations of their context. In the communities where this study took place, there are few to no job opportunities for women and their role in society is mostly limited to chores as housewives and mothers. Girls saw marriage as the opportunity to engage in their roles as wives and mothers given the lack of alternative options such as finding a job after finishing their education. Murphy-Graham and Leal (2015) described agency as opportunistic because young girls see marriage as an opportunity to gain freedom and improve their financial well-being. Girls in this study reported experiencing limitations to their mobility and ability to socialize with their peers given the control their parents or grandparents exerted over them because of fear that girls would engage in romantic relationships or run away with their partners. In this sense, girls saw marriage as an opportunity to enjoy the freedom they lacked in their household (although this does not necessarily mean they experienced this during their marriage). Additionally, they also saw marriage as a way to improve their economic well-being. The girls in this study ran away with men who were older and who had jobs and could provide financially for them. Given the few opportunities that girls have to be economically independent, marrying someone with economic stability was seen as an attractive option for these girls. The agency exercised by these girls is also described as accommodating since girls adapt to the traditional gender roles that are prevalent in their communities. Given the few alternative options for girls besides being wives and mothers, girls adapted to these roles and saw them as worthwhile. Finally, this agency is oppositional because girls married against their parents' advice. Murphy-Graham and Leal (2015) also conversed with the parents or grandparents of these girls and found that they had opposed the marriages of these girls. These parents/grandparents had even engaged in protective strategies such as sending the girls to live far away so that they would not see their partners and even asked teachers to talk girls out of their ideas of running away. It was clear that girls had taken the decision to run away in opposition to their parents/grandparents' will. This characteristic is of great significance to understand CM in Honduras given that child marriage in other countries, like India, is often the

result of forced marriage (Nirantar Trust, 2015). Notably, it is important to understand CM in Honduras as a phenomenon in which girls exercise agency in order to design interventions to prevent CM.

This dissertation also draws from the longitudinal study conducted by Murphy-Graham, Cohen, and Pacheco Montoya (2019) in the rural areas of Honduras that examined intersections between schooling, child marriage, and adolescent pregnancy. The results of this study indicate that most girls have already dropped out of school when they enter a union and/or become mothers. This aligns with research done in Africa, where school dropout preceded and was associated with an increased risk for early pregnancy and early marriage (Lloyd & Mensch, 2008; Glynn et al., 2018). Murphy-Graham et al., (2019) also found that by age 20, 46% had entered into a union at some point. Most of the growth in entrance into first union occurred from age 15 through age 18. Since this intervention aims to prevent CM by strengthening adolescents' ability to make informed decisions about CM, it is imperative to reach students from age 13-15, before these critical time frames, and from age 17-18, during these critical time frames. It is also important to note that Murphy-Graham et al.'s (2019) findings also align with Bongaarts et al.'s, (2017) results that establish that despite increased access to education, girls are still entering marriages and becoming mothers at a young age. The girls that participated in Murphy-Graham et al.'s (2019) study all had access to secondary education in the same communities where they completed their primary education. Despite this access, dropout rates were high, followed by girls entering marriages, and subsequently becoming mothers. Girls reported financial difficulties and lack of interest in school as main reasons to drop out, echoing similar results as a study conducted by Adelman and Szekely (2016) in Central American countries.

In short, there are four key insights from previous research that inform our understanding about CM in Honduras:

1. Approximately thirty-four percent of Honduran girls marry before the age of 18. Most of these girls are poor, live in rural areas, and have low levels of education.
2. CM is illegal, but this has little influence on CM as these are mostly informal unions.
3. Despite educational expansion, CM trends have not changed the past decades. In part, this is due to high dropout rates at lower and higher secondary levels in Honduras. Once girls are out of school, girls are likely to enter marriages in part because they have no alternative life options.
4. Girls exercise agency in their decision to marry. That is, girls are not coerced to marry. However, this decision must be understood as a response to rigid gender roles in their communities and lack of educational and economic opportunities for girls.

The following question requires additional research, and motivates this dissertation:

> *In what ways do social norms, the biological, cognitive, and psychosocial changes that individual experience during adolescence, and limited life opportunities for females converge to act as causal factors of child marriage, shaping adolescent girls' decisions to enter CM?*

This dissertation explores this question to advance a more nuanced understanding of CM in rural areas of Honduras and to use this knowledge to design a school-based intervention to prevent CM. These findings are discussed in Chapter 4.

Towards a Theory of Action: Lessons Learned from Previous Interventions and the Necessary Processes to Achieve Change

A theory of action consists of a provisional model that seeks to address a specific problem of practice and promote changes to improve educational outcomes (Mintrop, 2016). This plan of action is based on a deep understanding of the problem and the understanding of the processes that need to take place in order to improve the problem of practice or achieve the desired change. The preceding section of this chapter provided an in-depth analysis of the factors that drive CM in Honduras. In order to understand the processes that need to take place, this section provides a review of previous interventions to examine the strengths and gaps of these interventions and use the ensuing lessons learned to inform the design and implementation of ACMHE. Then, a theoretical framework that guides the desired and ideal learning processes and outcomes of ACMHE is described. Together, the lessons learned from previous interventions and the theoretical framework created were used to develop ACMHE's theory of action. As it is described in the previous section, at this point, there were still gaps in our understanding of CM in Honduras. Therefore, what is described in this section is an initial and incomplete theory of action. In chapter 4, the findings of an exploratory research that advanced our knowledge about the influence that social norms, changes that occur during adolescence and structural limitations have on girls' decision to marry at a young age are discussed. Using these results, a more nuanced theory of action that is described in detail in Chapter 5.

Lessons Learned from Previous Interventions

Interventions targeting CM did not start to take place until the 1990s (Malhotra et al., 2011)[39]. CM prevention programs have since been expanded[40] (ICRW, 2013). Nonetheless, few of these interventions have been evaluated. As of 2011, only 23 out of 150 programs that addressed CM had been evaluated in 11 countries[41][42] (ICRW, 2013). To develop a systematized review of these interventions that have been evaluated, six program analyses of CM interventions (Amin, 2010; Girls Not Brides, 2013; Greene et al., 2015; ICRW, 2013; Malhotra et al., 2012; Warner et al., 2014), and a CM report (Vogelstein, 2013) were reviewed to inform this dissertation. These six program analyses and the report provided a list of programs that have taken place in the last fifteen years. Ten programs were then chosen as examples that could guide and provide valuable learning for the design of future interventions and more specifically, the design of ACMHE. The following criteria were used to select the programs discussed in this

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[39] However, legislative efforts to address CM were made as early as the 1920s in India.

[40]Most of these programs are concentrated in South Asia, especially in Bangladesh and India.

[41] Afghanistan, Bangladesh, Egypt, Ethiopia, India, Indonesia, Kenya, Malawi, Nepal, Senegal, and Yemen.

[42] Since then, more evaluations have taken place. This number is used to provide an example of the small amount of evaluations that have taken place until recently.

section: 1) the program must have undergone an evaluation; 2) the evaluation report of the program was published within the last fifteen years; and 3) the evaluation report offered valuable[43] lessons for future program implementation.[44] Appendix 1 offers a summary of these interventions. A review of the evaluations of these interventions suggests:

1. CM interventions can be successful in delaying age of marriage (Amin & Suran, 2005; Girls not Brides & Population Council, 2016; Erulkar & Mutheng, 2009; Kanesathasan et al., 2008; Pathfinder International, 2013).
2. Targeting girls at a young age (10-14 years old) is more effective than targeting girls at a later age (15 -17 years old) (Erulkar & Mutheng, 2009).
3. Targeting specific and homogeneous groups is more effective than addressing heterogeneous groups (e.g., girls from different ages and economic backgrounds) (Amin & Suran, 2005)
4. Safe spaces where girls receive vocational training, literacy reinforcement, and life-skills are effective in improving girls' literacy and educational outcomes (Girls not Brides & Population Council, 2016; Selim, Abdel-Tawab, El Dadawy & El Kalaawy, 2013) and increasing girls' school enrollment (Erulkar & Mutheng, 2009; Girls not Brides & Population Council, 2016).
5. Economic incentives (for example, cash transfers to keep girls in school or micro-loans for women) work in the short term (e.g., increasing age at marriage), but to achieve long-term changes in social norms (e.g., changing the perception of girls' fundamental value), economic-based intervention programs need be paired with components that address discriminatory norms against girls at individual, familial, and community levels (Nanda, Datta &Das, 2014; Pedersen, Mukred, Wahed & Qaid, 2008).
6. Change at the community level is possible if community members are involved as designers and participants in the intervention (Pathfinder International, 2013; USAID, 2010).
7. Partnerships with governmental institutions make interventions sustainable and scalable (Girls not Brides & Population Council, 2016; Selim, Abdel-Tawab, El Dadawy & El Kalaawy, 2013).
8. Examining oppressive gender role norms can lead to increased self-esteem (Girls not Brides & Population Council, 2016), improved mental health (Pathfinder International, 2013) and decreased gender-based violence (Edmeades, 2014).
9. Interventions aimed at preventing CM that include sexual reproductive health education are successful in reducing early pregnancy (Girls not Brides & Population Council, 2016) and increasing knowledge and use of sexual and reproductive health services (Edmeades, 2014; Erulkar & Mutheng, 2009; Kanesathasan et al., 2008; Pathfinder International, 2013).

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[43] "Valuable" is defined here as lessons learned during the implementation and evaluation processes of these interventions that can inform the design of ACMHE. For example, what activities were successful? What kind of approaches yielded positive/negative results? What were some of the major obstacles in reaching desired outcomes?
[44] If two different programs were similar in design and/or had similar outcomes or lessons learned, only one of the programs was included.

Lack of emphasis on boys and masculinity.

Most of the interventions focus on girls and women and only three programs (Edmeades et al., 2014; Kanesathasan et al., 2008; Pathfinder International, 2013) included boys and men. There is a need to put greater emphasis on 1) engaging boys and men in interventions (single adolescents, husbands, fathers, brothers, leaders, etc.), 2) including content that challenges gender inequality and notions of masculinity, and 3) measuring shifts in gender-based beliefs and norms in evaluations. The perspectives, opinions, and choices of men regarding CM have not been systematically studied[45] (Greene et al., 2015), nor has research examined the role of masculinity in CM (Nirantar Trust, 2015). Interventions must include boys and men in meetings and activities, and challenge notions of masculinity and gender inequality that not only are a cause of CM but that prevail through time within marriages. As friends, brothers, fathers, husbands, community leaders, and in-laws, men have a crucial role in preventing CM and fighting gender inequality. Therefore, they should not be left out of interventions and research (Greene et al., 2015).

Focus on the age of marriage and a lack of emphasis on inequality within marriages.

As Nirantar Trust (2015) argued, "a later marriage is not always a more egalitarian one" (p. 36). Increasing age at marriage is a crucial component in addressing CM. However, simply because a girl marries at nineteen instead of fifteen years old does not guarantee that she will have a more egalitarian marriage. There is a need to engage in discussions that acknowledge that marriage can be a "social institution that reproduces inequalities" (p. 61). Programs should work toward encouraging individuals to marry beyond the age of 18 *as well as* having more egalitarian marital unions. In this sense, Amin (2011) suggested that interventions should be framed around three main goals: 1) delaying the age of marriage; 2) fostering consensual and more equitable intimate relationships; and 3) providing support for married girls. Only two programs (Edmeades et al., 2014; Pathfinder International, 2013) included married girls in their program, which revealed positive results at the individual, interpersonal, and economic level. In sum, interventions should include preventive and mitigating strategies for single and married participants, females and males alike, which encourage marriage after the age of 18 and promote gender equality (Greene, 2014; UNFPA, 2012).

No Emphasis on the Role of Sexuality

Girls' sexuality causes anxiety in their families and community members, who fear that girls will lose their virginity, become pregnant, or demonstrate sexual agency that will damage a family's honor. Some girls see marriage as the only socially aceptable setting to express their sexuality (Murphy-Graham & Leal, 2015). In other instances, parents see CM as a way to protect their daughters from harassment or rape (International Women's Health Coalition et al., 2015; Vogelstein, 2013; World Bank, 2011). Although Sexual Reproductive Health (SRH) is present in most of the interventions, most of the time it is restricted to information pertaining to

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[45] An exception to this is a study conducted in Brazil (Taylor et al., 2015).

contraception methods and the negative health effects of early childrearing. A discussion of sexuality is absent in all the programs reviewed despite it being one of the main causes of CM. Discussions around sexuality and concepts such as bodily integrity, choice, sexual rights, consent, and pleasures should be included in programs to address CM (International Women's Health Coalition et al., 2015; Greene, 2014; Nirantar Trust, 2015). In short, there is an imperative need to include a comprehensive sexual education curriculum[46] (CSE) in interventions aimed at addressing CM.

Lack of discussions around dating/courtship

In many cases, girls enter marriages without having a healthy premarital relationship with their husbands (Taylor et al., 2015). No interventions that addressed dating dynamics were identified in this review. Programs that encourage premarital dating can generate opportunities to foster communication and negotiation skills, choice, agency, consent, and equitable relationships. Additionally, including discussions about premarital romantic relationships can also be an avenue to address the age gap that prevails in CM, with males being 5 to 14 years older than their spouses (Clark et al., 2006).

Absence of role models

Role models can help counteract pervasive gender norms. For instance, a study in India found that girls who were exposed to women in positions of power reported plans of marrying later and obtaining jobs that required higher education, challenging the expectations that their communities had for them (World Bank, 2011). Publicizing role models from the communities/countries where the interventions take place hold potential for broadening youth's plans for their futures and the potential they have as individuals (Greene et al., 2015). Unfortunately, the programs analyzed for this proposal did not include content that build upon local role models.

Lack of in-school interventions that address the role of agency in LAC

The finding that girls exercise agency in their decision to enter CM not only challenges assumptions about CM as forced unions but also calls for completely different approaches in designing interventions that seek to prevent CM. For instance, many of the interventions analyzed in this paper targeted parents to prevent them from encouraging or forcing their daughters to get married (Nanda, Datta & Das, 2014; USAID, 2010). However, in countries such as Honduras, most of the time parents oppose CM (Murphy-Graham & Leal, 2015). Therefore,

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[46] Comprehensive sexuality education refers to programs that cover a broad range of topics related to human development (including reproduction, puberty, sexual orientation, and gender identity), relationships (including families, friendships, romantic relationships and dating), personal skills (including communication, negotiation, and decision-making), sexual behavior (including abstinence and sexuality throughout life), sexual health (including sexually transmitted diseases, contraception, and pregnancy), society and culture (including gender roles, diversity, and sexuality in the media) (Planned Parenthood, 2017).

the designs of interventions in contexts where agency is relevant need to take a different approach than those in which family members and/or traditions promote CM. Schools offer five main advantages for addressing the root causes of CM in contexts where agency plays an important role:

1. They provide an opportunity to engage boys and girls (in settings where girls and boys attend same schools). If interventions want to shift pervasive social norms against girls, boys need to be included in the conversation from an early age (Greene et al., 2015).
2. Schooling has the potential to provide youth with a protective environment where they can acquire knowledge and skills that can help them prevent CM (Lloyd & Mensch, 2008).
3. Strengthening, improving, and adapting the school curricula to make lessons relevant to young people's lives can help reduce CM (ICRW, 2013). Examples include comprehensive sexual education content, gender equality discussions, and content related to puberty.
4. Participation does not require recruitment or voluntary involvement, as students are already enrolled in or attending school.
5. Schools are a strategic setting to engage parents, teachers, and community leaders who, as socializing agents, often contribute to the perpetuation of discriminatory norms and behaviors (Achyut et al., 2016).
6. Retention efforts can prevent CM. When girls are in school, they are regarded as children who are not ready for marriage and are therefore safer (ICRW, 2013). Once they are out of the school system, their options are reduced, and marriage often seems like the most viable option. Keeping girls in school can constitute a protective factor against CM. Conditional cash-transfer programs are successful in improving health and educational outcomes in the short-term, but these programs fail to promote gender equality and empowerment in the long-term. Therefore, combining economic incentives with interventions that address CM and its underlying causes can be promising (Greene, 2014).

The lessons learned from the review of these interventions informed the design of ACMHE. Table 3.1 describes how some of these lessons learned are incorporated in ACMHE (a full description is provided in Chapter 5):

Table 3.1. *Summary of Lessons Learned from Review of Interventions.*		
Relevant factor	**Lesson learned**	**How it is incorporated in ACMHE**
Age	Targeting girls at a young age (10-14 years old).	ACMHE reaches adolescents as early as 7th grade (girls and boys between 13-14 years old).
Grouping	Targeting specific and homogeneous groups.	All students belong to the same community (or communities nearby) where the school is

		located. For this reason, most participants share similar characteristics.
Partnerships	Partnerships with governmental institutions make interventions sustainable and scalable.	SAT is funded by the Honduran government and it is part of the public education system, making it sustainable and scalable.
Content needed	1) Examining oppressive gender norms can lead to increased self-esteem.	1) ACMHE's content focuses on gender equality.
	2) Interventions aimed at preventing CM that include sexual reproductive health education are successful in reducing early pregnancy.	2) ACMHE's content includes sexual reproductive health content.
	3) There is a lack of emphasis on boys and masculinity.	3) Boys participate in ACMHE and are exposed to the same content as girls. Gender inequality is emphasized and challenged.
	4) Focus on the age of marriage and a lack of emphasis on inequality within marriages; lack of discussions around dating/courtship.	4) ACMHE recognizes that age is not all that matters. Oppressive marriages can happen at any age. ACMHE includes lessons that promote egalitarian and healthy romantic relationships at any age.
	5) No emphasis on the role of sexuality	5) ACMHE's curriculum addresses sexuality in the context of adolescent development.
	6) Absence of role models	6) ACMHE's curriculum includes case studies

		throughout different lessons.
Emphasis on intervention	Interventions focus on preventing teen pregnancy and do not address girls' agency in their decision to marry.	The purpose of ACMHE is to enhance students' decision-making processes so that they can make informed decisions about CM.
Setting	Lack of in-school interventions.	ACMHE is a school-based intervention that addresses the characteristics of CM in the LAC region.

When ACMHE started in 2016 and this consultation of the knowledge base took place, no evaluations of school-based interventions were identified. However, since then, we have identified two interventions that are similar to ACMHE: *Her Turn* in Nepal (Perczynska , 2019; Bennet, 2017) and *Tarang* in India (Center for Catalyzing Change, 2018). The *Her Turn* 47[OBJ]. We learned about the existence of *Tarang* during a global CM meeting in Fall of 2019 where the results of their evaluations were shared. However, this program has been in place since 2010. Although *Her Turn* and *Tarang* did not inform the design of ACMHE, these three interventions share important similarities:

1. They take place in the public-school system and are therefore scalable and sustainable. These three interventions have established partnerships with local governments.
2. They address agency, but the emphasis of this agency varies in each country depending of the characteristics of the context. For example, in India, girls' agency is related to behaviors such as convincing their parents to delay their marriage. In Honduras, the emphasis on agency is focused on girls' decision-making processes to enter CM.
3. Their curriculums include information about the changes that individuals go through during adolescence.

These three interventions respond to the gaps that have been identified by scholars and practitioners that study CM in different regions of the world. ACMHE is a pioneer of a school-based program in LAC and shares analogous characteristics with interventions with similar purposes in other regions. *Her Turn*, *Tarang*, and ACMHE are responding to the challenges that a greater understanding of CM has imposed in the fields of international development and education.

Understanding the Change Processes Needed to Enhance Adolescents' Decision-Making Processes Regarding CM in a School-Based Setting

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[47] A description of the chronological events of this study are escribed in Chapter 3.

This section describes the learning processes, pedagogical approach/curricular design, and implementation strategy necessary to enhance adolescents' decision-making processes to make informed decisions about CM.

Learning Processes

One of the basic tenets of ACMHE is to provide adolescents with the necessary knowledge to make informed decisions about CM. The process of change is expected to occur through implementing new curriculum in a formal educational setting. To understand what kind of knowledge adolescents need in order to make informed decisions regarding CM, ACMHE's curriculum uses the prototype willingness model (Gerrard, Gibbons, Houlihan, Stock, & Pomery, 2008). The prototype willingness model is a model of adolescent risk behavior. This model functions under two assumptions: a) adolescent risk health behavior is usually volitional but it is not planned; and b) young people develop cognitive representations or social images of the type of person their age who engages in specific risk behaviors (Gerrard et al., 2008).

The prototype willingness model is a type of dual-process model of decision-making. Dual-process models of decision-making maintain that there are two kinds of modes of information processing that individuals use to make decisions: one based on systematic reasoning and another one based on heuristics. The prototype willingness model contends that individuals can engage in these two modes simultaneously (Boyer, 2006; Reyna & Brainerd, 1990). The prototype willingness model suggests that there are two paths to adolescent risk behavior: a reasoned path described by the theory of reasoned action and a social reaction path that is image-based and involves heuristic processing (Gerrard et al., 2008). The theory of reasoned action (Fishbein & Ajzen, 2010) assumes that human social behavior is influenced by the information or beliefs people possess about the behavior under consideration. This information comes from a wide array of sources such as personal experience, media, and social interaction, or, in this case, a formal education setting. According to Fishbein and Ajzen (2010), beliefs associated with a given behavior serve as a guide to respond/act toward a specific situation. These authors distinguish between three kinds of beliefs: a) beliefs about the consequences of behaviors; b) interpersonal or social approval/disapproval of a given behavior; and c) beliefs about personal or environmental factors that can impede/allow to carry out a given behavior. Together, these three beliefs lead to the formation of "behavioral intention" (p. 21). This intention is now available to determine whether an individual will perform a given behavior. The stronger the intention, the more likely it is that a person will behave in a determined way. However, it is important to note that this intention can be minimized by obstacles present in the environment or by the personal characteristics of an individual. For instance, a girl might have the intention to postpone marriage so that she can continue studying but once she finishes middle school she realizes she can't continue her education because there is no high school available in her community and her parents cannot afford to send her to live elsewhere. Once out of school, this girl's options are reduced, and marriage might become an attractive option for her despite her previous intentions of postponing marriage. This theory relies heavily on the analytic processing that individuals go through when they make decisions and the ability to plan whether to engage in a behavior or not.

The prototype willingness model recognizes the importance of this reasoned path but argues that it does not capture in its entirety the complexity of decision-making processes. This model attempts to address those unplanned-but volitional decisions that involve engaging in risky behaviors, even when individuals have reported or planned on avoiding those behaviors. This model emphasizes that adolescents often find themselves in situations that facilitate risky behaviors, and, in these situations, it is willingness, and not reasoned action that determines behaviors. This model incorporates two new constructs: risk prototypes and behavioral willingness. The construct of risk prototypes refers to the cognitive representations or social images of the type of person who engages in a specific behavior. These "images", more than visual representations, refer to the characteristics of the persons who engage in those behaviors. The more favorable the image/representation, the more willing adolescents are to accept the social consequences connected to a specific behavior. This image-based system operates at an unconscious level and relies on previous experiences and knowledge of one's surroundings (e.g. media, behaviors of family members, friends or neighbors). Behavioral willingness refers to openness to engaging in risky behavior, "an acknowledgement that under certain circumstances one might engage in a risk behavior that was previously not intended or sought" (Gerrard et al., 2008). Focusing on willingness instead of intentions allows individuals to consider a broad range of possibilities to which they might be exposed to rather than thinking about whether they plan to engage in a determined behavior. However, although this model does not emphasize intentionality, it does take into consideration the characteristics of the reasoned path, which operates simultaneously with experiential knowledge.

ACMHE's curriculum addresses the two paths that are included in the prototype willingness model: a reasoned path and a social path. To incorporate elements of the reasoned path, ACMHE's curriculum includes: a) discussion about causes and consequences of CM (e.g. health outcomes, prevalence of gender inequality, reduction of opportunities to study/work in the future); b) examination of the reasons why CM does not have social approval (e.g. discussion of national laws and the reasons it forbids CM); and c) discussions about personal and environmental factors that impede or allow adolescents to marry (e.g. knowledge about puberty, social norms that promote gender inequality, lack of opportunities for girls etc.). To include elements of the social path, ACMHE's curriculum includes a series of case studies and dramatizations that aim to enrich students' image-based system to promote unfavorable images of individuals who engage in risky behaviors (e.g. girls running away from their homes and enduring the negative consequences of their decision). Similarly, through case studies and dramatizations, this curriculum promotes favorable images of individuals who choose not to engage in risky behaviors/ engage in healthy behaviors so that students can increase their willingness to engage in similar kinds of behaviors (e.g. youth engaging in healthy romantic relationships, youth challenging gender norms, etc.). These case studies and dramatizations simulate circumstances that students might encounter in their lives which might facilitate risky behaviors so that they have a cognitive repertoire of these scenarios that might aide them in making decisions in unplanned circumstances. ACMHE uses the prototype willingness model to enrich the curriculum with role models, a characteristic that has not been emphasized in previous interventions as it was identified in the previous section. Including case studies with real-life role

models can help students to reimagine life options. Including negative and positive models, helps students have a richer image-based system that informs their decision-making processes regarding CM.

Through ACMHE's new curricular materials, students will be exposed to information aimed at challenging negative attitudes and behaviors (e.g. gender inequality) that they have learned during their life span. Through this exposure to new concepts and ideas, the curriculum aims to create cognitive dissonance (Festinger, 1962). By cognition, Festinger refers to "any knowledge, opinion, or belief about the environment, about oneself, or about one's behavior" (p.3). Dissonance, on the other hand, refers to the unpleasant state that occurs when an individual is exposed to "two or more elements of knowledge that are relevant to each other but inconsistent with one another" (Harmon-Jones & Harmon-Jones, 2012, p. 72). Festinger theorized that when an individual is confronted with this unpleasant state, this will motivate this person to engage in psychological work to reduce inconsistencies between cognitions. Cognitive dissonance is "an antecedent condition which leads to activity oriented toward dissonance reduction just as hunger leads to activity oriented toward hungry reduction" (Festinger, 1962, p. 3). Cognitive dissonance is measured through attitude change. Hence, one of the main objectives of these curricular materials is to change attitudes and beliefs of students towards CM and its causes. ACMHE's aim is to foster cognitive dissonance through discussions based on theoretical knowledge (e.g. examination of terms such as gender, social norms, and puberty) and case studies (e.g. example of persons who challenge gender stereotypes).

Pedagogical approach/curricular design

This study follows Giroux's (2004), definition of pedagogy, which emphasizes the need to address power relations and representations of the self and the social environment in the learning process. According to Giroux,

Pedagogy has less to do with the language of technique and methodology than it does with issues of politics and power. Pedagogy is a moral and political practice that is always implicated in power relations and must be understood as a cultural politics that offers both a particular version and vision of civic life, the future, and how we might construct representations of ourselves, others, and our physical and social environment. (p. 33)

To develop curricular materials that address issues of power, inequality, and social change, this intervention uses critical (English & Irving, 2015; Freire, 2000) and feminist (Shrewsbury, 1993) pedagogies to design, develop, implement, and evaluate ACMHE. Critical pedagogy establishes that education should be used to promote emancipation from oppression through the emergence of a critical consciousness. To achieve critical consciousness, or *conscientização* a deep awareness of one's reality, the learning process should be guided by dialogue and critical thinking. As Freire (2000) stated, "only dialogue, which requires critical thinking, is capable of generating critical thinking. Without dialogue, there is no communication, and with no communication there can be no true education" (p. 74). In this way, Freire was

offering an alternative to "'depositing' ideas in another…a simple exchange of ideas to be 'consumed' by its discussants" (p.70).

Giroux argued that in order to achieve radical changes in society through education, it is necessary to "develop forms of critical pedagogy capable of appropriating from a variety of radical theories" like feminism (p. 32). Because the focus of ACMHE is to address the causal factors of CM by challenging the social norms that perpetuate gender inequality, critical pedagogy is paired with feminist pedagogy. According to Shrewsbury (1993), "at its simplest level, feminist pedagogy is concerned with gender justice and overcoming oppressions. It recognizes the *genderedness* of all social relations and consequently of all societal institutions and structures" (p. 9). Feminist pedagogy views the classroom as a liberatory environment where students become a community of learners who engage in a reflective process to promote social change. English and Irving (2015) bring these two pedagogies together and argued that a critical feminist pedagogy (CFP) is concerned with examining beliefs about women, the examination of content, and the ways in which we teach. CFP "puts a deliberate stress on women and resistance to power in learning situations" (p.104). CFP encourages that in designing content it is important to connect it to girls and women's everyday lives as well as taking the learner's experiences and linking them to larger social issues. English and Irving stated that CFP should:

1. Foster social analysis: This means moving beyond creating safe spaces for women to practice social analysis and critique.
2. Support women's leadership: CFP should have a capacity building approach to women's leadership.
3. Build organizations: Leadership of women should transform the organization in which they work or study.
4. Create social change: CFP needs to go beyond personal and organizational change and work toward societal change.

In addition to critical and feminist pedagogies, ACMHE also draws upon the pedagogical implications of the capabilities approach (Robeyns, 2017; Sen, 1999). The rational, objectives, and content of this intervention are guided by the capabilities approach. ACHME moves away from traditional views of education solely as an economic investment (Shultz, 1971). Instead, it focuses on what individuals can be and do rather than what they can produce or earn which are concerns of the capabilities approach. Rather than adhering to restricted definitions about development solely reflecting wealth and industrialization, this study draws upon Sen's (1999) view on development as the expansion of human freedoms:

Focusing on human freedoms contrasts with narrower views of development, such as identifying development with the rise in personal incomes or with industrialization …But freedoms depend also in other determinants, such as social and economic arrangements (for example, facilities for education and health care) as well as political and civil rights (for example, the liberty to participate in public discussion and scrutiny). (p.3)

Sen described development as "a process of expanding real freedoms that people enjoy" (p. 57). By freedoms, Sen refers to the opportunities that people have to lead lives in which they can choose and accomplish what they value. Sen proposed five instrumental freedoms, which are both the means and ends to development: political freedoms[48], economic facilities[49], social opportunities[50], transparency guarantees[51], and protective security[52]. In expanding these freedoms, Sen argued that individuals will enhance their *capabilities* in such a way that will allow them to shape their own destinies. Sen (1999) defined capabilities as "a person's ability to do valuable acts or achieve valuable states of being" (p. 30). But for people to enjoy these freedoms, there must be a removal of obstacles and barriers to experience them. Development also encompasses "the removal of major sources of *unfreedom*: poverty as well as tyranny, poor economic opportunities as well as systematic social deprivation, neglect of public facilities as well as intolerance or overactivity of repressive states" (p. 3).

Along with poverty, lack of educational and economic opportunities, as well as the failure of States to provide for and protect citizens, cultural norms that perpetuate gender inequality constitute one of the main unfreedoms that drive CM (Tzemach Lemmon, 2014; UNICEF, 2014; UNFPA, 2012; World Bank 2011). As Sen stated (1999), "inequality between women and men afflicts– and sometime prematurely ends– the lives of millions of women, and in different ways, severely restricts the substantive freedoms that women enjoy" (p. 15).

The rational and objective of ACHME is to challenge this unfreedom by developing an intervention that can help students identify gender inequality and the negative implications of CM. To do so, this work draws from the pedagogical implications of the capabilities approach. Walker's (2012) *A capital or capabilities education narrative in a world of staggering inequalities?* article is used as the foundation of the examination of the pedagogical implications of the capabilities approach. In this work, Walker (2012) argued that under a capabilities education narrative, education should promote freedom of expression and critical thinking through a problem-posing approach based on dialogue. Walker contended that this model should aim to foster a deep self-understanding of students as individuals and the society they live in. She maintained that the capabilities education narrative must provide an empowering and emancipatory education that promotes the search for the ultimate meaning of life in one's own way: agency. This intervention intends to provide students with the knowledge and skills so that they can exercise agency in informed ways, particularly in decisions regarding romantic relationships and marriage. ACMHE also intends to promote self-understanding among students and a critical perspective about the community/society they live in to comprehend in what ways CM can affect their lives so that they can use their agency to promote change. That is, agency is

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[48] Refers to the opportunity to choose the authorities that govern, the ability to scrutinize and criticize authorities, freedom of political expression, and freedom of press among others.

[49] Includes the opportunities of individuals to produce, consume or exchange economic resources.

[50] Arrangements such as education and health that improve individuals' quality of life

[51] Refers to the ability to trust others under assumptions of openness and transparency. These freedoms are important in preventing corruption.

[52] Institutional arrangements to provide a social safety net for individuals in case of adverse circumstances such as unemployment or famine.

at the heart of this intervention. It focuses on informing and enhancing adolescents' decision-making capacity (by addressing the reasoned and social paths of decision-making processes and promoting cognitive dissonance) to "thicken" (Klocker, 2007) their "socio-culturally mediated capacity to act" (agency) (Ahearn, 2001 p. 112) and lead lives that they value.

The capabilities approach and critical and feminist pedagogies informed the design, implementation and evaluation of the ACMHE. These pedagogies guided the content in the curricular materials, the structure in which this content is presented in the texts, and the ways in which it is delivered in the classroom.

Implementation Strategy: Who Implements ACMHE

Social learning theory (Bandura and Walters, 1977) also guided the design of ACMHE. The social learning theory proposes that individuals learn how to behave through modeling, observational learning, and social interactions. Social learning theory helps us understand how the social reality in which adolescents live affects the ways in which they understand romantic relationships. Following the basic assumption that learning occurs through modeling, observation, and social interaction, this curriculum is designed to be studied in a classroom setting through peer education. Peer education is defined as education that occurs "when individuals of a specific self-identified group educate other individuals from the same self-identified group with whom they may share similar social background or life experiences" (Sriranganathan, et al., 2012, p. 62-63).

In this intervention, 11th graders implement the curricular materials to 7th and 9th graders. To my knowledge, no intervention has addressed CM in a formal educational setting through peer education. However, peer education has been used for sexual health education and drug and alcohol prevention efforts. Since ACMHE includes a sexual reproductive health component, peer sexual health education experiences provide a good guide on deciding whether this mechanism could be a good strategy for ACMHE's curriculum implementation. According to several reviews of sexual health education efforts, peer sexual health education programs offer several advantages. First, peer educators can be effective sources of information because they are more likely to communicate using more simple language. They can also serve as positive role models, challenging notions that most adolescents engage on high-risk behaviors (DiClemente, 1993). Second, it is common for peer mentors and mentees to share similar interests, challenges, and backgrounds, which might help participants bond with peer educators. A peer education strategy also provides the opportunity to create an environment where youth can ask questions about their sexual health in a friendlier environment, without feeling judged or monitored by authority figures such as teachers (DiClemente, 1993; Jaworsky et al., 2013).

Peer educators also experience great benefits from their roles as peer educators. Not only are they exposed to important knowledge that is relevant for their own lives, they also develop transferable skills such as communication, facilitation, leadership, presentation development, and problem solving. Peer educators have also reported being more open-minded, confident and self-aware about their own reality after their experiences as peer educators (Jaworsky et al., 2013). In

some instances, peer educators are the ones that present the greater knowledge acquisition and attitudinal change (Jaworsky et al., 2013). Most importantly, evaluations have identified that peer sexual health education programs can be successful in improving knowledge, attitudes, and intentions (Agha & Van Rossem, 2004; DiClemente, 1993; Kim & Free, 2008). However, these gains are not always accompanied by sexual health outcomes (Kim & Free, 2008). In cases where positive outcomes were identified, they were not always sustained over time (Agha & Van Rossem, 2004). Other criticisms about peer lead programs include unequal power dynamics between peer educators and participants (e.g. gender dynamics) (Campbell & MacPhail, 2002), lack of experience and knowledge compared to professional educators (Sriranganathan, et al., 2012), and inadequate training (Walker & Avis, 1999). Chapter 5 explains how ACMHE addresses these limitations by creating an implementation design in which students are exposed to the content several times during their high school experience.

Desired Outcome: Informed decision-making processes

ACMHE's desired outcome is enhancing adolescents' decision-making processes to make informed decisions about CM by providing an educational context where students can empower themselves. ACMHE is informed by Murphy-Graham's (2012) longitudinal qualitative research on education and women's empowerment that she conducted in Honduras with SAT students, the same alternative education program in which this intervention took place. Murphy-Graham and Lloyd's (2016) conceptual framework that theorizes about the potential role of education in girls' empowerment is also applied. Although these two works focus on girls' empowerment processes, they are used in this study to design an intervention that addresses both girls and boys in a formal educational setting. In this context, ACMHE seeks to emphasize the role that boys play is equally crucial in recognizing and challenging gender inequality. Murphy-Graham (2012) defined empowerment as a

> Process of recognition, capacity building, and action. Empowered individuals come to recognize their inherent worth, the fundamental equality of all human beings, and their ability to contribute to personal and social betterment. They develop the capacity to critically examine their lives and broader society and take action toward personal and social transformation. (p.15)

It is important to note that empowerment is a process rather than a product and it cannot be provided by a third party. However, an intervention can provide a context where conditions are provided for boys and girls to empower themselves. Following this idea, ACMHE aims to foster 1) recognition, 2) capacity development and 3) action (agency) (Murphy-Graham, 2012):

1. Recognition: Help students recognize their inherent dignity, self-respect, and their equality to others.
2. Capacity development: Expand what students are able of thinking and doing. Enhance critical thinking skills to examine their lives and the society in which they live in.
3. Action (Agency): Students should be able to challenge oppressive relationships and structures and spark social transformation.

These three elements will be present in the curriculum developed for this intervention in the following ways:

a) There will be discussions of gender norms and gender (in) equality to address the recognition component of empowerment
b) The workbooks will promote dialogue through questions about local social norms meant to encourage social analysis (informed by critical and feminist pedagogies) to address the capacity development component of empowerment
c) The curriculum will use the prototype willingness model to include the necessary information and cognitive images to inform students' decisions and actions towards CM.

Ideally, these three components will inform adolescents' decision-making processes regarding CM. The themes, lessons, and components of this curriculum are discussed at greater length in chapter 5.

CM mostly affects girls from poor, rural areas where educational access is limited, and economic opportunities are scarce. A school-based intervention cannot control these factors, and as such, ACMHE's design does not address these directly because they are outside of its scope of action. However, these conditions are taken into consideration to understand how other factors intersect with these characteristics as well as how to design an intervention that acknowledges them and make youth more aware of how they converge to drive CM. For this reason, Ahearn's definition of agency as the "socioculturally mediated capacity to act" (2001 p. 112) is used in this context. As previously discussed, girls in the rural areas of Honduras exercise agency in their decision to marry. However, this agency must be understood within a context of limited academic, economic, and social opportunities available for girls. This intervention acknowledges the role that the limited alternative life options have on the decision-making processes of girls who decide to marry at a young age. For this reason, this intervention's purpose is to "thicken" (Klocker, 2007) adolescents' agency. As Murphy-Graham and Lloyd (2016) suggested, education should expand the actions adolescents "are able to take and push the boundaries of the cultural constraints that limit them from achieving their full potential" (p. 561). This intervention is grounded on the idea that despite the challenges of the context (and how the causal factors of CM are rooted in the characteristics of this context), adolescents can benefit from an intervention that allows them to make informed decisions about CM. That is, make decisions that acknowledge the how norms, that changes that occur during adolescence, and limited life opportunities converge in their reality.

Through the implementation of a curriculum guided by the prototype willingness model, cognitive dissonance, and critical and feminist pedagogies, this intervention seeks to provide opportunities that allow students to examine their lives and the social, economic, and political reality of their society and to understand how this reality affects their life options. As Nussbaum (2003) argued, empowering education should not only provide literacy and numeracy skills, it should also prepare individuals to master their political and economic situation (as cited in Murphy-Graham, 2012). ACMHE attempts to provide students with an educational context

where students can acquire knowledge and critically reflect upon and question attitudes and behaviors related to gender, relationships, CM, and future goals. Ideally, this experience will thicken students' agency (Klocker, 2007) and help them make informed choices about their lives and empower them to push the constraints imposed by their socio-economic reality so that they can live lives that they have reason to value. In this sense, although this intervention is explicit about conceptualizing CM as a pervasive practice, it also recognizes that given the limitations of the context in which this young people live, CM may be an attractive option for girls.

For example, Murphy-Graham et al., (2019), found that in a few instances, girls reported that entering unions was beneficial for their lives. For example, a young woman stated that she was able to finish school because of the financial support of her partner. These girls shared that their marriage provided them with greater emotional and economic stability than what they had at their homes. Furthermore, a marriage after the age of 18 years old does not mean that it is a healthier, egalitarian marriage. Our approach does not measure success solely on a reduction of unions before a certain age because it ultimately recognizes choice as a central component of the capabilities approach and choices made by individual should not be assessed "in terms of some external criteria". Rather, they should be judged in terms of a person's "own values and objectives" (Sen, p. 19). Taking this last point into consideration, the desired outcome of ACMHE is to provide students with the necessary knowledge and cognitive representations or social images to make informed decisions about CM.

In short, the process of change requires a combination of: a) content that addresses adolescents' decision-making processes following a prototype willingness model as well as content that promotes cognitive dissonance to achieve attitudinal change in relation to gender inequality, b) a pedagogical approach that reflects the principles of critical and feminist pedagogies as well as the pedagogical implications of the capabilities approach with an emphasis on the importance of developing agency in the educational setting, and c) a peer education implementation strategy that follows social learning theory principles. With this ideal change process in place and the lessons learned from previous interventions, an initial theory of action was developed as follows.

If students are exposed to a curriculum that:

a) Reaches boys and girls in homogenous groups and in a formal educational setting,
b) Addresses gender, gender inequality, (in) equality within romantic relationships, sexual reproductive health, through pedagogies that promote social analysis, social change, and critical thinking, and dialogue,
c) Challenges previous attitudes and beliefs about gender inequality and CM; and
d) Presents students the necessary knowledge and social images to inform their decision-making processes.

Then ideally, adolescents will be able to enhance their decision-making processes to make informed decisions about CM and empower themselves to push the constraints imposed by their socio-economic reality.

As explained earlier, at this point there were still gaps in our understanding of CM. Chapter 4 examines the influence that social norms, the biological, cognitive, and psychosocial changes that occur during adolescence, and limited opportunities have on adolescent girls' decision to enter unions. This initial theory of action is refined in Chapter 5 using the results of the exploratory research described in Chapter 4.

Chapter 4

Understanding How Social Norms, the Biological, Psychosocial, and Cognitive Changes that Individuals Experience during Adolescence, and Limited Life Opportunities for Females Converge to Act as Causal Factors of Child Marriage.

A more nuanced understanding of CM in the communities where this intervention is implemented was of critical importance for the design of ACMHE. As Biccheri (2016) stated, "understanding the nature of collective behaviors and why people engage in them is critical for the design of appropriate interventions… Addressing these behaviors requires disentangling the personal, social, economic, and cultural factors that support them" (p.1). We conducted an exploratory research to develop a theoretical understanding of CM in rural areas of Honduras. This chapter describes the results of this "mini study" or "needs assessment" (Mintrop, 2016) and provides a nuanced understanding of the social norms that support CM and how these converge with the biological, psychosocial, and cognitive changes that individuals experience during adolescence and the limitations of the social context in which adolescents' lives are embedded.

Theoretical Framework

This mini study draws from Bicchieri, Jiang, & Lindemans' (2014) theoretical framework to examine and diagnose what kind of collective practice CM is in rural areas of Honduras, which draws from Bicchieri's work on social norms (Bicchieri & Mercier 2014; Bicchieri, 2006) and was utilized to create a general framework to "help integrate the different explanations of CM and to also guide the development tools indispensable for child marriage measurement and evaluation" (Bicchieri et al., 2014, p. 3). Marianismo (Gil & Vásquez, 1996) is then used to understand and explain the social norms that are connected to CM in rural areas of Honduras. Finally, Steinberg's (2011) framework for studying adolescent development is incorporated to examine how the changes individuals experience during adolescence converge with these social norms and how they influence adolescents' decision-making processes to enter CM.

A Framework to Understand CM as a Collective Practice

A collective practice is a "cluster of individual behaviors" (Bicchieri et al., 2014, p.3). To understand collective practices, it is important to comprehend why individuals engage in certain behaviors (Bicchieri et al., 2014, p.3). Bicchieri et al.'s (2014) framework to understand CM as a collective practice is "based on insights into how individuals make decisions" (p.3). This framework is of interest to ACMHE because this intervention aims to inform adolescents' decision-making processes regarding CM. Therefore, if influencing individuals' decision-making processes is a goal of this intervention, it is necessary to understand them in the first place. CM causal factors vary across regions, countries, and even communities. The reasons why girls marry vary widely and, in most cases, the causal factors are multiple and complex. For this

reason, diagnosing what kind of collective practice CM is in specific settings is of utmost importance to design effective interventions.

This theoretical framework places an emphasis on understanding individuals' preferences, options, and beliefs. Preferences can be *self-regarding* (preferences about one's own well-being) or *other regarding* (preferences about others' well-being). As discussed previously, girls exercise agency in their decision to marry, therefore the emphasis on this analysis is on self-regarding preferences. Preferences are limited by the options individuals have. As some researchers have indicated before, the agency that girls exercise in their decision to marry should be understood within the limited set of choices they have (Murphy-Graham & Leal, 2015; Taylor et al., 2015). This is what Bicchieri et al. (2014) called *"preference-satisfaction-given-limited-options mold"* (p.3). Beliefs that individuals' hold about their options also matter. Sometimes, the beliefs that individuals hold about their options are false or incomplete. To address collective practices like CM, it is crucial to understand individuals' preference, options, and beliefs. Table 4.1 provides a description of the definitions and examples of preferences, options, and beliefs.

Table 4.1
Model to Explain Behaviors of Individuals with Definitions of what Preferences, Options, and Beliefs about Options Are, with Examples. (Bicchieri et al., 2014, p.7).

	Definition	Examples
Preferences	Somebody's ranking of all possible options according to their desirability.	Preferring more money to less; preferring a happy child to an unhappy child.
Options	The set of available courses of action (with their implications) somebody can actually choose from. People's options are limited.	Sending girls to school or trying to get them a job might not be options.
Belief about options	The beliefs somebody holds about the set of available courses of action or their implications.	The belief that girls have love affairs, and thus that delaying marriage while preserving virginity is not an option.

It is common that when a practice is widespread people come to the quick conclusion that it must be a "social norm" (Bicchieri et al.,2014, p.12). However, these authors argued that not all collective practices are social norms. To understand what kind of collective practice CM is in a determined region or community, it must be investigated why people endorse it. Bicchieri et al. (2014), differentiate between five different kinds of collective practices: rational response, custom, moral rule, descriptive norm, and social norm. This differentiation is based on what guides the decision-making processes of individuals. Table 4.2 describes the different kinds of collective practices and provides examples of the reasoning behind each practice.

Table 4.2:
Different Kinds of Collective Practices, with Examples.

	Definition	**Examples**
Rational response	A rule that people follow because they reason it maximally satisfies their preferences.	Fathers marry off their daughters young because girls are a financial burden.
Custom	A rule that people follow more or less blindly but which would be abandoned if no longer in their own interest.	Fathers marry off their daughters young because it is a tradition. Nobody thinks much about it.
Moral rule	A rule people follow because they believe that it should be followed (personal normative belief).	Fathers believe that girls should marry young because girls should be pure and chaste.
Descriptive norm	A rule that people follow because they believe that others follow it.	Fathers marry off their daughter young because they believe other fathers also marry off their daughter young.
Social norm	A rule that people follow because they believed that others follow it (*empirical expectation)* and that others think it should be followed (*normative expectation).*	Fathers marry off their daughters young because they believe other fathers also marry off their daughters young, and moreover, they believe other fathers think that girls should marry young (because girls should be pure and chaste).

Bicchieri et al.'s (2014) work informed the analysis of the data collected during this needs assessment and allowed us to have a better understanding of CM as a collective practice in rural areas of Honduras.

Marianismo

Marianismo and machismo are "an exaggerated stereotype" (Beattie, 2002, p.303) used to describe gender roles in Latin America and among Latino/Hispanic populations in the United States. Marianismo and machismo are "coexisting structures that describe socially acceptable norms and beliefs that support men and women in traditional gender roles emphasizing a patriarchal power structure" (Núñez et al., 2016, p.204). The term marianismo was first introduced by Evelyn Stevens in 1973 in her essay *Machismo and Marianismo* (Stevens, 1973a).

According to Stevens, marianismo derives from the emulation of the virtues of the Virgin Mary: "taking its cue from the worship of Mary, marianismo pictures its subjects as semi-divine, morally superior and spiritually stronger than men" (p.62). Although it has a religious inspiration, marianismo is a secular concept based on beliefs and practices associated to the expectations for women in society (Stevens, 1973b). The moral superiority is of utmost importance in the sexual realm. Stevens pointed out to the importance of preserving the moral status of women, particularly in protecting the female virginity. A girl or women who does not live by these moral standards "brings disgrace not only on herself, but –more important- on the whole family, in that she reveals the inability of her male relatives – their lack of virile strength and courage- to 'protect' her" (Stevens, 1973a, p.62). Marianismo characterizes women as passive, modest, innocent, sexually pure, chaste, nurturing, abnegated, and family-centered (good mother and wife). On the other hand, machismo personifies men as strong, independent, protective, dominant (particularly in romantic relationships), in a position of authority within the family as the providers, and enjoy sexual permissiveness (DeSouza et al., 2004; Fuller, 1995; Pastor, 2010).

Stevens argued that all Latin-American countries exhibit "a well-defined pattern of beliefs and behaviors centered on popular acceptance of a stereotype of the ideal women. This stereotype, like its macho counterpart, is ubiquitous in every social class. There is a universal agreement on what a 'real woman' is like and how she should act" (Stevens, 1973b, p.9). Many authors have contested the use of this term. Navarro (2002), for instance, described Stevens' conceptualization of marianismo as "an ahistorical, essentialist, anachronistic, sexist, and orientalist fabrication" (p.270). Peruvian anthropologist Norma Fuller (1995) agreed with the polarity that characterized the machismo/marianismo dyad. However, she contested that this dyad could capture the complexity of the many Latin American countries and cultures as Stevens suggested. Fuller sustained that using these concepts to generalize about an entire continent is problematic as "different cultures and times coexist" in Latin American (p.15). However, as Hagene (2006) argued, despite its flaws, Steven's essay has the merit of providing a new framework through which women's lives were studied during this time: "Steven's essay challenged the hyper economic-based perspective that prevailed during this period by addressing the gender imaginary explicitly, focusing on the values, beliefs, and meanings of the myths of self-perception and identity" (my translation) (p. 4).

With a new theoretical framework in place to draw from, through time, other authors refined, polished, and sensitized this concept. For example, Gil and Vásquez (1996), two Latina psychotherapists based in New York, wrote the book *The Maria Paradox: How Latinas Can Merge Old World Traditions with New World Self-Esteem*. In this book, the authors explore how marianismo relates to Latinas' self-esteem and their process of acculturation in the United States. Gil and Vásquez defined marianismo as:

> Marianismo is about sacred duty, self-sacrifice, and chastity. About living in the shadows, literally and figuratively, of your men- father, boyfriend, husband, son- your kids, and your family… In the Old Country, it affords a woman a level of protection as a wife and mother, gives her certain power and mucho respeto as well as a life free from loneliness and want. (p.7-8)

Gil and Vásquez also pointed out the pressure on Latina girls/women to be *la santa de la casa* (the saint of the house) (p. 2), a daughter, mother, and wife who is respectable and has an irreproachable behavior. Gil and Vásquez explained how girls' sexual purity becomes a "family issue" (p. 140) as it is related to the honor of the family. Moreover, these therapists also argued that marianismo has positive aspects such as loyalty, compassion, and generosity. For the purpose of this paper, I use Gil & Vásquez's definition of marianismo.

Marianismo is used to guide the examination of social norms that drive CM because it serves as a conceptual umbrella that attempts to capture norms and beliefs to which some women adhere to and/or are expected to adhere to among Latin American/ Latino populations. As a concept it attempts to capture women's reality at an individual, interpersonal, and community level. It encompasses beliefs that women have about themselves, it also explains the dynamics of the relationships of women with others and it describes some of the social expectations that society has for women. In this sense, it offers a wide spectrum through which we can try to understand certain social norms that women navigate in their lives. More specifically, marianismo serves as a valuable lens to analyze CM because it mirrors many characteristics that researchers have identified in communities where CM prevails. For example, Greene et al. (2017) advances the argument that ideas around sexual purity of girls (e.g. sexual intercourse only acceptable within marriage) "prompt a series of actions that are focused on controlling her and therefore lessening the risk of familial shame" (p.4). Murphy-Graham and Leal's (2015) study confirms this argument as they found that in rural areas of Honduras, the control exerted to regulate girls' sexuality created situations where girls lacked opportunities of interaction with their partners and made cohabiting the only available choice to be with them and therefore, driving CM. In this sense, marianismo offers a framework to understand this expectation from girls. Accordingly, despite its limitations, due to its complexity and being challenged by some authors, marianismo offers a framework that reflects ideas, beliefs, and attitudes that have important implications for CM analysis.

To be clear, marianismo is not used to make simplistic generalizations in this study or is used as a universal model to explain social norms across Latin America or Latino communities. However, it can serve as a lens to analyze and understand certain behaviors and attitudes. Finally, marianismo is used as a conceptual umbrella that offers a set of dimensions that can be analyzed separately and that are not necessarily interrelated or interdependent. Even in instances where a girl reflects attitudes that follow marianismo characteristics, this does not imply that she adheres to all the defining traits of this concept. For instance, a girl might believe that sexual purity is important but might not agree that being submissive is a positive quality (e.g. a girl runs away against her parents' will but sees marriage as the only context where she can be sexually active). Hence, besides existing a diversity of beliefs and behaviors among members of a community, the degree to which individuals identify with these traits also varies. For the purpose of this ministudy, there is an emphasis on three specific dimensions of marianismo as defined by Gil and Vásquez (1996): 1) the pressures on girls to be *de la casa* and show "proper behavior"; 2) the importance of chastity for girls and their families; and 3) the venerated role for women as wives and mothers.

A Framework for Studying Adolescent Development

Adolescence is a period of biological, psychological, social, and economic transitions. Adolescence begins around the age of 10 and ends in the early 20's. During adolescence, individuals become better able to make decisions, to think about their future, become more independent, often experience a significant growth spurt, develop interest in sex, and become capable of reproduction, among other changes (Steinberg, 2011). Adolescence is divided in three stages: early (ages 10-13), middle (ages 14-17), and late (ages 18-21) adolescence.[53] Steinberg (2011) proposes a framework with three basic components to study adolescent development: a) the fundamental changes of adolescence, b) the contexts of adolescence, and c) the psychosocial development of adolescence.

There are three major changes that occur during adolescence: biological, cognitive, and social transitions. During adolescence, individuals experience biological changes referred to as puberty. Puberty "is a universal experience with profound implications for adolescents' physical and emotional functioning as well as their long-term and sexual reproductive lives" (Crockett et al., 2019, p.177). Three main changes take place during puberty: acceleration in growth (height and weight), development of primary sex characteristics (hormonal changes that enable reproduction), and the development of secondary sex characteristics (changes in genitals and breasts, appearance of pubic hair, etc.) (Steinberg, 2011). Some of these changes in girls include breast development, menstruation, and hair growth in the pubic area and armpits. In boys, puberty includes testicles and penis growth, pubic and facial hair growth, muscle growth, and voice changes. In addition to the physical changes that individuals experience during this stage, puberty also affects psychosocial development and social relationships. Individuals also develop more sophisticated thinking abilities. Individuals develop the ability to think about hypothetical situations, and about more abstract concepts such as friendship and love and are capable to think about their own future. This ability to think in hypothetical and abstract concepts becomes evident in the different ways in which adolescents think about themselves, their relationships with others, and the reality that surrounds them. As young people go through adolescence and experience many changes in their lives, they begin to be treated by others differently. Their relationships with their family members, peers, and authority figures change. For example, during adolescence, individuals undergo important life events such as employment, acquisition of voting rights, a desire for greater independence, spending more time with peers, and less time with parents, etc.

All adolescents undergo the biological, cognitive and social changes described above. However, the environments in which these changes take place vary. In other words, these

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[53] In this intervention, we address youth in these three stages: 7th, 9th, and 11th graders whose ages range from 12-19 years.

universal changes that young people undergo are influenced by the characteristics and opportunities/limitations of the context in which adolescents live in. To analyze the settings in which adolescent development occurs, it is necessary to take into consideration the different contexts in which the adolescent develops. Using an ecological paradigm (Bronfenbrenner, 1977) to understand adolescent development allows for a broader understanding of the effect of the environment in an individual's development. According to Bronfenbrenner, the conception of environment implicit in the ecological paradigm is "conceived topologically as a nested arrangement of structures, each contained within the next" (p. 514). This nested arrangement of structures consists of a hierarchy of systems: a) microsystem; b) mesosystem; c) exosystem; and d) macrosystem. The microsystem is an individual's immediate surroundings and includes the interactions that occur within this level. Microsystems include an individual's family, community, school, religious institutions, clubs, peer groups, etc. The mesosystem, the second level of this ecological hierarchy, is "a system of microsystems" (Bronfenbrenner, 1977, p. 515); it consists of interactions between two or more microsystems. The third level is the exosystem, which Bronfenbrenner (1992) described as the system that "encompasses the linkage and process taking place between one or more settings, at least one of which does not ordinarily contain the developing person, but in which events occur that influence processes within the immediate setting that contains that person" (as cited in Sontag, 1996, p.326). The exosystem includes events or circumstances in which an individual does not participate in a direct way but that still has an impact in the development of that person. The fourth level is the macrosystem, which includes laws, policies, cultural values, belief systems, socio-economic statuses, economic patterns (e.g., poverty/prosperity), and social conditions (e.g., violence/peace, enjoyment of rights).

The last component is the psychosocial development of adolescence. Psychosocial refers to aspects of development that are psychological and social in nature. There are six relevant psychosocial aspects during adolescence: identity (self-conception, self-esteem), autonomy (sense of independence), intimacy (forming close and caring relationships with others), sexuality (development of sexual feelings and enjoying physical contact with others), and achievement (being successful and competent members of society). These aspects are not unique to adolescence but take special relevance during this stage. This adolescent framework is used to understand the decision-making processes of girls and how these are influenced by the social, cognitive, and biological changes of adolescence.

A focus on the biological, psychosocial, and cognitive implications of adolescent development.

This mini study uses Steinberg's (2011) overarching framework to focus on three specific changes that occur during this stage: biological, psychosocial, and cognitive. More specifically, it examines:

1. The role of puberty (biological changes),
2. The development of intimacy (emphasis on romantic relationships), sexual attraction, autonomy, and a sense achievement (psychosocial), and
3. The development of more sophisticated thinking abilities such as thinking about hypothetical situations and abstract concepts and its connection to decision-making processes (cognitive).

Research in the United States suggests that the meaning and the ways in which puberty affect the livelihoods of adolescence is different for individuals of different backgrounds (Deardorff et al., 2019). For this reason, it is crucial to examine the social context in which individuals experience these changes to understand how they affect adolescents' lives. The biological changes that occur during puberty are also accompanied by psychosocial changes due to the development of primary and secondary sex characteristics.

For instance, adolescents develop an interest in romantic relationships (Neeman, 1995; Steinberg, 2005). Research in countries like Sweden and the United States suggest that most adolescents engage in romantic relationships (Carver, Joyner, & Udry, 2003; Edgardh, 2000). Romance during adolescence is normative and central to adolescents' lives. Furman and Shaffer (2003) argued that romantic relationships play an important role in "the general course of development during adolescence" and have significant importance in adolescents' health and social adjustment (p.3). Along with developing an interest in romantic relationships, pubertal development initiates feelings of sexual attraction. This transition involves "complex biological and social processes contributing both to physical maturation and to individual interpretations of pubertal experiences" (Moore et al., 2014, p.1734). That is, the contexts in which adolescents live will shape their understanding and interpretation of what these biological and psychosocial changes entail. Adolescents' social context shapes their attitudes and behaviors towards themselves and others as they experience this developmental transition. For instance, messages about whether or not it is permitted to have romantic partners, or when and in what context sexual initiation is appropriate shape adolescents' perception and understanding of these changes they are experiencing as well as what behaviors and attitudes are expected of them during this developmental phase (Moore et al., 2014).

It is common for teenagers to distance themselves from their parents during adolescence and rely more on their peers (Shanahan et al.2007; Steinberg, 2011). This is in part due to their desire and need to become more autonomous. This need for autonomy is also connected to their emerging interest on romantic and sexual relationships. Spear & Kulbok (2004) defined autonomy as "a state of being, in that human beings covet independence and freedom to make choices. Autonomy involves maintaining some kind of balance between dependence and autonomy" (p.49). According to Steinberg, (2011) parenting style has an important influence on adolescent autonomy development. Steinberg warned that "in families in which excessive parental control is accompanied by extreme coldness, and punitiveness, the adolescent may rebel against parents' standards explicitly" (p. 286). In contrast, gradual changes in family dynamics that allow adolescents to match their autonomy with their emotional and cognitive maturity permit a healthy development of emotional autonomy. Finally, another important psychosocial

component is achievement. Achievement refers to the development of motifs, interests, and plan for one's future. During adolescence, individuals are prepared to assume roles in society. These interests, hopes, and plans for one's futures are deeply dependent on the opportunities and resources available for individuals. In industrialized societies, the emphasis on achievement during adolescence is focused on academic and occupational concerns. In some contexts, adolescents are confronted with having to make choices among an array of different options for their professional or scholastic lives. In other contexts, adolescents have few or no choices to make and their sense of achievement is determined by the constraints of the context in which they live. For instance, in rural communities where there are no economic or educational opportunities for girls, their opportunity for achievement is limited to becoming mothers and wives.

Adolescents also undergo important cognitive changes during this developmental stage. These changes have important effects on risk taking and decision-making behaviors. Steinberg (2004) explained that this propensity persists because "adolescence is a period of heightened vulnerability to risk taking because of a disjunction between novelty and sensation seeking (both of which increase dramatically at puberty) and the development of self-regulatory competence (which does not fully mature until early adulthood)" (p. 51). Additionally, Sawyer et al. (2012) explained that during adolescence, individuals engage in more risk-taking behavior due to "a developmental imbalance that favors behaviors driven by emotion and rewards over more rational decision making" (p. 1633). These authors suggest that "adolescents seem to be more affected than adults by exciting or stressful situations when making decisions—so-called hot cognitions—especially in the presence of peers" (p. 1633). This risky behavior increases between the ages of 10 and 15 years, suggesting that these fluctuations are affected by the changes that occur during puberty. These impulsive decision-making behaviors converge with teenagers' newly acquired cognitive capacity to think about abstract concepts such as love and marriage and hypothetical situations in the future. This propensity to risk and behaviors driven by emotion also coalesce with desires for autonomy, intimacy, and sexual desire. The biological, psychosocial, and cognitive changes examined in this section are used to investigate how these changes converge with social norms in a context of limited educational and economic opportunities for girls.

Methodology of mini study

For this mini study the following data collection methods were implemented:[54]

- 5 focus groups
- 1 workshop
- 7 interviews
- 10 Interviews from previous study (McEwan et al., 2015)

In addition to the data collected during the focus groups, workshops, and interviews this analysis also draws from data from a longitudinal study conducted by Murphy-Graham and colleagues from 2008 to 2016 (see McEwan et al., 2015 for more detailed sample description).

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[54] The data collection process of this needs assessment is described in greater detail in Table 3 Chapter 3.

This study began when adolescents were completing 6th grade in 2008 and ended when participants were approximately 20 years old. In 2009, 2010, and 2016, Murphy-Graham and her team conducted additional rounds of data collection to explore a range of outcomes related to schooling and well-being among a sample of 1,305 rural youth. The study used school and household administrative data to identify approximately 100 similar schools in which they sampled the entire 6th grade class (half of these schools were SAT schools, the same school system this dissertation focuses on). I use data from the third round (in 2016) of in-depth interviews with 64 adolescents (32 males, 32 females). Among the 32 females, 10 had entered a union or given birth before the age of 18 by 2016. The interviews focused on the transition to adulthood, particularly their educational history, their relationships, and their participation in work and community life (see Murphy-Graham et al., 2019 for more details of this data subset analysis). These interviews were conducted by Murphy-Graham and other research assistants. Each interview lasted approximately 1 hour. The purpose of using this data is to use these girls' interviews to learn about what influences the decision-making processes of these girls as well as the context in which these decisions are made. Appendix 8 summarizes the information of these 10 participants. All names used in this section are pseudonyms.

Findings

Our findings indicate that CM in rural areas of Honduras is a rational response. A rational response is "a rule that people follow because they reason it maximally satisfies their preferences" (Bicchieri et al, 2014, p.15). CM is a rational response for girls whose livelihoods are characterized by living in an environment that perpetuates oppressive gender norms, a lack of understanding and stigmatization of the changes that teenagers go through during adolescence, and the structural limitations of the society they live in. CM as a collective practice is also guided by girls' individual preferences, options, and beliefs. When unequal social norms converge with a stigmatization of the changes that girls experience during adolescence and few or inexistent economic and educational opportunities are available for girls, marriage becomes an attractive (and maybe only) option available to girls. With few options accessible to girls, marriage (or the ideal of marriage) seems desirable given the importance that the roles of wives and mothers have in the rural communities where this mini study took place. Finally, girls' decision to enter marriages is also influenced by the beliefs that they hold about marriage. Some girls think they will have more freedom since they won't be under the control and supervision of her parents, while others believe that their economic situation will improve.

Indirect Social Norms that Push Girls to CM and their Intersection with Developmental Changes of Adolescence.

Bicchieri et al. (2014) define a social norm as "a rule that people follow because they believed that others follow it (*empirical expectation)* and that others think it should be followed (*normative expectation*" (p.15). Following this definition, our results suggest that CM as a collective practice is not a social norm in rural areas of Honduras. The results of this mini-study align with Taylor et al.'s (2019) findings that in Latin American countries, CM is not directly

supported by social norms. When asked about the reactions of the community members towards girls who marry early, two female students responded:

> Female student 1: It is us, girls who people murmur about, not boys.
> Focus group moderator: What do they say?
> Female student 1: So many silly things…they criticize us.
> Female student 2: But they criticize parents even more
> Focus group moderator: What do they say about the parents?
> Female student 2: That her parents did not raise her well.

CM is not seen as a desirable or positive outcome by parents, teachers, or adolescents. That is, when adolescents decide to elope with their partners, they are not marrying because they think it is the right thing to do or what is expected of them. Social norms in rural areas of Honduras do not promote CM, but they *push* girls to CM. This is what Taylor et al. (2019) described as "transformative agency" (p.548). That is, the agency they exercised to get married was a way to resist harmful social norms. In this mini study, I expand upon Taylor et al.'s (2019) findings to provide an in-depth analysis of what these social norms are in rural areas of Honduras. To do so, I use marianismo to name and describe what these norms are and how they push girls to get married. The findings from our interviews and focus groups suggest that, marianismo, as a construct, dictates codes of conduct that proscribe behaviors for girls in rural areas of Honduras. Additionally, the biological, psychosocial, and cognitive changes that teenagers experience during adolescence are incorporated to examine how they converge with these social norms and the educational and economic limitations of the context in which girls exercise agency to marry.

Restricted mobility and socialization during a stage where adolescents develop psychosocial changes such as a greater desire for intimacy and autonomy.

Girls are expected to be "*de la casa*" (literally translated "of the house") meaning that they should be at home under supervision and have little to no freedom of mobilization or socialization and should have a reputable behavior. A female teacher described this common norm in her community: "Girls have to be at home, they are taken care of. On the contrary, boys have more freedom. Parents protect girls more than they protect boys" (female teacher, focus group). As a result of this expectation, girls experience excessive protectiveness. Girls are to remain at home and under supervision most of the time and are expected to avoid any contact with members of the opposite sex. The only setting where girls interact with boys is in school. Outside school, girls reported that they are not supposed to be seen with boys as these interactions can be misinterpreted by members of the community: "People cannot see you walking with a male friend because they immediately think that you are involved with him" (female student, focus group). This excessive protectiveness is a response to the biological and psychosocial changes that girls experience during adolescence. For example, as this male teacher stated, adolescents start developing an interest in the opposite sex during early (10-13 years old) and middle (14- 17 years old) adolescence and therefore this is when adolescent girls' behavior needs attention:

When we really need to watch out for them is when they are 13 to 16 years old. After that age, it is like if they have already matured. I have 5 single female students and 1 who is already married and now I basically have no problems with them. In the past, I had to be careful and take care of them in terms of their relationships with the boys. Now, they are not romantically interested in one another, they are more acquainted and get along well. (Male teacher, focus group)

An 11th grade female student added that this change in behavior was a result of hormonal changes and that these behaviors and feelings change once they reach late adolescence (18-21).

> Around the ages of 13 to 17 years old our hormones go crazy…after the age of 18, we are able to think more thoroughly what would happen to us if we got married…it is part of the adolescence process, it is a result of discovering that we like the opposite sex (Female student, focus group).

These modifications in behavior that are a result of hormonal changes like being attracted to others, caring how others see them, and becoming more intimate with peers of the opposite sex are sometimes explained as lack of moral values in these communities. That is, parents and community members confuse these inevitable and universal biological changes with bad behavior and a lack of moral clarity, especially for girls who are expected to show decorum and modesty. Furthermore, as both the teacher and the student suggest, these behavioral changes occur during middle adolescence and stop during late adolescence, when there is a consolidation of the sexual reproduction capacity, a sense of identity, and advanced reasoning abilities (Steinberg, 2011).

The excessive control that girls experience collides with the emerging sense of autonomy and the desire to establish intimate social relationships. During adolescence, individuals develop a need to establish stronger and closer relationships, some of which are accompanied by expressions of sexual feelings. Girls in rural areas of Honduras go through these changes in a highly restricted and controlled social environment. For example, Norma was a 15-year-old student who was forced to drop out of school by her father after he found out she had a boyfriend:

> Interviewer: What are some things that have made it difficult for you to reach your goals? For example, when you finished ninth grade, some of your classmates continued studying, but you did not.
> Norma: My dad did not want me to continue studying. I started dating a guy and when he found out about it, he did not want me to continue studying.

From Norma's account, we can see that although Norma's dad thought he was protecting his daughter, he pushed her into marriage. After dropping out of school at 15 years old with no job opportunities and no freedom in her household, she did not have many options but to marry. After she was forced to leave school, Norma met a new man, a 23-year-old with whom she started to date behind her parents' back despite their prohibition to have boyfriends. Without her parents' knowledge or consent she eloped with her new boyfriend:

> Interviewer: So, you decided to run away with him?
> Norma: Yes
> Interviewer: Where did you go?

> Norma: We went to his house
> Interviewer: Did your mom know that you were getting together with him?
> Norma: No.
> Interviewer: Why did you not let her know you were going away with him?
> Norma: Because she was going to be upset.
> Interviewer: So, if you knew your mom would not like it, why did you do it?
> Norma: I do not know
> Interviewer: You were in love maybe?
> Norma: Yes, that was it…and since my dad did not let me study…I wanted to study, but he would not let me. So, I made the decision to get married.

Examining the cognitive changes that adolescents undergo helps understand their impulsive decision-making processes. During adolescence, individuals start thinking about hypothetical situations and abstract concepts such as love and their future (Steinberg, 2011). Additionally, during adolescence, individuals are more prone to risk-taking behaviors that are a product of the cognitive changes they are experiencing. This risky behavior increases between the ages of 10 and 15 years, suggesting that these fluctuations are affected by the changes that occur during puberty (Sawyer et al., 2012). The combination of abstract thinking, desire for intimacy, autonomy, and risk-behavior inclinations in a context of excessive control and lack of freedom for socialization drive adolescents to dire situations where they have few options to choose from. Norma, for instance, was taken away her opportunity to study so she saw marriage as a reasonable option that fit her preferences: she would be able to be in a romantic relationship (something it was forbidden to her) and she would escape from the excessive control of her parents. As a female teacher explained, sometimes girls marry to enjoy more freedom when they face restrictive environments in their homes: "I think that some parents have very oppressive attitudes, so girls think that running away with their husbands, they will have more freedom, but this is an erroneous idea" (female teacher, focus group). However, as this teacher's comment implies, girls do not find the freedom they are looking for in marriage. Instead, they end up experiencing greater restrictions to their mobility, ability to interact with others, and become dependent on their husbands. As some researchers point out, marriages can constitute a transfer of control of girls' sexuality (International Women's Health Coalition et al., 2015; Nirantar Trust, 2015) from their original nuclear families to their husband, meaning that girls' senses of autonomy, independence, and well-being remain stagnant. Norma thought that by eloping she would enjoy greater freedom. Unfortunately, she found herself in the same situation of control and lack of autonomy:

> Interviewer: Did you ever think about going back to school?
> Norma: No.
> Interviewer: Why?
> Norma: You know, sometimes men are jealous, and my husband does not want me to have male friends.

As Biccheri et al. (2014) argued, it is possible that a collective practice is based on "false beliefs" (p.16). For example, Norma thought that by running away from her home she would enjoy more freedom. However, she experienced the same if not more control and isolation in her marriage. That is, as the female teacher suggested, girls are exercising agency to marry as a rational response to a preference that is based on a false belief (e.g. having more freedom).

Girls are expected to be chaste and only be sexually active within marriage during a developmental stage where sexual attraction emerges.

There is a special fear that girls will engage in "inappropriate behaviors" like having a boyfriend or eloping with a partner, as their conduct is an extension of her families' values. Girls are expected to be chaste and be sexually active only once married. Female participants shared that if girls are caught having a boyfriend secretly, being sexually active or become pregnant, the rumors and the comments from community members become intense. Conversely, according to the participants, men enjoy greater freedom than girls and the behaviors that are forbidden to women are celebrated to men:

> Focus Group moderator: What happens if neighbors find out a girl has a boyfriend?
> Female student: They say negative things about her.
> Focus Group moderator: And what happens in the community if a boy has a girlfriend?
> Male student: Ehh! You're doing well! They say… that's a macho!

The fear that girls will have a boyfriend and therefore be vulnerable to CM or teen pregnancy (and community criticism), makes girls the object of constant speculation and regulation by family and community members. Female participants explained that if they are caught seeing boys or having boyfriends, they face serious retaliation at home:

> Focus group moderator: So, what do parents say, do they let you have boyfriends?
> Female student 1: Most parents are oblivious to it.
> Focus group moderator: And what happens if they find out?
> Female student 2: Everything happens! A tsunami, an earthquake!
> Female student 3: That poor girl will wake up with bruises the next day.
> Focus group moderator: Does this happen to boys as well or just girls?
> Female student 3: Just girls

Girls' attraction towards others is stigmatized as something they should not be feeling, something shameful, and impure. Girls are punished emotionally, psychologically, and even physically for exhibiting emotions, feelings, ad behaviors that are natural for their age and are connected to biological changes they are experiencing. Although all young individuals experience puberty, the context in which adolescents live, have different "messages about physical attractiveness, sexuality, and sexual maturation change" (Steinberg, 2011, p.37). Adolescents in rural areas of Honduras experience these natural and universal changes in a context of taboo and poor communication with parents. Students, parents, and teachers agreed that parents do not talk to their kids about puberty or sex because parents do not know how to approach this topic and because there is lack of trust between parents and their children:

> In our communities, there is no parent/child communication. There is no trust. Fathers do not have the courage to talk to their daughters about sex, mothers do not have that familiarity with their daughters and sons either. Therefore, kids find out about sex with their friends…Parents do not talk about contraception with their daughters, how she can avoid getting pregnant if she decides to have sex. Kids do not trust their parents. It is very natural that a girl likes a boy and that a boy likes a girl. (Father, focus group)

As this father stated, attraction towards adolescence is something natural. Unfortunately, as he also pointed out, this is not a common belief in these communities. There is fear in talking about sexual attraction and preparing them to protect themselves (because they should not need to protect themselves since they are expected to be chaste). Nonetheless, the stigma, fear, and prohibition does not stop adolescents from having these natural feelings and emotions. Therefore, girls adapt those feelings and desires to the expectations and rules of their communities. In many cases, girls see marriage as the only way to be in a romantic relationship and the only sanctioned institution to be sexually active. Following this social norm, they enter marriages to be able to engage in romantic and sexual relationships.

For instance, Miriam was 16 years old when she decided to *juntarse* (get together) with her boyfriend Daniel who was 19 at that time. As most relationships in their community this was a secret relationship. Miriam and Daniel were classmates in their local high school and even though they decided to "get together" they both continued to study and could graduate together. One might ask, why would two teenagers who have plans to finish high school and neither of them has a steady job decide to marry? In Miriam and Daniel's case, the answer is that they were in love and wanted to be together and being husband and wife in the eyes of society was the only way to do it:

> Interviewer: Do you think you have reached the goals you had set up for yourself when you were 15 years and we interviewed you?
> Miriam: I do not think so.
> Interviewer: Why is that?
> Miriam: Because my dream was not to get married and have kids
> Interviewer: I see.
> Miriam: My dream now is to find a job.
> Interviewer: What obstacles kept you from reaching your dreams? Love maybe? Or was there another reason?
> Miriam: Yes. It was for love.
> Interviewer: You wanted to be with him? What that the reason?
> Miriam: Yes, I think it was.

Although getting married and being a mother was not Miriam's dream, the social norms that condition sex to marriage somehow pushed Miriam and Daniel to make that decision. To be clear, Miriam never attributed her decision to get married to her desire to be sexually active (especially taking in consideration that girls are not expected to talk about sex openly). However, throughout her interview it was clear that her desire to be with Daniel was what made her move in with him. Marriage as an institution is the only acceptable way of being sexually active, it serves as a protective shield and a "pass" for sexual activity.

Another student named Sonia shared that her desire for intimacy and freedom made her elope with her boyfriend. She stated that she wanted to date her boyfriend when she was 17 and he was 18 years old. Her family would not allow her to date this boy, so she decided to run away with him. Sonia's entire family was very upset about her decision and tried to advice against it. She reported wanting to be together with her partner, but she had no desires of being a mom. Unfortunately, like most girls who entered unions, she was not prepared to plan her family and ended up getting pregnant even when she did not plan/ felt ready to become a mother:

Interviewer: How did you react at becoming a mother? I mean, did you plan your pregnancy or was it unplanned?
Sonia: I did not plan it. At first, I felt really bad because I was not ready to have a baby.
Interviewer: You were not ready?
Sonia: No, I did not want a baby. Not so early.
Interviewer: I see.
Sonia: Yes, it happened so that was it.

Sonia and her boyfriend separated because they fought a lot. Most of the girls reported having no knowledge or resources to plan their pregnancies. Others shared becoming pregnant despite using contraception. These findings suggest that there is an urgent need for sexual reproductive health (SRH) knowledge and services. Adolescents enter puberty and become sexually active with little knowledge about their bodies and ways to prevent pregnancies. Adolescents are expected to not be sexually active so it is assumed that they should not count on this knowledge.

Roles as mothers and wives are highly regarded and most likely the only option for girls.

During adolescence, individuals also start developing a sense and need of becoming successful and competent members of society. For girls becoming wives and mothers can mean achievement, status, and purpose. In these communities, there is a strong emphasis on the role of women within the family. Women's roles as wives and mothers are highly regarded. Motherhood is seen as the most important role for women. However, given the structural limitations of these communities, motherhood is also highly regarded because it is more likely to be the only role available to them in their communities. During one of the focus groups, participants talked to me about a girl who I will call Melissa for the purposes for this analysis. After discussing CM in their community, they told me about a woman in their community who they considered a good example and who according to the participants' opinions, challenged gender norms stereotypes. I interviewed Melissa in the summer of 2016 when she was 24 years old, was in her senior year of college, and was working full-time on her own business. Melissa is a determined, independent, and confident woman who did not fit into the molds established for girls in her community. In addition to being economically independent, Melissa had a long-term romantic relationship and had no intention to marry in the short term. Despite being successful both academically and financially (especially compared to the reality of most girls in her community), she reported that people still pressured her to marry. According to Melissa, in the eyes of her family members and friends, she was lacking the most important aspect in a woman's life, marriage and motherhood: "Just today my brother got married and around six persons told me: 'The next one is your wedding!'… Our society is like that, it tells us that at age 20-22 we have to be married and have a baby".

Girls receive contradictory messages about marriage and motherhood during their adolescence. On the one hand, they are restricted from engaging in romantic relationships, and parents might even take extreme measures to prevent girls from marrying or getting pregnant. On

the other hand, they are told that marriage and motherhood are their most valued roles in society and are expected to be married relatively young (20-22 years old)[55]. Hence, when girls have a prospect to start that valued role, girls see it as an opportunity. In addition of seeing marriage as a chance to start that important role, girls can also see it as a way to enjoy greater freedom of mobility and opportunities to enjoy their romantic relationships without restrictions (Murphy-Graham and Leal, 2015). Hence, when girls decide to elope, they see it as a way of enjoying freedoms that they are unable to enjoy because of rigid gender norms in their communities. Their decision to run away is in some way justified by the fact that they are assuming important and valued roles as wives and potentially as mothers. In this sense, they are embracing a role that they have internalized as worthwhile and, in many cases, unavoidable given the limited structural opportunities they have access to.

Limited Life Opportunities

Job opportunities for women are scarce in rural areas of Honduras. Only 36% of women in rural areas of Honduras have a job compared to 92.7 % of men (Secretaría de Salud de Honduras et al., 2013). Hence, marriage and motherhood are not only highly valued, but most likely, girls' only life prospect. Poverty and lack of economic opportunities constrain them to a limited set of choices where marriage and motherhood are attractive. Thus, a girl might ask "why should I wait to marry until I am older if my destiny will be the same?" Furthermore, if a girl has a partner who can provide for her, she can also see marriage as an opportunity to improve her economic well-being (Murphy-Graham et al., 2015). In the marianismo/machismo dyad, women are expected to be the pillars of their families and be abnegated wives and mothers. Men, on the other hand, are expected to be the providers of their families. Consequently, in addition to the structural economic limitations that girls face, cultural norms also proscribe economic responsibility to men only, reinforcing the idea that women's arena is limited to the home. Finally, most girls take the decision to elope with their partners once they were out of school, or when their choice set becomes limited due to financial or family issues (Murphy-Graham et al., 2019). That is, they are in a position where marriage seems as viable or only option for them. Furthermore, as it was discussed before, girls have little educational and economic opportunities, so once they are out of school, they have few or no prospects besides marriage. This lack of opportunities converges with the high regard that the roles of mother and wives have in these communities.

In short, the excessive protectiveness towards girls, the lack of spaces to date and have romantic relationships, and an emphasis on the roles as wives and mothers converge with puberty, a need for autonomy, intimacy, sexual desire, and a sense for achievement in a context where these changes are misunderstood and stigmatized. Additionally, these norms and changes occur in a context of limited economic and educational opportunities for girls. Figure 4. 1 summarizes how marianismo and the changes that occur during adolescence converge.

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[55] As Melissa suggested and is confirmed by the latest Honduran DHS.

Description of how marianismo and changes of adolescence converge to promote CM.
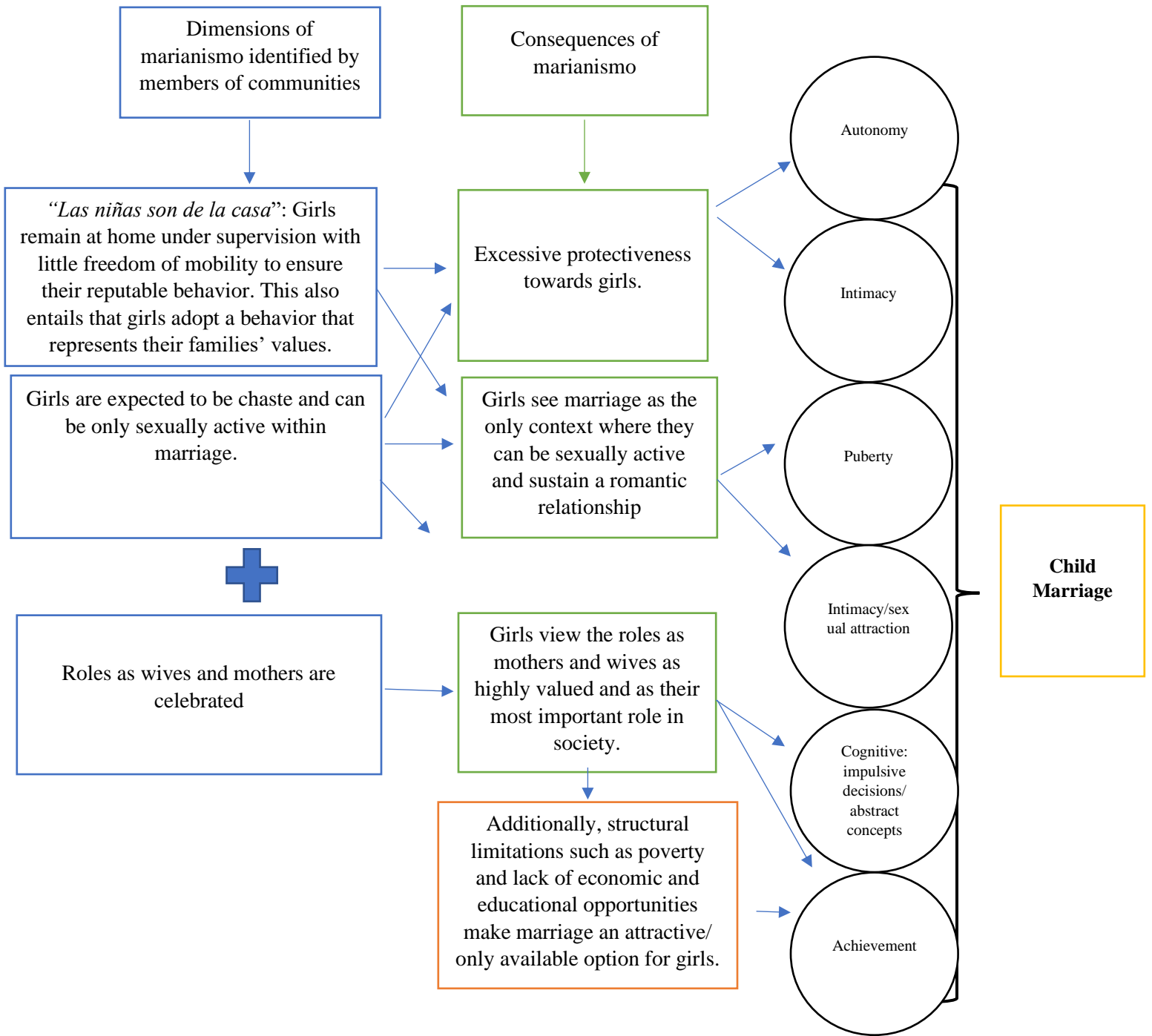
Figure 4.1. Description of how marianismo and changes of adolescence converge to promote CM.

Examining Girls' Perspective on Their Decision to Marry Years Later

Unfortunately, as girls aged and experienced the hardships of marriage and motherhood, they realized that marrying at a young age was not the best decision for their lives despite exercising agency in their decision to marry. During the last round of interviews of McEwan et al.'s (2015) longitudinal study, 8 of the 10 girls interviewed (who were on average 20 years old at the moment of the last interview) considered that marrying and/or becoming mothers at a young age was not the best decision and that it trumped their opportunities to advance both academically and economically. Most of them regretted leaving school and they longed for opportunities to be economically independent:

> Interviewer: Do you regret anything?
> Gladys: Yes. Not continuing my schooling.
> Interviewer: What advice would you give a 15-year-old?
> Gladys: My advice would be "don't get married!"
> Interviewer: So, do you advise them not to get married at all, or that they should not get married when they are 15?
> Gladys: I mean, that they should not get married when they are 15 years old. They should get married until they are 25, they should enjoy life… If she gets married, she will not enjoy life. That would be my advice, not to get married at a young age. That she needs to wait for the right age, it is never too late for that.

> Interviewer: So, if you were to give an advice to a 15-year-old girl, what would you say?
> Miriam: I will tell that girls that at her age she should be studying, to become a professional without having to get together with a person because sometimes there are men that won't let girls continue their studies.
> Interviewer: I see.
> Miriam: Or just be more relaxed when you study because sometimes your kid is sick, and you need to take an exam and you need to study. When they are young, they need a lot of attention and it makes harder to study. For that reason, it is better to be single to be able to study without distractions.

For community members, especially students, CM was equated with suffering. When they were asked about what they thought about girls who marry early, they responded: "They suffer, they suffer a lot" (female student, focus group). The fact that most of these girls stated years later that their decision to marry as adolescents was not the best, suggests that even when girls exercise agency in their decision to marry, they were not ready to make informed decisions and their expectations of what married life and motherhood would be was different from what they experienced. Using a criteria based on the physiological maturation of the body, cognitive capacity for making informed decisions, and legal frameworks and international standards, Dixon-Mueller (2008) concluded that "boys and girls aged 14 and younger are universally too young to make safe and consensual transitions; that 15–17 years old may or not be too young, depending on circumstances, and that 18-year-olds are generally old enough" to make informed judgments regarding their sexual, marital, and reproductive transitions (p. 247). Dixon-Mueller's findings corroborate these 10 girls' experiences. From the ten girls interviewed, only two girls stated that they were content about their decision to marry as adolescents. The other 8 girls were not pleased about their decision to marry as teenagers.

Other Findings

During this needs assessment, most girls interviewed described the dynamics of their romantic relationships in terms of control. For example, Gabriela, like Norma, reported that her husband did not like her to socialize:

> Interviewer: Would your husband allow you to do that [have friends]?
> Gabriela: He says he does not like to me to have friends; he says they are bad influences.
> Interviewer: And having male friends?
> Gabriela: Even worse

However, there were a few female students who reported having equitable and healthy relationships. Blanca for example, stated that her husband encouraged her to continue studying so that she can get a well-paying job, and she expects to do so after her babies are old enough so that she can go back to school:

> Interviewer: What are your goals?
> Blanca: I want to keep studying. My husband always tells me that I should go back to school because he was telling me that there is a factory in San Pedro Sula, and they pay well there.
> Interviewer: I see.
> Blanca: He always supports me…he tells me "if you want to back go to school, I will happily support you".

Similarly, Cecilia, who married Pedro when he was 20 and she was 16, stated that Pedro was a supportive husband and loving father. One of the main concerns of CM is that girls have lower bargaining power. However, Cecilia described her relationship as one where mutual respect prevailed:

> Interviewer: How is he as a father?
> Cecilia: Excellent
> Interviewer: And as a husband?
> Cecilia: Excellent as well. I have no complaints.
> Interviewer: Do you think you have a good home?
> Cecilia: Yes. He makes sure we have all we need. He is very responsible…and we both respect each other.

Cecilia was the only girl from the ten that were interviewed that reported being able to plan her pregnancy. Cecilia had her son only after she finished high school and shared that she was happy with her decision to marry three years after her union. The fact that Blanca and Cecilia reported not being unhappy about their decision to marry shows that equitable relationships can happen even when girls marry at a young age. Following that same idea, unequitable romantic relationships can happen at any age. Due to the many challenges that girls face, it is likely that marriage will continue to be seen a rational and viable option for girls. Therefore, in addition to preventing CM, interventions like ACMHE should also emphasize the important of equitable relationships. As the cases of Blanca and Cecilia show, equitable relationships can mean a better quality of life for girls.

Moreover, a lack of awareness about the legislation that protects minors and individuals' bodily integrity overall was also identified. During our focused groups, parents, teachers, and students shared that in most cases, parents do not want their daughters to get married and that in many instances, parents confronted their daughters' partner and even forced their daughters to come back home with them. We also heard about how parents feel helpless once their daughters leave and they feel like there is nothing to do about it. We also identified cases during our interviews that were clear cases of statutory rape, but participants never named those cases as such. It became evident that participants did not made direct connections between statutory rape, CM, and legislation. There is a need to inform individuals about their rights and the laws that protect them.

Discussion

Our findings suggest that in some instances, girls enter marriages because it satisfies their preferences. That is, child marriage is a rational response. Girls who experience excessive control, are socially isolated, and have few educational and economic opportunities and at the same time are undergoing biological changes that promote desire for autonomy, intimacy, and sexual desire might choose to enter a union in lieu of staying in their household where they feel trapped. That is, between the two options they have (staying with controlling parents with no freedom and running away with a love interest and accommodate to their respected roles as wives and mothers), some girls choose to elope with their partners. However, as Biccheri et al. argued, it is possible that CM as collective practice is founded on false beliefs (p.16). For example, years later, during the last round of data collection, it was identified that most of these girls expressed that they were not satisfied with their decision to marry as adolescents. This is key for intervention purposes as "if any of the factual beliefs people hold are false, the possibility to inform them about the truth is a powerful tool" (p.16). ACMHE's purpose is to provide students with a curriculum that can inform their decision-making processes relative to CM taking into consideration the reality of the context in which they exist. Another key finding during this needs assessment is the fact that parents should also be addressed in this intervention. A lot of the conflict and pressure that girls experience comes from their relationships with parents. As discussed earlier, parents, teachers, and students all mentioned the role of parenting in girls' decisions to elope. Furthermore, during the focus groups, parents expressed interest and enthusiasm for this intervention. Mothers and fathers recognize CM as undesirable and expressed their interest in addressing this phenomenon.

Towards a More Nuanced Theory of Action

The results of this mini-study or needs assessment advanced the understanding of CM in rural areas of Honduras. With this knowledge in place, this is what we know about CM in rural areas of Honduras:

1. It affects the most vulnerable girls (from rural areas, poor, and low levels of education).

2. Girls exercise agency in their decision to marry (but this must be understood within a context that provides them with a limited set of opportunities).
3. Legislation has a limited capacity to prevent CM since in most cases, these are informal unions.
4. Educational expansion has not contributed to CM reduction.
5. CM is driven by social norms that promote excessive limits to girls' mobility, control over their sexuality, and an emphasis on marriage and motherhood. The changes that occur during adolescence such as puberty, desire for intimacy, and autonomy, paired with cognitive changes that allow them to think about abstract concepts such as love and hypothetical scenarios about their future lives coexist within a context of rigid social norms for girls. Rigid social gender norms converge with the changes that individuals experience during adolescence in a context of limited educational and economic opportunities for girls. Many girls see marriage as a rational response given their limited options and false beliefs about the results that their decision to marry will bring to their lives.

The results of this needs assessment also complete the theoretical framework of ACMHE. With a better understanding of CM in Honduras in place, it is possible to enrich the set of theories that inform this understanding and the design of this intervention. In chapter 3, it was argued that the change process requires a combination of:

1. A pedagogical approach informed by critical and feminist pedagogies and the capabilities approach
2. Social learning theory and peer-to-peer education as implementation strategy.
3. The prototype willingness model and cognitive dissonance theory to guide the desired learning processes.
4. Theories of empowering education that guide the long-term desired outcome of ACMHE.

In addition to these theories, from the results of this needs assessment, the following frameworks inform ACMHE:

1. Bicchieri's et al.'s (2014) framework on collective practices and CM and Gil and Vasquez's (1996) concept of marianismo.
2. Steinberg's (2011) framework to study adolescent development with an emphasis on the biological, psychosocial, and cognitive changes.

Our knowledge on social norms and the changes that occur during adolescence guided the content of ACMHE. Norms that promote gender inequality are examined, questioned, and challenged. This content is delivered using a feminist and critical pedagogy and following a prototype willingness model that provides knowledge and cognitive images of individuals who engage and do not engage in those behavior. As Bicchieri's et al.'s (2014) argued, it is valuable for interventions to address the false beliefs that individuals have about their preferences which are influenced by the limited options available to them. The content of these materials aims at

debunking false beliefs girls have about the benefits of getting married. Additionally, the curriculum addresses puberty and its effect on adolescents. Unlike most puberty programs that focus on the physical changes of puberty (Crockett et al., 2019) this curriculum, emphasizes the emotional and psychosocial aspects of puberty and its role on CM.

Needs assessment part II:

Understanding the organizational context

Bayan is a non-governmental organization funded in 1986 in the department of Gracias a Dios. Bayan's Works focuses on three main areas: health, education, and economic empowerment. The Sistema de Aprendizaje Tutorial [Tutorial Learning System] (SAT) was developed in Colombia by the Fundación para la Aplicación y Enseñanza de las Ciencias [Foundation for the application and teaching of science] (FUNDAEC). SAT was created with the purpose of promoting development in the most disadvantaged rural areas of Colombia. SAT was then expanded to other countries such as Nicaragua, Ecuador, Honduras and Uganda. SAT arrived at Honduras through Bayan in 1996. In a matter of 5 years, SAT extended to 12 of the 18 department (equivalent to States) of Honduras. In 2002, SAT was approved by the Ministry of Education and the Counsel for Higher Education providing SAT graduates the same recognition as the traditional public and private secondary programs. Table 4.3 describes the role of these assets in ACMHE:

Table 4.3.
Assets of SAT and Their Role in ACMHE.

Asset	Role of asset in ACMHE
SAT schools are mostly present in low-income and isolated rural communities. Hence, SAT reaches girls that are the most vulnerable to CM: teenagers from rural areas from low income families.	It allows ACMHE to reach youth who are vulnerable to CM.
Texts, materials, projects and approaches respond to the needs of rural areas. Unlike many educational systems that reflect urban realities, SAT is designed to reflect and address the realities of rural areas in developing countries.	Including a topic like CM, fits SAT's emphasis on analyzing local challenges and finding ways to address them.
SAT'S textbooks constantly ask students to reflect upon the needs of their communities and avenues to address them.	SAT's methodology and textbook design provide a fertile ground to challenge social norms that promote CM marriage.
SAT emphasizes community service and the use of knowledge to promote the development of their communities.	SAT's methodology and textbook design provide a context where students can TAKE action to change CM.
SAT encourages students to view themselves and act as agents of social change.	This asset will encourage students to take ACMHE outside the classroom and impact

	the lives of their families, friends, and neighbors.
Although there is not a lesson dedicated to gender equality alone, gender equality is embedded throughout different lessons of SAT.	ACMHE's emphasis on gender equality enhances a value already embraced in SAT. This will allow students to be exposed to these values throughout their high school experience reinforcing its importance.
SAT merges the intellectual and spiritual dimension into one, inculcating universal human values. No specific religion is privileged. Instead, values like oneness of humanity, service to others, and the importance of communication with God are discussed.	The communities where ACMHE takes place embrace strong conservative and religious values. The recognition and inclusion of this spirituality resonates with the reality and value system of students and their families. This is both a strength and a challenge for ACMHE. A strength because it allows ACMHE to be embedded in a curriculum that values spirituality and this helps students feel identified with the content of the textbooks as well as see their understanding of the world reflected in a school setting. However, at the same time, sometimes these conservative values reinforce ideas around gender equality and certain behaviors such as chastity that in some way also contribute to CM. Hence, ACMHE's challenge is to design a material that reconciles the need to challenge oppressive social norms at the same time that it honors the values and beliefs of these communities.
In SAT, dialogue is considered both an educational objective and a means of training that allows students to establish relationships with other members of their communities that lead to community well-being.	The emphasis that SAT places on dialogue aligns with the feminist and critical pedagogies used in the design of ACMHE.
SAT has strong ties with the communities. For example, the model of SAT relies heavily on the principle of consultation. Every new activity or decision is always done in consultation with parents and community members. Furthermore, when hiring tutors, local individuals are given preference. Hence, the tutors are most of the time part of the communities they work in allowing them to	This close relationship with parents and community members is crucial in socializing ACMHE and counting on parents' and community members' support in designing, testing, and evaluating ACMHE.

develop close relationships with parents and students.	
SAT has an effective training program. One of the differences between the traditional public schools and SAT is that Bayan is in charge of teacher training. Since SAT works in isolated areas, it is hard to find certified teachers. To respond to this need, Bayan has developed a system to train tutors. SAT tutors are trained every three months for one week during each school year.	This training system ensures a space and system to train tutors in the use of the curriculum developed through ACMHE.
Parents, teachers, and students recognize CM as a problem.	During our focus groups all participants shared that they see CM as a problem that they were motivated to address this plight and showed enthusiasm about ACMHE.

A set of external documents (e.g. academic articles, reports) were also reviewed. The findings of these documents suggest that SAT empowers girls and women (Murphy-Graham, 2012), promotes social responsibility (Honeyman, 2010), and has better academic outcomes compared to public traditional schools (McEwan et al., 2015). The impact of SAT in Honduras has been such that it was selected in 2008 by the United Nations Sustainable Development Council as one of the best practices in Sustainable Development worldwide. In the same way, it was recently selected by the Brookings Institute as one of the 12 most effective large-scale interventions around the world.[56]

SAT's organizational context provides several advantages for the implementation of ACMHE. In first place, SAT reaches communities where youth have limited life options due to structural challenges such as poverty, geographical isolation, and few educational opportunities and are therefore vulnerable to CM. In second place, SAT's methodology and textbooks aligns with ACMHE's critical feminist pedagogy in that it addresses gender inequality and fosters social analysis and social change. ACMHE also benefits from the close relationships SAT has with parents and community members. Trust and participation from parents are crucial components of ACMHE as it intends to collaboratively design and evaluate the texts developed. Finally, SAT has a permanent training system in place which provides a space for training teachers in the use of the texts developed by ACMHE.

As part of this assessment, the limitations of SAT's organizational context were also analyzed. Two main limitations were identified: bureaucratic problems and high dropout rates. These two limitations are connected to the macrosystem in which SAT exists, and therefore cannot be addressed by ACMHE. Table 4.4 summarizes these findings.

Table 4.4.

Limitations of SAT.	
Limitations	**How these limitations affect ACMHE**
Bureaucratic problems: payments/strikes. Although one of the most important components of SAT is its partnership with the Ministry of Education as it ensures the payments of all teachers and its continuity as part of the public education system, having a close relationship with this governmental institution also presents challenges. SAT tutors often receive their salaries late and sometimes classes are cancelled due to strikes.	Due to these administrative impasses, sometimes classes are suspended, and it affects the normal functioning of schools and could delay (and in fact did) the implementation of ACMHE.
High dropout rates. Even though SAT is an effective program that provides relevant education to these communities, dropout rates are still high. Economic problems and lack of interest in education are the main reasons for dropout (Murphy-Graham et al., 2019).	Murphy-Graham et al. (2019) found that CM usually occurs once girls are out of school. Hence, the higher the dropout rates are, the higher CM incidence is. Although we do not believe dropout rates affect ACMHE's implementation, it does affect the likelihood that adolescents marry young once they have left school.

CM and dropout in SAT.

As part of the needs assessment, it was also necessary to understand what the relationship between child marriage and school dropout is in SAT. Is CM a main cause for dropout in SAT? Or do girls marry once they have dropped out of school? This and other questions were explored in the longitudinal study conducted by Murphy-Graham et al., (2019).[57] Murphy-Graham et al. found that marriage was not one of the primary reasons why female students dropped out. Instead, no longer wanting to be a student and economic difficulties were the main reasons not to enroll in school. Table 4.5 describes the reasons for dropout among rural youth:

Table 10.
Reasons to Dropout Among Youth in Rural Areas of Honduras. (Murphy-Graham et al., 2019).

Year	Grade	Was enrolled in school	Not enrolled: no longer wanted to be student	Not enrolled: economic reasons	Not enrolled: became pregnant	Not enrolled: became married	Not enrolled: other (e.g., work opportunity,

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[57] This study included a sample of SAT schools and traditional public high schools.

							taking care of siblings)
2008	6	99.5%	0.1%	0%	0.1%	0%	0.1%
2009	7	67.5%	12.3%	12.3%	0.9%	0.9%	6.2%
2010	8	63.2%	14.0%	13.1%	1.1%	2.8%	5.7%
2011	9	59.9%	16.3%	13.9%	1.1%	3.4%	5.5%
2012	10	39.3%	21.0%	19.7%	4.4%	4.4%	11.2%
2013	11	37.3%	20.6%	23.1%	3.6%	6.0%	9.4%
2014	12	36.1%	21.1%	22.4%	2.8%	6.7%	10.8%
2015	N/A	15.5%	23.6%	34.1%	4.1%	7.5%	15.3%
2016	N/A	14.2%	24.2%	34.6%	1.8%	8.2%	17.1%

Note; Percent in each row may not add up to exactly 100% due to rounding.

In fact, most girls have already discontinued their education when they enter a union: 72% of female students were not enrolled at the time of their first union. Hence, dropout appears to precede early marriage and early childbearing rather than these leading to school discontinuation. Once girls have married, they rarely went back to school. Only 8% of those who got married attained more education after their first union and only 6% of those who had had a pregnancy continued after their first pregnancy. For most girls, getting married and becoming pregnant meant that they would no longer study.

Age at entrance of first union is an important element for this assessment as it will inform the ages in which this intervention should focus. As shown in Table 4.6, by age 20, 46% of the participants had entered a union at some point. Most of the growth in entrance into first union occurred from age 15 through age 18. Consistent with national data, over 10% of girls are in a union at age 15, and almost 20% at age 16. These two ages, 15 and 16, therefore are particularly important to take into consideration when designing interventions. Interventions that aim to prevent early unions should reach adolescents before they get to these ages.

Table 4.6.
 Age at Entrance of First Union, Among Rural Female Youth (n=684). Murphy-Graham, et al., 2019).

Age	Percent who entered a union (*unión libre* or formal marriage)	Cumulative proportion in a union at each age
12	0%	0%
13	0.6%	0.6%
14	3.2%	3.8%
15	6.9%	10.7%
16	8.8%	19.4%
17	7.8%	27.2%
18	9.5%	36.7%
19	6.4%	43.1%
20	3.1%	46.2%

Note: cumulative proportion may differ from sum of percentages due to rounding.

In this chapter, the findings of the mini study conducted to advance the understanding of CM in rural areas of Honduras were discussed and the institutional context in which ACMHE is embedded was described. In the next chapter, this information is used to refine ACMHE's theory of action and design.

Chapter 5:

Theory of Action, Design, and Implementation of ACMHE

The results of the needs assessment in addition to the understanding of CM developed in Chapter 3, allowed us to synthesize the main problems that should guide the development of the curriculum of ACMHE. We identified 8 main issues that need to be addressed in order to address CM in rural areas of Honduras:

1) The prevalence of gender inequality at all levels (micro-meso-, exo-, macro- systems).
2) Lack of awareness about the biological, psychosocial, and cognitive changes that occur during adolescence.
3) Girls are not aware of the consequences of CM and hold false beliefs about CM.
4) Impulsive decision-making processes regarding romantic relationships (Agency).
5) Prevalence of unhealthy romantic relationships.
6) Lack of knowledge about the legislation that protects minors and people's bodily integrity.
7) Lack of knowledge and access to sexual reproductive health (SRH)
8) Poor communication between parents and children.

Theories of action "connect the values and intentions of leaders with their understanding of problems at hand and their knowledge of effective processes of change in given contexts" (Mintrop, 2016). Theories of actions specify activities that need to take place in order to achieve desired outcomes. Theories of action establish causality (if "A" then "B". In a design-based research study, a theory of action consists of five main parts: 1) problem definition; 2) goals of the action; 3) an understanding of the problem's symptoms and causes; 4) an understanding of the change process and 5) an understanding of the organizational context within which the change is to unfold (Mintrop, 2016).

These five parts have been developed through chapters 1-4. Now that: a) CM in rural areas of Honduras has been framed and the goals of ACMHE have been established (Chapter 1), b) there is an understanding of CM in rural areas of Honduras and the change processes needed to change norms and behaviors connected to these phenomenon (Chapter 3 and Chapter 4), and c) there is an understanding of the organizational context in which ACMHE takes place (Chapter 4), all the necessary parts to inform a theory of action for ACMHE are in place. It is important to note that these eight problems are issues that we believe can be addressed in a classroom setting. There are other problems that are beyond the scope of this intervention such as poverty, lack of economic opportunities for girls and women, and inexistence of public policies to ensure youth well-being and that are therefore not addressed in ACMHE. This intervention acknowledges the important role these problems but does not aim to address them in a direct way.

Theory of Action for Students

According to ACMHE's theory of action, if students study ACMHE's curriculum in a formal educational setting in homogenous groups through a peer education system using a pedagogical approach based on critical and feminist pedagogies (English and Irving, 2015; Freire, 2000; Shrewsbury, 1993) and the pedagogical implications of the capabilities approach (Walker, 2012), students will be exposed to:

a) Information and image-based knowledge (Gerrard et al., 2008) that will give them the opportunity to be equipped with a cognitive repertoire that will aid them to make informed decisions about child marriage and romantic relationships,
b) The opportunity to experience cognitive dissonance (Festinger 1962) that will provide students with chances to explore the personal and social realities in which they live in, and challenge previous conceptions about gender inequality and false beliefs they might have about CM,
c) The biological, cognitive, social, psychosocial, and structural causes of child marriage as well as the negative personal, health, educational, economic, social, and legal consequences of this phenomenon.

As a result of this exposure through ACMHE's curriculum, adolescents will ideally:

Be able to enhance their decision-making processes to make informed decisions about CM and will be empowered to push the constraints imposed by their socio-economic reality.

Theory of Action for Parents

According to ACMHE's theory of action, if parents/grandparents study ACMHE's curriculum in sessions lead by SAT tutors, they will be exposed to

a) Information and image-based knowledge (Gerrard et al., 2008) that will give them the opportunity to be equipped with a cognitive repertoire that will aid them to understand the biological, psychosocial, and cognitive changes that teenagers experience during adolescence.
b) The opportunity to experience cognitive dissonance (Festinger 1962) that will ideally provide them with chances to explore the personal and social realities in which they live in, and challenge previous conceptions about gender inequality.
c) The biological, cognitive, social, psychosocial, and structural causes of child marriage as well as the negative personal, health, educational, economic, social, and legal consequences of this phenomenon.

As a result of this exposure through ACMHE's curriculum, parents will ideally:

Be able to make informed decisions about the best ways to provide their children with a home environment that understands the changes adolescents undergo and protect them from CM.

The problems described at the beginning of this chapter were identified during our exploratory research to understand what the causes of CM in rural areas of Honduras are. This knowledge that we acquired guided the design of the curricular products through the identification of change drivers. The term "change drivers" refers to the events, activities, behaviors, or resources "that facilitate the implementation of change throughout the organization and, specifically facilitate individual adoption of change initiatives" (Whelan-Berry & Somerville, 2010, p. 177). After identifying the main problems that needed to be addressed, change drivers were identified for each problem. The lessons developed for these curricular products address all the problems that were recognized. The change drivers for each problem identified are described in Table 5.1. The column "problems" can be understood as a "point of departure", where students' knowledge/realities/ beliefs/attitudes/behaviors/structural limitations are at the moment previous to ACMHE's implementation and the column "goals" can be understood as the desired states that are expected to occur as a result of the implementation of the change drivers. Table 5.1 details the change drivers of the theory of change of ACMHE:

Table 5.
Change Drivers of the Theory of Action of ACMHE.

Problem	Change Driver	Theoretical Framework	Goal
1. Prevalence of gender inequality. Girls are not treated equally to their male counterparts in their families and communities, especially in terms of mobility and socialization opportunities. Girls have limited economic and academic opportunities. Girls see marriage and motherhood as their most worthwhile role. Girls have limited perceptions of what they can be or become. Girls experience exacerbated gender inequality during puberty.	Cognitive dissonance about gender norms. Exposure to positive role models that challenge gender stereotypes. Deeper analysis of how gender inequality promotes CM.	Cognitive dissonance Marianismo Capabilities approach Prototype willingness model	Increase knowledge about gender equality to: Change attitudes beliefs, and behaviors about gender norms. Change attitudes beliefs, and behaviors about what girls can do and be. Inform students' decision-making processes regarding CM.

2. Lack of awareness about the biological, psychosocial, and cognitive changes that occur during adolescence. **-**Due to shame, families and communities do not talk openly about puberty. -Adolescents are not aware of the biological, cognitive, and social changes they experience. -Stigma about girls' desire for intimacy during adolescence.	Knowledge about the biological changes that occur during puberty Knowledge about the social changes that adolescents go through puberty Cognitive dissonance about the stigma around girls' and boys' sexuality Deeper understanding of the role of puberty and intimacy in CM.	Adolescent development framework Marianismo	Increase knowledge about puberty to: Develop an understanding of the biological processes that adolescents go through so that they are aware of their capacity to reproduce. Normalize attraction to the opposite sex as a result of the biological and psychosocial implications of puberty. Change beliefs and attitudes about girls' desire for intimacy as something natural and caused by biological changes.
3. Girls are not aware of the consequences of CM and hold false beliefs about CM. -Girls enter unions thinking they will have more freedom than in their homes.	Knowledge about the causes and consequences of CM in Honduras. Case studies that portray the lives of girls who marry early.	Social norms framework for CM Prototype willingness model Marianismo	Strengthen decision-making processes by: Providing students with the necessary information so make they can make informed decisions

-Girls enter unions with idealized notions of marriage without realizing those notions can be false. -Girls report not being aware of how hard marriage motherhood can be.		Adolescent development framework Cognitive dissonance	regarding CM and their romantic relationships. Providing students with cognitive representations of girls and boys that engage in this behavior. `
4. Impulsive decision-making processes regarding romantic relationships (Agency): -Girls exercise agency in their decision to marry. That is, they are not being forced to do so. -Girls elope with their partners without being able to explain their reasoning behind their decision. -These impulsive decision-making processes are influenced by the cognitive changes that individuals experience during adolescence.	Reflection about one's meaning of purpose/happiness Appeal to taking decisions after analyzing one's situation and life goals. Exposure to positive and negative case studies of scenarios regarding CM. Exposure to information and examples that will challenge the false beliefs they have about CM.	Social Norms framework for CM Prototype willingness model Marianismo	Strengthen students' behavioral willingness against CM by: Improving students' capacity for critical thinking about their future/ romantic relationships Expanding students' images of risk and non-risk takers to inform their decision-making processes regarding CM. Expanding students' values, beliefs, and experiences to make informed decisions about CM.

-Girls are not happy about their decision to elope with their partners years later. -Girls elope with their partners without knowing them well (short courtship). -Girls see marriage as the only way to engage in a romantic relationship freely.			
5. Prevalence of unhealthy romantic relationships -Girls usually marry much older men who have greater social and economic capital than girls, putting them at disadvantage. -Girls report not having a voice in their relationships	Discussion of the personal qualities that contribute to healthy relationships Understanding of the characteristics of healthy/unhealthy relationships. Discussion of the characteristics and benefits of assertiveness	Prototype willingness model. Marianismo	Enhance students' willingness to engage in healthier/more equitable relationships. Provide students with the necessary knowledge and attitudes to become more assertive in their relationships.
6. Lack of knowledge about the legislation that protects minors and people's bodily integrity. - CM is prohibited by legislation, but parents and	Review of local legislation connected to CM and bodily integrity.	Prototype willingness model Capabilities approach	Promote a deeper understanding of the ways in which legislation and local law enforcement can protect minors and their bodily integrity so that they respect others' rights and

community members do not comply with legislation and local authorities do not enforce it. - Community members do not know about legislation that protects bodily integrity.			make their own rights be respected.
7. Lack of knowledge and access to sexual reproductive health (SRH) - No access to SRH information or services for youth. Sexual relations are reserved for adults within marriage and adolescents are not expected to need access to this kind of information and resources. -Even after marrying, girls report not being able to plan their families.	Discussion around the importance of SRH for personal well-being Knowledge about contraception and sexually transmitted diseases.	Adolescent development framework Capabilities approach	Provide students with the necessary knowledge and attitudes to take charge of their sexual reproductive rights.
8. Poor communication between parents and children -Students report having distant relationship with parents.	Exposure to positive role models that help parents improve communication with their children.	Adolescent development framework Marianismo	Provide parents with knowledge and skills to: Improve communication with their children.

-Girls' relationships with parents becomes even more distant during adolescence as girls' emerging desire for intimacy, autonomy, creates fear amongst parents that they could become pregnant or elope with partners. -Parents treat girls and boys differently, especially with regards to mobility and freedom.	Exposure to the changes that students go through adolescence. Information about CM and early pregnancy and the importance to have open communication about these issues. Information about the importance of sexual reproductive health.	Prototype willingness model	Understand the changes adolescents go through so that they can help their children transition to this phase. Prevent CM by communicating with their children about the causes and consequences of CM.

Design of Workbooks

Review of SAT's Curriculum

After identifying the main themes that need to be addressed in SAT, the Bayan and UC Berkeley teams reviewed SAT's textbooks to identify if these themes are addressed in the current curriculum to avoid replicating content. Table 5.2 describes the main 8 themes of ACMHE and whether these are addressed in SAT's curriculum:

Table 5.2.
Results of Review of Curriculum of SAT

Theme	Present in SAT	Description of lesson/content	Needs to be included in ACMHE? / Additional comments
Gender (in)equality	Yes, but in a limited capacity	There isn't a specific lesson about gender equality, but this theme is used in two textbooks in 7th grade. Gender equality is used to discuss the roles of women and men un agricultural production and to discuss and promote the role of women in the sciences. There are also references o gender equality in the 7th grade math and science textbooks. Gender equality is embedded in examples and exercises.	**Yes.** Although there are references to gender equality, there is a need to provide in-depth discussion of this theme and use it to analyze the social context and its role in CM prevalence.
Biological and social implications of adolescence	Yes, but in a limited capacity	In 8th grade, students study the human body and its parts and functions in three different lessons. More specifically, there is a discussion of	**Yes.** Although there is a brief discussion about body parts, there is not a specific discussion about the changes these

		the sexual organs and a scientific explanation about girls' menstruation.	undergo during puberty or the social and emotional changes that puberty implies. The explanation about girls' menstruation is thorough and this will therefore not be addressed in ACMHE.
Impulsive decision-making regarding romantic relationships	Yes, in a limited capacity	Conscious decision-making and control of one's actions is discussed in 8th grade lessons.	**Yes.** There is a discussion about self-control and the importance of reflecting upon one's actions and decisions. However, this discussion is not specific to romantic relationships. There is a need to apply these principles to choosing partners and making decisions about marrying/eloping.
Role models that promote alternative life choices to early unions	No.	N/A	**Yes**.
Communication between parents and daughters/sons	Yes, in a limited capacity.	In 7th grade students study the importance of family unity and its role in having a cohesive society.	**Yes.** Even though there is a lesson that explicitly talks about the importance of family unity, our findings suggest there is a need to reinforce the

			importance of communication with parents and their children, especially during the transition to adolescence and all the socioemotional changes that this transition entails.
Laws that protect minors and people's bodily integrity.	Yes, in a limited capacity	There is a lesson about human rights and of the rights of the child in an 8th grade textbook.	**Yes.** There is a need to add information about local legislation regarding CM and bodily integrity (e.g. statutory rape, domestic violence, etc.)
Sexual reproductive health	No.	There is no information about SRH in SAT textbooks except for a lesson about HIV.	**Yes.**
Healthy romantic relationships.	Yes, in a limited capacity	There are lessons that talk about dating, marriage and love in 7th and 10th grades.	**Yes.** Even though there are several lessons about relationships. There is a need to provide case studies that help students reimagine romantic relationships as well as information about how to identify unhealthy relationships.

As Table 5.2 shows, most themes of ACMHE are included in SAT's curriculum. In order to capitalize this, we used these lessons as foundations and use ACMHE's lessons to expand upon these existing themes without replicating content and making direct connections to gender equality, puberty, relationships, and CM.

Developing the workbooks.

These change drivers to implement our theory of action guided the design and development of the workbooks developed for ACMHE. In collaboration with the Bayan team, we developed three short workbooks[58]:
1. Living my youth with purpose (from now on Living my youth)
2. Youth with equality
3. How to guide our adolescent children (From now on parent workbook)

According to Walker (2003) a curriculum is a "particular way of ordering content and purposes for teaching and learning in schools… it affects what teachers teach and thus what students learn, and in so doing it helps to shape our identity and our future" (p.5). In designing these curricular materials, we followed what Klep, Letschert, and Thijs (2004) proposed as the three major orientations for curriculum development:

1. Knowledge oriented perspective: Concerned with the cultural heritage that needs to be transmitted. It also encompasses the study of content that will prepare students in the scientific and technological knowledge needed in their society.
2. Society oriented perspective: Prepare students for their role in society both in the present and in the future, especially as problem-solvers.
3. Pupil oriented perspective: Centered on the personal development of students. For example, broadening their perceptions and opinions and adapting content to their interests.

This curriculum was designed and developed collaboratively. Developing a curriculum is often a contentious endeavor given that it should be designed taking into consideration the needs and perceptions of various stakeholders such as teachers, parents, students, school officials, government agencies, etc. (Walker, 2003). In the case of ACMHE, workbooks were informed by the values of the communities in which ACMHE takes place, our theory of action, and institutional context in which the participating SAT schools are embedded. Table 5.3 lists the lessons in each text:

Table 5.3. *Description of Lessons of Workbooks of ACMHE.*		
Name of text	**Grade**	**Lessons**

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[58] These workbooks can be accessed [here](#).

Living my youth with purpose	7th grade	Lesson 1: What do I want for my future?
Living my youth with purpose	7th grade	Lesson 1: What do I want for my future? Lesson 2: Materialism: false happiness Lesson 3: Lasting happiness. Lesson 4: Impediments to reach our goals Lesson 5: Self-esteem and self-respect Lesson 6: Foundations for a good relationship. Lesson 7: Important qualities for healthy relationships. Lesson 8: How to develop qualities for healthy relationships. Lesson 9: The importance of consulting with others. Lesson 10: Gender equality Lesson 11: Getting to know the character of others. Lesson 12: Friendship first. Lesson 13: Working together Lesson 14: Getting to know each other in different settings Lesson 15: Making conscious decisions. Lesson 16: Benefits of chastity. Lesson 17: The difference between love and attraction. Lesson 18: Being mindful of our intimacy Lesson 19: Resisting peer pressures
Youth with equality	Lessons 1-9 7th grade Lesson 10-12 9th grade	Lesson 1: Child marriage: Causes and consequences. Lesson 2: Gender Lesson 3: Gender in (equality) Lesson 4: Gender inequality and child marriage Lesson 5: Puberty Lesson 6: Our lives before and after puberty Lesson 7: Puberty, early unions and pregnancies Lesson 8: Corporal integrity Lesson 9: Healthy romantic relationships Lesson 10: The importance of our sexual reproductive health for a fulfilling life. Lesson 11: Family planning

Living my youth with purpose	7th grade	Lesson content
Living my youth with purpose	7th grade	Lesson 1: What do I want for my future? Lesson 2: Materialism: false happiness Lesson 3: Lasting happiness. Lesson 4: Impediments to reach our goals Lesson 5: Self-esteem and self-respect Lesson 6: Foundations for a good relationship. Lesson 7: Important qualities for healthy relationships. Lesson 8: How to develop qualities for healthy relationships. Lesson 9: The importance of consulting with others. Lesson 10: Gender equality Lesson 11: Getting to know the character of others. Lesson 12: Friendship first. Lesson 13: Working together Lesson 14: Getting to know each other in different settings Lesson 15: Making conscious decisions. Lesson 16: Benefits of chastity. Lesson 17: The difference between love and attraction. Lesson 18: Being mindful of our intimacy Lesson 19: Resisting peer pressures
Youth with equality	Lessons 1-9 7th grade Lesson 10-12 9th grade	Lesson 1: Child marriage: Causes and consequences. Lesson 2: Gender Lesson 3: Gender in (equality) Lesson 4: Gender inequality and child marriage Lesson 5: Puberty Lesson 6: Our lives before and after puberty Lesson 7: Puberty, early unions and pregnancies Lesson 8: Corporal integrity Lesson 9: Healthy romantic relationships Lesson 10: The importance of our sexual reproductive health for a fulfilling life. Lesson 11: Family planning

		Lesson 12: Sexually transmitted diseases
How to guide our adolescent children	Parents	Lesson1: Developing trust with your children
		Lesson 2: Taking time to converse with your children
		Lesson 3: Acknowledging the potential of your children.
		Lesson 4: Conversing about moral and spiritual values.
		Lesson 5: Advices
		Lesson 6: Establishing norms and expectations.
		Lesson 7: Helping your kid develop self-discipline
		Lesson 8: Punishments
		Lesson 9: Setting a good example
		Lesson 10: From childhood to adolescence
		Lesson 11: Changes during adolescence
		Lesson 12: Learning about peer-pressure
		Lesson 13: Conversing about friendship and dating.
		Lesson 14: Why it is important to know your children's girlfriend/boyfriend
		Lesson 15: Conversing about challenges in romantic relationships.
		Lesson 16: Consequences of early unions and childbearing.
		Lesson 17: Contraceptive methods

Table 5.4 describes the problems identified, the change drivers of ACMHE, and the lessons developed for each change driver:

Table 5.4.

Description of Lessons of Workbooks of ACMHE and How they Address the Main Problems Identified.

Problem	Change Driver	Lessons in Workbooks
1. Prevalence of gender inequality	Cognitive dissonance about gender norms Exposure to positive role models that challenge gender stereotypes Deeper analysis of how gender inequality promotes CM	Youth with Purpose: 10 Youth with Equality:2-4
2. Impulsive decision making regarding romantic relationships:	Reflection about one's meaning of purpose/happiness Appeal to taking decisions after analyzing one's situation and life goals. Exposure to positive and negative case studies of scenarios regarding CM	Youth with Purpose: 1-5, 15 Youth with Equality: 1
3. Girls are not aware of the consequences of CM	Knowledge about the causes and consequences of CM in Honduras. Case studies that portray the lives of girls who marry early.	Youth with Purpose: 4 Youth with Equality: 1,8

4. Lack of awareness about the biological and social implications of adolescence	Knowledge about the biological changes that occur during puberty	Youth with Equality: 5, 6, 7
	Knowledge about the social changes that adolescents go through puberty	
.	Cognitive dissonance about the stigma around girls' and boys' sexuality	
	Deeper understanding of the role of puberty and sexuality in CM	
5. Lack of knowledge about the legislation that protects minors and people's bodily integrity	Review of local legislation connected to CM and bodily integrity	Youth with Equality:1, 8
6. Prevalence of unhealthy relationships	Discussion of the personal qualities that contribute to healthy relationships	Youth with Purpose: 6-14
		Youth with Equality: 9
	Understanding of the characteristics of healthy/unhealthy relationships.	
	Discussion of the characteristics and benefits of assertiveness	
7. Lack of knowledge and access to sexual reproductive health (SRH)	Discussion around the importance of SRH for personal well-being	Youth with Purpose: 16-19
		Youth with Equality: 10-12
	Knowledge about contraception and sexually transmitted diseases.	

8. Poor communication between parents and children		*Parent workbook
	Exposure to positive role models that help parents improve communication with their children.	
	Exposure to the changes that students go through adolescence. Information about CM and early pregnancy and the importance to have open communication about these issues.	
	Information about the importance of sexual reproductive health.	

*It is important to note that the parent workbook is part of ACMHE but the focus of this dissertation are the workbooks Living my youth and Youth with Equality as these are the workbooks that are the oned used by students in a school-based setting. The parent workbook will eventually be evaluated but for this prototypical evaluation only Living my Youth and Youth with Equality were evaluated.

Peer Education Component[59]

In this intervention, 11th graders teach the curricular materials to 7th and 9th graders. The purpose of implementing in three different grades is to reach students during two stages of adolescent development: early (10-13) and middle (14-17) adolescence (Steinberg, 2011). The goal is to address students before they reach critical ages (12-14 for 7th graders) as well as during those critical ages where adolescents are at greater risks of entering unions (15-18 for 9th and 11th graders; see Murphy-Graham et al., 2019)[60]. Previous studies have identified that peer education programs have difficulties sustaining positive outcomes over time (Agha & Van Rossem, 2004). Other criticisms about peer lead programs include unequal power dynamics between peer educators and participants (e.g. gender dynamics) (Campbell & MacPhail, 2002), lack of experience and knowledge compared to professional educators (Sriranganthan et al., 2010), and inadequate training (Walker & Avis, 1999).

This intervention addresses the lack of long-term behavioral outcome, inadequate training and lack of experience and knowledge by having a longitudinal implementation approach. That is, students will be exposed to the curriculum throughout their high school experience, and not during a single session/training. Students will study the materials for the first time in 7th grade and then again in 9th grade (with content pertinent to their age. For example, puberty in 7th grade, and SRH in 9th grade). Those same 7th graders will eventually become 11th graders. When that time comes, they will be trained as peer educators in the use of the materials they already studied in 7th and 9th grade. This means that in the long term, students will be exposed three times to the curriculum: when they receive it as participants and when they are trained as peer educators, and when they implement the curriculum. There are three main advantages with this implementation/training design: a) students are exposed to content relevant to the stage of adolescence they are in, b) students will be exposed to this curriculum before and during they reach critical ages where they are most vulnerable to CM and unhealthy relationships, and c) it ensures that once students become peer educators, they will be acquainted with the content they will facilitate. In this sense, through time, students become both recipients and implementers of the curriculum[61]. Furthermore, although students will be the main implementers of this curriculum, they will be accompanied and supervised by teachers who will also undergo a training process. Figure 5.1 explains this dynamic through time:

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[59] For a more detailed discussion about the theoretical foundations of peer education, see the peer education section in chapter 2.

[60] Murphy-Graham et al. (2019) conducted a longitudinal study of adolescents in rural areas of Honduras and followed their lives' trajectory during adolescence. These authors found that by age 20, 46% had entered a union at some point. Most of the growth in entrance into first union occurred from age 15 through age 18.

[61] However, it is important to note that for this prototypical implementation, 11th grade peer educators will only have been exposed to the materials during their training. The dynamic I described in this paragraph will happen after our first prototypical implementation.
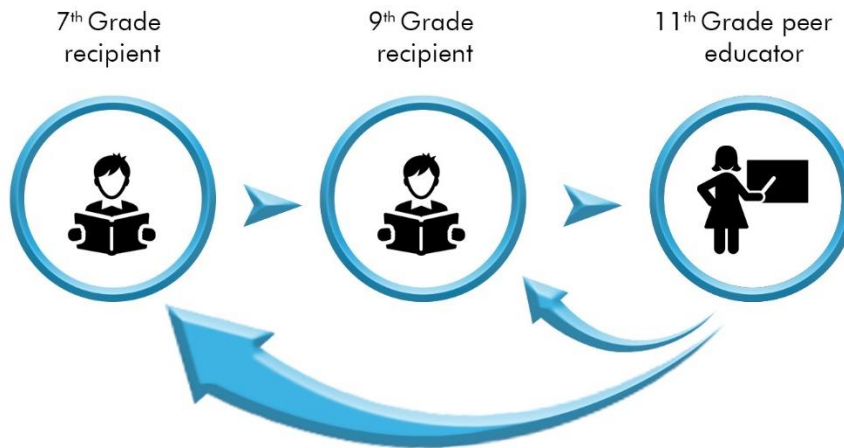
Figure 5.1: Students as participants and peer educators.

We also took into consideration van den Akker's (2003) ten components for developing a curriculum: rational, aims and objectives, content, learning activities, teacher role, materials and resources, grouping, location, time, and assessment. Table 5.5 contains a description of each component:

Table 5.5: Components of ACMHE's curriculum.

Table 5.5. *Components of ACMHE's Curriculum.*	
Rational or vision	**Why are they learning?** ACHME intends to provide students with the knowledge and critical thinking skills so that they can empower themselves to make informed decisions about CM. Ultimately, this curriculum aims to reduce CM in the communities where this intervention takes place.
Objectives	**Toward which goals are they learning?** Develop a curriculum that allows students to:

	1) Recognize their self-worth and equality towards others. 2) Foster social analysis to identify oppressive structures that cause CM. 3) Enhance their critical thinking skills to recognize the causes and consequences of CM. 4) Acquire knowledge about themselves and their societies to make informed decisions regarding CM and romantic relationships. 5) Have access to knowledge that allows them to have control over their sexual and reproductive health. 6) Strengthen students' willingness to reject attitudes, beliefs, and behaviors connected to CM. (Short-term objective)
Content	**What are they learning?** The content is informed by the change drivers proposed for each problem identified in table 5.1 which were framed using an adolescent development approach (Steinberg, 2011). This curriculum was also developed following Murphy-Graham and Lloyd's (2015) framework for adolescent empowerment.
Learning activities	**How are they learning?** Following a human capabilities approach (Sen ,1999; Walker, 2012) as well as critical and feminist pedagogies (English and Irving, 2015; Freire, 2000), this curriculum is designed to promote learning through: - Problem posing approach. - Dialogue - Analysis that promotes a self-understanding of students as individuals and the society they live in. To achieve this, this curriculum has: - Questions that foster reflection and dialogue at the beginning/middle/end of each lesson. - Content that was developed to reflect the realities of the lives of the students and communities where it is being implemented. - Case studies to model positive/negative models/scenarios (prototype willingness model).
Peer educator/ Teacher role	This curriculum is implemented using a peer education system. The teacher accompanies peer educators in the classroom and provide support to peer educators in case it is needed.

Materials and resources	**With what are they learning?** Two workbooks were developed for students in this intervention
Grouping	**With whom are they learning?** Students studied the curriculum with their grade peers. That is, 7th graders will study the curriculum with other 7th graders and 9th graders will study the material with other 9th graders, etc.
Location	**Where are they learning?** The workbooks will be studied in schools' classrooms.
Time	**When are they learning?** This curriculum will be studied during school hours. The amount of time per day/week will be determined by each school.
Assessment	**How to measure how far learning has progressed?** Qualitative interviews were conducted post-implementation.

The strength of this curriculum relies on three aspects: a) its design is informed by a group of theories that promote a learning process through reflection, social analysis, social interaction, and strengthens decision'making processes b) the content was developed taking into consideration the realities of the communities where it is implemented. That is, it reflects the context in which students grow as well as the limitations imposed by these realities, and c) students will be exposed to these curricular products throughout their high school experience which will allow ACMHE to address students before and during the years were adolescents are more vulnerable to CM.

Finally, ACMHE has three main outputs[62] as suggested by McKenney et al. (2006):

a) Curricular products: Some manifestations can include syllabi, teacher's guides, instructional booklets, software, etc. ACMHE developed three workbooks described above.
b) Professional development: There is a natural synergy between curriculum development and teacher development. This can be in the form of training or collaborative work related to the development of new products, for example. Tutors directly participated in

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[62] Outputs refer to the products of an intervention (e.g. workbooks, professional development, design principles). Outcomes refer to the results or achievements because of the activities of an intervention.

the design, development, implementation, and evaluation of ACMHE. Teachers were trained by the researchers in the use of the workbooks.

c) Design principles: Design principles are lessons learned that are shared with the intention of helping others select and apply practical substantive and procedural knowledge for developing similar products in different settings. The design principles of ACMHE for this first prototypical implementation are discussed in chapter 8.

Implementation

Quick Trial 1

Youth with Purpose was the first text we developed. Following the suggestion of our collaborators from Bayan, we started implementing only Youth with Purpose (the most conservative workbook that focused on spirituality) because Bayan feared that the content related to sexual reproductive health (SRH) (that was later developed in Youth with Equality) would not be welcomed in this context given conservative values of these communities. However, the Berkeley team was aware that Youth with Purpose did not include all the components necessary for this intervention. We agreed to begin implementing Youth with Purpose and upon consultation with all participants move on to the development of the second and third workbooks, Youth with Equality and the parent workbook.

Youth with Purpose was piloted in 7 schools in the Department of Atlántida. After this first iteration, in collaboration with Bayan, we conducted a focus group and interviews with students, parents, and teachers of these seven schools to reflect about their experience with Youth with Purpose and their openness to additional workbooks that included sexual reproductive health content. Youth with Purpose was well received by students, parents, and tutors. Participants were particularly interested in lessons related to chastity and spirituality as it resonated with their values and expectations for their youth. During our interviews, we asked students and parents if including a workbook that comprised sexual reproductive health (SRH) information would be contradictory to their values and to the content in Youth with Purpose that encouraged chastity. The parents that were interviewed said they would support SRH related content. For example, a mother stated that there would not be any reason to be upset about content related to SRH:

> **Interviewer:** We know this is a sensible topic and the reason we do these meetings is because we want to design the workbook in a way that it reflects the values and needs of the community. One of the biggest doubts we have is that this workbook talks about chastity and presents it as something that benefits students. But although chastity is being promoted, adolescents still engage in sexual relations or they leave their homes to be able to have sexual relations.
> **Mother**: Yes, yes.
> **Interviewer:** What I would like to know is: What would the response be if we include sexual reproductive health education in the workbook or in the intervention? I want you to be very honest, because maybe some parents might say "no, it may motivate kids to have sex" or "yes because it's important that they protect themselves". You as a mother, you have a 17-year-old daughter…
> **Mother**: I would like it…I would like it to be included.

Interviewer: So, you don't think there would be people in the community who would say "this is unacceptable!"

Mother: Why would they get upset? There is no reason to be upset, for me there's no reason to be alarmed.

Interviewer: Do you think that teaching them sexual education is promoting sexual relationships?

Mother: No, that is not to promoting it. That's my opinion.

Students also shared an interest in being exposed to SRH content:

Interviewer: What did you like the most about the workbook?

9th grade student (F): Everything is very nice overall. But certain lessons caught my attention like chastity, false happiness, and what I want for my future…

Interviewer: I want to ask you the thing I'm most curious about. I want you to be super honest. Everyone liked the lesson about chastity, so there are people who think that since we already talked about being chaste it's not necessary to talk about sexual education. What do you think about that?

9th grade student (F): I think it's a topic that should be talked about more. Just because we are chaste, it doesn't mean there will not be a time where we will have sexual relations. I think students should receive these lessons so that they are informed about these things.

After confirming that participants were not resistant to SRH content, we develop our second workbook, Youth with Equality and the parent workbook. We also made changes to Youth with Purpose from the findings of our focus group and interviews.

Quick Trial 2

The challenge with the design of the second workbook was to design a workbook that had the main components of comprehensive sexuality education and was still responsive to conservative values of the NGO we were collaborating with as well as the conservative values of the communities we were working with/at. Comprehensive sexuality education refers to programs that cover a broad range of topics related to human development (including reproduction, puberty, sexual orientation, and gender identity), relationships (including families, friendships, romantic relationships and dating), personal skills (including communication, negotiation, and decision-making), sexual behavior (including abstinence and sexuality throughout life), sexual health (including sexually transmitted diseases, contraception, and pregnancy), society and culture (including gender roles, diversity, and sexuality in the media) (Planned Parenthood, 2017). In addition to including comprehensive sexuality education content that was culturally sensitive and relevant to the communities where ACMHE is implemented at, this comprehensive sexuality education content also had to be presented in the context of CM. That is, how these different components such as puberty, intimate relationships, gender roles, personal skills, sexual behavior, and social norms are connected to CM. Unfortunately, we did not include all the components of a comprehensive sexuality education. For instance, we did not include themes around diversity or choice about sexual relationships outside marriage. This was because we had to socialize the content with the different participants and themes like homosexuality were not accepted in these communities. While not ideal, we believe that imperfect content is better than no content, and the openness of these themes will change over time as we continue our work in these communities.

To achieve this, we wrote Youth with Equality in constant communication with the Bayan staff. We wrote 8 different versions until we agreed upon a draft. Then, we piloted Youth with Equality in two schools with students, parents, and tutors. Since the content was a sensitive one, we wanted to observe its implementation directly and with accompaniment of parents to ensure that parents approved the content for their kids. We studied lesson by lesson and identified parts that needed clarification/changes. After these pilot sessions, we made the necessary changes and completed a final draft. Finally, the parent workbook was developed. The parent workbook draws from content from the Youth with Purpose and Youth with Equality workbooks adapted to parents' interests and perspectives.

Prototypical Implementation

After these two quick trials, we conducted our prototypical implementation. This prototypical implementation started by training SAT's district supervisors. Every supervisor oversees 3-4 schools. The UC Berkeley team trained the supervisors in the use of the workbooks. Supervisors then trained the tutors of the participating schools. 11th grade tutors then trained 11th graders. Eleventh graders then implemented the materials to 7th and 9th graders. In order to train tutors on SRH content, we established a collaboration with the Asociación hondureña de Planificación Familiar (ASHONPLAFA) [Honduran Association of Family Planning]. ASHONPLAFA trained tutors on the SRH content. In communities where there were public health clinics, the nurse of the clinic trained 11th graders on SRH. In those that there was no clinic, tutors oversaw the SRH training.
 Figure 5.2 describes this process.
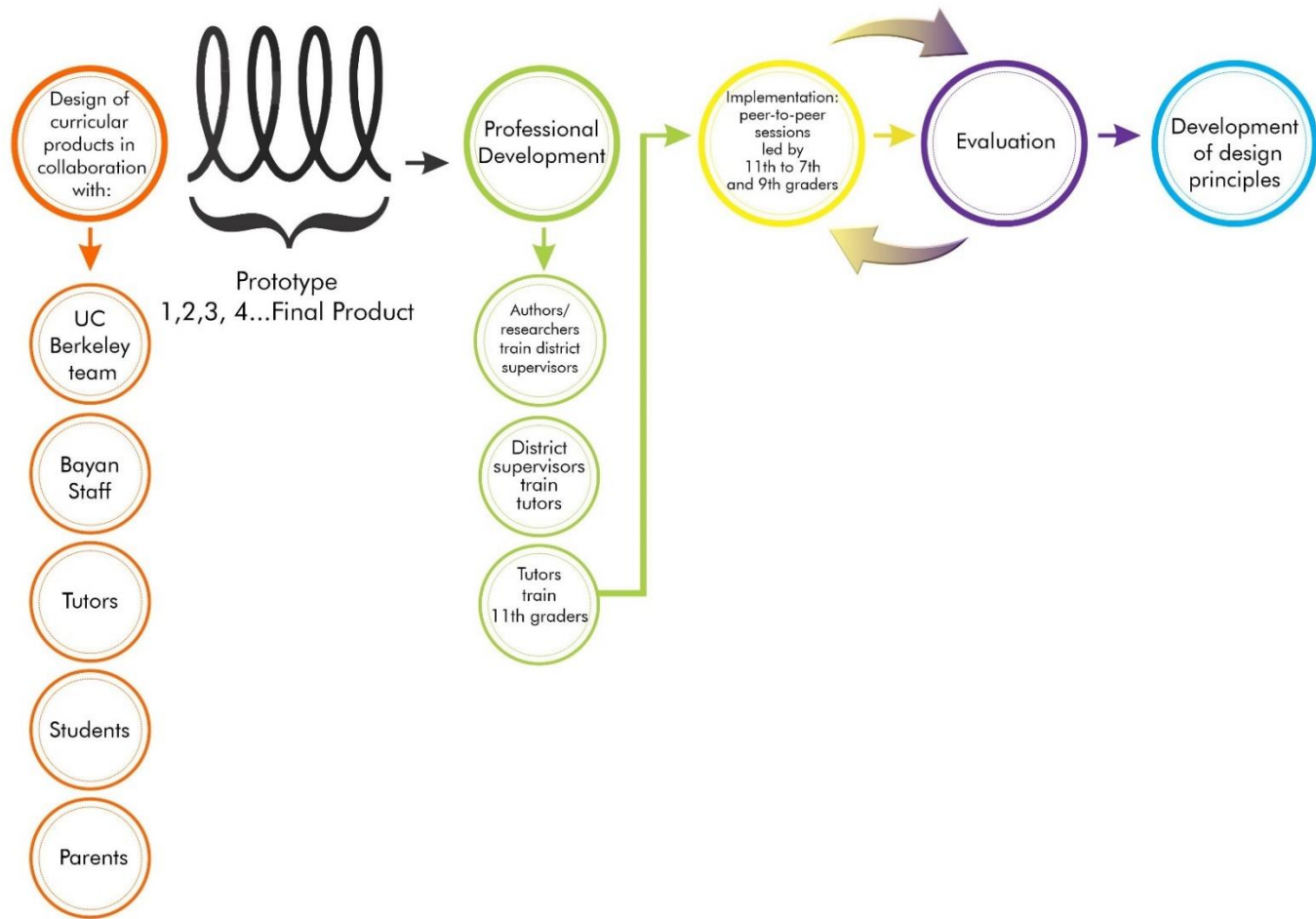
Figure 5.2. Prototypical implementation process.

As figure 5.2 shows, during and after implementation, an evaluation was conducted. For details of these evaluation see the next chapter.

Chapter 6

Findings: Developing a Better Understanding of the Effectiveness of ACMHE's Theory of Action

   This chapter discusses the qualitative and quantitative findings of the evaluation of ACMHE's first prototypical implementation. First, this chapter discusses the results of the qualitative interviews conducted at the end of the 2018 school year in all participating schools as part of the evaluation stage of this DBR study and connect the results of these outcomes to the process data which includes in-class observations and focus groups with participants to determine if the theory of action designed for ACMHE elicited the desired learning processes and outcomes. Furthermore, this chapter discusses the results of the pre and post intervention surveys collected to examine the relationship between dropout, child marriage, and childbearing in the 21 participating schools where ACMHE took place. It is important to note that this evaluation does not examine ACMHE's long-term desired outcome which is to influence students' decision-making processes about CM. To investigate if in fact ACMHE influences students' decision-making processes regarding CM, in the future, we will collect longitudinal data to follow students' lives. However, at this point, this evaluation only tests ACMHE's theory of action to investigate if the design curriculum addresses crucial concepts and learning processes of the proposed theory of action.

Testing ACMHE's Theory of Action [63]

   In a DBR study, "data from the implementation process in combination with assessment of impact, together, guide systematic reflection on the theory of action that underpins the intervention" (Mintrop, 2016, p. 186). Impact data test the outcomes of the intervention and the process data "document the fluid change process" (p.165). This evaluation (chapter) examines the following questions:

  a) Is the curriculum implementation eliciting the desired knowledge gain and attitudes in students to address the eight problems identified in ACMHE's theory of action?
  b) Is ACMHE's pedagogical and curricular design eliciting the desired learning processes implicit in ACMHE's theory of action?

Methods[64]

Impact data is used to compare relevant beliefs, attitudes, knowledge or practices among participants of a study (Mintrop, 2016). For this prototypical implementation, the following impact data was collected:

- 96 post intervention interviews with 58 students (21 7th graders, 16 9th graders, and 21 11th graders / 22 male, 36 female), 20 tutors, and 18 parents of all 21 schools participating in ACMHE.[65]

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[63] This analysis examines the theory of action for students. The theory of actions for parents was not examined during this evaluation.
[64] For the methodological description of these data collection processes and analyses, see chapter 3.
[65] See appendix 9 for the instruments used in these interviews.

- 2 surveys: The purpose of these surveys was to examine the number of girls and boys who either married or became parents while in school pre (2017 school year) and post (2019 school year) implementation. The results of these surveys are discussed in the second section of this chapter.[66]

For the post intervention interviews, we developed a scenario-based interview instrument. Each scenario addressed one (or more) of the problems identified as causal factors of CM. Each scenario was read to students followed by a set of questions. The different scenarios and questions were designed so that they would ideally elicit specific responses that included key concepts studied in ACMHE. To analyze these responses, the interviews were analyzed using MAXQDA, a data analysis software. To systematize this analysis, codes were created for each scenario. For instance, a scenario depicts two siblings who are treated in different ways. The questions for this scenario examined whether students used the concept of gender equality to explain and describe why a boy and a girl are treated differently and whether they rejected or not this scenario. The codes for this scenario were then quantified in order to establish how many students were able to identify gender equality and how many did not, as well as how many disagreed this differential treatment and how many did not disagree with it. Figure 6.1 is an excerpt of the coding system developed for this evaluation. The codes described in this figure are the codes for the scenario used as an example in this paragraph:

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[66] See appendix 11.

María and Juan are siblings. María is 16 years old and Juan is 15 years old. Their parents treat them very differently. Juan is allowed to go out freely to play and spend time with his friends. María can rarely leave the house and have fun. Juan has a girlfriend and the whole town knows about it and approves it. Last year, María had a boyfriend without her parents knowing and her neighbors found out and started calling her "slutty". The neighbors are always criticizing María for the way she dresses or if she hangs out with boys. Therefore, she feels surveilled. Juan doesn't worry if others approve of his behavior or not.	Scenario 4: Gender inequality	1) **Identification of concept**
		   a. Able to identify gender inequality
		   b. Unable to identify gender inequality
		   c. Justifies as protection.
		
		2) **Personal reaction**
		   a. Disagrees with differential treatment
		   b. Does not disagree with differential treatment
		
		3) **Pedagogical approach /learning processes**
		
		   a. Cognitive dissonance
		   b. Prototype model

Figure 6.1. Example of coding system used for analysis.

In this scenario, depending on the answers provided by participants, the answers were coded as "able to identify gender inequality" or "unable to identify gender inequality". A code that emerged (inductive code) was "justifies as protection" and was added to the coding system. These responses were then tallied to generate numerical results for each question of each scenario. This is what Becker, (1970) called "quasi-statistics" (as cited in Maxwell, 2013, p. 128). Quasi-statistics are used to derive numerical results from qualitative data. Responses were also analyzed to examine if and how the pedagogical and learning process implicit in ACMHE's theory of action shaped students' responses. All questions for each scenario were coded and analyzed following the same procedure. For a detailed description of the codes used for all the scenarios in the post intervention interview instrument, see appendix 10.

Process data captures the implementation of the intervention. The purpose of collecting process data is to explain the impact outcomes. The process data collected during this prototypical implementation consisted of:

- 5 focus groups in 5 schools (with participation of approximately 15 students)
- 21 class observations (field notes and recording of these classes)

Examining Knowledge and Attitudes Post Intervention

Eight main problems that act as causal factors of CM were identified during ACMHE's needs assessment:

9) The prevalence of gender inequality at all levels (micro-meso-, exo-, macro- systems).
10) Lack of awareness about the biological, psychosocial, and cognitive changes that occur during adolescence.
11) Girls are not aware of the consequences of CM and hold false beliefs about CM.
12) Impulsive decision-making processes regarding romantic relationships (Agency).
13) Lack of knowledge about the legislation that protects minors and people's bodily integrity.
14) Prevalence of unhealthy romantic relationships.
15) Lack of knowledge and access to sexual reproductive health (SRH)
16) Poor communication between parents and children.

These 8 themes guided the design of ACMHE's workbooks. The purpose of this evaluation was to examine if and how ACMHE's curriculum helped shape students' knowledge, attitudes, and beliefs around these 8 main causal factors of CM. In this section, these 8 problems that cause CM are described followed by the scenarios that were used to examine each problem. Then, the results for each scenario are discussed to support the conclusion of whether

a) The curriculum implementation elicited the desired knowledge gain and attitudes in students to address the eight problems that drive CM identified in ACMHE's theory of action and,
b) ACMHE's pedagogical and curricular design stimulated the desired learning processes implicit in ACMHE's theory of action.

Gender inequality.

ACMHE's curriculum has a strong emphasis on challenging gender inequality. Table 6.1 includes the description of the problem, the desired goals, the two scenarios and questions for each scenario used to examine the outcomes around this problem.

Table 6.1.
Gender Inequality Problem Description, Desired Goals, and Scenario Used to Examine Knowledge and Attitude Outcomes.

Problem 1: Gender inequality	
Description of problem	• Girls are not treated equally to their male counterparts in their families and communities, especially in terms of mobility and socialization opportunities. • Girls have limited economic and academic opportunities. • Girls see marriage and motherhood as their most worthwhile role.

	• Girls have limited perceptions of what they can be or become.
Goal	• Change attitudes beliefs, and behaviors about unequal gender norms. • Change attitudes beliefs, and behaviors about what girls can do and be. • Inform students' decision-making processes regarding CM.
Scenario A	Scenario # 4[67] María and Juan are siblings. María is 16 years old and Juan is15 years old. Their parents treat them very differently. Juan is allowed to go out freely to play and spend time with his friends. María can rarely leave the house and have fun. Juan has a girlfriend and the whole town knows about it and approves it. Last year, María had a boyfriend without her parents knowing and her neighbors found out and started calling her "slutty". The neighbors are always criticizing María for the way she dresses or if she hangs out with boys. Therefore, she feels surveilled. Juan doesn't worry if others approve of his behavior or not.
Questions scenario A	a. Why do you think that these differences in how men and women are treated exist? b. Do you agree that they should be treated differently? Why/why not?
Scenario B	Scenario #5 Lourdes has a husband named Alexis. Alexis has a small cornfield in which he works in the mornings. Lourdes is a SAT tutor and works in the afternoon. When Lourdes goes to work in the afternoon, Alexis takes care of their children, helps cleaning the house and makes dinner. Alexis' mom and brothers don't like that he does "women stuff" and are bothered that Lourdes is not taking care of the things that Alexis has to do, because they think that taking care of the home and children is not "men stuff".
Questions scenario B	a. Do you think Alexis' family is right to be upset because Alexis helps with house chores? b. What do you believe is the reason that people think that there are things that can only be done by man or can only be done by woman? Do you find that to be right? Why/why not? c. What would you tell Alexis' mother and brothers?

The first question of scenario "A" asked students why they thought the differences in how María and Juan were treated existed. Forty-one students identified gender inequality as the reason why María and Juan are treated differently, 13 were not able to explain conceptually why these differences existed and only 4 explained that they justified this scenario given that girls

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[67] The order of the scenarios in the interview instrument are different than the order in which these are analyzed here.

needed to be more protected (a well-established belief in these communities). Figure 6.2 describes the results of the question for this scenario:
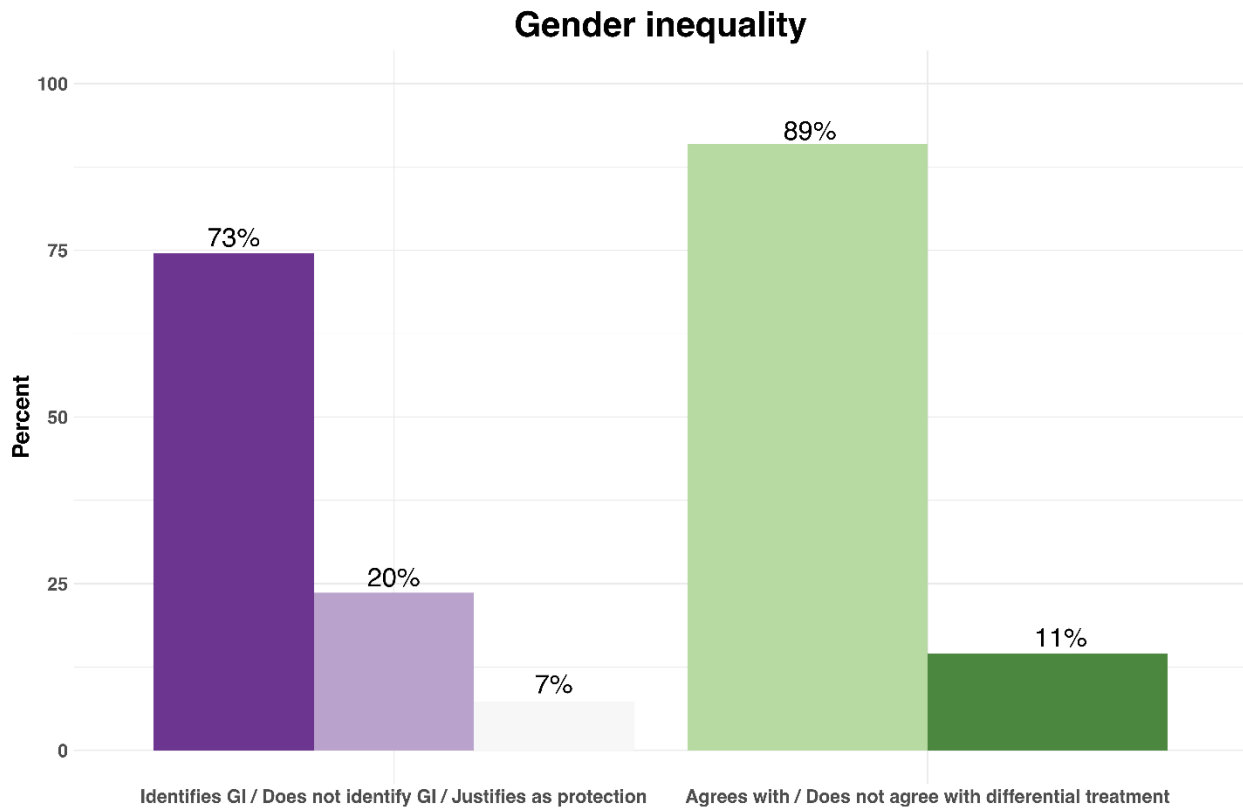
Gender inequality

Figure 6.2. Results gender of inequality scenario.

For example, a 7th grade female student was not only able to explain the role that gender inequality plays, but also connect this inequality to CM:

> **7th grade student (F):** Well, maybe because the father thinks that only women do incorrect things, so they treat her with gender inequality. The father thinks that the boy only goes out to play with classmates and friends, men have vices as well, they can learn and do wrong things... The father doesn't let the girl go out because he thinks that she will be with a man or something like that when in fact, some girls actually get married because they don't let them go out.

The second question of scenario "A" examined students' attitude towards the differential treatment that Juan and María experienced. Fifty students expressed that they disagreed with this differential treatment and 8 did not think this was a problem. For instance, this 9th grade male student advocated for equal opportunity for leisure activities:

> **9th grade student (M):** There's no gender equality, it should be equal. If the boy goes out, the girl should go out too, and both have to have fun, not just the boy while the girl is at home like a slave. I think there shouldn't be inequality, both of them should have fun.

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Students stated that gender inequality was one of the most relevant topics for their lives and reported changing the ways they view themselves and what they were capable of doing. For example, this 7th grade student reported that learning about gender equality helped her believe that she could do anything because she has the same capabilities as boys:

> **7th grade student (F):** I used to think that we women had fewer rights than men.
> **Interviewer:** Why did you think that?
> **7th grade student (F):** I thought we were weaker…
> **Interviewer:** Can you give me an example?
> **7th grade student (F):** When I used to see my cousins play soccer, I would see them and think I could not do what they were doing, I felt underestimated because they could play, and I couldn't.
> **Interviewer:** Why? Because they were given permission to play or because they were stronger?
> **7th grade student (F):** Because they were stronger…
> **Interviewer:** And now that you read these things, what do you think?
> **7th grade student (F):** That when I see someone doing something, I feel that I can also do it because we are equal, and we have the same capabilities.

This response shows that this student now has a framework to understand, explain, reject gender inequality, and to recognize her inherent worth, a key component of empowerment as suggested by Murphy-Graham (2012). The account of this student suggests that she experienced cognitive dissonance while she was exposed to this content, that she was exposed to a new set of beliefs that were different to those she held before participating in ACMHE. Through the texts developed for ACMHE, students were exposed to material aimed at challenging negative attitudes and behaviors (e.g. gender inequality, acceptance of considerable age gaps between partners, with girls being considerably younger) connected to CM. Through this contact to new concepts and ideas, the curriculum attempted to create cognitive dissonance (Festinger, 1962). Cognitive dissonance is measured through attitude change. Hence, one of the main purposes of ACMHE is to change attitudes and beliefs of students towards CM and its causes, particularly oppressive gender norms. ACMHE's aim is to foster cognitive dissonance through discussions based on theoretical knowledge (e.g. examination of terms such as gender, social norms, and puberty) and case studies (e.g. example of persons who challenge gender stereotypes). The data analysis suggests that ACMHE was successful in promoting cognitive dissonance regarding gender inequality. Below, a male student described how ACMHE provided an educational opportunity where he could confront his previous beliefs about gender inequality:

> **11th grade student (M):** Of course, gender equality as well because women are valuable too. I was taught to have a *machista* attitude.
> **Interviewer:** Who taught you to be *machista?*
> **11th grade student (M):** My dad
> **Interviewer:** What would he say, for example?
> **11th grade student (M):** Well, my dad used to say that women are here to serve and that a man's obligation is to be the head of the home and only men's ideas are valid. Women should not have voice or dictate what should happen. As I was learning, I understood that I should not have those attitudes.
> **Interviewer:** So, the content in the text collided with what you believed?
> **11th grade student (M):** Yes, it collided a lot. It became in a controversy.
> **Interviewer:** During the class or for yourself?
> **11th grade student (M):** For me.
> **Interviewer:** What was the controversy?
> **11th grade student (M):** Why should I serve a woman?
> **Interviewer:** That was your dad's voice.

11th grade student (M): Yes, my dad's voice was there but that started to fade away and I was able to see that it was good to be equitable.

The unpleasant state this student described when he was exposed to new information that challenged previous knowledge is what Harmon-Jones & Harmon-Jones (2012) called "dissonance". As this student describes, he engaged in a psychological work to reduce the inconsistencies of these two views. In the end, he was able to be clear about his new standpoint on gender equality.

Scenario "B" describes tensions in a family due to the fact that Alexis' mom and brothers do not think he should be doing housework that is thought to be "women's work". Ninety-eight percent of students said they disagreed with Alexis' mom and brothers' nuisance for Alexis' contribution to chores in the household. The second question for scenario "B" examined students' ability to explain why some people assign certain activities to men and women. As shown in Figure 6.3, 50 % of students were able to explain this scenario through the concept of "gender norms". Thirty-four percent were not as specific and explained this scenario using the concept of gender inequality, which is also a good response, but not as specific as gender norms. Fifteen percent of students were unable to provide an explanation to this scenario even when they disagreed with it.
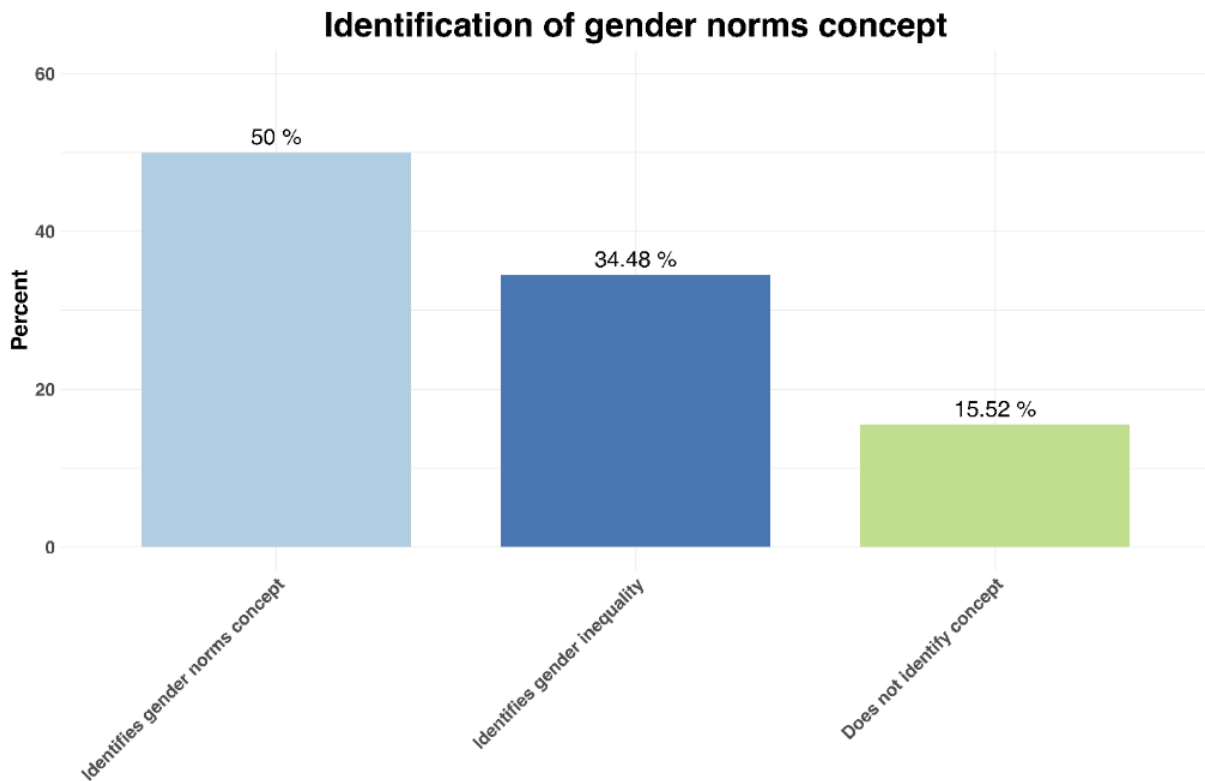
Figure 6.3. Identification of gender norms concept.

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Many students explained how socialization played a role in these beliefs. For example, a 7th grade male students explained that this happens due to gender inequality during socialization:

> **7th grade student (M):** That happens because they don't teach them when they are young what gender equality is. That's why they think men can do certain things and women can't, and it's not like that. Both have the capacity to do the same things.

Finally, almost 90 % of students reported they would challenge Alexis' family members' resistance to his behavior. A 7th grade female student stated that she would tell Alexis' family that "if women can take care of the home, men can too". Case studies were instrumental in helping students expand their knowledge about gender. For instance, an eleventh grader shared how reading the case studies presented in the workbooks helped her expand her horizons about what women could do:

> **11th grade student (F):** I really liked the lesson about gender. It explains to us that women and men should have the same rights...It also teaches us that just because someone is a woman, it does not mean that she can't do things that men do and vice versa… For example, a man can cook, not just women. There are men who are cooks that are chefs. A woman can be a soldier, a president, things that are supposed to be restricted to men. Women can also do those things.
> **Interviewer:** So before reading these lessons, you thought that those things were restricted to men or did you know that you could be a soldier, for example?
> **11th grade student (F):** No.
> **Interviewer:** You did not imagine this could happen? What did you think of these stories?
> **11th grade student (F):** I like them because they taught me that one can achieve things if one desires.

This student was referring to two case studies described in chapter 2 in the text Youth with Equality. One case study is the story of a young man who is a chef and the second case study tells the story of Dunia, a girl who always dreamt of being a soldier and despite her family and friends telling her that career was for men only, she was able to make her dream come true. From this students' response, it is clear that case studies helped her have social images that informed her analysis about her interpretation of what men and women can do. Following the prototype willingness model (Gerrard et al., 2008), there are case studies throughout the workbooks that intend to provide references, cognitive representations, and examples of individuals who engage in challenge restrictive gender norms. As evidenced by the previous response, students are using these case studies to inform their reasoning.

The results of these scenarios reflect students' interest in challenging traditional gender norms. This was also evident during class discussions. The following discussion took place during a peer class implementation. In this discussion, it can be appreciated how students believe that challenging rigid gender norms is a way of challenging *machismo*:

> **11th grade student 1(M):** Some examples of gender norms are "men can't cry because they are men…or can't sweep because he is a man, can't do laundry because he is a man" those are gender norms. Where are these gender norms applied?
> **9th grade student 3 (F):** In the family, at home, in society.
> …
> **11th grade student 1(M):** *(Reading from the workbook)* How can boys contribute to gender equality?
> **9th grade student 5 (M):** Sweeping, helping out at home

9th grade student 6 (F): Practicing gender equality
11th grade student 1(M): What else?
11th grade student 7 (M): Not being *machistas*!

Critical and feminist pedagogies were key in providing a context where students could challenge unequal treatment between girls and boys. These pedagogies view the classroom as a space where student can engage in a reflective process guided by dialogue and critical thinking. A place where students can become aware about their reality and that of the society in which the live in (English and Irving, 2015; Freire, 2000; Shrewsbury, 1993). Critical feminist pedagogy (English and Irving 2015) puts a deliberate stress on challenging the inequalities that affect women and aims to foster social analysis and social change. Tutors also mentioned how the workbooks provided a context to address inequality and how students used this space and opportunity to challenge this inequality. During the interviews, we asked tutors (who accompanied 11th graders during implementation) if they thought the workbooks were successful in eliciting discussions that promoted critical thinking and social analysis. Most of the tutors thought this was the case, particularly around discussions of gender equality. They provided concrete examples, including:

> **Interviewer:** What themes generated rich conversations among students?
> **Tutor (M):** It was the lesson about gender equality. As I mentioned to you before, some say that girls can't play soccer, because we see that only boys get to play soccer, no girls at all. We saw that boys had a *machista* attitude and it is clear that it comes from dynamics at home that promote it. For example, men work in agriculture and do not help to clean, wash dishes, or mop the floor, and they have more freedom and girls have no freedom. So, the girls in some way stood up for themselves, they said that they also worked and deserved the same rights.

When another teacher was asked whether he believed these texts were being useful to students, he shared that students are not only changing their attitudes and beliefs but their behaviors as well:

> **Tutor (M)**: Mostly with things related to equality. I have a student that he always said that "girls have to do this, and boys have to do that". He had this marked division girl/boy, boy/girl. But now he has understood. For instance, before he would not contribute with the cleaning of the classrooms. He would rather go take the trash out, but he wouldn't touch a broom or a mop. He thought that was something for women. He would rather do chores that required strength. But now it's different. We are all astounded. Now he is the first on grabbing the mop… I feel that he understood what the norms to live in society are. '

ACMHE was successful in providing an educational context where students could reflect upon and challenge gender inequality. Students and teachers' responses as well as class observations suggest that ACMHE's pedagogical approach based on critical and feminist pedagogies and the curricular design grounded on cognitive dissonance and the prototype model shaped students' attitudes and beliefs around gender equality. Developing attitudes that promote gender equality is equally important for boys and girls. However, reaching boys can be more challenging given that they enjoy certain privileges for being boys and they might not feel an urgency for demanding gender equality. Moreover, in many cases, promoting gender equality can be perceived as a threat to their status quo. For this reason, engaging boys in efforts to promote gender equality and prevent CM is crucial. The results of this section suggest that ACMHE's curriculum has been instrumental in helping male students understand the importance

of gender equality and the consequences of the lack thereof. Data presented in this segment provides evidence that ACMHE's curriculum has provided a context in which boys were able to develop a greater awareness of the importance of gender equality and develop attitudes that are conducive to more equitable relationships. This is a salient result given that most interventions do not include boys or examine boys' attitudes towards issues such as gender inequality or CM.

Lack of awareness about the biological, psychosocial, and cognitive changes that occur during adolescence.

During our needs assessment, we found a lack of understanding about the role that the biological, psychosocial, and cognitive changes that teenagers experience during adolescence have on students' lives. For example, we found that girls are more controlled and surveilled by their parents due to their new reproductive capacities and emerging desire to develop intimate relationships. ACMHE intended to expose students to information that would help them understand the biological, cognitive, and psychosocial changes that they go through during adolescence. Table 6.3 describes how ACMHE's theory of action aimed to address this lack of awareness:

Table 6.3. *Lack of Awareness about the Changes that Occur During Adolescence: Problem Description, Desired Goals, and Scenario Used to Examine Knowledge and Attitude Outcomes.*	
Problem 2: Lack of awareness about the biological, psychosocial, and cognitive changes that occur during adolescence	
Description of problem	- Due to shame, families and communities do not talk openly about puberty. - Adolescents are not aware of the biological, cognitive, and social changes they experience. - Stigma about girls' desire for intimacy during adolescence
Goal	Increase knowledge about puberty to: - Develop an understanding of the biological processes that adolescents go through so that they are aware of their capacity to reproduce. - Normalize attraction to the opposite sex as a result of the biological and psychosocial social implications of puberty. - Change beliefs and attitudes about girls' desire for intimacy as something natural and caused by biological changes.
Scenario	Scenario 3 Gabriela is a 13-year-old adolescent student from 7th grade in SAT. When Gabriela was in 6th grade she was never interested in playing with her male

	friends. However, now that she's 13 many things have changed. Gabriela cares a lot about her looks, especially because she likes a boy from 9th grade and enjoys spending time with him.
Questions	a. Why do you think Gabriela went from not wanting to hang with boys to feeling attracted by one? b. If someone was criticizing Gabriela for feeling this attraction for a boy, what would you say to the person criticizing her?

The first question examined whether students could explain Gabriela's behavior as a result of the biological and psychosocial changes that occur during puberty. As shown in Figure 6.4, 65 % of students were able to explain Gabriela's behavioral changes using the concept of puberty. For instance, a 7th grade male student responded: **"**Because of physical changes. It could be puberty, as I said hormones and all of that, that's why she's attracted to boys".
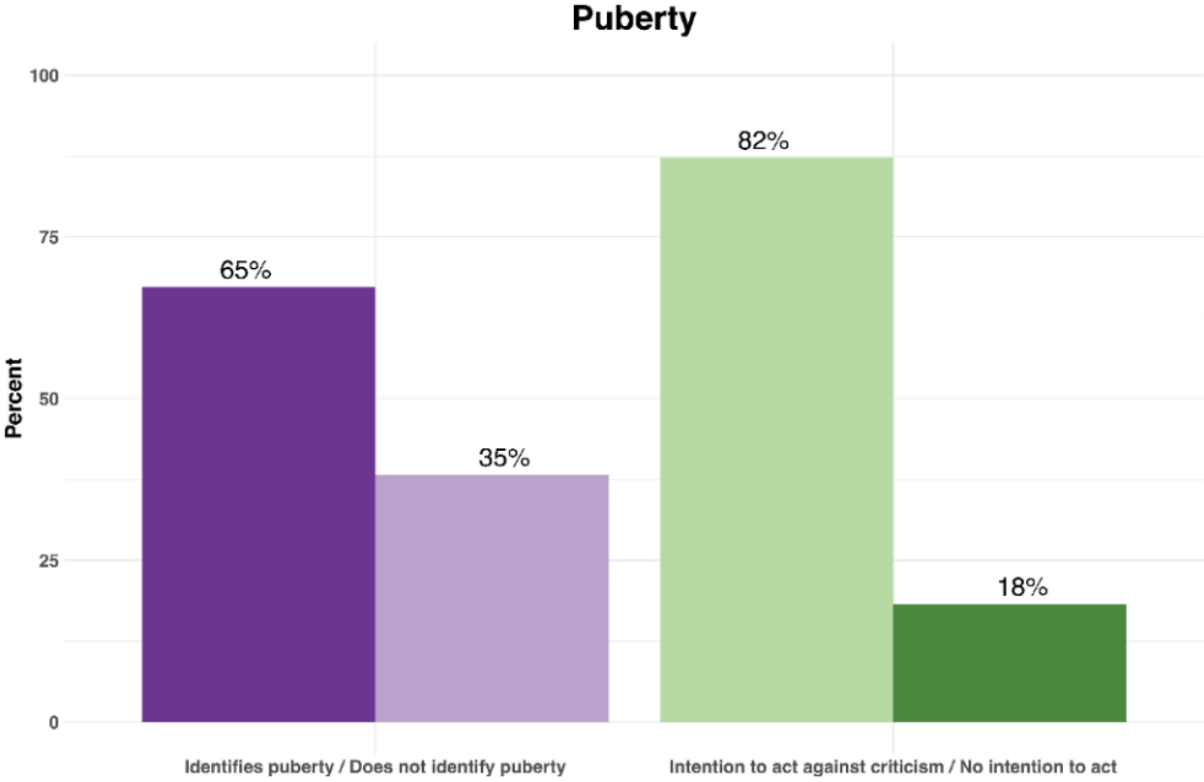
Figure 6.4. Use of the concept puberty.

As it was discussed in Chapter 4, girls experience puberty in a social context that limits their mobility and their socialization opportunities due to the anxiety that their emerging need for intimacy and their capacity for sexual reproduction creates in their parents and other community

members. Girls are criticized if they are seen hanging out with boys or if they have boyfriends. The second question aimed to examine what students would do if someone criticized Gabriela. Eighty-two percent of students also said that they would act against criticism directed towards Gabriela. Most of these students explained that they would defend Gabriela by saying that the attraction she was feeling was normal. A 7th grade female student stated that she would tell the person criticizing Gabriela that "she should not be criticizing her because it is something normal during adolescence that it is nothing out of this world". The lessons about puberty sought to normalize attraction and frame it as part of one of the changes that occur during adolescence and challenge the fixation on girls' behavior by parents, peers, and community members. Therefore, this normalization of attraction that these results suggest has important implications for helping students have a less stressful adolescence experience by having a greater understanding of the changes their bodies go through and the impact of these changes in their emotions and social interactions.

ACMHE was successful in helping students understand the biological and psychosocial changes they experience during adolescence. For example, these two students were able to explain and understand better the changes they experienced:

> **7th grade student (F)**: When I was 12 years old, I menstruated, and I was wondering what that meant. But when I read about puberty and said that one turns into adolescent and our bodies start to change, I was able to understand what happened to me. I then told my grandmother. At first, I did not want to tell her, I was embarrassed and really did not know what that was. I thought I was sick, but when I learned about puberty, I understood better.

> **Interviewer:** Why do you think Gabriela went from not wanting to hang with boys to feeling attracted by one?
> **7th grade student (F):** Because of the changes experienced during puberty maybe. For example, when I was younger I was interested in boys just as friends…now I hang out with boys from all grades, from my classmates to 11th graders and if before I was not interested in boys, now I start to see them differently.

Learning about puberty and its social implications is something new for students, even the older ones. During a focus group, I asked 11th grade students if someone had talked to them about puberty before. Out of 15 students, only three raised their hands and a male student added: "My parents have talked to me about this but not with the depth we are learning here". These students' age ranged from 16 to 18 years old, and only three have had the opportunity to openly talk about the changes that happen during puberty. This reflects the silence that revolves around topics like this in these communities. Even teachers reported a greater understanding of puberty. For instance, when asked if this intervention had helped him at a personal level in any way, this male tutor responded:

> **Interviewer:** From a personal perspective, do you consider that these workbooks helped you understand child marriage?
> **Tutor (M):** A lot. I am going to talk about something specific: puberty. I had knowledge about the biological aspects of puberty because of my major in college. However, I never had the opportunity to establish the relationship between puberty and child marriage and teen pregnancy. Of course, I knew about the biological processes adolescents go through. But I never had the opportunity to be prompted to connect this to how puberty influences girls' decisions to marry and how this affects their lives. How they are abused and tricked and how adult persons take advantage of this stage to deceive them.

During my observations of peer teaching, I was able to verify that 11th graders were able to bring this new framework to the classroom to understand changes during adolescence. I observed the peer-to-peer implementation of Lesson 7 of the workbook Youth with Equality. Students (especially female) used this opportunity to challenge notions about girls' physical changes. For instance, a female peer educator shared that when girls start experiencing those changes, some people think these changes occur as a sign of sexual initiation. In the next passage, the 11th grader is able to debunk this myth by explaining that these changes are a result of puberty:

> **11th grade student 1 (F):** When a girl starts experiencing puberty, she starts acting differently. Society starts judging her and say "that girl is so *loca*"…That is when they notice that we are longer kids and we are becoming adolescents, we go through what we call puberty.
> **11th grade student 2 (F):** When girls start experiencing those changes, society says "that girl already did it".
> **9th grade student 1 (M):** Did what?
> **11th grade student 1 (F):** That she had sex! In this *machista* society, when a girl starts experiencing puberty, experiencing physical changes, they do not see it as if she is going through a stage. Instead, they assume she started having sexual relations. And that is not the case. She is going through puberty. She is no longer a girl and starts becoming an adolescent, she experiences many changes in her body.
> **Teacher (M):** Her breast start growing and her hips widen…

Critical feminist pedagogy (English and Irving, 2015) stresses the importance of women's leadership to challenge gender inequality. The excerpt above exemplifies how ACMHE's curriculum and its implementation provided spaces and opportunities for girls to challenge inequality and myths about puberty. Puberty is a stressful period for girls not only because of the biological, cognitive, and psychosocial changes they are experiencing, but also for the social environment in which they experience these changes. A better understanding about these changes, has the potential of easing adolescents' experiences with the biological, cognitive, and psychosocial changes they are going through.

According to the results of our evaluation, most students were able to identify puberty as a reason why adolescents experience biological and psychosocial changes such as attraction to others. The results of my observations show that this is not a coincidence. This is a result of good training of peer educators. During a training of 11th graders, a male student expressed a common notion in these communities that describes girls in this developmental stage as "*locas*", meaning that they are "easy" or too "flirty". This intervention generated a discussion about the role that puberty plays in behavioral changes of adolescents and why terms like these should not be used to describe girls' behaviors. This exchange shows how puberty as discussed in the text Youth with Equality served as a new framework to understand these behaviors:

> **11th grade student 1 (M):** Teacher, there is an interesting relationship between puberty, pregnancy, and marriage. Well, thanks to puberty, that girl is around acting like a "*loca".*
> **Teacher (F):** Do you think it is appropriate to say that a girl is acting like a "*loca*".
> **11th grade student 2 (M):** 2: No. She's acting crazy.
> **Teacher (F):** Why do you think she behaves like that? Because she is in that phase, because we like to judge others and say that girls are acting like *locas* but it is not that they want to act inappropriately.
> **11th grade student 1 (M):** It's thanks to puberty.
> **Teacher (F):** She is simply going through changes that you have already studied. You need to know how to approach this with the younger students. You can't make them uncomfortable saying "these girls are acting like *locas".* We know what is behind all of this, girls go through changes…and maybe because of lack of

knowledge people interpret it in a wrong way like your classmate here. That is not the right way, girls and boys have behavioral changes because they are going through biological changes…we should not say inappropriate things like she's acting like a *loca*…We should help them, help them understand what is happening with their bodies.

At the end of the discussion of this lesson, the two teachers who were training the 11th grade students, were careful in letting 11th graders know that they should not use these pejorative terms and that they should instead help younger students understand why these behavioral changes happen:

Teacher (M): So, what are you going to say if your see a girl that is starting to like boys and she is only 14 years?

11th grade student 4 (F): That she is going through puberty.

11th grade student 5 (M): That it is a normal thing in adolescents like her.

Teacher (M): Correct. It is a result of a process she is going through.

11th grade student 6 (F): That her hormones are going crazy.

Teacher (F): Exactly. It is a process.

Teacher (M): In that moment she feels attraction towards boys, and hormones are the cause of that attraction. Do you think sexual appetite is greater or less?

11th grade students: Greater.

ACMHE's curriculum was successful in helping students (and even tutors) understand the changes that individuals experience during adolescence and its connections to CM. In addition to examining the biological aspect of puberty, ACMHE's curriculum addresses the cognitive and psychosocial aspects of this stage, components that most puberty education programs around the world lack (Crockett et al., 2019). Moreover, responses of participants suggest that ACMHE's curriculum was instrumental in normalizing the biological (e.g. understanding menarche), and psychosocial (e.g. being attracted to others) changes that occur during puberty, "normalizing these changes, potentially reducing their stressfulness for youth" (Crockett et al., 2019, p. 185). More importantly, this was achieved through a pedagogical approach that emphasizes gender equality and challenges expectations of marianismo, acknowledges the genderedness of all social relations (Shrewsbury, 1993), and that puts girls in positions of leadership to challenge gender inequality (e.g. girls acting as peer educators and challenging myths around puberty) (English and Irving 2015).

Girls are not aware of the consequences of CM and hold false beliefs about CM/ Impulsive decision-making processes regarding romantic relationships.

This section addresses two problems: the lack of awareness about the consequences of CM and the false beliefs that girls have about CM and the agency that girls exercise which is influenced by the impulsive decision-making processes common during adolescence. Many girls feel trapped due to the gender norms that condition their freedom to socialize and engage in social relationships. This converges with their new sense of autonomy, desire for intimacy, and ability to think about abstract concepts such as love and marriage. Moreover, these two elements exist within a context were marriage and motherhood are highly valued and few alternative life options for girls are available. As such, girls' decision to marry is influenced by expectations of freedom (that they do not get in their homes) and an opportunity to engage in a valuable role in society. However, more often than not, girls find themselves more limited in

their mobility and opportunities to socialize and end up not happy about their decision to marry so young. Table 6.4 describes this problem:

Table 6.4. *Girls are not Aware about the Consequences of CM/Impulsive Decision-Making: Problem Description, Desired Goals, and Scenario Used to Examine Knowledge and Attitude Outcomes.*	
Problem 3: Girls are not aware of the consequences of CM and hold false beliefs about CM. **Problem 4. Impulsive decision-making processes regarding romantic relationships (Agency):**	
Description of problem 3	• Girls enter unions thinking they will have more freedom than in their homes. • Girls enter unions with idealized notions of marriage without realizing that these notions might be false. • Girls are not aware of how hard marriage motherhood can be.
Description of problem 4	• Girls exercise agency in their decision to marry. That is, they are not being forced to do so. • Girls elope with their partners without being able to explain their reasoning behind their decision. • These impulsive decision-making processes are influenced by the cognitive changes that individuals experience during adolescence. • Girls are not happy about their decision to elope with their partners years later. • Girls elope with their partners without knowing them well (short courtship). • Girls see marriage as the only way to engage in a romantic relationship freely.
Goal problem 3	Strengthen decision-making processes by: • Providing students with the necessary information so that they can make informed decision regarding CM and their romantic relationships. • Providing students with representations of girls and boys that engage in this behavior to promote cognitive dissonance (is this what you mean?). `
Goal problem 4	Strengthen students' behavioral willingness against CM by: • Improving students' capacity for critical thinking about their future/ romantic relationships

	• Expanding students' images of risk and non-risk takers to inform their decision-making processes regarding CM. • Expanding students' values, beliefs, and experiences to make informed decisions about CM.
Scenario	Scenario 2 Melissa is a 16-year-old SAT student. Melissa has a boyfriend, but her parents do not know about it. Her boyfriend's name is Carlos. He is 24 years old and works as a farmer. Melissa and Carlos have been in a relationship for three months. Carlos asked Melissa to move in together. Melissa thinks that if she goes with Carlos, she will have more freedom, since she thinks her parents control her too much, and that she'll finally be able to have a relationship with Carlos without having to hide. She also believes that she will have more economic stability since Carlos has a job. Melissa is seriously considering accepting Carlos' proposal.
Questions	a. What do you think about Carlos wanting to elope with Melissa, and the fact that she is considering it? b. If Melissa decided to elope with Carlos, what do you think her life would be like? Would it be the way she imagines it? c. What would you recommend to Melissa and Carlos about their decision to elope? d. If you were Melissa/Carlos, what would you do? (Boys were asked what they would do if they were Carlos and girls were asked what they would do if they were Melissa).

The first question examined students' reaction towards Carlos and Melissa's intention to elope. Fifty-five of the 58 students interviewed did not agree with Carlos and Melissa's plan to elope. Figure 6.5 presents these results.

Child marriage scenario
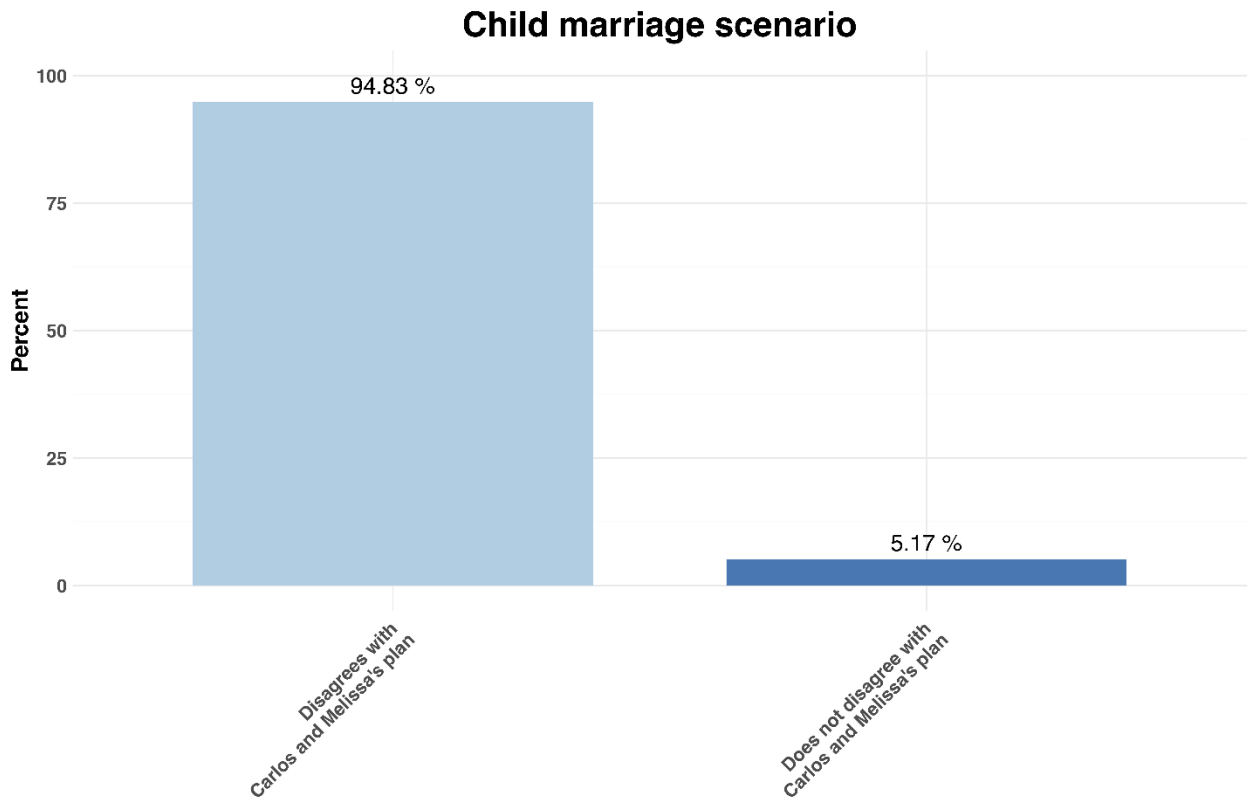
Figure 6.5. Reaction towards CM scenario.

For example, this 7th grade female stated:

> **7th grade student (F):** Well for me it's not right. She should've said "No. I don't want to get married at an early age. I'm too young, I need to keep studying to get my degree and be able to work and if you want, you can get another girl"...Carlos should've also waited a couple of years so that she could finish school...She thinks she will have more freedom and it's not like that, it's better to stay with our parents.

Twenty-five of the 55 students who did not agree with Carlos and Melissa's plan to elope mentioned the age difference between them as a reason for believing that it was wrong. For instance, this 11th grade female student based her response on the age difference between Carlos and Melissa:

> **11th grade student (F)**: Carlos is eight years older than her. He is 24 and she is 16. And she is very wrong if she thinks she will have more freedom. When men are older than women, they want them submissive, girls are on their way to hell…so she better think hard about it.

The second question asked students how they imagined Melissa's life would be if she eloped with Carlos. Most students used the word "control" to describe how Melissa's life would be if she accepted Carlos' proposal. The second most common response was that Melissa would lose her opportunity to continue with her education. Students also equated marriage with

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unhappiness, the cycle of poverty, and the burden of the responsibilities that girls would have to undertake as wives and mothers. Like the 11th grade student quoted above, most students were able to identify Melissa's false belief that eloping with her partner would give her more freedom and allow her to enjoy her relationship. A male student commented:

> **7th grade student (M):** It may be worse. She says her parents give her little freedom, well then if she leaves with her husband, she will have no freedom because she will have to clean the house, do the dishes. There are also cases that if the man still has his mom, she will even have to take care of her mother in law.

> **7th grade student (F)**: If she elopes and gets married, she will not have the freedom to visit her friends and her family…Sometimes men are harsh. A wife might say "I want to go out" and they say, "No. Women belong home, they should not be on the streets".

The fact that adolescents relate CM to suffering, control, submissiveness, lack of freedom, household work responsibilities, and lack of access to education has important implications for adolescents' decision-making processes. This means that ACMHE was successful in addressing the false beliefs connected to CM at the same time that it developed a rich image repertoire from which they can inform their decisions regarding CM. The responses above are "images of risk takers" (Gerrard et al., 2008, p. 36). The more unfavorable the image/representation, the less willing are adolescents to accept the social consequences connected to a specific behavior. Throughout the workbooks, lessons included case studies that portrayed adolescents who engaged in risky and healthy behaviors. During the focus groups and interviews, students shared that case studies helped them realize how the lives of students were affected by CM. For instance, during a focus group that I conducted while implementation was ongoing, I asked students what they liked about the workbooks. A 7th grade male student responded:

> **Moderator:** What lesson did the boys like?
> **7th grade student 1 (M)**: Page 13. The story of Leticia
> **Moderator:** Ok you liked the case studies…you liked the stories
> **7th grade student 2 (M)**: It says the girl got married at an early age and left her studies and all of that.
> **7th grade student 1 (M)**: And she thought she was going to be free
> **Moderator**: Why did you like it?
> **7th grade student 1 (M)**: I liked it because it teaches boys and girls not to marry at an early age, because sometimes we think we are going to be free. There are girls that get bored of their parents and when they marry its more complicated…they don't even have time to go out or study.

During class observations and focus groups, I was able to note how effective case studies are in a) providing students with thought-provoking content and questions, and b) generating cognitive representations of individuals who engage in certain behaviors. For instance, in the first lesson of the workbook Youth with Equality there is a case study that talks about Gladys, a girl who got married as an adolescent. Students dramatized her life story and responded the following questions (asked by the teacher who was accompanying 11th graders) about the dramatizations they have observed in class:

> **Teacher (F):** So, what just happened here?
> **7th grade student 1 (M):** She dropped out of school to go away with her partner
> **Teacher (F):** Very good.
> **7th grade student 2 (F):** She became pregnant and had a daughter.
> **Teacher (F):** And how did it end?

7ᵗʰ grade student 3 (F): She regretted it.
Teacher (F): Why did she regret it?
7ᵗʰ grade student 4 (M): She was too young.
7ᵗʰ grade student 1 (M): Her partner did not let her go out.
7ᵗʰ grade student 5 (F): She had too many responsibilities with her baby.

At the end of the class a peer educator asked:

11ᵗʰ grade student (F): What does Glady's story teach us?
7th grade student (F): That we should not marry at a young age and that we need to think about the consequences of a decision like that.

Teachers also noted the effectiveness of the scenarios included in the workbooks:

Interviewer: Do you consider that the workbooks have been effective in generating discussions that promote reflection among students?
Tutor (M): Yes. They have been very effective because these are themes that are relevant in these communities. For example, during class they would discuss and say "do you remember person "x" that experienced something similar?" So, they took the content from the workbook and relate it to what happens in real life.

ACMHE's curriculum was effective in providing case studies that portrayed images of risk takers. These social representations were also effective because they reflected the reality of the lives of persons of these communities. Case studies were base in real life stories that reflected the lives of people from the communities where students live gathered during 10 years of qualitative research (Murphy-Graham and Leal, 2015; Murphy-Graham et al., 2019) and during the needs assessment of this study. The purpose was to create narratives that helped students have representations of individuals who engage in certain behaviors (good and bad ones) and who lived in similar circumstances as they did so that these cognitive representations help them inform their decision-making processes.

The third question asked students what they would recommend Carlos and Melissa to do. Seventy-four percent of students recommended Melissa and Carlos to avoid eloping whereas 26 % suggested them to "think about it" and consider the consequences of their actions. These responses suggest that in addition to using risk images of individuals who enter CM, students are also taking into consideration a reasoned path to decision-making. According to Fishbein and Ajzen (2010), beliefs associated with a given behavior serve as a guide to respond/act toward a specific situation. The fact that students were making reference to "reflection" and place importance on thinking about the consequences of entering CM, suggests that they are engaging in reasoned action and heuristic paths to decision-making, both of which happen simultaneously (Gerrard et al., 2008). For instance, this 7th grade female student responded:

7ᵗʰ grade student (F): I would recommend that she trust her parents, to keep studying so she can have a brighter future. I would tell her to wait for an age in which she can reflect upon her decision better. In this way, she will not suffer when she marries at an early age, she will know how to defend herself.

The fourth and last question examined students' willingness to enter CM. Behavioral willingness refers to "an openness to engaging to risky behaviors" (Gerrard et al., 2008). The prototyope willingness model states that adolescent health risk behavior is usually volitional but

it is not always planned or intentional. In most cases, adolescents are presented with circumstances that facilitate risk behaviors and provide opportunities that adolescents did not plan on having. According to Gerrard et al., (2008), willingness measures should establish an opennes to engage in certain behavior instead of asking whether or not adolescents plan to engage in it. Adolescents should be provided with the opportunity to engage with the possibility of the risk behavior and frame the decision as the participants' choice. In this scenario, students were asked what their attitude towards Melissa's circumstance was, how they thought her life would be (this question addressed image of risk takers/false beliefs), and what they recommended others to do. The last question examined what they would do if they were in a situation similar to Carlos and Melissa.

Sixty-nine percent of students categorically said they would not enter a union if they were in a situation like Melissa or Carlos. This result is consistent with the negative descriptions that students attributed to individuals who entered CM. The following are some sample responses of female and male students from each grade in which ACMHE was implemented. These responses illustrate that knowledge about CM (e.g., the importance of age) and cognitive representations of risk takers (undertaking serious responsibilities, suffering) informed students' responses:

> **7th grade student (F):** I would not accept Carlos' proposal because I'm a minor and I have to study.
> **7th grade student (M):** I would let her reach her goals and I would get to know her well and that she knows me well to strengthen our relationship.
>
> **9th grade student (F):** I would not make that decision [to go with Carlos] …I want to be independent but not in the sense of going away with other person. I would like to be independent in the sense of graduating from school, getting a job, and if God allows it, then share my life with a person. But doing that? No. Because I do not know the type of suffering that I could go through if I eloped at a young age.
> **9th grade student (M):** With the knowledge I have now, I would let her study.
>
> **11th grade student (F):** I would reject him because I do not see myself capable of keeping up with a marriage or having children…I am not capable of handling that responsibility.
> **11th grade student (M):** I would say: "She is a minor, I would let her study and find someone my age".
> **11th grade student (M):** If I really liked her, I would wait for her, I would let her keep studying and when I get married, I would continue supporting her studies, because in that way we could have more economic stability if we both work.

These responses suggest that ACMHE's curriculum has been successful developing an awareness about a) the importance of age, b) the importance of education and life goals, c) the recognition of suffering and increased responsibility in early unions, and d) the importance of gender equality in romantic relationships. That is, students had a repertoire of reasons that informed their responses. Their responses were insightful, reasoned, and reflected the content developed in the workbooks.

Twenty-six percent of students were not clear as to what their reaction would be (11 of these 15 students said they would consult an adult to help them decide). For instance, a female 11th grader responded:

> **11th grade student (F):** Well, given that situation, if I were in a situation like that, I would seek advice from an adult that I know can give me a positive advice, a person who can give me a positive comment, someone I trust and that can tell me if the decision that I will make is good or bad.

Finally, only 5 % expressed that they would enter a union. This male student explained that given the circumstances of the scenario, he might ask Melissa to elope with him:

> **11th grade student (M):** Oh! That is a difficult one! Because you always feel like anxious about marrying someone and you do not give up easily and you do not think about the girl and her education.

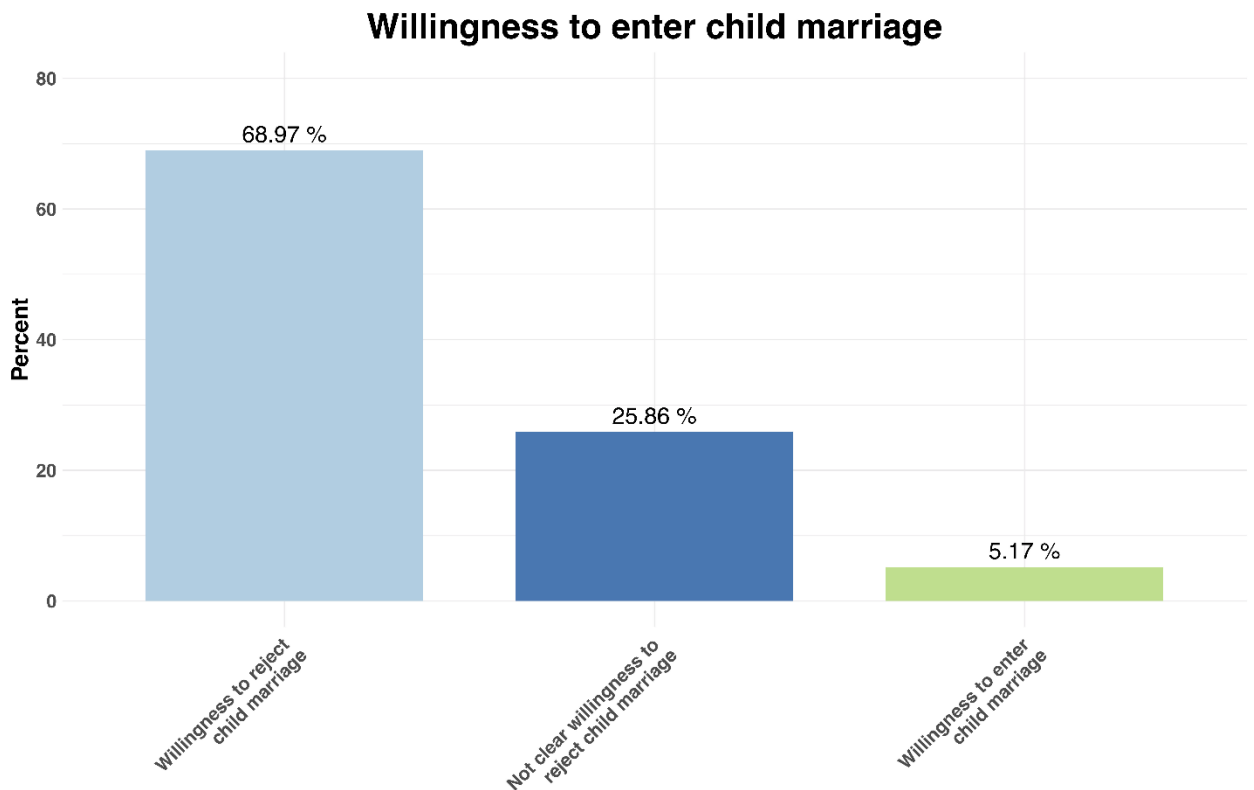Figure 6.6 summarizes Students' reported willingness to enter CM.

Willingness to enter child marriage

Figure 6.6. Students' reported willingness to enter CM.

It is important to note that the percentage of students who reported a willingness to reject CM is lower (69%) than the percentage of students who disagreed with Carlos and Melissa's plan to elope (95%). These results confirm the prototype willingness model assumption that "much risk behavior is not intended, and that adolescents often find themselves in situations that facilitate (but do not demand) risky behaviors…once in these situations, it is frequently not a reasoned decision making process, but rather their willingness that determines their behavior" (p. 36). That is, measuring willingness captures more accurately adolescents' dispositions to engage in risky behaviors. The results of this evaluation suggest that ACMHE's curriculum was successful in providing students with knowledge that informed their reasoned path (e.g. causes, consequences) and provided images of risk takers (e.g. greater responsibilities, control) that informed their responses. Ideally, this will shape and influence their willingness to enter CM in real life.
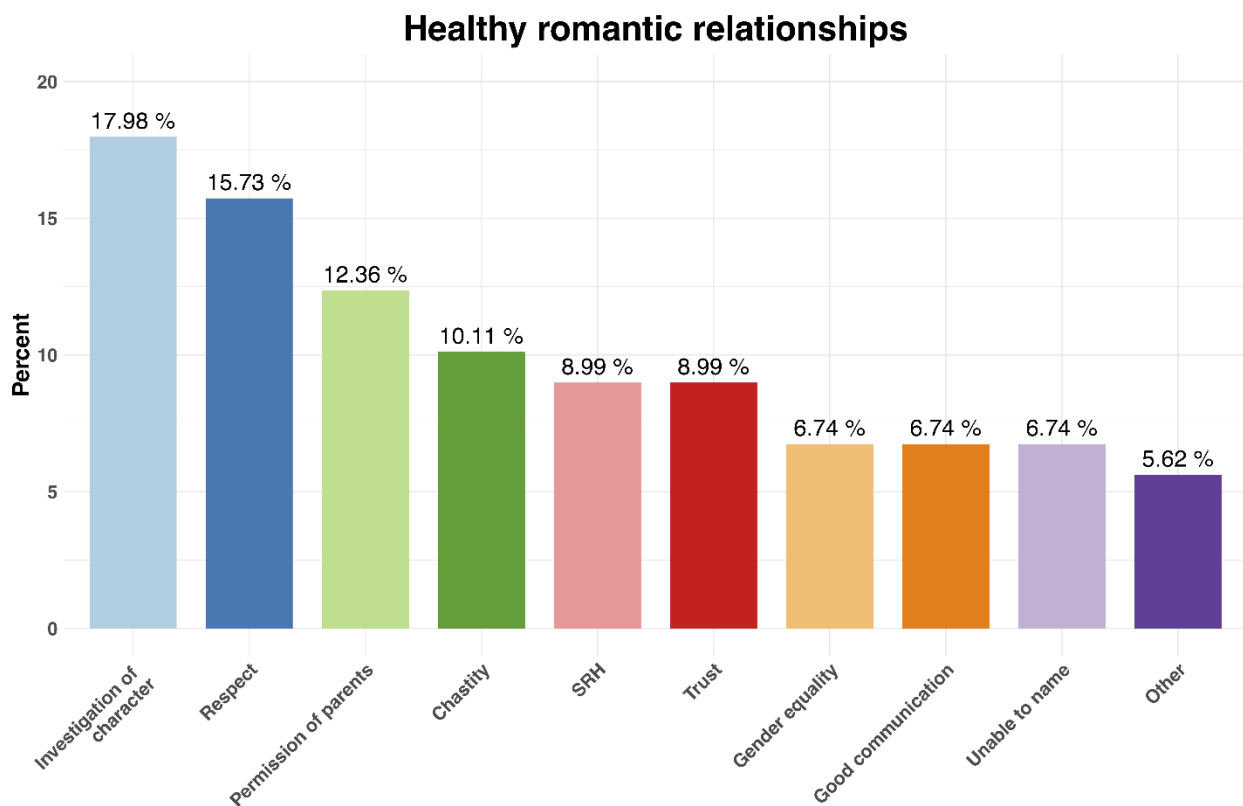
Prevalence of unhealthy romantic relationships.

ACMHE emphasizes the importance of equality within relationships given that age is not the only element that matters when it comes to relationships and marriage. The equality of these relationships is of utmost importance and are crucial in the quality of life of individuals. ACMHE intends to provide students with the skills and attitudes to engage in healthy and equitable relationships throughout their life span. Table 6.6 describes how this problem is addressed in ACMHE:

Table 6.6. *Prevalence of Unhealthy Relationships: Problem Description, Desired Goals, and Scenario used to Examine Knowledge and Attitude Outcomes.*	
Problem 6: Prevalence of unhealthy romantic relationships	
Description of problem	• Girls usually marry much older men who have greater social and economic capital than girls, putting them at disadvantage • Girls report not having a voice in their relationships • Boys replicate roles they are familiar with from their own families, and do not have space to critically examine machismo (something like this to ensure it is not all "on girls"
Goal	• Enhance students' willingness to engage in healthier/more equitable relationships. • Provide students with the necessary knowledge and confidence to become more assertive in their relationships.
Scenario A	Scenario 6 Let's imagine that your best friend told you she/he has a boyfriend/girlfriend. She/he is not a SAT student so (s)he has not studied the workbooks Youth with Purpose and Youth with Equality and knows that in SAT you've studied these workbooks, and that they talk about how to have healthy relationships and the qualities that people have to develop to achieve this type of relationship.
Questions scenario A	From what you've learned in the workbooks, what advice would you give him/her to foster a healthy relationship?
Scenario B	Scenario 7 Let's imagine you have a boyfriend/girlfriend, and that like in any relationship there are things you don't like from him/her. For example, let's imagine that your boyfriend/girlfriend likes to control who you talk to on Facebook or on the phone and let's say you dislike that.

| Questions B | What would you do to solve the problem? |

This scenario aimed to address students' knowledge of the characteristics of healthy relationships. The most common response for scenario A was investigation of character, followed by respect, and permission of parents, all elements that were discussed in the workbooks. How to deal with sexual intimacy was also important for students. Some recommended being chaste and others recommended taking steps to protect themselves in case they decided to become sexually active. Figure 6.7 shows the results of scenario "A".

Healthy romantic relationships

17.98 % — Investigation of character
15.73 % — Respect
12.36 % — Permission of parents
10.11 % — Chastity
8.99 % — SRH
8.99 % — Trust
6.74 % — Gender equality
6.74 % — Good communication
6.74 % — Unable to name
5.62 % — Other

Figure 6.8. Responses about the characteristics of healthy relationships.

Overall, the responses from this scenario were disperse and students did not seem to have appropriated this knowledge to the same extent as the themes discussed earlier. Students were not as confident responding to this scenario as they were with the previous scenarios. The following response from a female 11th grade female student was an "ideal" response: "Take the time to know each other, not have sexual relations before marriage, consult each other to take decisions, and gender equality".

Investigation of character, consultation between the couple, and gender equality were central themes in the lessons that addressed this theme. A response like the one above listed key themes that ideally would influence students' relationships in the present and the future.

However, responses like this were unusual. Furthermore, the fact that gender equality was not a common response is a shortcoming as equality within relationships was a central aspect of the design. Ideally, this would have been the most common response. Instead, most responses were vague and did not name or expand upon key concepts discussed in the lessons. For instance, another 7th grade female student provided the following response: "That they should have healthy relationships and they should not fail in life. They should not talk about eloping, not have sex at an early age, and support her girlfriend so that she doesn't not fail in life".

Unlike responses from previous scenarios, most students' responses for this scenario were not based on a deep understanding of concepts and their responses were not always traceable to the content of the lessons studied (e.g. characters of case studies, key concepts). In most cases, students struggled to provide more than two characteristics even though there are three lessons in Youth with Purpose and Youth with Equality that specifically discuss a long list of characteristics of healthy relationships. This could be due to two reasons:

1) The scenario was not well designed. This scenario was in some way asking to list characteristics. This required students to have memorized a long list of characteristics discussed in the workbooks. Perhaps changing this scenario to analyze a concrete dynamic of a couple would have elicited more analytic responses.
2) The workbooks were not successful in developing case studies that helped students remember these characteristics. With most scenarios, students used the case studies developed in the workbooks to explain their reasoning. For example, many mentioned the case of Leticia, a girl who eloped with her boyfriend to explain why Melissa from scenario 2 should not marry. Students also used or made references about a female soldier and a male cook to explain why they changed their views about gender norms.

Most students disagreed with the behavior portrayed in scenario "B" that depicted control in a romantic relationship. As shown in figure 6.8, 67 % of students said they would use dialogue to solve this issue.
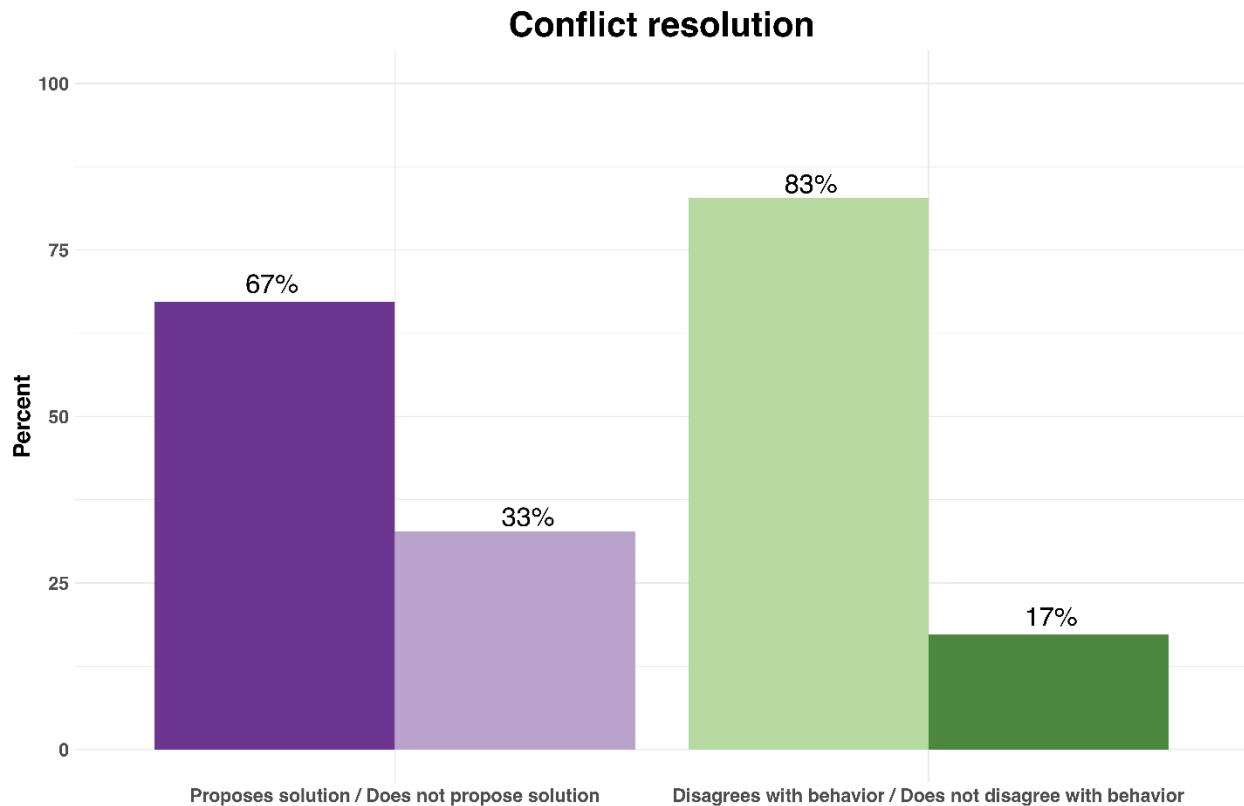
Conflict resolution

Figure 6.8. Responses on how to solve conflict in a romantic relationship.

However, although dialogue *is* the correct response, we were expecting students to use an important concept in their responses: assertiveness. This scenario is very similar to an activity of lesson 9 in the workbook Youth with Equality. In this lesson, assertiveness is discussed and the steps to develop an assertive dialogue are presented. Students are then asked to create dramatizations on how to be assertive based on a set of scenarios. One of the scenarios presented in lesson 9 has the same characteristics of the scenario "B". Even though this is a scenario that students had been exposed to in the past, students did not mention assertiveness in their responses. Again, we believe this is connected to the absence of case studies in this lesson.

This flaw in the design of this lesson was also evident during class observations. During one of my observations, students teamed up in couples to develop a conversation that followed the steps of an assertive dialogue. The workbook describes four steps to an assertive dialogue: a) describe the concrete facts, b) share your thoughts and feelings, c) ask explicitly what you want the other person to do, and d) state the consequences of what will happen if the other person agrees to what you have requested. Despite the steps described in the workbook, students were not able to follow them during this activity. When they were asked to present their dialogues, these were aggressive (yelling and vivid body language) and could be described more like fights than calmed, assertive dialogues. One of the dramatizations presented a boy who disliked the fact that his girlfriend was always checking his phone. After expressing his discontent, he broke up

with his girlfriend without completing the last two steps- or even letting the girlfriend talk. After this dramatization, the teacher (who was training the 11th graders) expressed his surprised about what they had presented:

> **Teacher (M):** Well, but we know that is not the solution, right? I thought you would ask her not to check your phone.
> **11th grade student (F):** Yeah, that boyfriend had no patience!
> **Teacher (M):** We will not present a drama like that to 7th and 9th graders, right? We will teach them that we can come to agreements without having to end the relationship. I really hope you do it the right way. We cannot teach students that they have to finish their relationships at the first problem they have.

From this episode, it can be inferred that this concept was not fully understood by 11th graders and therefore, it is likely that they were not successful in helping others understand it. It is possible that a case study that exemplified how two persons can have an assertive dialogue might have proven more efficient than asking students to apply such an abstract concept without proper scaffolding. Students were asked to dramatize something that they were not acquainted with, a very complex and abstract behavior. They were asked to role play something that they are not familiar with. Instead of asking students to make dramatizations about assertiveness, it is necessary to provide students with case studies that model this behavior and from which students can learn from.

There were no indications of cognitive dissonance or the use of social images or cognitive representations in the responses to these two scenarios. The lessons related to healthy romantic relationships were too focused on information related to characteristics of healthy relationships (reasoned action path) and not enough cognitive images that students could use as reference to characterize healthy and unhealthy romantic relationships. There is a need to improve the lessons that address healthy relationships to promote cognitive dissonance to challenge the unequal dynamics that prevail in romantic relationships and develop case studies to create images of risk takers and non-risk takers that can inform students' heuristic decision-making path regarding romantic relationships. As Gerrard et al. (2008) indicated, "The prototype model assumes that heuristic processing is the initial default, and analytic thoughts develop later" (p.54). The lessons related to the problem of unhealthy relationships need to be redesigned to reflect this order of heuristics processing followed by analytical driven content.

Lack of knowledge about legislation that protects minors and people's bodily integrity.

Even though there is legislation that prohibits CM and punishes crimes like statutory rape, these incidents are common in rural areas and are usually not reported to authorities. For this reason, ACMHE includes a lesson where legal protections are discussed. Table 6.5 describes the problem, change driver, theoretical background, and goal related to legislation knowledge.

Table 6.5.
Lack of Knowledge about Legislation: Problem Description, Desired Goals, and Scenario used to Examine Knowledge and Attitude utcomes.

| Problem 5: Lack of knowledge about the legislation that protects minors and people's bodily integrity	
Description of problem	• CM is prohibited by legislation, but parents and community members do not comply with legislation and local authorities do not enforce it. • Community members do not know about legislation that protects bodily integrity.
Goal	Promote a deeper understanding of the ways in which legislation and local law enforcement can protect minors and their bodily integrity so that they respect others' rights and make their own rights be respected.
Scenario	Scenario 8 Laura is a 16-year-old young woman. During the mornings she works in a small corner store in her community. The owner of the corner store is a 40-year old man named Mr. Pedro. Mr. Pedro started courting Laura and promised her he'd marry her if they started dating. Within few months from starting to work at the corner store Laura was pregnant. When Mr. Pedro got the news that Laura was pregnant, he denied responsibility for it.
Questions	a. Did Mr. Pedro incur in any crime? Why or why not? b. What can Laura or her parents do in this situation?

This scenario intended to examine students' knowledge about legislation that protects them. In response to this scenario, 88 % stated that Pedro committed a crime and 12 failed to do so, as described in Figure 6.9:

Recognition of illegal behavior
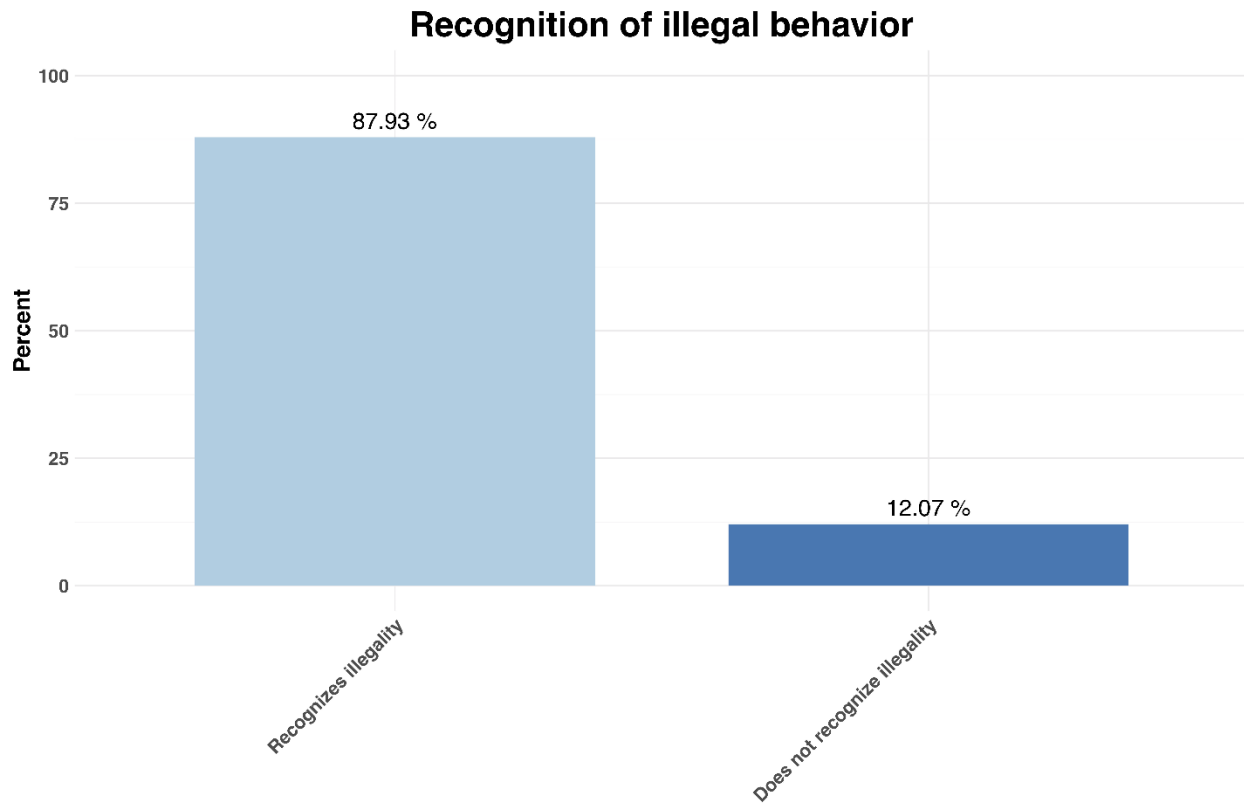
Figure 6.9. Recognition of illegal behavior

Of the 51 students that were able to establish the illegality of Pedro's behavior, 31 stated that the age difference between Pedro and Laura was an issue, 20 were able to point out that this scenario was statutory rape (or explained the role of deceit), and 38 responded that Laura and her parents could go to the authorities (police, judge, prosecutor) to make him be held accountable for his behavior. Figure 6.10 provides the percentages of these results.
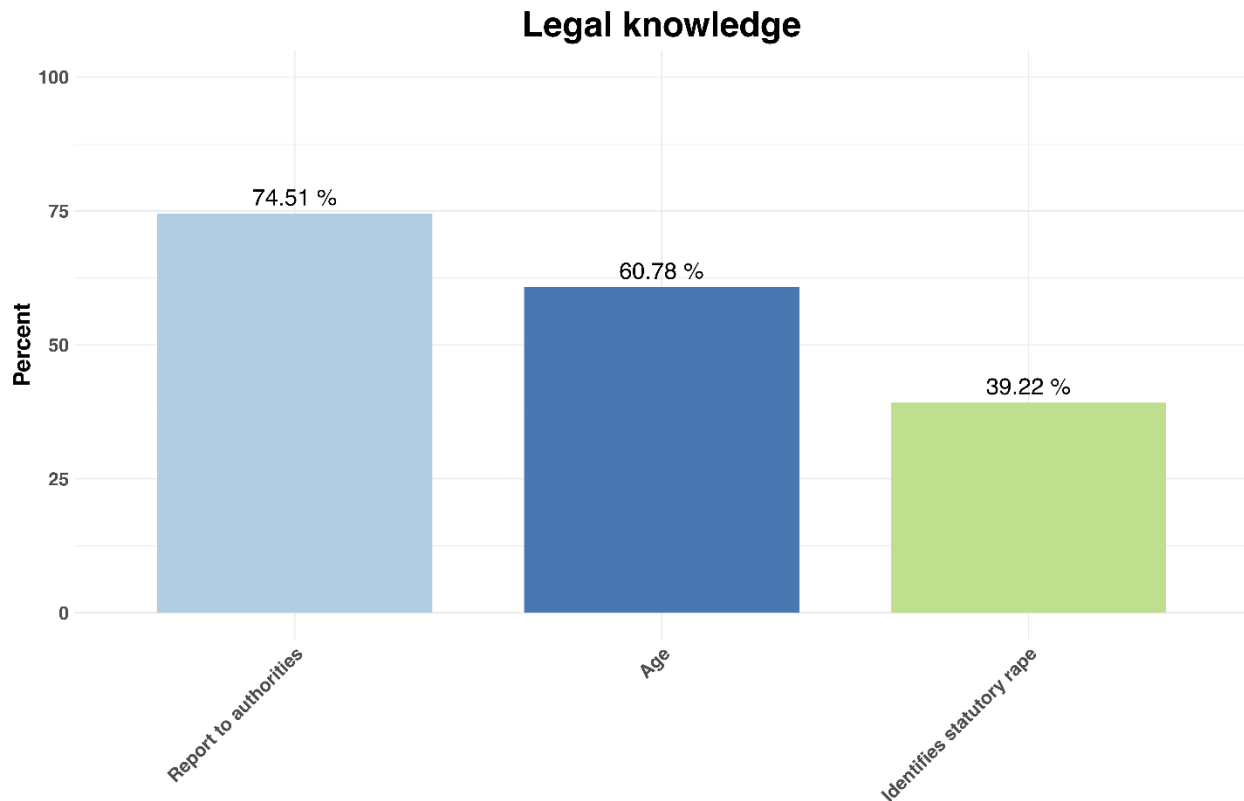
Legal knowledge

Figure 6.10. Examination of legal knowledge.

During interviews, students were confident in their responses and were able to use the knowledge they gained through the workbooks to respond. This female 7th grader was able to identify this criminal behavior and explain the components that characterize this crime:

> **7th grade student (F):** He is a grown up right?
> **Interviewer:** Yes, he is 40 and she is 16.
> **7th grade student (F):** Yes, he committed a crime. In first place, he is a grown-up, he deceived her, and doesn't want to be responsible. He must do 5 to 20 years in jail.
> **Interviewer:** Oh yeah? Did you memorize that?
> **7th grade student (F):** Yes
> **Interviewer:** What can Laura and her parents do about it?
> **7th grade student (F): ...**They could maybe talk with the police or with a lawyer and see if he [the lawyer] could do something.
> **Interviewer:** Has there been cases like this in your community?
> **7th grade student (F):** No, I haven't seen any.

Although the number of years in prison she stated are not correct, it reflects that the lesson got an important message across: these crimes will result in jail time. The lesson is arranged in a way that it presents a series of behaviors and actions that constitute crimes like rape, statutory rape, domestic violence, etc. For each crime, the lesson provides a description of the illegal behavior/act, an example, and the number years that a person who engages in these crimes will endure. The response of this student shows that despite being legal language and

difficult topics to talk about, this knowledge is allowing students to know their rights and their responsibilities. That is, they are protected by the law and should report if someone harms them but also that they should respect and protect others by not engaging in illegal behaviors that harm others.

Most students were able to articulate that reaching out to authorities for help was one important action to take. This is of particular importance because there is legislation that protects minors, but in most cases, people ignore it or do not know that authorities have a responsibility to help them even if this is a "private matter". In the following exchange, 11th graders dramatize during an 11th grade training a situation where citizens go to a lawyer asking for help. From this transcript of this dramatization, it is possible to infer that students had effectively learned the legal content from lesson 8 of the workbook Youth with Equality. At the end of this lesson, there are a set of case studies that students need to figure out what illicit act each scenario is describing. Although this exercise does not ask students to dramatize them, this class used these scenarios to develop short dramas:

> **Teacher (M):** Action!
> **11th grade student 1 (M):** Good afternoon. How are you?
> **11th grade student 2 (M):** Good afternoon, Counsellor.
> **11th grade student 1 (M):** Tell me, what is the problem?
> **11th grade student 3 (F):** We have a daughter who eloped and got married but she is underage.
> **11th grade student 2 (M):** She eloped voluntarily but she is only 13 years old. Is there a law that says that I can accuse the person who took her?
> **11th grade student 1 (M):** There is. This is why the law exists. We are here to help you.
> **11th grade student 3 (F):** Yes, she is underage and he can't be with an underage girl.
> **11th grade student 2 (M):** What is the law that protects girls under the age of 14?
> **11th grade student 1 (M):** The crime is called rape under special circumstances,
> **11th grade student 2 (M):** Even if she left by her own will?
> **11th grade student 1 (M):** Even if she left because she wanted to leave. She is underage. The law stipulates 15 to 20 years for this crime.
> **11th grade student 1 (M):** Does that mean I can accuse him?
> **11th grade student 1 (M):** Yes. You are within your rights.

Again, the use of cases studies was useful in helping students understand abstract concepts and in this case, simplify and synthesize dense content like legal information. In short, ACMHE's curriculum was effective in addressing the lack of knowledge about the legislative protections that protect minors and their bodily integrity.

Lack of knowledge and access to sexual reproductive health (SRH).

Results of the needs assessment indicate that adolescents lack access to SRH knowledge and services. During focus groups, some married students said that despite being married they had never been exposed to SRH education. For this reason, SRH is an important component of ACMHE's theory of action. Table 6.8 describes this problem and the desired goal.

Table 6.8.
 Lack of SRH Knowledge: Problem Description, Desired Goals, and Scenario Used to Examine Knowledge and Attitude Outcomes.

Problem 7: Lack of knowledge and access to sexual reproductive health (SRH)	
Description of problem	• No access to SRH information or services for youth. Sexual relations are reserved for adults within marriage and adolescents are not expected to need access to this kind of information and resources. • Even after marrying, girls report not being able to plan their families, in part due to lack of communication regarding family planning within the couple.
Goal	• Provide students with the necessary knowledge and attitudes to take charge of their sexual reproductive rights.
Scenario A	Scenario 9 Let's imagine that we are in the future and you just got married/ together with your partner.
Questions scenario A	What must you and your partner do to plan your children?
Scenario B	Scenario 10 Jenny and Pablo just got married. They don't want to have children right away.
Questions scenario B	What must Jenny and Pablo do to achieve their objective?

As Gerrard et al. (2008) suggested, "there is reason to believe that with age and experience, decision making tends to shift from a more reactive process to a more reasoned one...the relation between intention and behavior tends to strengthen" (p. 44). The first scenario for this theme examined students' intention to take actions in order to plan their children. The decision to examine intention and not willingness was influenced by the fact that this scenario was only presented to 9th and 11th graders, the oldest participants of this intervention, and as the previous quote suggests, intentions might be a more effective way to predict future behaviors with older and more mature participants. This scenario aimed to examine students' intentions to engage in specific actions to plan their children (e.g. communicate with partner, use contraceptive methods) in the future, a behavior that rarely occurs in these communities. During our needs assessment it was identified that girls got pregnant either because they did not know how to plan their children or because they did not use contraceptive methods adequately. In these communities, adolescents are expected not to engage in sexual relationships and therefore they are not expected to need these services or resources or talk openly about them openly. ACMHE intended to provide students with access to knowledge about contraceptives methods as well as incentivize students to take charge of their reproductive rights and needs. Namely, ACMHE aimed to encourage adolescents to use knowledge and resources to plan if, when, and how many children they want to have. During this evaluation, we were not interested in students' ability to

name or list contraceptive methods. We were more interested in students' intention of using resources and knowledge to plan their families.

The question for scenario "A" asked about what they would do in order to plan their children. Fifty-five percent of students provided responses related to economic stability and preparedness, 26 % responded that they would establish direct communication with their partner about family planning, and 18 % responded that they would take concrete actions such as going to a clinic or using contraceptive methods. Figure 6.11 describes these results.
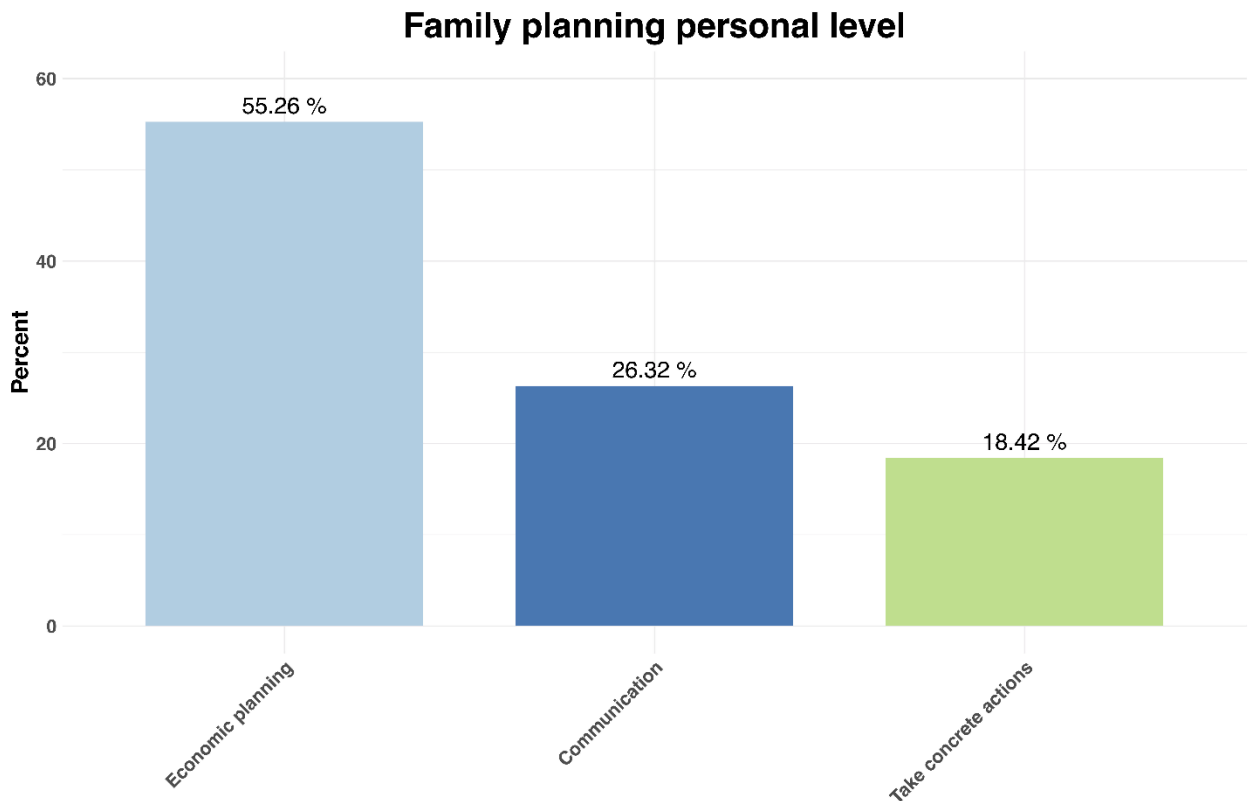
Family planning personal level

Figure 6.11. Responses of family planning at a personal level.

For instance, an 11th grade female student responded: "more than anything one has to check how one is financially because you can't have that bunch of kids in a bad financial situation". Another male 11th grade student provided a similar response: "we need to make sure we are the appropriate age to raise a kid and also take into account if we are economically ready to give a kid all he/she needs". Most students' responses revolved around having a job or having economic stability to raise a child. We used scenario "B" to examine a similar situation but involving third persons.

In scenario "A", when students were asked about what they would do to decide when to have kids, they focused on the economic aspects of that decision. However, when a similar question was asked about what others should do in scenario "B", they were more inclined to mention concrete actions such as using contraceptive methods or going to a clinic to get help. Over 60 % of students said that Jenny and Pablo from scenario "B" should use contraceptive methods or go to a clinic. Figure 6.12 describes the results.

Sexual reproductive health for family planning (others)
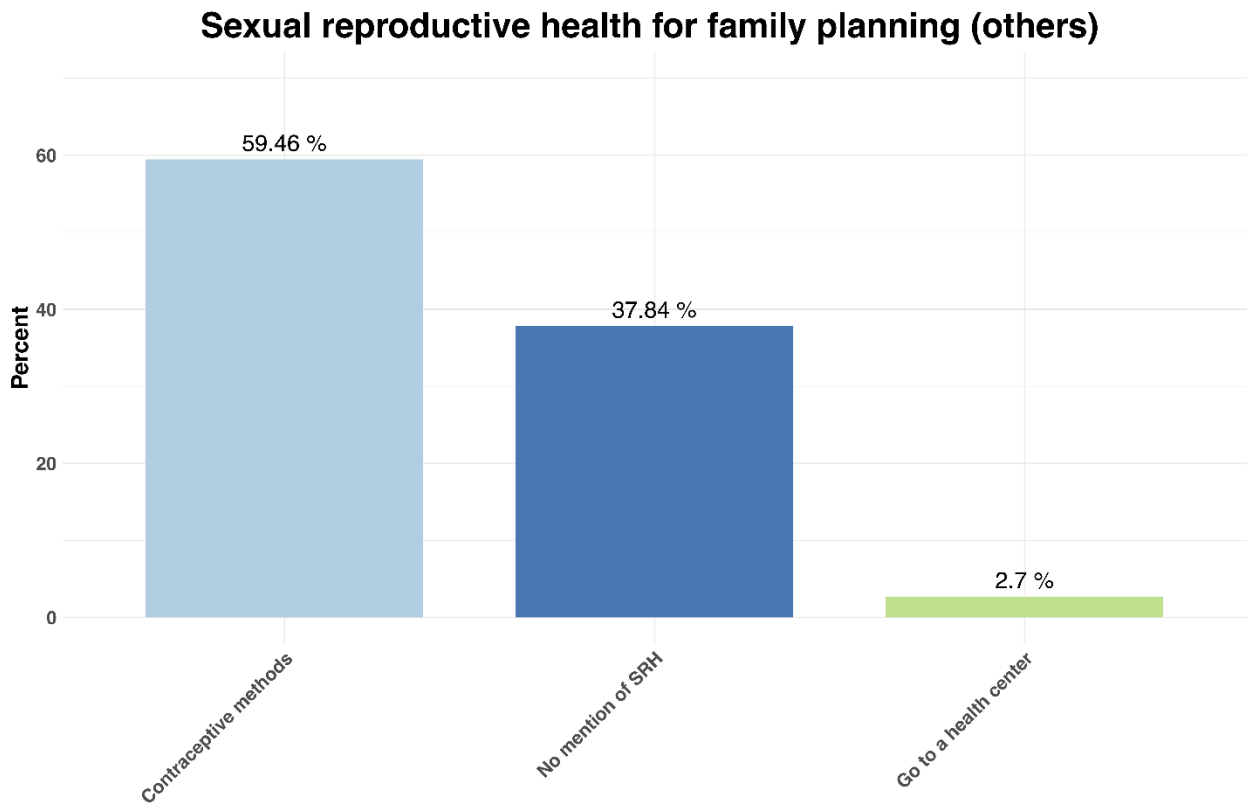
Figure 6.12. Responses of family planning for third persons.

Including SRH content was a contentious subject in ACMHE. Bayan, our collaborators, feared that such content could create animosity among parents. However, as it was described in chapter 5, after consultation with parents and students we found that it was content they would like to be exposed to. Even after confirming the desire of parents and students to have SRH content, there was still some anxiety from Bayan to talk about sex in non-conservative terms (e.g. contraceptives can be used to prevent pregnancies outside of marriage) since these communities hold very conservative values. However, to take into consideration Bayan's and some tutors' concerns about including content that was not culturally sensitive, both teams agreed to include SRH content if it was framed as a resource used within the institution of marriage. During the discussion of lesson 10 called "The importance of sexual reproductive health for a fulfilling life" a teacher stresses this caveat:

Teacher (M): It is important to note that sexual relations are not bad. They help marriages a lot, they protect marriage, they strengthen it. However, sexual relations must happen within the legal norms, within established norms. Not outside marriage, not at an early age, not forcefully. Sexual relations must happen inside marriage and it is important to emphasize that both persons involved should benefit from it.

During our exploratory research we found that in some cases, girls elope because they see it as the only accepted way to be sexually active. Being married is the socially conventional way to have a partner without having to hide or endure social scrutiny. In some way, by reinforcing this exclusiveness of sex for marriage, the workbooks were reinforcing this idea. For this reason, the scenario "A" created for this theme asked students what they would do if they were married and wanted to plan their kids. A question of sex outside of marriage would have been incoherent with the content of the workbooks. Our findings suggest that most students did not respond that they would perform actions to access a health clinic or use contraceptive methods despite emphasis of these behaviors in the workbooks. Nonetheless, when asked about what others should do to avoid having children, almost 60% of students responded that they should either visit a clinic or use contraceptive methods. It is possible that the emphasis on sexual reproductive health within the context of marriage might contribute to these students' perception that that kind of knowledge/behavior is reserved for others (who are older or already married) and does not necessarily apply to them. When asked to respond what they would do in a specific circumstance, they did not apply the knowledge they gained to themselves. Additionally, there was a strong component on chastity in the workbook Youth with Purpose, a very well received and valued concept in these communities. It is also possible that the importance placed on chastity both in Youth with Puropose and in the classroom sent the message that chastity is the ideal (and maybe only) behavior expected from them. Unfortunately, beliefs like this could leave adolescents unprepared to take control of their sexual and reproductive lives outside of marriage. It is important to note, however, that students reported that lessons about chastity and SRH were some of their favorite lessons. Hence, both themes are important and valued, but there is a need to find more effective ways to present these two topics in a way that they are not in tension with each other.

Removing the lesson and emphasis on chastity is not an option for two reasons. In the first place, chastity or abstinence is and should be part of comprehensive education sexuality content (Planned Parenthood, 2017). Students should be presented with a set of choices from which they can choose in an informed and responsible way including being chaste or sexually active. Second, the emphasis on chastity served as a protective shield for the SRH content. During the evaluation nobody complained about the inclusion of SRH content. In part, this is because there is an emphasis on chastity.

Therefore, there is a tension between the benefits and limitations that including chastity involves. In ACMHE's next iteration, there must be an effort to incorporate content, discussions, and case studies that allows for a less rigid idea of the use of contraceptive methods. It is possible that lessons could be strengthen by including more case studies modeling the concrete actions that show how individuals can engage in effective family planning. These case studies, however, should reflect a diversity of role models (e.g. young, old, married, single, etc.). This

diversity of case studies should be accompanied by a component of personal choice and respect for other's choices. This will not be an easy task and will require the different actors of this intervention (researchers, practitioners, students) to have frank discussions and open minds.

The tension identified in this evaluation, however, should not erase a great achievement. The inclusion of SRH is a great step forward. Even with the limitations that have been discussed, students had, for the first time, access to a workbook that contained most elements of a comprehensive sexuality education (CSE). It is important to note that this inclusion was negotiated, approved, and celebrated by most actors, especially students. The collaborative effort that resulted in these workbooks is a major achievement, especially in a context where this kind of content is highly contested and where not even the Secretary of Education has been able to implement their own curriculum on SRH (Iglesia Católica tampoco avala guías sexuales [Catholic Church does not endorse sexual guides either], 2018).

Poor communication with parents.

Adolescence and its changes sometimes put a strain in parent-child relationships. Tensions become more problematic in a context where puberty is not well-understood and the expectations on girls' behaviors put entire families under the spotlight. Table 6.10 describes this problem and the way ACMHE addresses it.

Table 6.10.
Poor Communication with Parents: Description of Problem and Goal.

Problem 8: Poor communication with parents	
Description of problem	• Students report having distant relationship with parents. • Girls' relationships with parents become even more distant during adolescence as girls' emerging desire for intimacy and autonomy creates fear amongst parents that they could become pregnant or elope with partners. • Parents treat girls and boys differently, especially with regards to mobility and freedom.
Goal	Provide parents with knowledge and skills to: • Improve communication with their children. • Understand the changes adolescents go through so that they can help their children transition to this phase. • Prevent CM by communicating with their children about the causes and consequences of CM.
Scenario	N/A
Questions	N/A

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An important element of ACMHE is its component for parents. A workbook was developed for parents and this was incorporated into *escuela para padres* [school for parents] a national strategy in public schools of Honduras to reach parents. *Escuelas para padres* meet once every

month for four hours and are led by teachers (or tutors in SAT's case). This element of ACMHE was not evaluated since the unit of analysis of this evaluation are students. However, we did conduct interviews with parents, and although we cannot evaluate knowledge or effectiveness of learning processes, we did ask them about their experience with the workbooks. All parents interviewed not only approved of ACMHE, but expressed gratefulness for the project:

> **Interviewer:** Tell me what you have learned from the workbooks for parents, what has caught your attention and why?
> **Mother:** I like the lesson that talks about developing trust with our kids, there is section that talks about making time to talk with our kids. Sometimes we have time to go to work, go to church and we do not give them the time so that we can develop a relationship of trust with them. That lesson is beautiful… I liked all the lessons, they are all beautiful, I am so happy with this project.

Many parents reported behavioral change and improved relationships with their children as a result of participating in ACMHE. For instance, this grandmother shared that she changed the ways she interacted with her grandkids:

> **Grandmother:** I have learned how to raise them, because I have read about it. I have learned how to spend time with my grandchildren. When I was a mom, I was very strict. But not anymore. Now I take a seat and converse with him. I give him advice and he gives me advice. I really liked the workbook and I hope these classes continue. We learn a lot from that book. That book is really good.

Parents also reported noticing changes in their children: "I have 5 young children and I have noticed the change in my daughters. My daughter tells me about what she learns here…I see her very interested in what she has read and learned". Another mother reported being able to guide her daughter through puberty as a consequence of what she learned from the book:

> **Mother:** With my older daughter, I never told her "when you become 12 years old you will menstruate" I never told her anything.
> **Interviewer:** And with your youngest daughter? Did you tell her?
> **Mother:** Yes, with her I did.
> **Interviewer:** And why did you talk to her about that?
> **Mother:** Because of the workbook.

Although we only have anecdotal evidence from parents and not a rigid data collection process as we did with students, overall, it was evident that ACMHE was not only accepted but championed by parents. However, one of the shortcomings of this prototypical implementation is that the workbooks Youth with Purpose and Youth with Equality did not include a lesson that talks about relationships with parents. This component was not evaluated, and we could not explore the effect that this intervention has had in their family lives. During the design, the focus was on developing a workbook for parents and we forgot to include lessons that help students understand why and how relationships with parents change and evolve during adolescence. For the next iteration, it is necessary to include a lesson that discusses how adolescence also changes the way we interact with our parents and how to process and cope with these changes.

Summary of findings

We conclude that the results of this evaluation suggest that ACMHE's theory of action was successful in eliciting the desired learning processes in students and addressing the main

problems that drive CM. Our analysis of data collected for this evaluation indicates that the pedagogical approaches and the learning processes implicit in the theory of action were instrumental in eliciting the desired learning context, knowledge gain, and anticipated attitudes. For instance, cognitive dissonance and critical feminist pedagogy were key in challenging gender inequality. The prototypical willingness model was effective in addressing both the reasoned and heuristics paths to decision making of adolescents regarding CM by providing crucial information and a rich image data set from which students could draw from. ACMHE was successful in addressing gender inequality, providing students with the information necessary to make informed decisions regarding CM, offering students with information that helped them understand the changes they go through during adolescence, and helping students recognize behaviors that endanger their bodily integrity.

Additionally, ACMHE needs to work on improving the lessons that address healthy relationships and sexual reproductive health. The weaknesses in addressing these two themes do not indicate a deficiency in ACMHE's theory of action. Instead, it reveals a deficient design of the curriculum and application of the theory of action in the lessons that address these themes. For instance, the lessons about SRH and romantic relationships did not include effective case studies that students could use as references or cognitive images to inform their responses. Furthermore, there were no signals of cognitive dissonance or responses that indicated that students had changed behaviors regarding these two themes. These results imply that the deficiencies of the curriculum were due to not implementing ACMHE's theory of action well. That is, the design of these lessons did not follow the learning processes and pedagogical approaches proposed by ACMHE's theory of action efficiently. In the next iteration, these lessons must be improved to reflect AMCHE's theory of action principles more effectively. Another major oversight in designing the workbooks for students was not including a lesson to address the lack of family cohesion/communication. A workbook for parents was developed (which was not part of this evaluation) to address this problem, but the workbooks created for students lacked this component and therefore we could not examine it in this evaluation. There is a need to incorporate such lesson in the next iteration. Table 6.11 describes how each scenario aimed at exploring ACMHE's effectiveness in addressing the key problems identified during the needs assessment and whether or not ACMHE was successful in helping students understand concepts and develop attitudes and beliefs that challenged these issues.

Table 6.11.

Summary of results of evaluation of ACMHE.

Problem	Result
1. Prevalence of gender inequality	ACMHE was successful in providing students with information and a context where they could critically examine gender inequality.
2. Lack of awareness about the biological and social implications of adolescence	ACMHE was successful in providing students with information that allowed them to understand the biological, psychosocial, and cognitive changes that take place during puberty and how these are reflected in social interactions.
3. Girls are not aware of the consequences of CM	ACMHE was successful in providing students with the necessary knowledge and social images to inform their responses when asked what they would do in a CM situation.
5. Prevalence of unhealthy relationships	ACMHE was not entirely successful in helping students develop attitudes that will help them have more equitable relationships. Lessons connected to this problem need revisions.
6. Lack of knowledge about the legislation that protects minors and people's bodily integrity	ACMHE was successful in helping students identify illegal behaviors.

| 7. Lack of knowledge and access to sexual reproductive health (SRH)	ACMHE was not successful in helping students develop attitudes that would help them be in charge of their SRH. Lessons connected to this problem need revisions.
8. Poor communications between parents and children	Lessons connected to this problem need to be included in ACMHE's next iteration.

Additional Insights from ACMHE's Evaluation

Aside from the 8 problems that act as causal factors of CM that are addressed through the curriculum, we also identified several other important findings from our evaluation. These included a deeper understanding of family conflict, a good reception of peer teaching, spontaneous student initiative to promote social change, the importance of putting workbooks in students' hands, and initial indications of long-term desired outcomes such as such as the enhancement of students' agency to shape their own destiny, empowerment to act against gender inequality, and informed decision-making processes regarding CM.

A deeper Understanding of Family Conflict

The first scenario of the interview instrument explored students' knowledge about the causes of CM. This scenario aimed to examine students' perceptions about why girls decide to elope with their partners as well as to explore what they have learned from the workbooks and in-class discussions about the causes of CM. Table 6.12 describes this scenario.

Table 6.12. *Scenario 1: Causes of CM*.	
Scenario	Scenario 1 In the department of Atlántida, where you live, it's common for adolescent girls to marry when they're very young. From your experience on what you see in your community and from what you've learned studying the workbooks.
Questions	Why do you think girls marry at an early age?

Family tensions was the most common answer given by students followed by lack of knowledge about the consequences of CM and poverty. Figure 6.13 describes the results of this scenario.
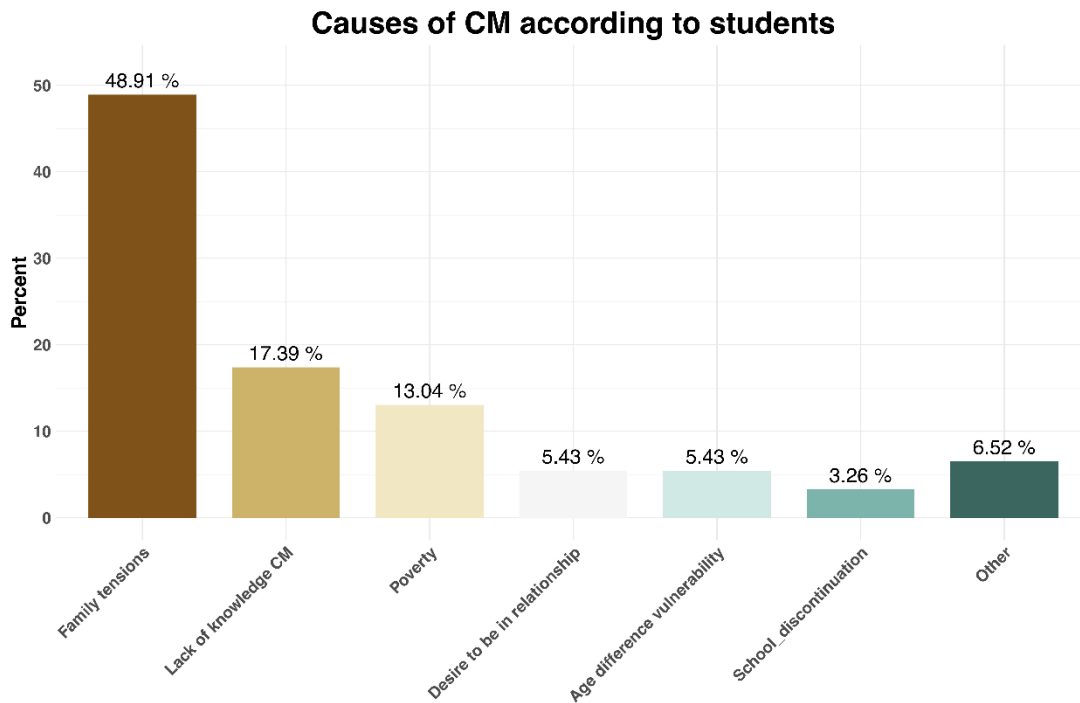
Figure 6.13. Causes of CM according to students.

As researchers, we were aware that family conflict played an important role in girls' decision to elope. During our needs assessment we identified the lack of communication between parents and their children as well as the lack of freedom that girls experience. However, the responses of this scenario suggest that there is another element to family conflict: girls are extremely burdened with housekeeping obligations. Although this inequality was identified previously and was addressed in ACMHE by discussing gender norms and gender inequality, the connection between this unfair household labor and girls' decision to elope was not as clear. The following explanation of an 11th grade female student captures the justification provided by many students:

> **11th grade student (F):** Some girls see it as an escape. Many feel that in their home, they have expressed that they feel like servants. If they have younger siblings, they have to take care of the siblings, they have to clean the house, take care of the father or stepfather, some of them do not have permission to go out, they feel imprisoned, or that they do not have the freedom they should have. So they think, "If I get married, my mom is not there, my dad is not there, my grandmother is not there to tell me what to do, problem solved".

According to students, the lack of freedom, poor communication between parents, and the burden of chores girls have at home constitutes the main reason why girls decide to elope with their partners. There are also three reasons that students provided that were not included in the workbook: lack of knowledge about the consequences of CM (it was addressed as a problem in the workbooks but was not listed as a cause of CM in the lesson about causes and consequences of CM), vulnerability due to age difference, and school discontinuation. These new causes will need to be added to the workbook for our next iteration.

Participants Valued the Peer Teaching Design

The social learning theory (Bandura and Walters 1977) advances that learning happens through modeling, observational learning, and social interactions. ACMHE intended to provide a context where students could learn, create meaning, and grow together. Our findings suggest that overall, 7th, 9th and 11th graders perceived the peer education strategy positively. Twenty-six 7th and 9th graders were asked whether they preferred 11th graders or tutors to implement the materials. Twelve responded that they preferred tutors as they have more experience and are better teachers. However, none of those students who said they would prefer a tutor based on the fact that they had more experience, expressed animosity or dislike regarding their experience in peer led classes. Fourteen students said they preferred peers as they feel more comfortable, share similar backgrounds, and have better rapport with them:

> **7th grade student (F):** Sometimes you feel more trust with young people. Eleventh graders are still young and the age difference between 7th and 11th graders is not much. Students get along better and there is more trust, and sometimes that is not the case with teachers. It is also useful that 11th graders can learn from us and they take advantage of that as well.

Most eleventh graders thought that trainings prepared them for peer-to-peer implementation and expressed confidence in that they did a good job. Twenty-one 11th graders were asked if they thought tutors should implement the materials instead of them. Thirteen stated they should continue implementing the materials and 8 believed the tutors could do a better job. Consistent with previous studies (e.g. Jaworsky et al., 2013), eleventh graders reported benefits from implementing materials such as experience speaking in public, confidence, and greater knowledge acquisition:

> **11th grade student (F):** An advantage is that we develop our mind and we become capable of being in front of a group of adolescents talking about these themes. These are themes that some people are embarrassed to talk about like sex, condoms, and things like that. Talking about these themes is very advantageous because it teaches us a lot and we also learn from other students because sometimes they share stories that had happened in their families and that is an advantage.

ACMHE's peer education strategy is designed in a way that (in the long term) allows students to be exposed three times to the curriculum: when they receive it as participants, when they are trained as peer educators, and when they implement the curriculum. For this prototypical implementation, most 11th graders were exposed to the workbooks for the first time the same year they had to implement it as peer educators. However, there were 7 schools that had participated in the piloting of the workbooks in 2016. Those students who were in 11th grade in 2019 had studied the workbooks when they were in 9th grade. This group of 11th graders provided us with a forecast of the benefits of the long-term implementation of ACMHE throughout different years. When asked if she felt prepared to be a peer educator, an 11th grade female student who had participated in ACMHE when she was in 9th grade, responded:

> **11th grade student (F):** Well, we had an advantage because we had studied these workbooks in 9th grade so we had more information about these topics. I do believe we did a good job. However, it is the other students who really get to decide if we did a good job. But for us, this was a beautiful experience. It is beneficial to have the opportunity to be able to express ourselves about a topic in front of others and learn. It is never the same to listen to a lecture than actually giving that lecture. You learn from everything.

Her response provides important feedback to ACMHE's design. First, she reports feeling more confident as a peer educator because she had been exposed to those materials in the past. Second, despite being exposed to the workbooks in 9th grade as a participant and in 11th during her training as a peer educator, she reports learning even more while implementing the workbooks. That is, she engages with the materials three times and, despite it being the same content, it does not become boring or repetitive. Instead, as this student shares, it makes student feel more confident and engaged with the workbooks more deeply.

Spontaneous Student Initiative to Act Towards Social Change

According to English and Irving (2015) critical feminist pedagogy (CFP) should not only be concerned about fostering social analysis and challenging inequality. CFP should also create social change. According to these authors, CFP needs to go beyond personal and organizational change and work toward societal change. Several students reported engaging on voluntary and self-directed actions to take what they had learned in school to other community members and promote social change:

> **11th grade student (F):** With my 11th grade classmates, we went around asking mothers if they knew how to prevent pregnancies, what they thought about sex education and promoting it in the community. We recorded videos and everything.
> **Interviewer:** Was that your idea or was it the idea of a teacher?
> **11th grade student (F):** No. It was our idea. In addition to the training we received, we wanted to find out how much our community knew about these subjects, so we decided to go around and find out asking different mothers while they were cleaning their houses or while parents were working on the fields.

The importance of putting workbooks in students' hands.

This spontaneous drive of acting towards social change was also reinforced by students' ability to share the workbooks with others. During our interviews, students stated that they found a lot of value on being able to share the content of the workbooks. Students reported sharing the workbooks with parents, siblings, friends, and even romantic partners. For instance, an 11th grade male students shared that he and other classmates hosted meetings to share the workbooks with their neighbors:

> **11th grade student (M):** With other two classmates, we would sit in our neighborhood and we read together.
> **Interviewer:** So, the 11th graders went to their communities and held meetings?
> **11th grade student (M):** Yes.
> **Interviewer:** How many times have you done that?
> **11th grade student (M):** Three times.
> **Interviewer:** Whose idea was this?
> **11th grade student (M):** Ours, between the three of us. It is not the entire grade just three of us that live here.
> **Interviewer:** How many persons came to the first meeting?
> **11th grade student (M):** The first time 7.
> **Interviewer:** And after the first meeting?
> **11th grade student (M):** The next time came like 11 or 12 persons.
> **Interviewer:** How old were the persons that participated?
> **11th grade student (M):** Around 18, 17, 15 but not older than 18.
> **Interviewer:** They are not SAT students?

11th grade student (M): No… some are from other schools, others dropped out of school.

ACMHE was successful in promoting an educational space where students could reflect upon the norms that prevail in their families and communities and challenge existing inequalities. Some students were so motivated about this awareness that they took that knowledge to the streets in an attempt to promote a social change they desired as a result of this new consciousness they developed through ACMHE. Putting workbooks in students' hands (rather than teachers or other adults) provides the possibility that this content is shared with other community members.

Initial Indications of Long-Term Desired Outcomes

The focus of this evaluation was to examine if the workbooks were successful or not in addressing the eight main problems identified as causal factors of CM and if the pedagogical approaches were eliciting the desired learning processes and outcomes. The purpose of this evaluation was *not* to examine whether ACMHE's theory of action was eliciting the desired behavioral outcomes. However, during the interviews, we identified instances that suggest that ACMHE's curriculum *is*, enhancing students' agency, empowering students to act against gender inequality, and informing adolescents' decision-making processes regarding CM. The following examples provided are used as anecdotal evidence that can inform ACMHE's future evaluations.

ACMHE uses the capabilities approach (Robeyns, 2017; Sen 1999) as a conceptual umbrella as it aims to enhance individual's capabilities to shape their own destiny, to develop agency (Walker, 2012). Through education as a social arrangement available to students, ACMHE's curriculum was able to provide an opportunity for students to examine and imagine the ways in which they could shape their destiny. The lesson "What I want for my future" from Youth with Purpose opened a space for students to examine their lives and their reality and analyze how they want to lead their lives. For example, a 7th grade female student reported excitement at her newfound sense of ability to find purpose and reach her goals:

> **Interviewer:** Tell me some of the things you learned from the "Living my Youth with Purpose" workbook.
> **7ᵗʰ grade student (F):** I liked the lesson about thinking about our future. Sometimes you don't stop and think what you want for your future. Every day after school when we received these classes, I would read [the workbook] and say, "yes, this is true. I like it" …I grabbed it every day [the workbook]. The first question asked how I imagined my life in 5-10 years. I had never thought about that. The next question asked what one needs to do to achieve what one wants. So, I would think stop being…because sometimes one has low self-esteem and believes that dreams cannot be achieved. So, it is necessary to leave all those negative thoughts behind. In that way, they can become true.

A male student also shared how this lesson helped him reflect about his future:

> **Interviewer:** Tell me some of the things you learned from the "Living my Youth with Purpose" workbook.
> **11th grade student (M):** To have a purpose in life… As adolescents, sometimes we have a sea of ideas, "I want to do this, I want to do that" and you do not focus on a purpose. This helped me develop real purpose that will guide my life.
> **Interviewer:** When you read that, what did you think?
> **11th grade student (M):** Honestly, I thought it was boring…but then I started reading more and I thought the workbook was interesting.
> **Interviewer:** Have you thought about this before?

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11th grade student (M): Of course, I have thought about it, but I am an adolescent, I have a sea of ideas. I had not given much importance to it, but when I read the workbook, I felt the weight of needing to have a purpose.

Walker (2012) argued that the capabilities education narrative must provide an empowering and emancipatory education that promotes the search for the ultimate meaning of life in one's own way: agency. Agency is the ability to act upon what matters, to pursue a life one has reason to value. More specifically, ACMHE intends to enhance students' agency so that they can have healthier and more equitable relationships, and therefore better quality of life. This new sense of purpose and clarity about what students wanted for their future and how they plan to act upon it is exemplified by an 11th grade female student. With the knowledge gained from participating in ACMHE, she plans on taking specific actions to have the type of life she wants:

> **Interviewer:** And how are things in your home?
> **11th grade student (F):** In my home things are not like that. I would like them to be like that, but obviously they were raised with values of the past which teach men to always impose and teach women to obey…
> **Interviewer:** And how do you think your life will be like in the future?
> **11th grade student (F):** Obviously, I have learned so I will not look for a man that is *machista* because I do not want that for my family. So, I am going to think about the question in the first book: "what do I want for my life?"

The enthusiasm for this lesson was also noticed by a tutor who shared this lesson sparked meaningful discussions in the classroom:

> **Teacher (M):** The themes [in the workbooks] help students have a better perspective of life. I remember that in the workbook "Living my youth with purpose" the first lesson was "What do I want for my future?" My students analyzed, reflected, thought, and shared their ideas of what they wanted to be in 5-10 years. It asked them how they saw themselves, how could they achieve their goals. This project, this workbook has helped them a lot.
>
> The lesson about the causes and consequences of child marriage and teen pregnancy has also helped them. When we studied these lessons, they loved participating…In my class girls were very interested in these themes. They said "Wow, we have never studied these topics before. This is why these things happen [CM and TP], but now we are prepared". Girls told me: "we can think differently now we can think about what we want, how far we want to go, and what we need to do to achieve our goals".

The capability approach's focus that education should go beyond preparing students for a job market was noticed even by community members as noted by one of the district supervisors:

> **District supervisor (M):** A lady who has children in this school told me: "Very interesting, very nice what you are teaching. You are not just teaching Math, you are not just teaching Spanish, you are educating kids. That is really good because some of us think that kids come to school just to find a partner and we don't want to enroll girls in school because we are scared, they will get married. It is great you are guiding them.

Realizing that girls and boys should have the same privileges and have the same capabilities has provided a context where they can empower themselves. An 11th grade female student, who I will call Martha[68], is a great example of empowerment as defined by Murphy-Graham (2012). This student shared how she used what she had learned in ACMHE to encourage her parents to treat her and brothers with equality.

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[68] All names used are pseudonyms.

Martha: We are six sisters and two brothers. My parents always used to say that I better study because they would only inherit me a house. They used to say that the land was for my brothers because they were able to work, because they were capable of working the land, and we girls could not do that. So, I read to them the content of the workbook where it said that girls and boys have the same rights because we are capable of doing any kind of work. As a result, they changed their attitude towards me. I believe they love all of us equally now. I have also told some of my friends that they should respect their girlfriends. If their girlfriends turn around, they are already flirting with other girls. I tell them that that is not respect, it is not love. I have learned all these things through the workbooks.

Martha was able to 1)recognize her inherent worth and equality to others, 2) analyze how she was not treated equally to her brothers because of her gender, and 3) challenge this inequality in order to change her reality and enjoy equal benefits as her brothers.

Boys and girls shared learning concepts that impacted their life outlook and their decision-making processes as it was the case for Xiomara, an 11th grade female student, who changed her mind about eloping with her boyfriend:

Interviewer: Can you tell me about something specific that you might say changed after studying these workbooks?
Xiomara: I changed my decision to marry. I was thinking about getting married and after studying these workbooks I retracted [from getting married].
Interviewer: Tell me about this process, what things made you change your mind?
Xiomara: So many things, the workbooks included some dramas, some case studies including one of a girl who decided to marry and she did not like it and that is not worth it.
Interviewer: So, you got scared?
Xiomara: Yes, I do not want anyone telling me I cannot go out. I like my freedom.
Interviewer: Do you think you did the right thing?
Xiomara: Yes. I did the right thing. In my house I have everything I need.
Interviewer: Do you think you would have eloped if you had not studied these workbooks?
Xiomara: I would probably have; I am not sure.

A teacher reported that one of his students, who we will call Rosa, was thinking about getting married, but after being exposed to ACMHE's curriculum, she changed her mind:

Tutor (M): One of my students told me that she had plans to drop out. When I asked her why [she was thinking to dropout], she said "I have too many problems at home. They are not helping me economically to pay for my education expenses so I think I will marry or I will leave to San Pedro Sula to work". So I told her "you should think about it because I do not think that what you are planning to do will make your situation better. In fact, it might make it worse". After the workbooks came [to our school], she was one of the students that was involved the most in this project. Afterwards, she told me, "I will not drop out, I will see how I can get a part time job in the area so I can buy the books for school, I will keep studying". The day we finished implementing the workbooks she posted on Facebook that things she had learned and how what she learned had changed her.

ACMHE recognizes the complexity of the social and economic environment in which adolescents' lives are embedded. For this reason, ACMHE's goals is to provide an educational context where students can empower themselves to push the constraints imposed by their environment. ACMHE'S goal is to inform adolescents' decision-making processes and challenge false beliefs connected to CM. The case of Xiomara for example, suggests that the content in the workbooks provided her with social images that informed her decision-making process. Xiomara

reported not wanting to experience the consequences of CM as depicted in the case studies. On the other hand, the tutor's account of Rosa's case suggests that ACMHE's curriculum might be helping address false beliefs about CM as an option when things at home are tense or when the economic circumstances are difficult.

In short, through this evaluation, in addition to examining ACMHE's effectiveness in addressing the 8 problems that are causal factors of CM, we identified additional insights that informed this evaluation. First, we developed a deeper understanding of how family dynamics that overburden girls with domestic work contribute to girls' dire living conditions that push girls to see marriage as a viable option. Other important findings include the acceptance and appreciation of peer education among students and the spontaneous actions that some students took to promote social change in their communities because of their exposure to ACMHE's curriculum and their ability to share that content with others. Finally, we also identified instances that suggest that some students experienced some of ACMHE's long-term desired outcomes such as such as the enhancement of students' agency to shape their own destiny, empowerment to act against gender inequality, and informed decision-making processes regarding CM.

Child Marriage, Teen Pregnancy, and Dropout Rates Pre- and Post-Intervention

Two surveys were implemented in collaboration with Bayan; one pre implementation (2017 school year) and one post implementation (2019 school year) to determine the relationship between dropout, child marriage, and childbearing in the 21 schools where ACMHE took place. These surveys were completed by tutors of the 21 schools where ACMHE was implemented. The surveys asked tutors to report instances of students who got married and dropped out, students who got married but stayed in school, students who got pregnant (or their partner got pregnant) and dropped out, and students who got pregnant (or their partners) but remained in school along with the gender and age of students who fit in these categories. Murphy-Graham et al.'s (2019) study suggests that CM is not one of the main reasons for school dropout, we still wanted to have a sense of how common CM and teen pregnancy[69] (TP) are in these schools and if rates were affected or not by ACMHE's implementation.

The results of this data collection process can be summarized in three points. First, there was a reduction of cases of CM and TP in the 21 schools that participated in AMCHE's prototypical implementation in 2018. Second, more students dropped out after marrying in 2019 compared to 2017. Finally, there was a reduction of the number of schools with cases of CM and TP in 2019 compared to 2017. However, because we do not have an experimental or quasi experimental design, we can't say with any degree of confidence that ACMHE caused these results. These results could be prompted by other factors such as economic fluctuations, natural variation, etc.

Methodology

Data Collection.

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[69]We define teen pregnancy as a pregnancy before the age of 18.

The surveys were developed using Google Forms. The UC Berkeley team designed the survey and shared the link to the online survey via email with the Bayan staff[70], who then shared it through WhatsApp with SAT's *asesores* (similar to district supervisors). Finally, the *asesores* distributed it to tutors using WhatsApp. The tutors' response were automatically saved on Google Forms, thus giving the UC Berkeley team direct access to them. Data for 2017 were collected retroactively at the beginning of the 2018 school year (February 2018). Data for 2019 were collected at the end of the 2019 school year (November 2019).

Participants.

There were 114 classes (and therefore 114 tutors; one for each class) from the 7th through 12th grades in the 21 participating schools during the 2017 school year. One hundred tutors completed the survey for this school year (14 tutors did not complete the survey). In the 2019 school year, there were 107 classes (and 107 tutors). There were seven fewer classes in 2019 compared to 2017 because some grades were not offered in some of the schools. This reduction of classes was mostly due to schools closing classes because of insufficient number of students. Of the 107 classes available in 2019, 104 tutors completed the survey and 3 did not. The 2017 academic year had seven less available classes, but the 2019 academic year had more tutor responses than the 2017 academic year. Table 6.13 describes the number of tutors completing the survey per year.

Table 6.13
Number of Tutors that Completed the Survey Per Year.

Academic year	Number of grade sections (and tutors) per year	Number of tutors that completed the survey
2017	114	100
2019	107	104

Analysis.

Survey results were manually recorded for each grade in an MS Excel spreadsheet. Numbers were tallied for: 1) students who got married and dropped out of school, 2) students who got married and stayed in school, 3) students who got pregnant (or their partners) and dropped out of school, and 4) students who got pregnant (or their partners) and stayed in school.

Results

The average age for entering a union for girls is 15.5 years old. A total of 26 (24 girls and 2 boys) underage students entered unions in the 2017 school year. Eighteen of these 26 students continued their schooling and 8 dropped out. Of the two male students, one dropped out and the other one continued his studies. A total of 8 girls became pregnant and of these girls, two

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[70] See appendix 10.

dropped out of school but the rest stayed enrolled. Fifteen of the 21 schools that participated in the prototypical implementation of ACMHE in 2018 had cases of CM or TP in the 2017 academic year. Table 6.14 describes the number of dropouts due to CM and TP as well as cases in which students got married or pregnant (or their partners) but continued their schooling in the 2017 school year. The rows with gray shading indicate schools did not have CM or TP cases.

Table 6.14
Cases of CM and Early Pregnancy in Participating Schools in the 2017 academic school year.

Name of School	# of students who got married and dropped out	# of students who got married but stayed in school	# of students who became pregnant (or their partner did) and dropped out	# of students who became pregnant (or their partner did) stayed in school	Total per school
School 1	0	0	0	0	0
School 2	0	0	0	0	0
School 3	1	0	0	0	1
School 4	0	1	0	1	2
School 5	0	0	0	0	0
School 6	1	0	2	0	3
School 7	3	2	0	0	5
School 8	0	1	0	1	2
School 9	0	3	0	0	3
School 10	1	0	0	0	1
School 11	0	1	0	0	1
School 12	0	0	0	1	1
School 13	0	0	0	0	0
School 14	0	0	0	0	0
School 15	0	5	0	1	6

School 16	0	0	0	1	1
School 17	0	1	0	0	1
School 18	0	2	0	0	2
School 19	2	1	0	0	3
School 20	0	1	0	1	2
School 21	0	0	0	0	0
TOTAL	8	18	2	6	34

A total of 16 underage students entered unions in the 2019 school year (all of them were girls). Of these 16 girls who got married in 2019, 13 dropped out of school and 3 stayed in school. The average age for entering unions for these girls was 15 years old. A total of 6 girls became pregnant (along with one boy's partner); two dropped out of school and the rest stayed in school. The one boy stayed in school. Thirteen of the 21 schools that participated in the prototypical implementation of ACMHE in 2018 had cases of CM or TP in the 2019 academic year. Table 6.15 describes the number of dropouts due to CM and TP as well as cases in which students got married or pregnant (or their partners) but continued their schooling in the 2019 school year. It is important to note that during the 2019 academic year 12 of the schools that participated in the 2018 implementation continued to implement the curriculum during the 2019 academic year and 9 schools did not. The schools marked with a * indicate that they implemented ACMHE during the 2019 academic year. The rows with gray shading indicate schools that did not have CM or TP cases.

Table 6.15.
 Cases of CM and Early Pregnancy in Participating Schools during the 2019 Academic School year.

Name of School	# of students who got married and dropped out	# of students who got married but stayed in school	# of students who became pregnant (or their partner did) and dropped out	# of students who became pregnant (or their partner did) stayed in school	Total per school
School 1	0	0	0	0	0
School 2*	0	0	0	1	1

School 3	1	1	0	0	2
School 4*	2	0	1	0	3
School 5*	3	1	0	0	4
School 6*	0	0	0	0	0
School 7*	0	0	0	0	0
School 8*	0	0	0	1	1
School 9	1	0	0	0	1
School 10	1	0	0	0	1
School 11*	3	0	1	0	4
School 12	0	0	0	1	1
School 13	0	0	0	0	0
School 14	0	0	0	0	0
School 15	0	0	0	0	0
School 16*	1	1	0	0	2
School 17*	0	1	0	0	1
School 18	0	0	0	0	0
School 19*	1	0	0	1	2
School 20*	0	0	0	1	1
School 21*	0	0	0	0	0
TOTAL	13	3	2	5	23

The results of the surveys implemented the year before and the year after the prototypical implementation of ACMHE that took place in 2018 suggest that:

There was a reduction of cases of CM and TP in the 21 schools that participated in AMCHE's prototypical implementation in 2018.

There were 34 cases of CM and TP in 2017 versus 23 in 2019. There were 10 fewer cases of CM and 1 fewer cases of TP in 2019 compared to the 2017 academic year. These results indicate that there were 32% fewer cases of CM and TP in 2019 in these 21 schools. Table 6.16 provides a comparison of cases of CM and TP by year.

Table 6.16. *Comparison of Cases of CM and TP Per Year.*				
	2017	**2019**	**Total reduction**	**% reduction**
Number CM cases	26	16	10	38%
Number of TP cases	8	7	1	13%

More students dropped out after marrying in 2019 compared to 2017.

Although there was a reduction of the cases of CM, the relationship between CM and dropout changed between 2017 and 2019. In 2017, there was a total of 26 cases of CM. Thirty one percent of students who entered marriages in the 2017 academic year dropped out and 69% stayed in school. That is, most students who got married remained enrolled in school. However, this trend was reversed in 2019, as most of the students who married dropped out of school. Eighty-one percent of students dropped out after marrying in 2019. In 2017, 22 % of students dropped out of school due to pregnancy (or that of their partner) compared to 29 % in 2019. Tables 7.5 and 6.17 and 6.18 describe the relationship between CM, TP and dropout in 2017 and 2019.

Table 6.17. *Percentage of Students Who Dropped Out After Marrying Per Year.*				
Year	**# of students who married during the academic year.**	**# of students who got married and dropped out**	**# of students who got married and stayed in school**	**% of students who dropped out of school after marrying**
2017	26	8	18	31%
2019	16	13	3	81%

Table 6.18 *Percentage of students who dropped out after pregnancy per year.*

Year	# of students who got pregnant during the academic year	# of students who became pregnant (or their partner did) and dropped out	# of students who became pregnant (or their partner did) stayed in school	% of students who dropped out of school after pregnancy
2017	8	2	6	25%
2019	7	2	5	29%

There was a reduction of the number of schools with cases of CM and TP.

In 2017, 71 % of participating schools (15 schools) had at least one case of CM or TP. In 2019, this percentage was reduced to 62 % (13 schools). That is, in 2017 there were 6 schools with no cases of CM or TP and in 2019 this number of schools increased to 8. In 2017, there were 13 schools with cases of CM whereas in 2019, there were 9 schools with cases of CM. There was an equal number of schools who reported cases of pregnancy in 2017 and 2019. Table 7.7 describes the number of schools who reported cases of CM and TP.

Table 7.7. *Number of Schools that Reported Cases of CM and TP in the 2017 and 2019 Academic Years.*			
	2017	**2019**	**Difference between years**
Schools with cases of CM or TP	15	13	2 fewer schools in 2019
	2017	**2019**	**Difference between years**
Schools with cases of CM	13	9	4 fewer schools in 2019
Schools with cases of TP	7	7	0

Discussion

Murphy-Graham et al. (2019) found that CM and TP are *not* main causes of school dropout in rural areas of Honduras. Therefore, the number of students who dropout or marry while in school is low. Instead, most marriages and pregnancies occur once students are out of school. However, CM and TP are still common occurrences in these schools. As discussed above, 71 % of schools that participated in ACMHE reported cases of CM and/or TP the year before implementation.

According to the results of these surveys, schools that participated in ACMHE's prototypical implementation in the 2018 school had 38% fewer cases of CM in 2019 compared

to 2017, the academic year before ACMHE's implementation. There was also a 31% decrease of the number of schools that had cases of CM (13 in 2017 to 9 in 2019).

Unfortunately, ACMHE may also have had a negative and unintended consequence. In 2019, 69% of students who entered marriage remained in school. In 2019 however, the percentage of married girls who remained in school dropped to 19%. It is possible that girls who got married post intervention felt uncomfortable to return to school after they married given that there was an ongoing effort to prevent marriages. During the post intervention interviews we also noticed that this intervention sometimes created an uncomfortable setting for girls who were already married. For instance, during an interview a female 9th grader stated that she felt ashamed during the discussion of the workbooks:

> **Interviewer:** It is very interesting for me to be able to talk to you about with you because the purpose of this intervention is to prevent child marriage. So, how did you feel?
> **9th grade student (F):** I was already married when this workbook was implemented. When they asked me: "Alejandra, what do you think about this?" I felt weird, when they asked me that, I felt awful. I would just hang my head.

However, this same student who reported feeling uncomfortable due to the implementation of ACMHE's curriculum emphasized the importance of this intervention and hoped she would have had this opportunity to learn about CM before:

> **Interviewer:** Do you think that if you would have studied these workbooks…
> **9th grade student (F):** I would not have done it [marry].
> **Interviewer:** Really? Why?
> **9th grade student (F):** I do not know, all of this [content of workbooks] would have changed me. I would have not done it [marry]. I would have tolerated my stepfather; I would have not done it.
> **Interviewer:** Do you think these materials can help prevent child marriage?
> **9th grade student (F):** Yes… If I would have seen this before I would have not done it [marry].

There exists a tension between the benefits that an intervention like ACMHE can provide to prevent CM and negative consequences it can also have such as potentially pushing married girls out of school. There is an urgent need to adapt the workbooks so that they do not create an unfriendly environment for married girls and at the same time provide students with a context that informs their decision-making processes regarding CM. Over the course of the two years that this survey was conducted, 21 girls (18 in 2017 and 3 in 2019) got married and stayed in school. This suggests hypothetically that if every year girls are marrying and staying in school, there is an important demographic of girls who are married and who stay in school and might feel uncomfortable by this intervention. Murphy-Graham et al. (2019) found that most girls dropped out and then they get married and rarely come back to school. However, in these 21 schools we found that there is an important number of girls who get married and stay in school. ACMHE's design did not consider this characteristic in these schools. ACMHE's next iteration must find ways to inform adolescents' decision-making processes regarding CM and TP, promote that girls stay in school regardless of their marital status, and ensure the space is welcoming to girls already married and/or pregnant.

Finally, it is important to note that this data collection process that incorporated WhatsApp was successful. ACHME is a collaboration between different stakeholders that work

remotely, and WhatsApp allowed the dissemination of instrument protocols and data for participants to complete the survey at the same time it allowed researchers to collect this data in real time and without intermediaries. In short, the collaboration between UC Berkeley and Bayan was enhanced by the use of technological tools that made data collection easier, more effective, and time sensitive. During ACHME's next iteration we will document our process for utilizing WhatsApp for data collection purposes with the intention of sharing it with others in academic and professional contexts.

Limitations

The current survey data collection experience has several limitations. First, data for the 2017 and 2019 school years were not collected under the same circumstances. The data for 2017 was collected retroactively at the beginning if the 2018 school year, whereas the 2019 data was collected at the end of that same year. Second, the class sample sizes differed between 2017 and 2019 due to class closures in 2019. Third, the number of tutors that responded to the survey differed from 2017 to 2019. Despite these limitations, this data collection experience serves as a pilot and provides valuable lessons for future and more rigorous data collection protocols. However, the results of this data collection process provide meaningful insights for ACHME's next iteration and its long-term data collection processes.

The qualitative findings of ACMHE's prototypical implementation suggest that ACMHE's theory of action was successful in eliciting the desired learning processes such as cognitive dissonance and the use of the reasoned and social path to decision-making processes. The curricular and pedagogical approach based on critical feminist pedagogies and the capabilities approach were instrumental in designing the workbooks and eliciting dialogue and social analysis in the classroom.The curriculum developed was effective in addressing 5 of the 8 problems that act as causal factors of CM. The next iteration should improve the lessons that address SRH, healthy romantic relationships, and parent-child relationships during adolescence. The quantitative findings suggest that there are fewer cases of CM cases in the 21 participating schools and that fewer schools reported cases of CM and TP. However, these results cannot provide any degree of confidence given that we do not have an experimental or quasi experimental design. The qualitative and quantitative results of this evaluation will inform the next iteration of ACMHE's curriculum and the future evaluation processes which will be more rigorous and informed by the results presented in this chapter. One of the most important limitations of this study is the lack of a systematic evaluation of the parents' workbook implementation. We expect to address this shortcoming in future iterations. Finally, we hope to conduct an impact evaluation in the future dependent upon funding.

Chapter 7

Conclusions: Design principles of ACMHE

Our findings, presented in earlier chapters, indicate that ACMHE has the potential to be an effective educational intervention to address child marriage in rural areas of Honduras for two central reasons: a) it offers a deep and theoretically-informed approach, taking into consideration how girls' decision to enter marriages is shaped by their social and familial context and the biological, psychosocial, and cognitive changes that they experience during adolescence and b) it proposes a theory of action from which we derived design principles to guide future interventions in similar contexts.

A deeper understanding of CM in rural areas of Honduras

The results of the needs assessment of this intervention provide valuable theoretical and practical insights to understand the role of agency in contexts like Honduras. In this context, we use Ahearn's definition of agency as the "socioculturally mediated capacity to act" (Ahearn, 2001 p. 112). Understanding the role of agency in girls' decision-making processes to enter marriages is challenging, especially if we as researchers come from contexts that allow us to have a wider set of life opportunities and when our life choices are not as restricted like the ones of adolescents in rural areas of countries like Honduras. It is crucial to acknowledge how limited life opportunities and social norms (namely marianismo) that promote gender inequality *push* girls to CM. However, it is equally important to recognize that girls are not being forced to marry, they are making a choice within a very limited set of options. Recognizing that it is a choice does not minimize the fact that girls are victims of their circumstances. It does not imply that they are to be blamed, or that they should have known better. It simply acknowledges the fact that girls are pushed by their personal, social, and/or economic circumstances (e.g. poverty, intrafamilial violence, excessive control, lack of schooling or economic opportunities) to see marriage as a viable and rational option. Furthermore, while young girls are dealing with these dire circumstances, they are going through biological, psychosocial, and cognitive changes that are often misunderstood and even stigmatized in their communities. Their limited set of choices is met with a natural desire for autonomy, romantic intimacy, sexual desire, and the emerging capability to think about the future and abstract concepts. The difficult personal, social, and economic context in which girls' lives are embedded in addition to the changes they are experiencing as adolescents converge to shape girls' decision to marry.

We argue that CM is a rational response to the circumstances previously discussed (Bicchieri et al., 2014). That is, girls choose to marry because they think this will satisfy their preferences within the options available to them. As Bicchieri et al. (2014) argued, it is common that the preferences of individuals are misguided by false beliefs. Our findings indicate that this is the case in rural areas of Honduras. Our longitudinal data suggests that years after marrying, girls are often not happy with their decision to marry as they assume more responsibilities as wives and mothers and often experience greater control by their husbands than what they experienced in their households. The reality that adolescents encounter in their marriages does

not meet girls' expectations of greater freedom, economic stability or happiness in romantic relationships. These findings are key for practical purposes. They tell us that: 1) interventions should acknowledge the limitations of the socioeconomic context in which girls live, 2) the biological, psychosocial, and cognitive changes that individuals experience during adolescence should also be taken into account, 3) interventions should focus on adolescents' decision-making processes, and 4) interventions should address false beliefs.

Focusing on the decision-making processes of adolescents is important because interventions cannot always change or influence structural limitations such as poverty or lack of educational or economic opportunities. However, ACHME's theory of action is based on the belief that an empowering education can provide a context in which adolescents can empower themselves to think critically about their context and life options and inform their decision-making processes to push the constraints imposed by their reality, or as Klocker (2007) puts it, "thicken" their agency. That is, as Murphy-Graham and Lloyd (2016) suggested, education can expand the actions adolescents "are able to take and push the boundaries of the cultural constraints that limit them from achieving their full potential" (p. 561).

Design Principles

Design principles are lessons learned that are shared with the purpose of helping others select and apply theoretical, practical, and procedural knowledge for developing similar interventions or products in different settings (McKenney et al., 2006). The design principles are meant to be transferable from "one user to another who encounters a similar problem of practice in a similar context" (Mintrop, 2016, p.227). The design principles discussed in this section are derived from ACMHE's theory of action and the results of the evaluation that was conducted and discussed in Chapter 5. The results of this evaluation suggest that ACMHE's theory of action is "sound and can be transferred to other contexts" (Mintrop, 2016, p.227). The design principles discussed in this section are to be understood as provisional design principles that are limited to the data collected during this first prototypical implementation. As ACMHE moves forward, we will evaluate outcome and process data in more systematic ways which will allow us to design and share more robust design principles. For instance, although we have summative data that demonstrates that the orchestration of certain themes in the workbooks has achieved desirable results, our process data as to how these learning processes occur in the classroom are limited. Therefore, although we think that the outcomes discussed in this study and the lessons learned so far can guide other interventions, we want to be cautious by signaling that ACMHE is in constant iteration and that these design principles speak to our current, limited, and temporary knowledge and experience. These principles will be refined and supported with stronger evidence as we continue to work on this project.

It is important to note that we believe that ACMHE's design principles are transferable in the Latin America and Caribbean (LAC) context and the discussion of these principles have the LAC context in mind. However, we believe that the following principles can also be useful in other regions but might require a more careful and thorough adaptation to reflect the social realities of those contexts. The design principles of ACMHE are as follows:

If practitioners and/or researchers want to design/implement an intervention to address CM in contexts where girls exercise agency to marry they are best advised to give that intervention the following characteristics and procedures:

Context

- Use formal educational settings to address the social norms and constraints that drive CM. Educational expansion and legislative efforts have proven to be insufficient to reduce CM incidence in LAC. These principles could also be applied in informal settings but will need greater adaptations like length of curriculum and training of instructors. So far, ACMHE has been only tested in a formal educational setting.

Learning Processes[71]

- Develop an understanding of adolescents' decision-making processes to address the agency that adolescents exercise in their decision to marry. The "prototype willingness model" (Gerrard et al., 2008) is a useful tool to understand, study, and influence adolescents' decision-making processes. The prototype willingness model should inform the way the content is presented. The content should include information that addresses the reasoned path (e.g. information about the causes of CM) and the social path (provide social images of individuals who engage in determined behaviors. The more negative these images are, the less prone adolescents are to engage in those behaviors). Case studies, stories, and dramatizations are powerful pedagogical practices to promote these cognitive images, particularly when they are based on the reality of students' lives.
- Promote cognitive dissonance. Social norms, such as those promoted by marianismo promote gender inequality and indirectly *push* girls to CM. It is crucial to recognize what these social norms are and include discussions of these social norms in the intervention. Provide opportunities of discussion and analysis to generate dialogue that allows adolescents to express their views about these norms. Finally, it is crucial to present content that challenges these norms to confront previous beliefs with the new knowledge presented in the content of the workbooks/curriculum.

Pedagogical Approach[72]

- Use a pedagogical approach that promotes dialogue, critical thinking, social analysis, social change, and that challenges inequalities. These characteristics should shape the design (e.g. content that talks about ender inequality), delivery

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[71] This principle is based on circumstantial evidence. Participants reported instances of cognitive dissonance and using cognitive images to explain their responses, but there was not a formative evaluation of the learning process. There is a need for a deeper and systematized inquiry on the learning process of students.

[72] This principle is based on circumstantial evidence. Participants reported instances of social analysis and we have limited data that show students challenging inequalities in in-class discussions. However, there is a need to conduct a formative evaluation of the in-class teaching and learning process.

(e.g. questions that promote discussion to promote dialogue and reflection), and desired outcomes (e.g. examine students' ability to analyze their social context and identify inequality) of the intervention. The capabilities approach's pedagogical implications and feminist and critical pedagogies provide such characteristics (English & Irving, 2015; Freire, 2000; Shrewsbury;1993; Walker, 2012).

Content[73]

You may consider including the following themes:

1. Gender inequality: address gender inequality at the micro, meso, exo, and macro system levels. Use cognitive dissonance to challenge gender norms, what boys and girls are capable of being and doing. Provide examples that can provide images from which adolescents can draw from when making decisions.

2. Changes that occur during adolescence: This content should not be limited to menarche or the biological changes that adolescents experience. It should also address the psychosocial (e.g. attraction, autonomy) and cognitive changes (impulsivity, maturity through adolescence) adolescents go through. Normalize these psychosocial changes. Establish direct connections between these changes and their connection to CM.

3. Causes and consequences of CM: The intervention should be explicit about the reasons why some girls choose to marry and what the consequences might be. Address false beliefs. Again, the prototype willingness model and cognitive dissonance to address false beliefs are powerful theoretical concepts that can be applied.

4. Impulsive decision-making processes regarding romantic relationships (Agency): The curriculum should include lessons that discuss the plans and goals that adolescents have for their future and the steps they need to take in order to achieve their goals. An important step is to find out what false beliefs are motivating adolescents to choose marriage as an option and why they might think marriage responds to their needs and preferences. Once identified, the intervention can present evidence that explains why these beliefs are false, using the prototype willingness model to present this information.

5. Legislation information: Although legislation alone cannot eradicate CM, it is crucial that individuals know their rights and their responsibilities towards others in terms of bodily integrity and CM prohibitions.

6. Emphasis on the importance of healthy romantic relationships. The curriculum/intervention should not solely focus on age. Marrying after the age

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[73] The summative data demonstrate that these themes were instrumental in achieving desirable responses from students during interviews. Longitudinal data is needed to examine if these help students inform their decision-making processes in real-life situations.

of 18 does not guarantee a better relationships or better quality of life. It is crucial to place an emphasis in providing positive role models and examples that can help students reimagine what romantic relationships can look like.

7. Comprehensive sexuality education (CSE): This content should go beyond listing contraceptive methods, it should include as many components of comprehensive sexuality education. CSE education refers to programs that cover a broad range of topics related to human development (including reproduction and puberty), relationships (such as friendships and romantic relationships), personal skills (including communication, negotiation, and decision-making), sexual behavior (including abstinence and sexuality throughout life), sexual health (including sexually transmitted diseases, contraception, and pregnancy), society and culture such as gender) (Planned Parenthood, 2017).

8. Relationships with parents/caregivers: Include discussions about adolescence and relationships with parents. For instance, it is important to discuss how the psychosocial changes like an emerging need for autonomy and intimacy can promote conflict between parents and adolescents.

Extension to familial context

- Adapt the intervention to parents/caregivers. Parents/caregivers and the home environment play an important role in girls' decision-making processes to elope. When girls are mistreated, face excessive control, lack of opportunities to socialize, have distant relationships with parents, and/or have excessive chores at home, it is common for girls to elope in search for more stability, love, and less work. The intervention should work directly with parents and incorporate their perspectives.

Implementation[74]

- Peer education can be a valuable strategy. If you have the resources, time, and context to use peer education, prioritize it. If this is not possible, teacher/adult implementation is a good option.
- Expose students to implementation throughout different years during their high school experience (7th, 9th, 11th grade).

Desired Outcome

As a result of this exposure through ACMHE's curriculum, adolescents will ideally be able to enhance their decision-making processes to make informed decisions about CM and will be able to empower themselves to push the constraints imposed by their socio-economic reality.

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[74] Again, a more thorough formative data collection process will provide stronger evidence to investigate this claim. However, from the process data collected in this prototypical implementation and the reports of students about their experience with peer educators, we believe peer education can be a powerful component to interventions like ACMHE.

We believe that the principles discussed in this section can be instrumental in designing or adapting interventions that share a similar context to the Honduran one. The principles discussed in this section are directly connected to ACMHE's theory of action which, according to our evaluation, was successful in eliciting the desired learning processes and outcomes.

Lessons learned post implementation

During ACMHE's evaluation, we identified valuable lessons learned that were not directly connected to ACMHE's theory of action, but we believe should be considered when designing an intervention to prevent CM. Some of lessons learned that are discussed in this section are also design principles, but the source is not ACMHE's theory of action. Instead, these principles come from experience gained through implementation. This section also discusses lessons learned that should inform refinements and improvements for ACMHE's next iterations. The most important lessons learned during ACMHE's prototypical implementation are:

1) In LAC sexual reproductive health sexual reproductive health (SRH) is a contentious subject. To address this issue, follow these design principles:

   - Be deliberate in including different stakeholders in the design process specific to SRH. These should include parents, teachers, students, community leaders, and researchers. After agreeing on the content and design, pilot it. Study the content with all participants, conduct focus groups, observations, and interviews to examine participants' attitudes towards this content. Any disagreement should be addressed before implementation.
   - Take the values of the communities you are working in into consideration. Chastity is cherished value in rural areas in many LAC countries. Embrace it. From our experience designing with and for community members, we learned that chastity is a cherished value and that if included as part of comprehensive sexuality education, it has better acceptance. Including chastity will reduce animosity and the sense of threats to local values. Chastity will also serve as a "protective shield" to SRH. Including the concept of chastity can lessen the anxiety around sexual education and challenge the idea that that SRH content promotes promiscuous behaviors[75].
   - Make compromises. It is likely that some SRH content will be too sensitive/controversial. For example, the UC Berkeley team wanted to include a rights-based approach to SRH access and discussion of homosexuality, but this was not acceptable to Bayan. For this reason, ACMHE frames the use of SRH within the context of marriage. While not ideal, we believe imperfect content is better than no content, and the openness to these topics may evolve over time as we continue to build trust.

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[75] Since chastity was a concept that emerged during the design of ACMHE, this concept was not theorized in this iteration. Greater attention to chastity and its implications need to me addressed as ACMHE moves forward.

These principles allowed ACMHE to include SRH content. During our evaluation, we identified no complaint or contention around SRH content. This was a major accomplishment, particularly because in the past, SRH materials have been removed from Honduran public schools. Nonetheless, we identified a shortcoming. Students did not report intention to use or access SRH services even when the scenario placed them in a context of marriage. We believe that the emphasis on chastity and SRH limited to use within marriage might contribute to adolescents' perceptions that SRH is not for them (e.g. it is for married, older people). In ACMHE's next iteration, this shortcoming needs to be addressed. There is a need to find a way to present chastity and SRH within a context of personal choice and emphasize the importance of SRH for marriage but not stigmatize or avoid discussing its use for sexual activity outside marriage. This remains a challenge that needs to be addressed in ACMHE.

2) Make sure the curriculum/workbooks are in adolescents' hands.

We found that there is a special added value to an intervention that puts materials in students' hands. It is common for interventions to design materials that guide instructors/teachers class planning. We found that students engage in more meaningful ways with the texts if they have the freedom to take them home, write in them, and share them with others. Students reported reading the workbooks at home with their parents, sharing the content with friends, family members, and holding reading sessions with neighbors. If students have these texts in their hands, the likelihood that they will reach individuals outside school increases. Furthermore, it is important that as teenagers go through adolescence and transition to adulthood, they can have resources like these workbooks (in their homes) that talk about puberty, contraceptive methods, healthy relationships, that can help them experience these stages with a greater understanding of themselves and the society they live in.

3) Consider that some of the participating adolescents might be married or might be teen parents.

During our prototypical implementation we found that although fewer girls were getting married, the ones who got married rarely stayed in school. This might be due to girls feeling embarrassed or unwelcome to stay in school after marrying while there was an intervention that aimed to prevent CM. It is important to stress the importance of staying in school, even after marriage and emphasize that schools are safe spaces where everyone is welcomed despite any circumstance.

4) Take advantage of technological tools for virtual collaboration

Technological tools like WhatsApp facilitated communication with tutors. The schools where ACMHE was implemented are usually located in remote areas and access is difficult. We were able to keep communication with them and collect important data like surveys using WhatsApp.

A "tool kit" to transfer ACMHE's theory of action to other contexts

Using the design principles and the lessons learned described above, we developed a toolkit that we believe can be useful in transferring ACMHE's design principles to other contexts. In a DBR study, transferability does not mean replication or implementation fidelity

(Mintrop, 2016). Individuals or organizations that are interested in using these design principles can use these as guidelines and make all the necessary adjustments to meet the need of the context, organization, or participants of their program/intervention. That is, DBR studies "suggest guided reinvention by subsequent users along the distilled design principles" (Mintrop, 2016, p.228). Figure 7.1 describes the different elements interventions that aim to prevent CM in educational settings should consider:

ACMHE's theory of action.
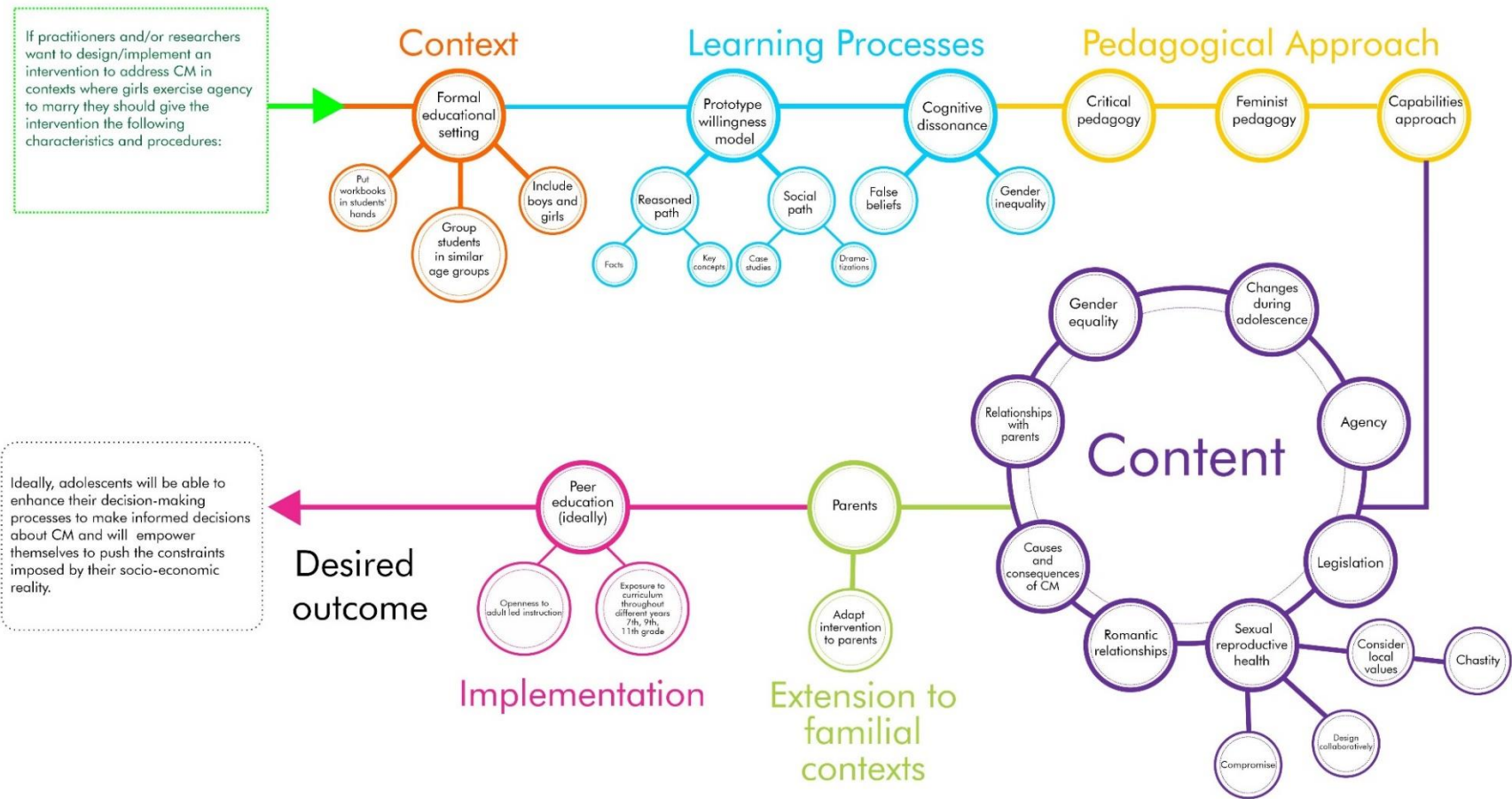
Figure 7.1. ACMHE's toolkit for designing interventions to prevent CM in LAC.

Figure 7.1 describes ACMHE's theory of action after its first prototypical implementation. However, ACMHE's design is in constant flux and its design and implementation will continue to evolve during future iterations. In 2020, ACMHE will expand to other departments of Honduras and reach more students and communities. Ideally, in the next few years ACMHE will be scaled nationwide in all departments where SAT operates in Honduras. Additionally, in 2020 ACMHE will also be implemented in rural areas of Nicaragua in an informal educational context in collaboration with Fabretto, a Nicaraguan-based organization. This experience will test ACMHE's theory of action in a different context and will contribute to its improvement.

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Appendix 1

Summary of interventions aimed at addressing CM that have

been evaluated.

Name of Program	Country / Year[76]	Description of Program	Evaluation Method	Findings	Challenges	Lessons learned
Abriendo Oportunidades **(Girls Not Brides & Population Council, 2016).**	Guatemala 2016	Abriendo Oportunidades works with Mayan adolescent girls in rural Guatemala. This program provides safe spaces with mentor-led sessions for girls (8 to 12 years old) and adolescents (13 to 18 years old). These sessions follow a rights-based curriculum that fosters communication skills, critical thinking regarding gender roles, and sexual reproductive health (SRH). Abriendo Oportunidades also has a partnership with the Ministry of Education to provide an accelerated educational program for girls in rural areas where secondary schools are not available. Finally, this	Abriendo Oportunidades is regularly monitored for tracking and improvement and has been evaluated using both quantitative and qualitative methods[77] (Girls Not Brides &Population Council, 2016).	Evaluation of this program has yielded positive results in delaying CM, increasing school attendance and participation, reducing early pregnancy, and increasing self-esteem in participants.	One of the main barriers is the persistent attitude among community leaders that CM is based on tradition and is also a private matter and therefore third persons/institutions should not get involved.	Abriendo Oportunidades believes that the success of their program lies on the fact that they evaluate and monitor their performance systematically. They also make sure that the content of their intervention is culturally appropriate. Finally, they advise involving community leaders from the start in order to avoid resistance. Alliances with the government institutions allows the promotion of sustainability and the integration of programs that address CM and

		program also works at the community level to change gender-based discrimination, denounce abuse, and support girls' education (Girls Not Brides & Population Council, 2016).				champion gender equality within public institutions.
Impact on Marriage: Program Assessment of Conditional Cash Transfers (IMPACCT) **(Nanda, Datta & Das, 2014).**	India 2014	The Apni Beti Apna Dhan (ABAD), or "Our Daughter, Our Wealth" was a conditional cash-transfer program developed by the Government of Haryana in 1994 and operated between 1994 to 1998. The initial cohort of beneficiaries turned 18 between 2012 and 2013, marking the first opportunity to determine whether the cash incentive has been a sufficient motivator for delayed	The study was designed as a quasi-experimental evaluation design with two rounds of surveys of beneficiaries and a comparable group of eligible non-beneficiary girls and their mothers (Nanda, Datta & Das, 2014).	The International Center for Research on Women (ICRW) designed a rigorous evaluation for the ABAD program and found that the girls who participated in this program had higher levels of schooling and were more likely to continue their education and were less likely to drop out than	This evaluation also found that discriminatory gender roles and expectations against girls make families prioritize girls' roles as future wives and mothers. These perceptions about girls limit the impact of education on girls' empowerment. In sum, this cash-transfer program was successful in improving educational	This intervention is limited to an economic component. Therefore, it does not address the negative traditional and cultural notions against women which can limit its impact. CM is a multi-factorial phenomenon and therefore interventions should address it at all levels. An economic component in an isolated manner is

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[76] Year of publication of evaluation report.

[77] No detailed information about these methods were provided in the report.

			marriage (Nanda, Datta & Das, 2014).		non-beneficiary girls.	outcomes, but it is not clear whether or not it can delay age at marriage. This will be determined in the second part of this evaluation (which was scheduled to take place in 2014).	likely to be insufficient.
	Ishraq (Selim, Abdel-Tawab, El Dadawy & El Kalaawy, 2013).	Egypt 2013	Ishraq is a program that aims to provide safe spaces where out-of-school girls aged 11 to 15 can enrich their literacy and life skills and prepare for re-entry into formal schooling, encouraging alternative options to CM. Ishraq has four major components: literacy, life skills, sports (which include physical fitness activities and a fostering of mental well-being, social interaction, team work, team spirit,	The Population Council interviewed Ishraq and non-Ishraq participants, and parents and brothers of participants before and after the program, as well as community leaders on the village committee after the program. For the evaluation, non-Ishraq girls who were similar to Ishraq participants on important background characteristics, including poverty and education levels, were selected for comparison. Impact	Ishraq has been successful in improving girls' literacy and educational outcomes, acquisition of life skills, social support networks and access to safe spaces, and has increased community and governmental support.	One of the greatest challenges has been to ensure a physical space for girls' meetings as the youth centers where the meetings take place are thought to be restricted to boys' use.	Ishraq incorporates an element that is usually missing in most programs: sports. In many contexts, girls do not have spaces to socialize or get any physical activity. Sports offer a great opportunity for promoting important values and bringing communities together. As a result, the community is engaged and

| | | | cooperation, and self-confidence). Ishraq also has a strong emphasis at the community level through home visits and political advocacy (Selim, Abdel-Tawab, El Dadawy & El Kalaawy, 2013). | assessments looked at outcomes in five broad areas: 1) functional literacy, 2) mobility and access to safe spaces, 3) acquisition of life skills, 4) girl empowering knowledge and attitudes, 5) parents' and brothers' girl-related attitudes (Selim, Abdel-Tawab, El Dadawy & El Kalaawy, 2013). | | | committed to providing resources. |
| TESFA (Edmeades et al., 2014). | Ethiopia 2013 | TESFA ("hope" in Amharic) is a prevention and mitigation program to support married and unmarried girls. TESFA provides girls with SRH information and services, financial literacy through group-based Village Savings and Loan Associations, negotiation skills, and micro-loans. Additionally, TESFA also includes a | Researchers analyzed whether providing economic empowerment and SRHprogramming together or individually was more effective. With TESFA participants separated into specific groups. The evaluation compared the relative effectiveness of each group's approach in improving the economic empowerment and | Participants reported improved communication between the young wives and their husbands, decreased levels of gender-based violence, improved mental health among participating girls, increased investment in productive economic assets, | TESFA does not include a curriculum that emphasizes gender inequality. | Work with couples rather than individuals to improve the lives of married girls. |

		community mobilization with husbands, in-laws, and other community members (Edmeades et al., 2014).	sexual and reproductive health outcomes for girls. The design also provided an opportunity to see the effect of each of these compared to a de facto "do nothing" scenario, where the girls did not receive any programming (Edmeades et al., 2014).	improved knowledge and use of sexual and reproductive health services, including family planning, and increased social capital and support.		
PRACHAR **(Pathfinder International, 2013).**	India 2013	PRACHAR addressed adolescent boys and girls, married couples, parents, and mothers-in-law, and the community at large through a comprehensive behavioral change approach. PRACHAR used training programs to foster interpersonal communication skills and also used gender-transformative activities to generate reflection and dialogue about gender	After almost three years of implementation, PRACHAR conducted an evaluation of Phase I, consisting of surveys in both intervention and comparison sites of unmarried and married young people (under age 25) with no children, one child, or two children. Cluster sampling methodology was used to interview 1,995 women in the baseline survey	Women married about 2.6 years later than non-participant women and contraception use among young married couples increased from four percent at baseline to 21 percent at end line.	Young people have very little autonomy and decision-making power.	Evaluation results were mostly based on age at marriage and contraceptive use. Although the intervention targeted gender norms and gender inequality, the attitudes of men and women in this regard were not measured. Future interventions should pay greater attention

| | | inequality. Additionally, this intervention implemented home visits to reach family and community members, and organized community events (e.g., theater and puppet shows) to create awareness (Pathfinder International, 2013). | (2002–03), and 2,080 women at end line (2004–05).

To determine the effects of Phase I on age at marriage and childbearing, Pathfinder conducted an additional survey five years after exposure to the Phase I intervention. This 2008 survey sampled young people 19–24 years old in all three districts who had been exposed to PRACHAR Phase I and had participated in the three-day AYSRH training. At the time of the Phase I training, participants had been 15–19 years old, the majority unmarried.

The sample of the 2008 survey included 613 young men and women who had been exposed to the Phase I intervention, and 612 who had not been | | | to shifting views of gender norms among participants.

Engaging both male and female partners yielded stronger results than working with only young men or young women in terms of contraceptive use.

Using dialogic method instead of prescribed messages allows for more in-depth and contextually relevant communication, creating opportunities to pose and answer questions and ensure comprehension. |

			exposed to any PRACHAR activities (Pathfinder International, 2013).		
Safe Age of Marriage **(USAID, 2010).**	Yemen 2010	Safe Age of Marriage's purpose is to increase community knowledge of the social and health consequences of CM and seek endorsement of religious leaders and stakeholders to stand against CM. This program operates through community educators. Community educators hold several awareness-raising sessions per month (such as discussions, poetry recitations, theater, role playing, movies, etc.) in their communities and organize fairs where SRH information and services are provided (USAID, 2010).	The project selected and trained 20 male and 20 female volunteer community educators, including religious leaders and nurse midwives. These community educators carried out a baseline and end line survey of 400 households to assess the knowledge, attitudes and practice of CM in Al Sawd and Al Soodah (USAID, 2010).	End-line surveys indicate that there was an increase in awareness about the benefits of delaying marriage. As a result of this increased awareness, community members began working toward improving girls' education by building schools for girls and ensuring female teachers and principals were hired. Additionally, the Ministry of Religious Affairs in the region where this intervention	There is not an individual-level component for girls, boys, and parents in this intervention, and the intervention is limited to a community-level approach.	Minimize religious and political opposition by becoming familiar with the arguments for and against CM and engage legislators, politicians, and leaders from the beginning. Train implementers thoroughly, as they are the key to success.

				took place asked all religious leaders to discourage CM in their religious messages.		
Berhane Hewan **(Erulkar & Mutheng, 2009).**	Ethiopia 2009	The Berhane Hewan program had four components: safe spaces for girls with adult female mentors, economic incentive to keep girls in schools, non-formal education (e.g., basic literacy and numeracy) and vocational training for out-of-school girls, and community engagement (Erulkar & Mutheng, 2009).	A quasi-experimental research design with baseline and endline surveys was used to measure changes in social and educational participation, marriage age, reproductive health knowledge and contraceptive use. Chi-square tests, proportional hazards models and logistic regressions were conducted to assess changes associated with the project (Erulkar & Mutheng, 2009). .	This program was associated with an increase in school enrollment, age at marriage, and reproductive health knowledge for girls aged 10 to14. However, girls between 15 and 19 years old had an elevated likelihood of getting married and not using contraceptives (Erulkar & Mutheng, 2009).	Program worked only for younger girls (10 to 14 years old).	These findings suggest that implementations should target at-risk girls at an early age (10 to 14) in order to obtain better results.
Development Initiative Supporting Healthy Adolescents (DISHA)	India 2008	DISHA aims to increase access to SRH information and services to male and female youth aged 14 to 24 years and delay	ICRW used a quasi-experimental study design with intervention and control groups to evaluate the	Age at marriage increased by nearly two years. Contraceptive use increased among youth by	However, there did not seem to be a significant change in empowerment norms, highlighting the	There is a need for incorporating more gender based content that targets gender inequality and

		CM by strengthening youth's ability to make informed decisions about reproductive health matters through youth groups lead by peer educators. Additionally, DISHA provides youth with alternatives to early marriage through livelihood skills and options. DISHA partnered with two local organizations to provide technical guidance in this component. Finally, DISHA also does community outreach to address partner and adult community members through mass communication activities (Kanesathasan et al., 2008).	programmatic impact of DISHA. The study collected quantitative, qualitative and program monitoring data throughout the life of the project. The evaluation also assessed the institutional impact on NGO partner capacity by analyzing the context in which partners evolved, drawing on monitoring reports and periodic NGO assessments (Kanesathasan et al., 2008).	nearly 60 percent. There was also an increase in the number of adolescent (girls and boys) and adult participants (male and female) who believe that girls should marry until they are at least 18 years old.	difficulty in shifting deeply entrenched gender norms.	girls' empowerment. Including male and female youth in programs that target SRH and CM is imperative. Interventions should address boys and girls. Youth can be implementers as peer-educators.
(Kanesatha san et al., 2008).						
The Integrated Action on Poverty and	Yemen 2008	The IAPE is a program that aims to reduce CM by raising community awareness,	Semi-structured interviews with key stakeholders/informant s at the national and	The evaluation found increased awareness about the negative	Although there was an increase in awareness about the negative	It is important to target religious leaders, to include them since the

Early Marriage (IAPE). **(Pedersen, Mukred, Wahed, & Qaid, 2008).**		engaging in legal advocacy for establishing a legal age of marriage, and providing micro-leases and business development services to women in communities affected by this practice (Pedersen, Mukred, Wahed, & Qaid, 2008).	governorate levels and eleven focus group meetings with target groups (women and men separately) in the targeted governorates took place. A change assessment scoring tool (CAST) was also tested and later used to capture the effects of project interventions (Pedersen, Mukred, Wahed, & Qaid, 2008).	ramifications of CM. Micro-leases improved women's income levels and employment opportunities, as well as community attitudes toward women's employment.	aspects of CM, this awareness did not always translate into a change in practice. Additionally, this program found resistance against its legal advocacy component. Many of the parliamentarians are religious leaders and opposed legal changes against CM as they saw this legal advocacy as an attempt to "Westernize" their country.	beginning of the implementation. Furthermore, it is a good strategy to include religious arguments against CM where religion plays an important component for acceptance.
Kishori Abhijan **(Amin & Suran, 2005).**	Bangladesh 2005	Kishori Abhijan provided safe spaces for girls to meet and offered life-skills lessons, vocational trainings, and credit options (Amin & Suran, 2005).	This evaluation analyzed the impact of this program using the propensity-score matching method (Amin & Suran, 2005).	This program was successful in delaying marriage among girls.	Due to the dowry system that prevailed in the communities where this intervention took place, the postponement of marriage increased the dowry that families had to pay	Cultural implications should be taken into consideration when designing the intervention in order to avoid negative effects on participants.

| | | | | | when their daughters got married (Amin & Suran, 2005 as cited in Amin, 2011). | The findings of this intervention also suggest that programs should target vulnerable populations rather than heterogeneous groups. For instance, targeting of younger adolescents in poor areas may lead to greater success than targeting groups from different ages and backgrounds (Amin & Suran, 2005). |

Appendix 2

Focus Group Students/Parents/Tutors

Thank you for joining us in this focus group. We are in the process of designing an intervention to prevent CM. We are here to learn more about this topic from you and understand what are the realities in your communities that drive this phenomenon. We really appreciate your input.

Dating

1. Tell me a Little about dating in the community. At what age to adolescents start dating?
2. Generally, where and how do adolescents meet their girlfriends/boyfriends?
3. If two adolescents are a couple, where do they see each other? What activities do they do together?
4. What do parents/teachers/neighbors/Friends say/think about adolescents dating?
5. Do you think dating is something important at this age?
6. Generally, who is older in the relationships, boys or girls? Why do you think this is so?
7. For how long do couples generally date before getting married/ living together?
8. Sometimes couples "escape" together to start living together. Why do you think this happens? Is this a good or a bad thing?
9. What do you expect from a girlfriend/boyfriend?

Early marriage

1. In Jutiapa, when a couple starts living together in the same house do they get married or they just start living together without any formality (common law marriage)?
2. ¿In general, at what age do people start their families in Jutiapa?

> Hopefully they will bring up the young age at which girls and boys start a family, if they do:
> 2.1 ¿ Do you know adolescents that started a family at a very young age? Can you tell me a little about the experiences of these persons?
> 2.2 When a couple decides to live together who has a Word in that decision (For example,parents, friends, religious leaders, etc.)?
> 2.3 As adolescents, what do you think about early marriages and starting families at a young
> age?

3. Once a couple decides to start a family, what role do they take in their new home?
4. ¿If an adolescent gets married, what happens with his/her schooling? (Probably here they will focus on women as men are usually older and generally already in the workforce). If they do not bring it up…
    4.1 When girls get married ¿do they drop out of school?
5. What happens with the schooling of a girl if she becomes a mother?
6. What do you think about a girl/boy dropping out of school after getting married or becoming a parent?

Early Pregnancies

1. Up until now we have talked about marriage, but what happens when a girl becomes pregnant before marriage while being an adolescent?
2. There is a high incidence of adolescent pregnancies in Honduras. Why do you think this happens?
3. When an adolescent becomes pregnant what happens with her? (schooling, family, friends, partner)

Interventions

1. What are your expectations for your future?
2. Do you think it would be something positive to motivate adolescents to postpone getting married/pregnant/starting a family at a later age? Or do you think it is okay that adolescents start their families at a young age?
3. How do you think we can motivate students to avoid starting their families? During their adolescence?
4. If there were programs that motivated the youth to continue their studies instead of starting a family, would you support them?

Appendix 3

Questions for Workshop

Thank you for joining us in this workshop. We believe that together, we can learn more about CM and we can come up with different ways to prevent it. Please share with all of us all your knowledge and experience.

For everyone

Instructions: Ask the participants to make groups of 5 and discuss the following questions. The answers will be shared with everyone when ready.
1. Is early marriage common in your communities?
2. Do you personally know cases of early marriage (family, friends, neighbors, etc.)?
3. Why do you think early marriages are prevalent in Honduras?
4. Mention some risk factors for early marriage in rural areas of Honduras.
5. Mention some protective factors for early marriage in the rural areas of Honduras.
Later, the participants will be asked to share a little about their experiences with early marriage in their areas of expertise.

For teachers:

1. Have you witness early marriage cases in your high school?
2. When students get married, do they continue with their studies?
3. When students get married, what is the reaction of other students/teachers/parents?
4. Have you seen a case where a student continued with school even after getting married?

For SAT administrators:

1. Why is it important for SAT to address early marriages?
2. How did SAT become interested in addressing early marriages?
3. What is the drop-out rate caused by early marriage in SAT?

For experts:

1. What interventions/program exist in Honduras to address early marriage?
2. What interventions have been successful and which have not?
3. Why do you think it is important to address early marriage with an educational focus?

For everyone:

Finally, the participants will be asked to get back to their groups and answer the following questions:
1. What areas should be covered in an intervention in order to prevent early marriages?
2. What programs/interventions/ activities/materials do you think should be implemented in an intervention that aims to prevent early marriage?
3. What partners do you suggests we look for in order to collaborate in this program?

Appendix 4

Interview for Experts

Thank you for having us today. We are researchers from the University of California, Berkeley and we are doing exploratory research to understand the causes and consequences of CM in rural areas of Honduras. We want to hear about the work that you and your organization do to prevent CM and fight gender inequality. We are in the process of designing a school-based intervention and we believe your input can enrich our understanding of this phenomenon.

1. Tell me a little about your organization

2. In what areas of Honduras do you work?

3. Do you work with youth? What ages?

4. Can you tell me a little about your work/projects related to early marriage/early pregnancy/sexual education/etc.?

5. Do you have any report/results/data regarding these subjects that you think could be useful for our study?

6. Do you have experience working with an educational focus?

7. Do you have experience cooperating with other organizations? Which ones?

8. What materials/resources do you use? If yes:

      8.1 Could we see/use them in our project?

9. How is your organization/program funded?

10. How do you think our study and your work could complement each other?

11. Would you be interested in collaborating with us in this project?

Appendix 5

Focus Group Peer-to-peer implementation

Thank you for taking the time to meet with me to discuss your experience during peer-to-peer sessions so far. I am interested in learning about your experiences and your thoughts about the new materials you are studying. I have a few questions for you:

1. *This question is specific to 11th graders*. Can you please tell me about the process through which you were trained?

    a) When did this training take place?

    b) How long was the training? (How many hours per day/ how many days, etc.)

    c) Who trained you?

2. *This question is specific to 11th graders:* Can you tell me about your experience in this training?

    a) What were some of the most important things you learned?

    b) Do you feel this training prepared you to implement it with 7th and 9th graders?

    c) What was your favorite/ least favorite aspect of your training?

3. *This question is specific to 11th graders.* When did you start implementing? What lesson are you currently studying?

4. I would like to hear about the peer-to-peer experience.

    a) 7th and 9th graders: Please tell me about your experience having peer mentors. I know this is a new experience for you.

    b) Do you like discussing these materials with your peers? Why or why not?

    c) 11th graders: Do 7th and 9th graders respond positively to your instruction/ respect you as peer mentors?

5. Can you tell a little about the materials?

    a) Are they easy to understand?

    b) Are they similar or different to other SAT textbooks you use? If so, in what ways?

6. Can you please tell me some of the most important things you have learned so far? Why do you consider them important?

7. Do you have recommendations/comments about these materials that can help us improve them?

Appendix 6

Interviews for reflection session on the use of Youth with Purpose

Thank you for coming to this reflection session today. I want to ask some short questions about your experience studying the new material Youth with Purpose. Please feel free to only answer the questions you feel comfortable with. You can stop your participation in this interview at any moment. If you do not understand something, please let me know and I will make my best effort to make things clearer.

Students

1. Tell me about your experience studying this material. What are your impressions?

2. Was there a specific lesson/concept that you liked? If answer is yes:

a) Can you tell me which one and why?

3. What did you think about having 11th graders as peer mentors? / How did you feel being a peer mentor?

a) Did your classmates behave properly while 11th graders were in charge?

b) Do you consider that 8th graders respected you as peer mentors? Did they behave accordingly?

4. Could you please share with me what you learned about chastity?

5. Do you think that including other content such as contraception information would contradict what you learned about chastity? Why or why not?

6. We really want to develop a material that is informed by the needs, wants, and beliefs of students, parents, and community members. Do you think that including content related to sexual reproductive health would go against the values of your family/community?

7. Do you have any recommendations for us to improve this material? For examples, something you would like to learn.

Parents

1. What do you think about this initiative we are engaging with Bayan to prevent CM?

2. Do you think it is necessary to discuss issues related to gender inequality and CM in schools? Why or why not?

3. We really want to develop a material that is informed by the needs, wants, and beliefs of students, parents, and community members. Do you think that including content related to sexual reproductive health would go against the values of your family/community?

Appendix 7

Focus Group with Bayan Staff, District Supervisors, and Tutors.

Thank you for taking the time to talk with me. I learned a lot about the experiences of students and parents during this reflection session. I would like to hear more about your perspective as tutors and supervisors and get some feedback that will allow us to keep improving out materials.

Training

1. Please tell be a little about your experience with your own training in the use of the material Youth with Purpose.

2. Do you think this training was effective in preparing you to use this materialas and train 11th graders?

3. Please tell me about the practical implications of the training of 11th graders. How many hours/days etc.

4. Once you had trained 11th graders, what was your role in the peer-to-peer sessions? For example, were the students by themselves, or was there a tutor present?

Content

1. Do you think the content reflected the lives of the students and the realities of their communities?

2. What was the lesson/topic that students seemed to be more interested in?

3. We have had different opinions with Bayan about including content related to comprehensive sexual education. What do you think about including this content in this material?

4. Do you have any recommendations on how to improve this material?

Appendix 8

Description of participants who have experienced CM

Name	Brief description about reason to marry.	Age at union/marriage:	Age at first pregnancy
Blanca	She dropped out of school because of financial hardships. She married once she had dropped out of school. She said she married out of love.	16	17
Norma	Her dad refused to continue supporting her to go to school because she was dating someone, and her dad thought she would use her freedom to go to school to see boys. Once out of school, she met her current husband. She married against her parents' will, but she clearly stated that since she was out of school, she saw marriage as the next step to take in life.	15	18
Julieta	Her father gave her permission to have a boyfriend and he could visit her at her house. They got intimate and she became pregnant. As a result, her husband moved in with her, her father, and other siblings.	15	15
Miriam	Her partner was her classmate. They both finished high school together. They wanted to be in a romantic relationship.	16	18
Cecilia	She got married at 16 but did not have her child until she was 18 and done with school. She got married because of her desire to be in a romantic relationship. She also saw it as a way enjoy greater financial security.	16	18
Gladys	Gladys did not grow up with her parents. She	16	18

	lived with her aunt in San Pedro Sula but due to family tensions she decided to move out. After moving elsewhere, she stopped going to school.		
Iris	Irma dated her boyfriend for three years. She then moved away to another village to continue her secondary education. She had a hard time in school, she had low grades and felt disappointed and returned to her village. Once she dropped out, she decided to marry	16	17
Dunia	She studied until 10th grade and then got married.	18	19
Sara	She wanted to date her boyfriend. She was 17, he was 18. They started living together. Her entire family was very upset about her decision and tried to advice against it.	17	19
Esther	She married when she was 15 years old. She married because she wanted to be in a romantic relationship with her partner and wanted to enjoy greater freedom than the one she had at home.	15	16

Appendix 9

Interview instrument for students

Interviewer: _____

Date: _____

School name: _____

Grade: _____

Thank you for taking your time to come to this meeting. We want to know a little more of you think about this Project. Please, feel free to only answer what you consider necessary. Your participation is completely voluntary and may end at any time you wish to stop. If any question isn't clear, please let me know and I'll try to clarify any doubt.

Review of texts:

Using the texts, and letting the students go over the lessons in each material, ask the following questions:

1. Tell me some of the things you learned from the "Living my Youth with Purpose" text.
Explore and expand the answer from the interviewee.

2. Tell me some of the things you learned from the "Youth with Equality" text.
Explore and expand the answer from the interviewee.

Cases to explore attitudes, beliefs and intentions

From here on, I'm going to read several scenarios for which I will ask some questions. Please answer according to your thoughts or beliefs and the knowledge you've gained with the new texts.

1. In the department of Atlántida, where you live, it's common for adolescent girls to marry when they're very young. From your experience on what you see in your community and from what you've learned studying the texts.
   a. Why do you think young woman marry at an early age?

2. Melissa is a 16-year-old SAT student. Melissa has a boyfriend behind her parents. Her boyfriend's name is Carlos; he is 24 years old and works as a farmer. Melissa and Carlos have been in a relationship for three months. Carlos asked Melissa to move in together. Melissa thinks that if she goes with Carlos she will have more freedom, since she thinks her parents control her too much, and that she'll finally be able to have a relationship with Carlos without having to hide. She also believes that she would have more economic stability since Carlos has a job. Melissa is seriously considering accepting Carlos' proposal.
   a. What do you think about Carlos wanting to take Melissa away, and she considering it?
   b. Do you think it's necessary to avoid this from happening? Why?

c. If Melissa decided to leave with Carlos, how do you think her life would be? Would it be the way she imagines it?

d. What would you recommend Melissa?

e. What would you tell Carlos about his decision to take Melissa away at a young age?

f. If you were Melissa/Carlos, what would you do?

3. Gabriela is a 13 year old adolescent student from 7th grade in SAT. When Gabriela was in 6th grade she was never interested in playing with her male Friends. However, now that she's 13 many things have changed. Gabriela cares a lot about her looks, especially because she likes a boy from 9th grade and enjoys spending time with him.

c. Why do you think Gabriela went from not wanting to hang with boys to feeling attracted by one?

d. Do you think that the attraction that Gabriela feels for another student is normal? Why?

e. If someone was criticizing Gabriela for feeling this attraction for a boy, what would say to the person criticizing her?

f. Have you or any of your classmates gone through something like Gabriela? Have the things you've learned helped you to comprehend all of these?

4. Maria and Juan are siblings. Maria is 16 years old and Juan 15. Their parents treat them very differently. Juan is allowed to go out freely to play and spend time with his Friends. Maria can rarely leave the house and have fun. Juan has a girlfriend and the whole town knows about and approves it. Last year, Maria had a boyfriend behind her parents and her neighbors found out and started calling her "nutty". The neighbors are always criticizing Maria for the way she dresses or if she hangs with boys, therefore she feels monitored. Juan doesn't worry if others approve his doings.

c. Why do you think that these differences in treating man and woman exist?

d. Do you agree with those differences? Why/why not?

e. Do you know of any case like this, where man and woman are treated differently?

5. Lourdes has a husband named Alexis. Alexis has a small cornfield in which he works in the mornings. Lourdes is a SAT Tutor and works in the afternoon. When Lourdes goes to work in the afternoon, Alexis takes care of their children, helps cleaning the house and makes dinner. Alexis' mom and brothers don't like that he does "women stuff" and are bothered that Lourdes is not taking care of the things that Alexis has to do, because they think that taking care of the home and children is not "men stuff"

a) Do you think Alexis' family is right to be upset because Alexis helps with house shores?

b) What do you believe is the reason for people to think that there are things that can only be done by man or can only be done by woman? Do you find that ok? Why/why not?

c) What would you tell Alexis' mother and brothers?

d) Do you know any case similar to the one of Alexis and Lourdes?

6. Let's imagine your best friend tell you she/he has a girlfriend/boyfriend. She/he is not a SAT students and knows that in SAT you've studied the texts, and that they talk about how to have

healthy relations and the qualities that people have to develop to achieve this type of relationship.

    a) From what you've learned in the texts, what advice would you give him/her to foster a healthy relationship?

    b) Do you see that there are healthy relationships in your community?

7. Let's imagine you have a boyfriend/girlfriend, and that like in any relationship there are thigs you don't like from him/her. For example, let's imagine that your boyfriend/girlfriend likes to control who you talk to on Facebook or on the phone and let's say you dislike that.

    a) **What would you do to solve the problem?**

8. Laura is a 16 year old young woman. During the mornings she Works in a small corner store in her community. The owner of the corner store is a 40 years old man named Pedro. Mr. Pedro has started wooing Laura and promised her he'd marry her if they started dating. Within few months from starting working at the corner store Laura was pregnant. When Mr. Pedro got the news that Laura was pregnant, he denied responsibility for it.

    c. Did Mr. Pedro incur in any crime? Why?

    d. What can Laura o her parents do in this situation?

    e. Have there been any cases like this in your community?

For 9th and 11th grade:

9. Let's imagine that we are in the future and you just got married/ together with your partner.

    a) What must you and your partner do to decide when to have children?

10. Jenny and Pablo just got married. They don't want to have children right away.

    a) What must Jenny and Pablo do to achieve their objective?

For 7th and 9th grade:

11. Tell me about the experience of having your peers giving the lessons in the text.

a) Did they seem capable of communicating the main ideas from the texts?

b) What are some advantages/disadvantages of having the students from 11th grade giving the lessons from the texts?

c) If you had to choose between your tutor and the 11th grade students to give the lessons from the texts, who would you choose?

For 11th grade:

12. Tell me about your experience giving the lessons in the text.

a) Do you think you were you sufficiently trained to give the lessons?

b) What are some advantages/disadvantages of having the students from 11th grade giving the lessons from the texts?

c) If you had to choose between your tutor and yourselves classmates to give the lessons from the texts, who would you ch

Everybody

13. Do you think this Project can help prevent early marriages? Why/ why not?

14. Who have you shared the things you have learned with?

a) If they don't mention their parents, ask specifically if they share what they learn with their parents.

15. Do your parents attend the "School for Parents"?

a) If the answer is yes: Do you share with them, what you've learned? Do they share with you what they learn at the School for Parents?

Interview Instrument for Parents

Name: _____

Son/daughters school's name: _____

Thank you for taking your time to come to this meeting. We want to know a little more of you think about this Project. Please, feel free to only answer what you consider necessary. Your participation is completely voluntary and may end at any time you wish to stop. If any question isn't clear, please let me know and I'll try to clarify any doubt.

1. Do you think it is important to address gender inequality and early marriages in your community? Why?
2. What is your opinion on this intervention that has the purpose of preventing early marriages?
3. Have you participated in the meetings were the texts for parents were studied?

   If the answer is NO, go to question number 6. If the answer is yes:
   a) What do you think of such meetings?
   b) Can you tell me which lessons or themes have caught your attention and why?

4. Let's review the four sections in this text a little **(for the interviewer: read/show the name of each section and browse with the interviewee to generate discussion.**)
   a) What caught your attention/what did you learn about building a better communication with your daughter/son?
   b) What caught your attention/what did you learn about self-discipline?
   c) What caught your attention/what did you learn about the transition from childhood to adolescence?
   d) What caught your attention/what did you learn about the consequences of early marriage/ pregnancy?
   e) What do you think about the inclusion of contraceptive methods in the text?
5. Have you discussed with your daughter/son something of what you've learned?
6. Has your son/daughter discussed about something he/she has learned in the texts?
7. Have you implemented the knowledge you've gained at the school for parents?
8. Which other activities do you think could be implemented to prevent early marriages?
9. Do you have any recommendations for the improvement of this intervention?

Interview Instruments for Tutors

Name: _____

School name: _____

Grade you tutor: _____

Thank you for taking your time to come to this meeting. We want to know a little more of you think about this Project. Please, feel free to only answer what you consider necessary. Your participation is completely voluntary and may end at any time you wish to stop. If any question isn't clear, please let me know and I'll try to clarify any doubt.

Tutor's experience with the texts

1. First, lets' talk about your experience with the "Living my Youth with Purpose" and "Youth with Equality" texts.
   a. Can you name some strengths/weaknesses in the trainings you participated in?
   b. From your personal point of view, do you consider that these texts have helped you see and understand the causes and consequences of early marriage? In what way?

Experience in the classroom

2. Tell me a little about the 11th grade trainings. How were they organized? (How many days, hours, tutors etc.)
   a. Do you consider that the training prepared the 11th graders to implement the texts? Why/why not?

3. In your school, what was the role of the tutor when the 11th graders were implementing the texts? (Observation/taking part in the discussion/ helping to moderate discussions, etc.)

4. From your observations, what comments do you have on the role of the 11th graders? What strength and weaknesses did you identify?
   a) Do you consider that the 7th and 9th graders responded positively to a peer implementation? Why?
   b) Can you Comment on the participation of man and woman? Did they participate with the same frequency? Did they show the same enthusiasm?

5. If you had to choose between the next two options, which would you choose and why?
   a) Continue with the peer implementation.
   b) Change to a tutor-student implementation.

6. Do you consider that texts are effective in creating discussions that promote reflection among students? Can you think of a related example from what you observed in the classroom?

Social change

7. Do you think that the texts "Living my Youth with Purpose" and "Youth with Equality" can contribute to generate changes that help prevent early marriages in your community?
   a) Do you think that communitarian education (campaign) and the Parents meeting can help prevent early marriages?
   b) If you answer is yes, can you give me an example of something you have heard or seen from students, parents or in the community that leads you to think that this intervention is really contributing to prevent early marriages?

8. As a tutor, we can establish that you have an authority role in the community. As a leader in your community, what else do you consider necessary (aside from what this intervention already includes) to prevent early marriages?

9. How has the parent's reaction to the use of both texts been?

10. Do you have recommendation about the content/training/ implementation of the new texts?

Appendix 10

Coding System

Theoretical Framework

Code	Description
1) Capabilities Approach	Conceptual umbrella that focuses on what individuals can be and do rather than what they can produce or earn. By freedoms, Sen refers to the opportunities that people have to lead lives in which they can choose and accomplish what they value. In expanding these freedoms, Sen argued, individuals will enhance their *capabilities* in such a way that will allow them to shape their own destiny.
a) Gender inequality as unfreedom	But for people to enjoy these freedoms, there must be a removal of obstacles and barriers to experience them. Development also encompasses "the removal of major sources of unfreedom". Along with poverty, lack of educational and economic opportunities, as well as the failure of States to provide for and protect its citizens, cultural norms that perpetuate gender inequality constitute one of the main unfreedoms that drive CM (UNFPA, 2012; UNICEF, 2014; World Bank 2011; Tzemach Lemmon, 2014).
b) Capabilities approach and education	Walker (2012) argued that under a capabilities education narrative, education should promote freedom of expression and critical thinking through a problem-posing approach based on dialogue. Walker contended that this model should aim to foster a deep self-understanding of students as individuals and the society they live in
c) Capabilities approach and agency	Walker argued that the capabilities education narrative must provide an empowering and emancipatory education that promotes the search for the ultimate meaning of life in one's own way: agency. Ability to shape our destiny, lead lives that we value.
2) Empowering Education	ACMHE's purpose is to prevent CM by providing a curriculum that offers the

		necessary conditions so that boys and girls can empower themselves to recognize, challenge, and act against oppressive cultural norms around gender that are connected to CM.
	a) Recognition	Help students recognize their inherent dignity, self-respect, and their equality to others.
	b) Capacity development	Expand what students are able of thinking and doing. Enhance critical thinking skills to examine their lives and the society in which they live in.
	c) Action: agency	Students should be able to challenge oppressive relationships and structures and spark social transformation.
3. Critical feminist pedagogy		CFP "puts a deliberate stress on women and resistance to power in learning situations" (p.104). CFP encourages that in designing content it is important to connect it to girls and women's everyday lives as well as taking the learner's experiences and linking them to larger social issues. According to English and Irving critical pedagogy should:
	a) Foster social analysis:	This means moving beyond creating safe spaces for women and practice social analysis and critique.
	a) Create social change:	CFP needs to go beyond personal and organizational change and work toward societal change.
4. Adolescent development		
	b) Fundamental changes of adolescence	There are three major changes that occur during adolescence: biological (puberty), cognitive (sophisticated thinking/future/hypothetical), and social transitions (relationship with others; parents, peers, society).
	c) Context	Reality in which the fundamental changes take place using an ecological paradigm (micro, meso, exo, macrosystems).
	d) Psychosocial	There are six relevant psychosocial aspects during adolescence: identity (self-conception, self-esteem), autonomy (sense of independence), intimacy (forming close and caring relationships with others), sexuality (development of sexual feelings and enjoying

	physical contact with others), and achievement (being successful and competent members of society).
5. The prototype willingness model	The prototype willingness model is a type of dual-process model of decision making. Dual-process models of decision making maintain that there are two kinds of modes of information processing that individuals use to make decisions: one based on systematic reasoning and another one based on heuristics. The prototype willingness model contends that individuals can engage in these two modes simultaneously (Reyna ad Brainerd, 1990; Boyer, 2006).
a) The theory of reasoned action (Fishbein & Ajzen 2010)	The theory of reasoned action (Fishbein & Ajzen 2010) assumes that human social behavior is influenced by the information or beliefs people possess about the behavior under consideration. This information comes from a wide array of sources such as personal experience, media, and social interaction, or as in this case, a formal education setting. According to Fishbein and Ajzen, beliefs associated with a given behavior serve as a guide to respond/act toward a specific situation. These authors distinguish between three kinds of beliefs: a) beliefs about the consequences of behaviors, b) interpersonal or social approval/disapproval of a given behavior, and c) beliefs about personal or environmental factors that can impede/allow to carry out a given behavior. Together, these three beliefs lead to the formation of "behavioral intention" (p. 21). This intention is now available to determine whether an individual will perform a given behavior. The stronger the intention, the more likely it is that a person will behave in a determined way. To incorporate elements of the reasoned path, ACMHE's curriculum includes: a) discussion about causes and consequences of CM (e.g., health outcomes, prevalence of gender inequality, reduction of opportunities to study/work in the future), b) examination of the

	reasons why CM does not have social approval (e.g. discussion of national laws and the reasons it forbids CM), and c) discussions about personal and environmental factors that impede or allow adolescents to marry (e.g. knowledge about puberty, social norms that promote gender inequality, lack of opportunities for girls etc.).
b) Risk prototypes	Risk prototypes refers to the cognitive representations or social images of the type of person who engages in a specific behavior. These "images" more than visual representations, refer to the characteristics of the persons who engage in those behaviors. The more favorable the image/representation, the more willing are adolescents to accept the social consequences connected to a specific behavior. This image-based system operates at an unconscious level and relies on previous experiences and knowledge of one's surroundings (e.g. media, behaviors of family members, friends or neighbors). Behavioral willingness refers to "an acknowledgement that under certain circumstances one might engage in a risk behavior that was previously not intended or sought" (Gerrard et al., 2008). Focusing on willingness instead of intentions allows individuals to consider a broad range of possibilities to which they might be exposed to rather than thinking about whether they plan to engage in a determined behavior. However, although this model does not emphasize intentionality, it does take into consideration the characteristics of the reasoned path which operates simultaneously with experiential knowledge. To include elements of the social path, ACMHE's curriculum includes a series of case studies and dramatizations that aim to enrich students' image-based system to promote unfavorable images of individuals who engage in risky behaviors (e.g girls running away from their homes and enduring the negative consequences of their decision). Similarly, through case studies and dramatizations, this

	curriculum promotes favorable images of individuals who choose not to engage in risky behaviors/ engage in healthy behaviors so that students can increase their willingness to engage in this similar kinds of behaviors (e.g. youth engaging in healthy romantic relationships, youth challenging gender norms).
6. Cognitive dissonance	By cognition, Festinger refers to "any knowledge, opinion, or belief about the environment, about oneself, or about one's behavior". Dissonance, on the other hand, refers to the unpleasant state that occurs when an individual is exposed to "two or more elements of knowledge that are relevant to each other but inconsistent with one another" (Harmon-Jones & Harmon-Jones, 2012, p.72). Festinger theorized that when an individual is confronted with this unpleasant state, this will motivate this person to engage in psychological work to reduce inconsistencies between cognitions. Cognitive dissonance is "an lmnklnljn condition which leads to activity oriented toward dissonance reduction just as hunger leads to activity oriented toward hungry reduction" (Festinger, 1962, p.3). Cognitive dissonance is measured through attitude change. Hence, one of the main objectives if these curricular products is to change attitudes and beliefs of students towards CM and its causes, particularly oppressive gender norms. ACMHE's aim is to foster cognitive dissonance through discussions based on theoretical knowledge (e.g. examination of terms such as gender, social norms, and puberty) and case studies (e.g. example of persons who challenge gender stereotypes).
7. Social learning theory	The social learning theory advances that individuals learn how to behave through modeling, observational learning, and social interactions. Social learning theory helps us understand how the social reality in which adolescents live in affect the ways in which they understand romantic relationships. For example, according to the demographic health

	survey data, 62% of 20-24-year-old Honduran women from rural areas entered into a union as an adolescent (Honduran Secretary of Health et al., 2013). Only 10 percent of unions formed by adolescents are legal (Remez et al. 2009). That is, it is common for adolescents in rural areas to observe informal unions happen among young people in their communities and families which might lead them to consider that running away with their partners at a young age is a normal way to engage in a romantic relationship. Following this idea, this intervention aims to provide a social context where students can dialogue and evaluate positive and negative models, behaviors, beliefs, and attitudes present in their communities to analyze the causes and causes and consequences of CM. To achieve this, this curriculum relies heavily on real-life case studies to promote social analysis and dialogue around this phenomenon.
8. Peer education	Peer education is defined as education that occurs "when individuals of a specific self-identified group educate other individuals from the same self-identified group with whom they may share similar social background or life experiences" (Sriranganathan, et al., 2012, p.62-63).
a) Simple language/ role models	According to several reviews of sexual health education efforts, peer sexual health education programs offer several advantages. First, peer educators be effective sources of information because they are more likely to communicate using more simple language and they can serve as positive role models, challenging notions that most adolescents engage on high-risk behaviors (DiClemente, 1993).
b) Similar backgrounds	Second, it is common for peer mentors and mentees to share similar interests, challenges, and backgrounds which might help participants bond with peer educators.
c) Friendlier environment	A peer education strategy also provides the opportunity to create an environment where youth can ask questions about their sexual health in a friendlier environment, without

	feeling judged or monitored by authority figures such as teachers (DiClemente, 1993; Jaworsky et al., 2013).
d) Benefits for peer educators	Peer educators also experience great benefits. Not only are they exposed to important knowledge that is relevant for their own lives, they also develop transferable skills such as communication, facilitation, leadership, presentation development, and problem solving. Peer educators have also reported being more open-minded, confident and self-aware about their own reality after their experiences as peer educators. In some instances, peer educators are the ones that present the greater knowledge acquisition and attitudinal change (Jaworsky et al., 2013).

Student Interviews

Question/case study	Code	Sub-code
1. Tell me some of the things you learned from the "Living my Youth with Purpose" text	Viviendo mi juventud con propósito	a) Gender equality b) Case studies c) Chastity d) What I want for my future e) Fake happiness
2. Tell me some of the things you learned from the "Youth with Equality" text.	Juventud con Igualdad	a) Gender equality b) Puberty c) SRH d) Case studies e) Healthy relationships
3. In the department of Atlántida, where you live, it's common for adolescent girls to marry when they're very young. From your experience on what you see in your community and from what you've learned studying the texts.	Scenario 1: Causes of CM	a) Poverty b) Family tensions c) Puberty d) Pregnancies **Codes that emerged:** a) Lack of knowledge of CM b) Desire to be in a relationship. c) School discontinuation d) Age difference vulnerability. e) Others

4. Melissa is a 16-year-old SAT student. Melissa has a boyfriend behind her parents. Her boyfriend's name is Carlos; he is 24 years old and works as a farmer. Melissa and Carlos have been in a relationship for three months. Carlos asked Melissa to move in together. Melissa thinks that if she goes with Carlos, she will have more freedom, since she thinks her parents control her too much, and that she'll finally be able to have a relationship with Carlos without having to hide. She also believes that she would have more economic stability since Carlos has a job. Melissa is seriously considering accepting Carlos' proposal.	Scenario 2: Attitude towards CM	**1) Attitude towards CM** a. Disagrees with Carlos and Melissa's plan. b. Does not disagree with Carlos and Melissa's plan. **2) Recognition of Causes and consequences of CM** a. Control b. No Education c. Unhappiness d. Good outcomes **3) Recommendation** a. Avoid CM b. Think about it. **4) Willingness** a. Willingness to reject CM b. Not clear willingness to reject CM c. Willingness to enter CM
5. Gabriela is a 13-year-old adolescent student from 7th grade in SAT. When Gabriela was in 6th grade she was never interested in playing with her male friends. However, now that she's 13 many things have changed. Gabriela cares a lot about her looks, especially because she likes a boy from 9th grade and enjoys spending time with him.	Scenario 3: Puberty and attraction	**1) Reason for change in behavior** e. Identified puberty f. Did not identify puberty /other reason **2) Reaction to lack of understanding** a. Reported intention to act b. Did not report intention to act **3) Personal experience / theoretical framework** a. Cognitive dissonance b. Gender equality c. Family d. Marianismo e. Decision making process
María and Juan are siblings. María is 16 years old and Juan is15 years old. Their parents treat them very	Scenario 4: Gender inequality	**1) Identification of concept**

differently. Juan is allowed to go out freely to play and spend time with his friends. María can rarely leave the house and have fun. Juan has a girlfriend and the whole town knows about it and approves it. Last year, María had a boyfriend without her parents knowing and her neighbors found out and started calling her "slutty". The neighbors are always criticizing María for the way she dresses or if she hangs out with boys. Therefore, she feels surveilled. Juan doesn't worry if others approve of his behavior or not.		a. Able to identify gender inequality b. Unable to identify gender inequality c. Justifies as protection. **2) Personal reaction** a. Disagrees with differential treatment. b. Does not disagree with differential treatment **3) Pedagogical approach /learning processes** a. Cognitive dissonance b. Prototype model c. Gender equality d. Feminist critical theory
7. Lourdes has a husband named Alexis. Alexis has a small cornfield in which he works in the mornings. Lourdes is a SAT Tutor and works in the afternoon. When Lourdes goes to work in the afternoon, Alexis takes care of their children, helps cleaning the house and makes dinner. Alexis' mom and brothers don't like that he does "women stuff" and are bothered that Lourdes is not taking care of the things that Alexis has to do, because they think that taking care of the home and children is not "men stuff"	Scenario 5: Gender norms	**1) Gender norms** a. Agrees with rigid gender norms b. Disagrees with rigid gender norms **2) Identifying gender norms (GN)** a. Able to identify GN b. Uses gender inequality concept c. Not able to identify GN or gender inequality **3) Intention to challenge /act against GN** a. Intends to challenge b. Does not intend to challenge **4) Personal experience/theoretical framework** a. Cognitive dissonance b. Case studies
8. Let's imagine your best friend tells you she/he has a girlfriend/boyfriend. She/he is not a SATstudent and knows that in SAT you've studied the texts, and	Scenario 6: Healthy relationships	**1) Relationships** a. Gender equality b. Consult to take decisions

that they talk about how to have healthy relations and the qualities that people have to develop to achieve this type of relationship.		c. Investigation of character d. Unable to name **Codes that emerged:** a. Permission of parents b. Chastity c. SRH d. Respect
9. Let's imagine you have a boyfriend/girlfriend, and that like in any relationship there are thigs you don't like from him/her. For example, let's imagine that your boyfriend/girlfriend likes to control who you talk to on Facebook or on the phone and let's say you dislike that.	Scenario 7: Assertiveness	**1) Problem solving** a) Proposes solution b) Does not propose solution **2) Reaction** a. Disagrees with behavior b. Does not disagree with behavior.
10. Laura is a 16-year-old young girl. During the mornings she Works in a small corner store in her community. The owner of the corner store is a 40 years old man named Pedro. Mr. Pedro has started wooing Laura and promised her he'd marry her if they started dating. Within few months from starting to work at the corner store Laura was pregnant. When Mr. Pedro got the news that Laura was pregnant, he denied responsibility for it.	Scenario 8: Legality	**1) Recognition** a. Recognition of illegality b. No recognition of illegality c. Recognition of statutory rape
11. Let's imagine that we are in the future and you just got married/ together with your partner.	Scenario 9: Communication about planning a family	**1) Family Planning** a. Communication b. Concrete actions (clinic/contraceptives) **Code that emerged:** a

12. Jenny and Pablo just got married. They don't want to have children right away.	Scenario 10: Contraceptive methods	a. Economic planning
13. Tell me about the experience of having your peers giving the lessons in the text.	Scenario 11: Peer education 7th/9th	**1) 11th graders peer educators positive** **2) 11th graders peer educators negative** **3) Choose** a. 11th graders b. Tutors c. Both
14. Tell me about your experience giving the lessons in the text.	Q14: Peer education 11th	**1) Considered prepared to tutor peers** a. yes b. no **2) Difficulties** **3) Advantages** **4) Choose** a. 11th b. Tutors c. Both
15. Do you think this Project can help prevent early marriages? Why/ why not?	Q15: ACMHE able to prevent CM	**1) Yes** **2) No**
16. Who have you shared the things you have learned with?	Q16: Sharing ACMHE with others	**1) Yes** a. parents b. friends c. neighbors d. family members **2) No**
17. Do your parents attend the "School for Parents"?	Q17: Parents go to meetings	**1) Yes** a. Share what they have learned **2) No**

Parent interviews

Questions	Code	Sub code
1. Do you think it is important to address gender inequality and early marriages in your community? Why?	Q1: Attitude towards CM	a) Rejects CM b) No clear rejection of CM

2. What is your opinion on this intervention that has the purpose of preventing early marriages?	Q2: Attitude towards ACMHE	a) Supports ACMHE b) No clear support of ACMHE
3. Let's review the four sections in this text a little	Q 4: Salient topics of interest	a) Communication b) Puberty c) Discipline
4. Have you discussed with your daughter/son something of what you've learned? 5. Has your son/daughter discussed about something he/she has learned in the texts?	Q 5/6: Discussion of materials with students	a) Discusses the materials b) Does not discuss the materials
6. Have you implemented the knowledge you've gained at the school for parents?	Q 7: Implementing knowledge	a) Implements b) No implementation
7. Do you have any recommendations for the improvement of this intervention?	Q 8/9: Recommendations	

Tutor interviews

Question	Code	Sub code
1. First, lets' talk about your experience with the texts "Living my Youth with Purpose" and "Youth with Equality".	Q1: Experience of tutors with text	a) Training -Strengths -Weaknesses b) Personal experience /theoretical framework
2. In your school, what was the role of the tutor when the 11th graders were implementing the texts? (Observation/taking part in the discussion/ helping to moderate discussions, etc.)	Q3: Role of tutor	a) Observed b) Helped students directly c) Was not present
3. From your observations, what comments do you have on the role of the 11th graders?	Q4: Role of 11th graders	a) Response of 7th and 9th graders -positive -negative

		b) Participation of girls and boys - Frequency -Enthusiasm
4. If you had to choose between the next two options, which would you choose and why? c) Continue with the peer implementation. d) Change to a tutor-student implementation.	Q5: Peer vs tutor	a) Continue with the peer implementation. b) Change to a tutor-student implementation. c) Mix of both
5. Do you consider that texts are effective in creating discussions that promote reflection among students? Can you think of a related example from what you observed in the classroom?	Q6: Texts promote discussions and reflection	a) Yes b) No
6. Do you think that the texts "Living my Youth with Purpose" and "Youth with Equality" can contribute to generate changes that help prevent early marriages in your community?	Q7: ACMHE can generate changes	a) Yes -example b) No
7. What has been the reaction of parents to these texts?	Q 9: Reaction of parents	a) Good b) Bad
8. Do you have recommendation about the content/training/ implementation of the new texts?	Q 8/10: Recommendation	