Abstract

Many girls in Indonesia lack the information and life skills necessary to navigate the complex worlds they live in, making them vulnerable to teenage pregnancy and child marriage. Around one in nine, or 11% of girls, married before age 18 in 2016 (Susenas). Ultimately, many of these marriages and subsequent dropping out of school are happening due to teenage pregnancy or due to families’ wishing to protect their female children from the stigma of a potential pregnancy out of wedlock. The Human Centered Design (HCD) process inspired innovation and used a user-centred process to design solutions. Adolescents were led through a process of identifying and solving challenges, with consultations with teachers, health workers and parents to understand the greater context. It identified an innovative and gender responsive adolescent friendly information and communication material - a comic book - to close the information gap for adolescents on child marriage, healthy relationships and reproductive health.

Introduction

The Convention of the Rights of the Child (CRC) provides a globally accepted definition that a child is someone below the age of 18. Therefore, child marriage occurs when either party (or both) is below the age of 18 and enters into marriage. The practice violates child rights as it deprives them of their rights to education, health, and to be protected from violence, amongst others. Placing the issue in context, the Sustainable Development Goals (SDGs) launched by the United Nations General Assembly reaffirmed members’ commitment, including the Government of Indonesia, to gender equality and empowerment of women and girls. Specifically, Goal 5, target 5.3, aims to eliminate all harmful practices such as child, early and forced marriage by 2030, yet with its complex and multi-dimensional nature it contributes towards the achievement of 8 other SDG goals (United Nations General Assembly, 2015).

Many girls in Indonesia lack the information and life skills necessary to navigate the complex worlds they live in, making them vulnerable to teenage pregnancy and
Child marriage. Comprehensive sexuality education is not provided in schools and very few parents openly discuss these topics with their children. Approximately 45% of Indonesian girls feel unprepared for their first period, and only 16% of adolescent girls and 9% of adolescent boys know that a woman’s fertile period is halfway between her periods (IDHS, 2012). Around one in nine, or 11% of girls, married before age 18 in 2016 (Susenas). Ultimately, many of these marriages and subsequent school drop-outs are happening due to teenage pregnancy or due to families’ wishing to protect their female children from the stigma of a potential pregnancy out of wedlock (Brown, 2012). Some of these relationships start online, where girls do not have the knowledge or skills to negotiate the internet safely. A recent poll conducted with Indonesians aged 14-24 showed that a shocking 41% of girls had sex with their boyfriends because they felt they could not say no (UNICEF, 2017). It is crucial to fill these knowledge and skills gaps with a focus on empowering adolescent girls and to close the information gap by developing innovative and gender-responsive, adolescent-friendly information and communication materials, through human centred design.

Child Marriage in Indonesia

There are 46 million adolescents (aged 10-19) in Indonesia amongst a total population of 255 million. Indonesia is culturally diverse and resource rich, averaging around 6% GDP growth in recent years (World Bank Development Indicators, 2015). However, adolescents in Indonesia face many adverse challenges. Only 56% complete upper secondary (57% male; 56% female) compared to 76% at lower secondary school (74% male; 78% female) (Susenas, 2015). Additionally, only 44% of 15 year-olds are proficient in reading (38% males; 51% females) and 31% in math (30% males; 32% females) (PISA, 2015). The out-of-school rate is 29% for children aged 16-18 with an unemployment rate of 24% (23% males; 25% females) for age 15-19 (Susenas, 2015; Sakernas, 2010). Forty seven (47) births per 1000 are by adolescents aged 15-19; the under-five mortality is currently 40 deaths per 1000 live births; and 37% of children below five are stunted (IDHS, 2012).

Child marriage has detrimental impacts on the wellbeing and opportunities of girls and of their children. Global evidence shows that complications during pregnancy and childbirth are one of the leading causes of death for girls between ages 15 and 19. Babies born to young mothers under the age of 20 are 1.5 times more likely to die during the first 28 days than babies born to mothers in their 20s and 30s (UNICEF, 2016). Married girls are more vulnerable to domestic violence and are also more likely to drop out of school (Kidman, 2016). In Indonesia, girls who marry before the age of 18 are at least four times less likely to complete secondary education or equivalent (Susenas, 2016).

Data from the National Statistics Bureau (BPS) and UNICEF find that child marriages are associated with rural residence, low household education, and households with lower levels of expenditure - all categories associated with poverty
Girls in rural areas are three times more likely to marry before the age of 18 compared to girls in urban areas; girls are three times less likely to marry before age 18 if their household head has completed university compared to primary school; and girls from households with the lowest levels of expenditure are five times more likely to be married before the age of 18 compared to girls from households with the highest level of expenditure. Furthermore, based on data from the Indonesian Demographic Health Survey (IDHS) and confirmed through online and offline consultations with adolescents and community members, there is a lack of accessible and adolescent-friendly information about child marriage, healthy relationships, and reproductive health.

Due to Indonesia’s large population, it has one of the highest burdens of child marriage in the world (UNICEF, 2016). However, provincial rates vary across the country from five to 22% (Susenas, 2016). Provincial averages can mask districts and sub-districts where prevalence is much higher. Unequal gender norms, poverty, lack of access to (quality) education are all drivers of child marriage, including traditional attitudes about gender and women’s role in society (Rumble et al, 2018). Evidence highlights the role for education as a protective factor against child marriage (Brown, 2012). Promoting girls’ completion of secondary school could significantly reduce child marriage. Furthermore, social protection financing directed at the most vulnerable girls will help address the poverty driver of child marriage. Lauren Rumble et al., undertook a quantitative analysis of the child marriage determinants in Indonesia and identified that the average age of preferred marriage is around 26 years (2018). Yet, structural and environmental factors are driving the onset of marriage despite the girls’ ideal age of marriage.

The legal age of marriage in Indonesia is 21 for both boys and girls but with parental consent, the minimum age of marriage for girls is 16 and boys is 19 (UNICEF, nd). However, the mechanism for marriage dispensation, as stipulated in the 1974 Marriage Law, allows exceptions to the minimum age, allowing children to get married at an even younger age. In other words, there is no minimum age for marriage provided that there is consent from an appropriate authority, judges from the Religious Court (for Muslims) or District Court (for non-Muslims) (UNICEF, nd). Furthermore, the procedures surrounding marriage dispensation are not clear, are open to interpretation and loopholes, and do not consider the consent of the children. Families may also choose to marry through traditional marriage (adat) where the degree of consent and minimum age vary widely across the country (Rumble et al, 2018).

**Delivering Child Marriage**

Globally, efforts have been made to address child marriage through multiple channels. These include initiatives such as legal reform; providing skills to girls; adolescent empowerment; engaging with communities and families; and engaging policymakers (Malhotra, 2011). The multitude of factors that drive child marriage
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make it challenging to address. The International Center for Research on Women (ICRW) undertook a systematic review of child marriage prevention programmes and found that what works best are programmes that work directly with girls to empower them with information and skills and resources in order to change deeply entrenched social and cultural practices (2011). This enables girls to act and advocate for themselves. Other effective initiatives change the accessibility and quality of education for girls, or educate and mobilise parents and community members.

Education Entertainment and approaches with engaging formats involving dialogue and interaction have shown promising results in affecting positive social change for adolescents by transforming their attitudes and behaviours towards child marriage and creating new norms, values and behaviours (Bouwman et al, 2017; Overseas Development Institute, 2015). Providing opportunities for interaction, reflection and discussion enable audiences to act upon their newly gained knowledge and has been identified as an effective method for change (Marcus, 2014; ODI, 2015). Further, these opportunities promote dialogue and help personalise messages. One channel for dialogue is peer education. Peer education is effective among adolescents because friends are their main sources of information and motivate their behaviour (ODI, 2015). A discussion paper by Innocenti explains the “pre-adolescent and adolescent years as critical periods for socialisation, where there is acute sensitivity to social norms and peer influences, including those around gender”. Peers and schools are an important source of influence for gender socialisation, particularly during mid-adolescence, when a significant portion of time is spent in these settings (Neetu et al, 2017). Peer education is also a common approach for adolescents to fill their information gaps in Indonesia. Two government programmes in Indonesia support adolescents to provide peer support. The National Family Planning Coordinating Board (BKKBN) provides information and counseling services by and for adolescents through PIK Remaja and the Ministry of Women’s Empowerment and Child Protection provides peer support to victims of violence and bullying through Child Forum.

Within the field of Education Entertainment, the use of fictional characters as role models has been shown to contribute to gender norm change. Characters that the audience can relate to and identify with are more memorable (Marcus, 2014). Fiction and real-life role models were successful in India to change gender norms, through a cartoon character named Meena. Nine year old Meena is depicted as a girl who challenges gender inequality and was found to be entertaining and fun while inviting reflection on the realities of girls’ lives in South Asia. An evaluation found that girls who watched Meena felt inspired to partake in activities previously seen as “masculine” and it challenged adult practices on the importance of girls’ education and equal treatment of girls and boys (Chesterton, 2014).

Furthermore, the content and messaging of communication materials are most effective when tailored to the target group (ODI, 2015). The approach of Human-Centered Design (HCD) goes one step further and develops materials with the user, for the user. IDEO.org defines HCD “as a creative approach to problem-solving that
starts with people and ends with innovative solutions that are tailor made to suit their needs”. To our knowledge, many partners tend to overlook the user/target audience when developing communication materials.

The HCD Process

To help close the information gap, the HCD process was used to develop innovative and gender-responsive adolescent friendly information and communication materials to address child marriage. By involving adolescents to participate in the design and implementation of the intervention, it is tailored to fit their capacities, address their challenges and use solutions identified by them. Designing the information materials to delay child marriage involved IDEO’s three-step process; Inspiration Phase to learn directly from end-users; Ideation Phase to process learnings, identify design opportunities and prototype solutions; and Implementation Phase to scale up the solution and integrate continuous feedback1. Lastly, there was an advisory board consisting of experts in gender, journalism, communication and a child marriage survivor that helped analyse the findings throughout the process.

The Inspiration Phase

During the Inspiration Phase the focus was on understanding the behaviour and needs of the end user through discussions and participant observation. West Sulawesi was chosen as the testing site due to its high prevalence of child marriage, with one out of six marrying before 18 (higher than the national average of one out of nine) and its underdeveloped infrastructure (including institutions such as schools and healthcare facilities), as the province was established only in 2004. Discussions were held with 24 adolescents (12 girls and 12 boys aged 12 – 17 years old) to understand their daily lives; through what channels they prefer to receive information; and their knowledge, attitudes and practices related to child marriage as well as education, aspirations, social media, and reproductive health. Additional discussions were held with 8 teachers, 6 parents, and three local community leaders to understand the environment in which child marriage takes place. Conversations were also held with three married adolescent girls to understand the deeper causes of child marriage, which found that a lack of sexual and reproductive health information, pressure from their boyfriend, lack of assertiveness, and curiosity about sexual activities as being drivers behind pregnancy and marriage. Flamingo Social Purpose undertook similar consultations with married girls in 2016 in three locations, including West Sulawesi to better understand the drivers of child marriage. Their research found that various elements are driving the practice including economic necessity; teen pregnancy;

1 http://www.designkit.org/human-centered-design.
lack of critical information on relationships and reproductive health; and lack of alternatives to marriage, including lack of economic alternatives. Furthermore, technology has opened up a world outside the gaze of parents and communities, and many relationships start online (Bransky, Enoch & Long, 2016).

Participant observations of 20 adolescents were undertaken to understand how and where adolescent girls and boys spend their time by joining their activities. Strategies included home visits; spending time with boys at their ‘hang out’ spots which included playstation places and at the docks while fishing; and speaking to adolescents working on construction sites. Adolescents were observed over a one-week period and it was found that boys spend their free time at play station rental spots or small stores (warungs) or local security posts (pos ronda) whilst adolescent girls spend most of their time at home cooking, playing with dolls, or watching television. If adolescent girls and boys want to spend time together alone, they meet by the river. As is the case in the rest of Indonesia as evidenced above, adolescents in West Sulawesi lack comprehensive sexuality education and knowledge including on how to prevent pregnancy. Little information is provided by parents or teachers. Pregnancy was found to be one of the drivers of child marriage, as well as the lack of comprehensive reproductive health information, lack of parental supervision, curiosity and boredom. Pregnancy was in some cases used by adolescents to force marriages previously disapproved of by parents; and in cases where the dowry for a girl was too high, pregnancy would lower the amount.

The Ideation Phase

In HCD, the Ideation Phase aims to generate ideas, to build prototypes, to test with users and to iterate. By prototyping, a tangible product can be tested with users and ideas can evolve and be improved through the iteration process. Through discussions and activities with 37 adolescents (20 girls and 17 boys aged 10 - 17 years old) in West Sulawesi, prototype ideas were developed to solve the identified problems of child marriage, which was closely linked to other issues such as school enrolment, healthy relationships and reproductive health (topics identified as drivers/protective factors for child marriage). Some methods to generate ideas and to build prototypes included illustration with stories, writing fictional letters to pregnant or married friends, storyboards, and picture cards with quotes. The methods varied from one group to another based on literacy skills, familiarity amongst participants, and personality types (introvert vs extrovert) of participants. For example, storyboards were developed with 15-17 years old boys as they enjoyed drawing while case studies were used to generate prototype ideas with 15-17 years old girls. Culturally relevant solutions were prototyped in the form of a comic book, a popular Indonesian card game (kartu bayang), playing cards and a poster.

Local security posts (pos ronda) are spaces where the local security takes breaks. The space is open to anyone and is often visited by boys and men.
The card game and playing cards included key messages derived from the consultations in West Sulawesi, such as encouraging girls and boys to stay in school, prolonging marriage to accomplish your dreams, and asking trusted individuals for more information about pregnancy and reproductive health. Furthermore, the key messages show concrete actions that both boys and girls can take to avoid child marriage and messages that are specific to boys and girls. The prototypes acknowledge the important roles that boys play as peers and boyfriends to adolescent girls, avoiding placing the responsibility solely on girls to avoid unwanted pregnancy/marriage.

The comic book tells the story of Marni (female, 15 years old) and Hendra (male, 16 years old). They meet during a wedding ceremony and start a relationship. Marni dreams of going to university and becoming a teacher, while Hendra dreams of becoming a football player. However, within a short period of time, Marni is pregnant and both have to drop out of school. Hendra finds employment to provide for his family and Marni stays at home with her baby, isolated from her friends. As this point, the story provides them both with a second chance. The two inform themselves about reproductive health through asking trusted teachers and family members for information and support and agree to prioritise pursuing their dreams to build a future together. Ultimately, Marni becomes a school teacher and Hendra a football player, and together they are able to provide for their family as equal partners. The comic book aims to provide the audience with information on different competencies and skills, such as problem solving, decision-making, assertiveness, respect and cooperation, aspirations, and goal setting to empower adolescents to delay marriage.

User feedback was gathered from 62 adolescents in and out of school (13 girls aged 13-17 and 17 girls aged 10-14; 15 boys aged 13-17 and 17 boys aged 10-14), 11 teachers, 6 parents, three health workers, and local and national government to check relevance in different regions in Indonesia and ensure cultural sensitivity in the form of focus group discussions (FGDs). West Sulawesi, West Nusa Tenggara, and West Java were selected due to their varying socio-economic status of the population, as well as the high prevalence of child marriage.

Prototypes were tested according to their attractiveness, comprehension, acceptance and credibility, and areas for improvement. Attractiveness related to the preferred illustrations; comprehension checked whether the story or messages were understood; and acceptance and credibility aimed to understand if the materials were relatable and if users would share them with their peers and family. Users were also observed in how they reacted and interacted with the prototypes. Participants were presented with copies of the materials and interacted with the materials for 15 minutes before partaking in a group discussion.

The content and illustrations of the comic book were well understood, contextually - and culturally-appropriate and relatable for the users. Adolescent participants

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1 The child marriage prevalence is 12% in West Java, 15% in West Nusa Tenggara and 16% in West Sulawesi (Susenas, 2016).
strongly expressed that the comic book emphasised the impact of decision-making, particularly the consequences of their decisions on their future. Adolescents understood that completing their education is the key to their empowerment and to improving their lives. Furthermore, they found the story relatable and appreciated learning about the importance of education through this methodology rather than being told by adults or lectured to. Many wanted to share the book and the key messages with their friends and family. Feedback was also provided regarding the illustrations to shorten the hair, darken the skin and create a more youthful Hendra. It was observed that children in rural areas struggled more in reading the comic book than in urban areas. Literacy levels in 2015 for ages 15 and above were 97% in urban areas (98% males; 96% females) compared to 93% in rural areas (96% males; 90% females) (Susenas, 2015). One suggestion for the next iteration is to shorten and simplify the comic book for rural areas with lower literacy levels.

Parents, teachers and health workers appreciated the comic book as a way to facilitate open discussion on sensitive topics such as reproductive health, relationships, and marriage. Parents, in particular, felt empowered to talk about these topics, which they previously expressed not knowing about. The book also facilitated discussions among adults on their experiences, with many having married as children, often as a result of early pregnancy. Health workers also expressed being able to use the book to reiterate the role of parents in protecting their children and teachers felt it supported their messaging to encourage children to complete their education before getting married. Teachers recommended developing more detailed guidelines for discussions, to support the conversations around these topics.

Not all user groups were familiar with the kartu bayang due to Indonesia’s diversity. While adolescents were familiar with the cards in West Sulawesi, they did not know how to use them in West Nusa Tenggara. The playing cards were positively received in semi-urban and urban locations in West Sulawesi and West Nusa Tenggara, but were negatively associated with gambling in more traditional places in West Java. They were subsequently not included for testing in West Java. Gambling, both online and offline, is strictly illegal in Indonesia. In one of the largest Muslim countries in the world, the Qur’an prohibits Muslims from gambling. As a result, users showed an initial reluctance to the cards and suggested removing the numbers and symbols. However, users were still engaged by the pictures, messages and platform.

The aim of the comic book was to encourage adolescent girls and boys to seek out information and support when making important life decisions and increase their knowledge on marriage, relationships, and reproductive health. The comic book was tested again in West Sulawesi, but in a UNICEF pilot programme where the reach and scope for testing would be larger. The programme used the Adolescent Kit to bring together adolescent girls and boys in a safe space on a regular basis for social

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4 A simple facilitation card already has been developed.
5 http://adolescentkit.org/.
interaction and support (to develop their social capital). Adolescents were introduced to the comic book during the child marriage sessions, supported by a facilitator and facilitator guidelines. The 207 adolescents (62 males and 60 females (10-14 years); 48 males and 57 females (15-17 years)) were asked to share the comic book with 10 peers and to test their knowledge and perception prior to, and after reading the comic book. The results (available June 2018) will provide insights into the effectiveness of the peer-to-peer approach, the knowledge gained and any changes in perception by adolescents of child marriage, reproductive health and healthy relationships.

The Implementation Phase

During the Implementation Phase, partnerships are built to launch long-term solutions and strategic partnerships will be formed to reach the target audiences across Indonesia.

Communication activities are most effective when part of a ‘package’ of support (Marcus, 2014). The comic book will be used within an adolescent empowerment programme as a tool for discussion. This programme will commence in late 2018 in South Sulawesi and involve adolescents, parents, teachers, religious and community leaders, to improve the knowledge and attitudes of both adolescents and decision-makers and influencers of child marriage practices. Working with multiple stakeholders is important to enable changes in social norms. The child marriage comic book will be used alongside a menstrual hygiene management comic book, to improve adolescents’ knowledge on key health issues through the government’s health programme in schools.

In order to reach a larger audience of adolescents and as part of the iteration process, the comic book will be adapted to include digital versions. Discussions are ongoing to develop an online game and Instagram video story. In April 2018, the comic book was adapted for U-Report, UNICEF’s social media-based polling platform, and shared on Facebook, Instagram and Twitter with its 110,000 users. Amongst other digital content posted in April through U-report, the comic book was the most successful in engaging users (821 reactions on Facebook; 2,126 likes on Instagram and more than 6,000 impressions on Twitter).

Conclusion

The HCD process inspires innovation and uses a user-centered process to design unique solutions adapted to the context of Indonesia. It led adolescents through a process of identifying and solving challenges, in consultation with teachers, health workers and parents to understand the greater context. It identified innovative and gender-responsive adolescent friendly communication material to

6 U-report enables young people to share their opinion on topics and influence policy making. There are approximately 110,000 U-reporters across Indonesia aged 14-25, of which 51% female and 49% male.
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close the information gap for adolescents on child marriage, healthy relationships and reproductive health. It further empowers and engages adolescents on problem solving, decision-making, assertiveness, respect and cooperation, hope for the future, and goal setting.

Apart from the benefits of using the HCD methodology, two main challenges were identified in its application. The first challenge is that generally adolescents, especially adolescent girls, were found to have limited experience in actively participating in group discussions, expressing their opinions and engaging in solution-based methodologies. Gender norms and stereotypes, as well as ageism (a culture where children and adolescents are expected to be obedient to their parents and elders), all contribute to a lack of critical thinking skills for adolescents. As an example, adolescents are rarely asked to express their opinions by their families and communities and therefore they are not able to exercise this skill. To address this issue, tools were developed (prompts such as letter writing, drawing, case studies) to encourage adolescents to participate in group discussions. Often adolescents only responded to questions with a few words and needed to be probed to elaborate on their answers, by using various techniques from drawing to collages.

Secondly, the HCD methodology may work better in Indonesia in settings where adolescents have established bonds with one another previously as they may feel more comfortable to express themselves in the group. This approach was applied in some settings, but not in all, as initially it was thought that engaging adolescents from diverse backgrounds would lead to different ideas and solutions. Furthermore, it was thought that participants from rural areas would feel inferior and shy when speaking with outsiders/people from the city who were leading the process. To address this, a local partner (who spoke the local dialect) was engaged to open the sessions and encourage adolescents to feel comfortable. Another suggestion would be to first build the capacity of adolescents on self-expression (such as through life skills-based education or programmes) before engaging directly in HCD.

The participatory nature of HCD, actively involving users in the design process, ensures that their diverse needs are expressed and reflected in the product. However, it is also important to contextualise the HCD methodology and use tools that are appropriate for the local context. Constant iteration will result in the best version of the product; for example, the comic book has been tested in three locations and will be tested again in South Sulawesi to ensure that a well-developed, culturally appropriate, and gender responsive version is available for national adoption in the future.

References


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