Bringing Sex Education to Rural Women and Adolescents through an Interactive Pop-Up Book

Submitted by
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Declaration

I declare that this written submission represents my ideas in my own words, and where others' ideas or words have been included, I have adequately cited and referenced the original sources.

I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented, fabricated, or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be a cause for disciplinary action by the Institute and can also evoke penal action from the sources that have thus not been properly cited, or from whom proper permission has not been taken when needed.

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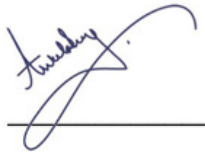
Approval Sheet

This thesis titled **'Bringing Sex Education to Rural Women and Adolescents through an Interactive Pop-Up Book'** by **Nikita Pegu** is approved for the degree of 'Master of Design' from the Indian Institute of Technology, Hyderabad.



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Abstract

Sex Education is essential for young adolescents to make informed choices regarding sexual interactions while undergoing critical developmental and physical changes as they enter adulthood. Knowledge about Sexual Reproductive Health (SRH) is even more crucial for rural women, as the higher the women know about it, the more likely it is for them to have agency in decisions regarding their sexual health. But it is difficult for information about sex and sexual health to reach the masses due to the social constraints and stigma associated with it.

This project targets young women from rural India since they are in immediate need of awareness of such issues. The objective is to make a pop-up book that will convey important sex education topics such as reproduction, contraception, STDs, etc., in a more accessible, fun, interactive, and suitable way through mediums such as Anganwadis and high schools.

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01 Introduction

1.1 Project Proposal
1.2 Problem Statement
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1.1 Project Proposal

Sex education, commonly referred to as sexuality education or sex-ed, is a comprehensive program that attempts to provide a solid basis for lifelong sexual health by empowering participants to make thoughtful decisions about their relationships, sexuality, and mental and physical wellbeing[1]. Sex-ed acts as a form of guidance typically targeted toward adolescents or young adults as they navigate their ways around their 'coming of age.'

But irrespective of its importance, sex education is still considered a controversial topic, especially in India. As our Indian society shuns open discussion on sex and sexuality, it makes it extremely difficult for adolescents to gain the understanding they need to handle their growing biological and physical changes and sexual curiosity. They may engage in hazardous sexual conduct as a result, which puts them at risk for poor sexual and reproductive health outcomes like STIs, unintended teen pregnancies, sexual assault, etc.

Then there is also the issue of gender inequality in our country, which makes it even harder for young females to know about their sexuality and have autonomy in decisions regarding their bodies. While there has been a lot of development in women's rights and professional careers in India over the decades, there is still a massive deficit in sex education and primary healthcare that women (mainly from lower castes) get in rural areas where 73 percent of

the poor in the country live [2]. The social stigma surrounding matters of sex and sexuality, poverty, and accelerating population growth in rural and slums of urban areas often lead to educational, nutritional, and social discrimination, specifically in females, which affects their overall physical, emotional, and sexual well-being.

Since there is a dire need to deliver sex education for the growing demographic of adolescents, especially girls in India, this thesis aims to develop a way to spread awareness of sex and sexuality among young rural women, which would be scientifically accurate and accessible. Still, it will also keep our culture's sensitivities in mind.

1.2 Problem Statement

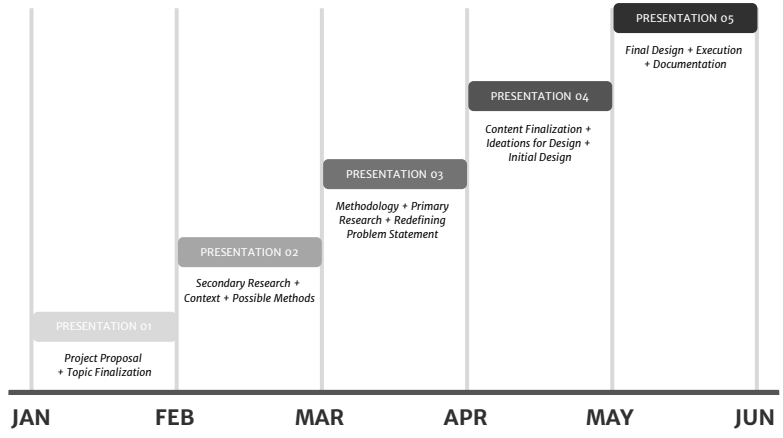
In this project, the problem statement is- 'How might we find a way to make the learning of Sex Education easier and more accessible for young rural women in India?'

1.3 Scope of Work

The project's scope of work includes first finding out the current scenario of how information on sex education is spread amongst people in rural areas, especially women and adolescents, by reviewing some journals and studies researching the same. After this, we will look into a case study where we will take actual interviews of people from the nearby villages into account and ask them about their personal experiences and views regarding sex education. We will then make user personas from the interview insights, re-define the problem statement if required, and explore possible solutions while categorizing and prepping the information to relay and keeping the target audience in mind. Furthermore, it also involves collecting the visual representation to support the narrative from rightful sources, conceptualizing the end output, and then making the final design.

1.4 Project Timeline

The course of the thesis was chalked out over 20 weeks, with review presentations scheduled at regular intervals to mark the project's progress.



02 Secondary Research

2.1 Female SRH in Rural Areas
2.2 Sources of SRH Information
2.3 Sex Education in Adolescents
2.4 Means of Sexual Education

Secondary research was done by analyzing a few relevant research journals to gain insight into the existing scenario of how information about sexual reproductive health (SRH) reaches the womenfolk and teens of rural India.

2.1 Female SRH in Rural Areas

Sexual and reproductive health (SRH) issues are a major concern for young women in India, particularly those from rural areas. Forty-one percent of all maternal deaths in India occurred in people between the ages of 15 to 24 years.[3] Young children engaging in unprotected sex at a young age is a result of early marriage, a lack of sex education, knowledge of SRH, and a lack of agency to handle sexual circumstances[4,5]. Even after many years of government family planning in India, these women rarely adopt contemporary methods like condoms, oral contraceptive tablets, or IUDs[6]. Although numerous laws in India are designed to delay marriage[7–10], nearly half of women aged 20 to 24 (47%) said they wed before turning eighteen[11]. It is not surprising that over 30% of Indian women give birth before the age of 18, and nearly 53% do so by the age of 20, given the increased social pressure of producing an heir and demonstrating potency[11].

During their pregnancies, deliveries, and postnatal periods, new moms do not have access to proper care. Women require higher-quality nutrition while pregnant or breastfeeding, yet in some parts of India, they generally eat last and the least[12]. In India, anemia affects more than

half of the female population[13,14], and every year, anemia-related deaths in pregnant women total almost 22,000 cases[15]. Lack of nourishment is also passed on to the breastfed baby, which can occasionally result in delayed mental and physical development[12].

Young women also lack knowledge about abortion. After 40 years of abortion being legal in India, many rural women remain oblivious of this fact[6]. Unsafe abortion is why 8-9 percent of all maternal casualties happen in India, which is higher in younger women[3]. Due to its stigma, information related to unsafe abortion does not get to women, especially those from rural areas.

A 2015 study conducted in rural areas of Jharkhand found that women had little agency over essential topics such as when to get married or have children, access to monetary resources, autonomy in movement, and self-efficacy [6]. Regardless, the husband's control over the wife's decision-making was way more extreme than the control of parents over their unwed daughter's decision-making and mobility[6]. Married women also didn't have much control over when to have sex[6].

In conclusion, women in rural India face many challenges, but inequality in reproductive healthcare, awareness, and agency are a few key ones.

2.2 Sources of SRH Information

According to the aforementioned 2015 study, married and older women (19–24 years) in rural areas were more likely than younger, unmarried women to have learned about topics including contraception, SRH, and abortion[6]. A higher level of understanding of SRH-related concerns and the women's standard of living were strongly correlated[6]. Usually, the best places to get information on SRH were from friends and relatives[6]. Married women were more likely to learn about SRH from outreach programs than single women, who learned about it from the media[6]. These women had very little knowledge of abortion, and unmarried women were less likely than married women to know anything about it[6]. Many women said they had never received information about SRH, contraception, or abortion.[6]

On the other hand, 94% of young women received no knowledge about SRH[6]. Television, movies, and newspapers are the most popular media formats, and women reported having high exposure to them[6]. Few women had access to social networking, and even fewer had access to the internet[6].

2.3 Sex Education in Adolescents

Due to India's sizable adolescent population (243 million), high rates of child marriage and early childbearing, and its large adolescent population, sexual reproductive health education for adolescents has been a focus for researchers and policy-makers in India[16,17]. One in 10 children in India is a teen or is going through puberty, and more than 25 percent of all youths will undergo puberty within the next few years[18]. But in the past decade, these policy-makers have struggled with incorporating appropriate measures to spread sex education due to the subject's delicate nature.

Almost one-third of girls between the ages of 15 to 19 are married in South Asia[19]; the average age of marriage among women in India being 16.7 years[20]. Ninety-five percent of young women aged 25 to 29 are married[21]. India has one of the highest numbers child marriages in the entire world[22]. Girls between the ages of 15 and 19 who live in rural India are married at a rate of 40 percent[16]. Due to early births, this practice frequently causes problems for girls' reproductive health. Nearly half of married women between the ages of 15 and 19 have had at least one kid[22]; and the average age of women giving birth to their first child is 19.6 years[21]. Girls who marry and have children early are more likely to lack the knowledge necessary to make informed decisions about SRH-related matters, such as sexual activity, contraception, STIs, pregnancy, and childbirth[23]. Given the social norms and restrictions that limit girls' and women's mobility and their accessibility to SRH information, it is possible that even with this knowledge, girls would still be restricted access to contraception, safe maternity, and disease prevention aid[24]. For unmarried ladies, societal constraints are much more important. in addition to withholding SRH information, girls are required not to inquire about such matters especially if they are unwed[25]. This is not the situation for young men in India, where a very small percentage of men marry between the ages of 15 and 19 years[26]. However, research indicates that it might be difficult for young men to find reliable, timely, and high-quality SRH information and services[16].

Lack of sex education and risky sexual behavior are the foremost reasons most associated with adolescent morbidity, mortality, and other illnesses[27]. RTIs and STIs of the reproductive tract are common among young people in India[16]. However, many of them are unable to receive therapy or are hesitant to do so due to feared social repercussions[16]. Several NGOs and communal organizations are working to introduce SRH services to the youth in India to improve this situation[16]. But not much is understood about what works for the youth and how to encourage them to use the general services[16].

2.4 Means of Sexual Education

Studies have shown that adolescent SRH and sex education agendas should include techniques that develop young women's life skills and sense of agency and better male involvement through their education and sensitization of

the issue[6]. Education of parents and guardians is also necessary to strengthen support from stakeholders and improve communication and access to SRH information and services[28]. Additionally, outreach programs ought to enlighten these young women about abortion legality, legislation against early marriage, and reproductive rights[6].

In the past, school-based initiatives have attempted to increase young women and adolescent girls' understanding of SRH. The current program of sex education included in the Indian school syllabus is called adolescent family life/sex education (FLE), offered by the MHRD and the National AIDS Control Organization. The main topics covered in FLE are reproduction, human sexual anatomy, reproductive health and rights, contraception, emotional well-being, and other human sexual and nonsexual behavior elements[29].

However, the curriculum forces specific values and beliefs on young people, discouraging them from creating their own opinions[29]. Additionally, it can be difficult to conduct teacher-led SRH education in India due to the instructors' uneasiness and inability to teach children about delicate topics of sex and sexuality-related issues[30–32].

Studies have demonstrated that community-led outreach initiatives and campaigns that directly teach health education to youth through outreach providers or peers can effectively improve comprehension and learning of SRH, particularly in rural areas of India[33–35]. These initiatives directly include young people and work to change perceptions about young women's accessibility to reproductive and sexual health care and education.

03 Primary Research

3.1 Case Study Background
3.2 Methodology
3.3 Results

3.1 Case Study Background

For primary research, a case study was done in the Kandi village of Telangana, India. We tried to understand the views and experiences of the local women and youth regarding SRH and sex education. Another objective was to understand the current system of imparting such information and find out if there are any loopholes.

About Kandi

Kandi is located in the Sangareddy mandal of Medak district in Telangana, India. It is situated 6 km away from Sangareddy, the district & sub-district headquarter of Kandi. This village is also a gram panchayat. As part of Telangana districts' re-organization, Kandi was re-organized from Medak to Sangareddy district. It is situated on the borders of the Medak and Rangareddi district. The local language of Kandi is Telugu. The total geographical area of the village is 1790 hectares (17.9 sq km). According to the 2011 census, Kandi has a total population of 7,492 people, out of which 3,882 (51.8 percent) are males and 3,610 (48.2 percent) are females[36]. Kandi's population is estimated to reach 8,391 in 2022[37]. The literacy rate of this village is 59.05 percent, 69.14 percent being males and 48.20 percent being females[38].

The 2964 workers in Kandi, 1994 of whom are men and 970 of whom are women, depend on a variety of skills to support their daily lives[37]. There are 333 cultivators in total who depend on agriculture farming, of which 295 are men and 38 are women [37]. A whole of 569 people work in

agricultural land as labor in Kandi; 323 being men, and 246 being women [37]. The agricultural commodities are typically paddy and sugarcane, while the manufacturing commodities are machine tools [37]. There are about 1,562 houses [38], six government primary schools, and two private schools in this village [37].

It is a lovely village with educational institutions like the Indian Institute of Technology, Hyderabad, and is bordered by lush meadows and large water tanks. The village has a long tradition of having a "club of temples", an ancient Panduranga Swamy temple encircled by other holy temple clusters [38].

Healthcare in Kandi Village

A three-tiered structure for public healthcare has been designed in Kandi and rural regions alike based on predetermined demographic norms.

- CHC (Community Health Centres): CHCs form the uppermost tier and are established and maintained by the State Government. CHCs are usually staffed by surgeons, physicians, gynecologists, and pediatricians.
- PHC (Primary Health Centres): PHCs comprise the second tier in rural healthcare. Activities include promoting better health and hygiene practices, tetanus vaccination of pregnant women, intake of IFA tablets, and institutional deliveries.
- Sub-centers: It is the most peripheral institution and the first contact point between the primary healthcare system and the community. Usually, an Auxiliary Nurse Midwife (ANM) is in charge of six sub-centers, providing basic drugs for minor ailments.

Medak district has 12 general hospitals, 8 CHCs, 67 PHCs, and 489 sub-centers [39]. Kandi has a total number of one Sub Primary Health Care center (health workers staff sub-centers for outreach services), where two doctors are available. The local PHC, with the help of ASHA workers, collects records of their female patient's entire sexual health and keeps track of their developments.

Thirty-five percent of women from Medak district of age 18-25 were married before the age of 18 as compared to 10 percent from Hyderabad district [39]. They are not much exposed to family planning via a health worker [39]. Most women in the state of Telangana preferred to give birth in local hospitals compared to their homes [39].

Apart from the government bodies, private hospitals are present to provide special services or even primary healthcare. There are also non-profit NGO Hospitals that run Community Health Services (CHS), where they hire and train health workers to provide health services and education to the villagers.

Role of Anganwadi Workers

Anganwadi is one of the important assets to Kandi village in distributing valuable SRH information and resources to rural women. The main health examinations and immunizations, supplemental nutrition, and teaching people (especially women) about family planning, their

well-being and health are the essential services offered by the Anganwadi personnel. Apart from this, they also teach and take care of pre-schoolers below six years old. Their role is to also assist in implementing Kishori Shakti Yojana (KSY) and organize social awareness programs/ campaigns etc., for young adolescent girls [40].

3.2 Methodology

At this stage, interviews were conducted to get qualitative insights into the views and opinions of the people concerning SRH and sex education. The interviews were conducted during March within the span of three days in Kandi. The people interviewed were divided into two groups: potential beneficiaries and potential stakeholders. Potential beneficiaries were the group that could directly benefit from the product/solution that would come up from this research, and Potential stakeholders were the group that could bring the product/solution to the former. For the interview, a set of questions were asked to each group. Each session started with a brief introduction about the interviewer and the subject of study. The name, age, and profession of the interviewee were also noted. It took roughly about 45 mins for the completion of each session. The interaction was recorded with permission. A total of nine people were interviewed, five being the potential beneficiaries and four potential stakeholders.

Interview Guide (Potential Stakeholders)
Target group: Anganwadis, ASHAs, Village Health Workers, doctors and school teachers.
Age: No bar
Motivation: To help educate rural girls and women to know about their own SRH and safe sexual practices.

List of conversations:

NAME* AND AGE	ROLE/ORGANIZATION
Sujaya H., 36	*Anganwadi worker*
Dr. Namrata L., 34	*General Doctor at PHC*
Shivani M., 52	*English teacher at local Girl's high school*
Sanjita T., 42	*Science teacher at local Girl's high school*

Questionnaire (for Potential Stakeholders)

1. How are rural women informed about their reproductive health, safe sexual practices, contraception, abortion, etc., and how is this information relayed?
2. Do outreach programs occur? Do they use any visual aid like posters etc., or is it just word of mouth?
3. Do you think the current method works?
4. Should Sexual Reproductive Health information be targeted toward students or adults?
5. When do you think a female should start learning about SRH?

*Real names have been withheld for confidentiality.

6. Do you think it is essential for women in the villages to know things about contraception, abortion, pregnancy diets, and care before they give birth?
7. Does knowing about SRH and pre-birth care beforehand help ease the pregnancy?
8. What is the system of pre and post-birth care here?
9. Where do most rural women give birth here, in a hospital or the home?
10. What is the average age range for giving birth here?
11. Do you think fewer underage youngsters will get pregnant if they know about contraception?
12. In what other ways do you think reproductive health awareness can be spread to the masses?
13. Do you think something visual and interactive like a pop-up book is a good way to ignite interest and spread information about SRH, rather than just word of mouth?
14. Are there any additional ideas, thoughts, or questions that you would like to share/ask?

Interview Guide (Potential Beneficiaries)

Target group: Rural women, school-going girls
Age: No bar (but mostly teens)
Motivation: To know about their own SRH and safe sexual practices and to have more agency in their life.

List of conversations:

NAME* AND AGE	ROLE/ORGANIZATION
Seema, 15	*Student at local Girl's HS*
Alka, 14	*Student at local Girl's HS*
Shruti, 14	*Student at local Girl's HS*
Shehnaaz, 31	*Mother of an Anganwadi toddler*
Amrita, 23	*Student at IIT-H*

Questionnaire (for Potential Beneficiaries)

1. How much do you understand about reproductive health, contraception, safe sex, pregnancy, and abortion?
2. From where do you get this information? What is the media of communication?
3. What more ways do you think can make learning about SRH more fun?
4. How old were you when you first learned about SRH?
5. Is it taboo to talk about SRH at home?
6. Do you know any of your peers who are/were pregnant? Any particular difficulties that they faced?
7. Have you ever been pregnant? Was the pregnancy difficult or easy? How did you take care of yourself while pregnant?
8. Have you ever given birth? Where did you give birth, hospital, or home? Why?
9. Do you think SRH knowledge prepared you better or has been helpful in your case?
10. Do you think a lack of SRH knowledge created problems for you somehow?
11. Do you think something visual and interactive like a

**Real names have been withheld for confidentiality.*

pop-up book is a good way to ignite interest and spread information about SRH, rather than just word of mouth?
12. Are there any additional ideas, thoughts, or questions that you would like to share/ask?

A video of pop-up books was shown towards the end to clarify what a pop-up book is. The interviews were taken on-site.

3.3 Results

Important and interesting parts of the interviews were taken from the transcripts and compiled to understand the gist of the situation.

Interview Outcomes (Anganwadi Worker)

- Most information about SRH is relayed during monthly meetings and gatherings (4-5 times) in the Anganwadi or near the villagers' homes, primarily through word of mouth, occasionally with visual images.
- Contraceptions like condoms etc. are available in the Anganwadi for the public to avail.
- Anganwadi workers usually talk to adolescent girls aged 11-17 about things like menstruation etc. but not much about sex-ed and safe sex practices.
- They also visit the home of pregnant ladies and lactating mothers to provide supplements and bits of advice related to their health.
- Diet plans are provided to pregnant and lactating mothers, and food such as 16 boiled eggs and milk is rationed for them daily from the time they get pregnant up until six months after birth.
- Most women prefer to give birth in the hospitals designated to their village. Home births are pretty rare these days.
- Anganwadis have the authority to stop child marriages and have recently been successful in stopping 2-3 cases.
- Abstinence is promoted among teens, and sex-ed is not talked about openly.
- Sometimes, they use visual images to try and inform about the baby's development in the mother's womb.
- Things like pop-up books will make it more interesting to relay the information about SRH to the villagers.
- Few pregnant ladies who own smartphones are given information through WhatsApp groups.
- She thinks mobile apps can be a solution to provide information and awareness of SRH.

Interview Outcomes (General Doctor)

- In south Indian tradition, not much is known about SRH by the women because of stigma. Only the mother can teach about it if she is herself educated.
- Not much public participates in the SRH meetings conducted by the Anganwadi.
- A few early teen pregnancy and sexual abuse cases are seen due to a lack of sex-ed and good touch/bad touch knowledge of the children.

- More campaigning, more awareness, and more participation of women are required to overcome the lack of knowledge of SRH.
- Early teen marriages still occur secretly.
- In some communities, like the Tandas, patriarchy does not allow women agency in decision-making about their own bodies because they fear freedom will ruin their women.
- Education and open conversations are crucial to uplift the level of knowledge regarding SRH.
- Promoting education in girl children is also very important.
- Villagers now at least come to hospitals for safe deliveries, albeit for monetary rewards by the government.
- Most PHCs have data regarding their patient's monthly cycles and follow her from adolescence till adulthood., checking pregnancies, births, etc. ASHAs play the main role in maintaining the records.
- She believes a visual method to spread sex-ed will be much better, like ads on TVs. Basically, some form of visual media. Even mobile apps might help.
- She thinks pop-up books might help the younger crowd more, but they are worth trying.

Interview Outcomes (School Teachers)

- Outreach programs happen only on the topics of AIDS etc. Not much about sex-ed.
- Whatever is covered in prescribed books is the only amount of sex-ed taught in classes.
- Students are typically expected to rely on digital media to learn about sex-ed themselves since most kids have smartphones after the pandemic.
- Usually, information is accompanied by posters during outreach programs.
- The teachers believe that SRH should not be taught to kids so young, like 11-12 years of age, because maturity is not there. Only things about good touch and bad touch should be explained.
- They believe that things like pop-up books will make it more interesting to relay the information about SRH to the school kids, as most kids are visual learners.
- The teachers still think movies and media are enough to know about sex-ed.

Interview Outcomes (Beneficiaries)

- Most rural girls and women seem to know significantly less about SRH and their own bodies.
- There seems to be a lot of stigma and shame attached to having conversations about SRH openly.
- Most girls don't consume media meant to learn about SRH and feel shy to even talk about it to their parents.
- Women mostly learn from their peers, relatives, and word of mouth.
- The high school girls seemed somewhat excited about something like a pop-up book to learn about sex-ed in a fun and interactive way.

04 Understand and Define

4.1 User Personas

4.2 Detailed Project Brief

4.1 User Personas

In user-centered design, a fictitious user persona is a user type that might utilize a website, brand, or product in a comparable manner[41]. To comprehend our target audience, we conducted a user persona analysis. Three different sorts of personas—one for stakeholders and two for beneficiaries—were discovered from the interview insights. Below are the user persona tables.

PERSONA 1 (Stakeholder)	
Name: *Geetha R.* ***Occupation:*** *Anganwadi worker* ***Location:*** *Rural India*	***Age:*** *29* ***Status:*** *Married*
About: *Geetha has worked as an Anganwadi worker for the past six years. She has been trained to teach pre-schoolers up to age six and provide sex-ed to females of the local villages. She loves her job and likes helping people. She wishes the government could grant more funds to the Anganwadis.*	
Motivation: *She wants the women folk of the villages to have a decent knowledge about SRH and also wants to spread information about sex-ed to adolescents.*	
Frustration: *She usually has to teach about SRH by word of mouth along with a few posters, which does not make it a very effective method to retain such information amongst the villagers.*	

Table 1: User Persona 1

PERSONA 2 (Beneficiary)	
Name: *Preethi K.* ***Occupation:*** *Housewife* ***Location:*** *Rural India*	***Age:*** *33* ***Status:*** *Married with 2 kids*
About: *Preethi got married at age 17 with limited education and got pregnant quite early. She has had a few complications in some earlier pregnancies, resulting in miscarriages. She doesn't have much information about safe sexual practices, contraception, or abortion. She is now pregnant with her 3rd child.*	
Motivation: *She wants to have knowledge and agency over her own reproductive health to have a safer birth and avoid unwanted pregnancies.*	
Frustration: *She does not have much information on these aspects, and a lot of them come from peers and relatives who don't know much and believe in a lot of superstitions.*	

Table 2: User Persona 2

PERSONA 3 (Beneficiary)	
Name: *Vaishnavi N.* ***Occupation:*** *Student* ***Location:*** *Rural India*	***Age:*** *13* ***Status:*** *Unmarried*
About: *Vaishnavi is a grade 8th girl studying in the local HS school. Discussions related to sex are avoided in her home as well as in the school, apart from what is being taught in the class. Due to this reason, there are a lot of doubts about SRH in her mind that she is reluctant to ask her parents, teachers, or peers and even feels ashamed to look it up on the internet.*	
Motivation: *She wants to know more about sex and reproduction and her body to clear certain doubts in her mind. Also, she does not want to feel ashamed to discuss such issues.*	
Frustration: *She does not have much information on these topics as many stigmas are attached to them.*	

Table 3: User Persona 3

4.2 Detailed Project Brief

SRH knowledge is essential in women as we have seen that the higher the women know about it, the more likely it is for them to have agency in decisions regarding their sexual health. Sex-ed is also important for adolescents as it helps them make informed choices regarding their sexual explorations. This project targets young women from rural India since they need awareness of SRH the most. So, we need to consider appropriate mediums to convey this information through sources like Anganwadis, PHCs, etc.

Target Group

School girls from 11-15 years old will be the target group. This is because it is the best age to start learning about SRH as kids become aware of their bodies and sexuality at that age.

Information to Relay

Sex-ed topics like puberty, menstruation, reproduction, pregnancy, consent and free will, abstinence and contraception, STDs, etc., will be included in the information. This is because first-hand interviews with teens from high schools in rural India show a massive lack of basic knowledge of such topics.

Intermediaries

The intermediaries through which the information could be relayed are **Anganwadi workers through outreach programs, community-led interventions, or teachers in high schools.**

Objective

The objective of this project is to come up with an information system that will convey important sex education topics such as puberty, reproduction, contraception, STDs, etc. to the adolescent girls of rural India in an easier, fun, interactive, and suitable way through mediums such as Anganwadis and schools.

05 Ideation

5.1 Possible Solutions
5.2 Content for the Pop-up Book
5.3 Explorations

5.1 Possible Solutions

After doing the secondary research, conducting the interviews, and discussing with my mentor, the methods that can be used to spread information are:

- Awareness campaigns
- Books and magazines containing illustrations
- Class activities like dramas, theater shows, roleplay, competitions like poster making, art and debate, a kit box, etc.
- Sports and indoor games
- A mobile app/website
- A form of film or video communication

Why a Pop-Up Book and not the others...?

A digital solution would not be feasible as a lot of the rural population in India does not have a smartphone. A mobile application will not be an ideal solution here, as most villages have almost no electricity and network connectivity. The villagers will have a higher learning curve because most of them aren't well equipped with technology which will diminish their interest in the product.

Printed books have a quality to them, as in it is a more tactile form of a medium, do not require power, and do not damage our eyes. It also provides a reading experience that other digital media can hardly compare. A paper engineering method like a pop-up book is a visual solution that uses illustrations and always manages to gather a

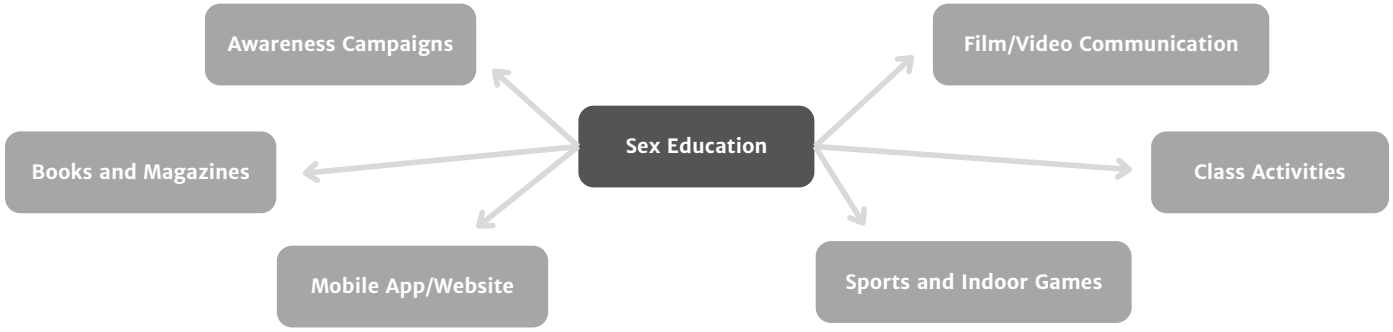


Figure 1: Mind mapping of the sources of sex-ed in adolescents

striking response because of its 3-dimensional form and can be made interactive and as creative as possible to relay information in a whole different way. It can also be used in awareness drives and class activities. Due to these parameters, it would be well suited for school-going adolescents of rural India.

Finally, the method of solution that we decided to carry forward was a pop-up book.

Briefly about Pop-up Books

Any book with three-dimensional pages is considered a pop-up book. It is an all-encompassing phrase for tunnel books, moveable books, volvelles, pop-ups, flaps, pull-tabs, pop-outs, etc., each of which has a distinct function[42] Unlike many other creative formats, it relies more on cutting and glue. The majority of this paper engineering approach is still assembled by hand and uses a variety of folding techniques that enable figures to lift, pop up, rise and unfold, or unfurl and extend when a page is opened. Traditionally pop-ups typically contained about six to eight spreads owing to the paper thickness required to make the book durable. Pop-up books have a rich history dating back to nearly 800 years. Its early audience was actually adults, not children. The earliest recorded pop-ups were created by a Benedictine monk named Matthew Paris in the 14th century. Calendars were drawn on the 'Chronica Majora' book using rotating paper disks to help other monks figure out when certain holy days fell[43]. Later, to adequately show the various portions of human anatomy, moveable pop-up pieces were added to medical textbooks with drawings and diagrams. Written text and flat visuals alone cannot provide the same amount of understanding as these interactive methods do. Pop-up books have recently pushed the frontiers of three-dimensional structures to the maximum degree of skill, ingenuity, and

imagination.

5.2 Content for Pop-up Book

Sex Education is a guidance program that helps adolescents navigate relationships, sexuality, and emotional and physical health. There are a lot of topics that fall under sex education. It encompasses different issues in different countries depending on the necessity of the information to be relayed. But overall, the topics covered in sex-ed revolve around knowledge about puberty, menstruation, reproduction, pregnancy, contraception, STDs, consent, sexual orientation, and gender identity. In India, the National Council of Educational Research and Training (NCERT) structured sex education as a part of existing studies rather than a separate subject. While reviewing the SCERT Telangana class 10 biology book, we found that topics covered in sex-ed as part of the chapter 'Reproduction' are reproductive health, HIV/AIDS, birth control methods, teenage motherhood, and female foeticide. The book does a good job of talking about such topics, but it does not mention the sexual and emotional aspects and the issues that come to the mind of an adolescent after reaching puberty.

After going back to the interview insights and doing some more secondary research, we narrowed down the information on sex education and SRH that needs to be covered in nine broader topics. They were 1) puberty in girls (Menstruation), 2) puberty in boys, 3) reproduction, 4) contraception, 5) STDs, 6) pregnancy, 7) consent and free will, 8) sexual orientation and gender identity, 9) family planning and abortion. The first six topics are sufficient for rural adolescents in India.

For this project, I would be working on the first topic, i.e., menstruation and puberty in girls.

Research on Menstruation

As with other sex-ed topics, menstruation is also attached with some heavy stigma in the context of India. Particularly in rural places where menstruation is associated with a culture of shame and silence and is seen as filthy, polluted, and unholy. During their period, women are frequently expected to adhere to a set of rules. According to research, just 12 percent of women in rural regions use sanitary pads; the majority instead use cloth [44]. Additionally, they are unable to publicly wash and dry their clothes in the sun due to taboo and humiliation. They commonly use damp cloth as a result, which is unsafe for their health and unhygienic. Reproductive tract infections (RTI) are 70 percent more likely in women who do not use sanitary napkins, according to reports [44]. Apart from this, school teachers in India are also not very sensitive to the needs of girls during their periods and take their tiredness and toilet breaks as a lack of interest in studies [45].

Interview with Seema* and Her Friends

We again talked to Seema*, the ninth-grade 15-year-old

**Real name has been withheld for confidentiality.*

girl, and some of her friends from the local girls' high school in Kandi village. This was more of an unstructured, conversation-type interview on the topic of menstruation. We asked them about their experiences related to periods, how much they know, communication and restrictions at home, their period practices, unique period practices and stories from their friends, and so on. The interview insights were quite interesting. Many households impose restrictions during periods, such as not entering temples or kitchens. Some are prohibited from touching clean clothes or plants or eating sour foods. A lot of girls still use cloth as their primary sanitary product, but people are gradually starting to use pads more now. They think a girl becomes susceptible to evil spirits during her periods; hence some even bury their cloth after use. Sometimes, other people keep their distance from them during periods, and some girls miss classes. It is not an open conversation at home. Some of their parents think sanitary pads are a waste of money, and girls feel shy to buy them themselves. Most girls still do not know much about the topic and initially felt quite ashamed to discuss it. Teachers were the primary source of most information that they got about menstruation.

Existing Content Analysis

- Menstrupedia: It is an online guide developed by Aditi Gupta to break the taboos attached to menstruation in India. It covers the explanation of girl puberty, safe menstrual hygiene practices, myths versus facts, and much more. They also produced comic books translated into ten regional languages, which follow the story of a group of friends taught about periods by an older sister.
- Amaze.org: It is a digital media platform based in the U.S. They aim to provide young adolescents around the world with accurate, age-appropriate, and honest sex education and also assist caregivers in communicating effectively about sex and sexuality to their children. They often cover topics such as puberty, personal safety, healthy relationships, pregnancy, reproduction, gender identity, and sexual orientation in short and humorous videos.

Final Content for the Book

After the interviews and research analysis, we selected these subtopics to be covered in the pop-up book under the topic of menstruation. These are:

- Introduction- What is it? (definition, description), How does it happen? (mechanism)
- How long does it occur? (cycle length, etc.)
- Menstruation hygiene (pads, etc.)
- Period myth versus facts
- PMS (What is it? Mood Swings, etc.), How does it feel during periods (menstrual cramps, etc.), and how to tackle it?
- Other effects of puberty in girls
- Conclusion- Normalizing it.

Inspirations for the Pop-up Book

There are a lot of pop-up books available showing a plethora of paper engineering mechanisms. To understand the basic mechanisms of pop-ups, the book 'Pop-up Design and Paper Mechanics' by Duncan Birmingham was

used as a reference. Other books used in this project as references were 'Hermès Pop-up Book' by Pierre-Alexis Dumas and Stéphane Foenkinos for the 3 circles rotation mechanism, 'The Little Prince' published by HMH for the pull-tab box mechanism, 'Robot' and 'Haunted House' by Jan Pieńkowski for the hubs and pivot rotation mechanism and the dissolve-type pull-tab mechanism respectively.

5.3 Explorations

The subtopics were decided to be covered in 6 spreads of the book. Below are the explorations of each spread and its contents, illustrations, and pop-up mechanisms used.

Spread 1

What is Menstruation: One of the most significant changes of puberty for many girls is menstruation, commonly known as having a period. This usually happens between the ages of 8 and 13 and occurs even older for some people. Everyone goes through puberty when the time is right for their body. Once a person with a uterus reaches puberty, their hormones tell their body to prepare for the possibility of having a baby. Once every month, one of your two ovaries releases a small egg, or ovum, into the fallopian tubes. The uterus then grows an extra lining in case the egg becomes fertilized with a sperm, the male reproductive cell. The lining is filled with blood and nutrients called the endometrium, which has everything necessary for a fetus or a baby to grow there. When no sperm is there to meet the egg, the egg continues to travel down the fallopian tubes and signifies to the uterus that the person is not pregnant and the extra lining isn't necessary. The uterus then expels the extra lining filled with blood through the vagina. This is called menstruation or getting your period. After the uterus is cleaned out, the body starts making a new lining, preparing the womb once again in case there is pregnancy the next month.

Illustration: Here, the goal is to explain what menstruation is, when it starts, and how it occurs. Since it is a biological process, we thought it was best to express it with the help of the female reproductive tract.

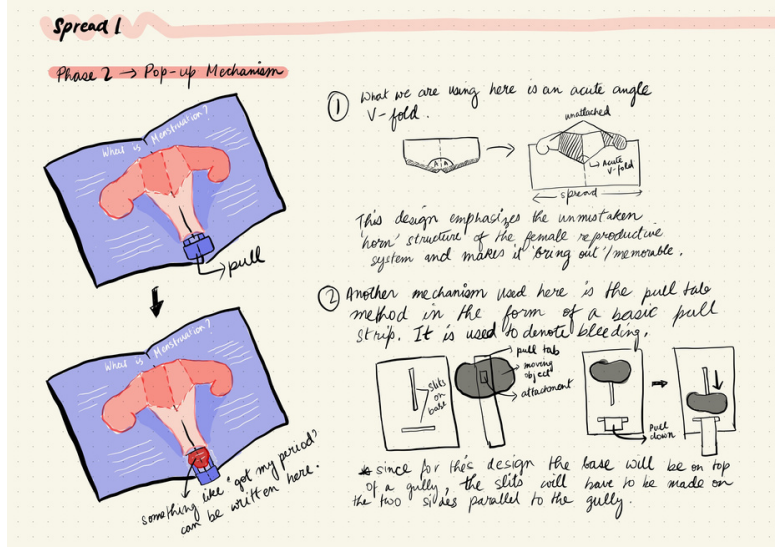


Figure 2: Ideation for Spread 1

Pop-up mechanisms used: The mechanisms used here are a combination of an acute angle V-fold and a pull tab mechanism. The acute angle V-fold is used in the top half of the illustration, which makes it move forward, to symbolize the horn-like structure of the ovaries and fallopian tube. In contrast, the pull tab pulls down the bottom part of the illustration, representing blood expulsion during periods.

Spread 2

It is a monthly cycle: Menstruation generally occurs every 21 to 35 days in adults and 21 to 45 days in young teens. It can last from two to seven days. When people start menstruating, they may get them more or less frequently. The menstrual fluid may be heavy, light, or somewhere in between. A person usually expels less than two tablespoons of blood during their period, but it can seem like more because of the other fluids that come out.

Illustrations: Here, the idea was to represent the monthly cycle in the concept of a clock. It also coincides with the monthly lunar cycle. Hence the outer galaxy is used as an inspiration for the background.

Pop-up mechanisms used: The pop-up mechanism is a three-way rotation containing three circles stacked on top of one another, the biggest one being on the bottom. The top and bottom circle rotates the same way, while the middle one turns in the opposite direction. The circles are attached to a strip that is connected to the spine in a parallel fold. Opening the book pulls on the strip, putting the circles into action and giving the illusion of clock rotation. Also, all of the centers of the circles and the strip should align with one another.

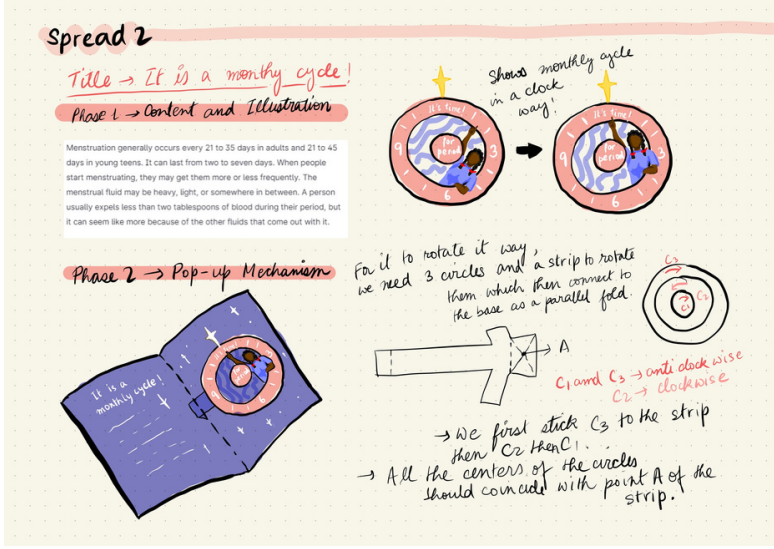


Figure 3: Ideation for Spread 2

Spread 3

Period Hygiene: You can use sanitary pads to keep your clothes clean during your period. A pad is used by placing it on the inside of a person's underwear where it can absorb the menstrual fluid as it leaves the vagina. Pads come in a variety of sizes. Each pad should only be used once and changed at least every three to four hours. The used pad

should be wrapped in paper and disposed of in a trash can. It is advisable to use sanitary pads during periods, but if you use a cloth instead, you must ensure that it is clean, not damp, or infested with insects and rodents. Cloth pads can be safe to use as long as you use them hygienically. They must be washed properly, dried under sunlight, stored in dry and sterile places, and changed from time to time. When menstrual and personal hygiene is not practiced, it can lead to an infection or even Toxic Shock Syndrome.

Illustration: For the illustration, inspiration has been taken from the sanitary period napkin's box.

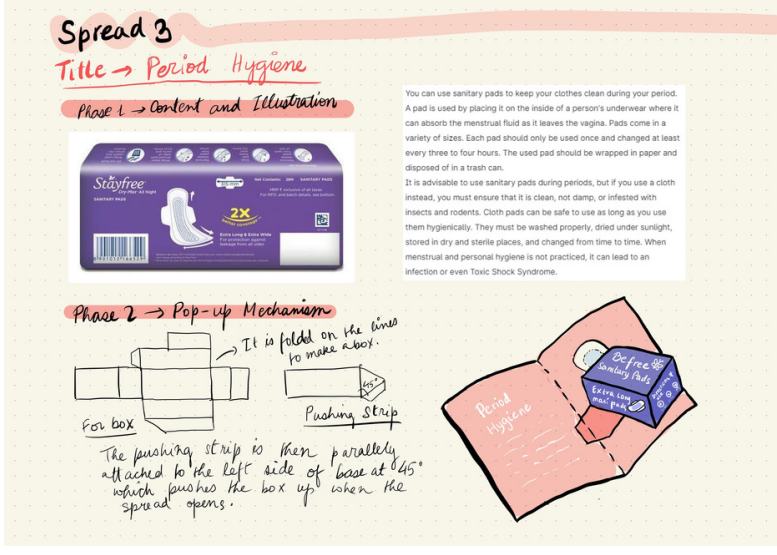


Figure 4: Ideation for Spread 3

Pop-up mechanism used: There are two parts for this pop-up, the box structure and other is the pushing strip. The box is attached to the pushing strip, which is then attached parallel to the left side of the spine at 45 degrees from the bottom edge. The strip pushes the box up when the spread opens.

Spread 4

Period Myths: One does not get "impure" during their period; this is a myth. Myths have been associated with menstruation for a long time. You must have heard things like, during periods you cannot enter your kitchen, schools, or temples, particular food gets impure to your touch, and you are susceptible to evil spirits, etc., at some point. However, there is no logical or scientific explanation for this; therefore, it is not real. It is best if one does not let these myths affect their life in any negative way and also educate others about this.

Illustrations: Here, the illustrations depicted certain period practices and rules imposed on girls during menstruation and whether they were facts or myths at the bottom of the spread. A total of 8 illustrations were shown on each side of the spread.

Pop-up mechanism used: This mechanism uses hubs and pivots to rotate the turning wheel that has the illustrations and change the image on the front. The turning wheel is attached to the base of the card with a small pivot.

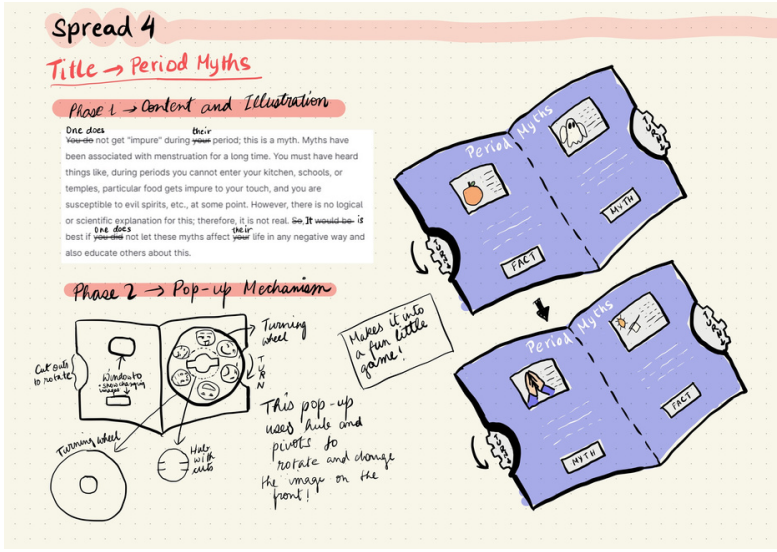


Figure 5: Ideation for Spread 4

Spread 5

What to expect during this time: PMS stands for Premenstrual Syndrome and describes the physical and emotional symptoms you may experience one to two weeks before starting your period each month. During PMS, you might experience acne, bloating, tiredness, backache, headaches, constipation, diarrhea, food craving, depression, moodiness, difficulty concentrating, trouble handling stress, or difficulty sleeping. Not everyone experiences all of these, and most symptoms usually disappear when your period begins.

During their period, a person might experience menstrual cramps. They may start one to two days before your period and last two to four days. Menstrual cramps result from uterine contractions when the uterus tightens and relaxes to release and shed its lining. These contractions can cause jabbing or cramp-like pain in the lower abdomen and lower back regions. Exercise and warm baths can reduce the discomfort caused by cramps. While some people experience PMS and cramps, others do not. Either way is normal.

Apart from getting your periods, other physical changes start happening to your body when you reach puberty. Your body starts to grow. You get taller, your hips will get wider, and you start developing breasts. Pubic and underarm hair also starts to grow, and at times, your body starts to sweat and smell. You may suffer from acne.

Illustrations: A girl is shown having mood swings which is a very common symptom of PMS. The contrast in the moods is emphasized by showing one mood and then 'dissolving' it into another mood.

Pop-up mechanism used: A dissolve-type pull tab method is used here. There are two main pieces in this process a moving piece and a base piece, both with slits. Those slits need to be cut with accurate measurements for the moving piece to move seamlessly on top of the base.

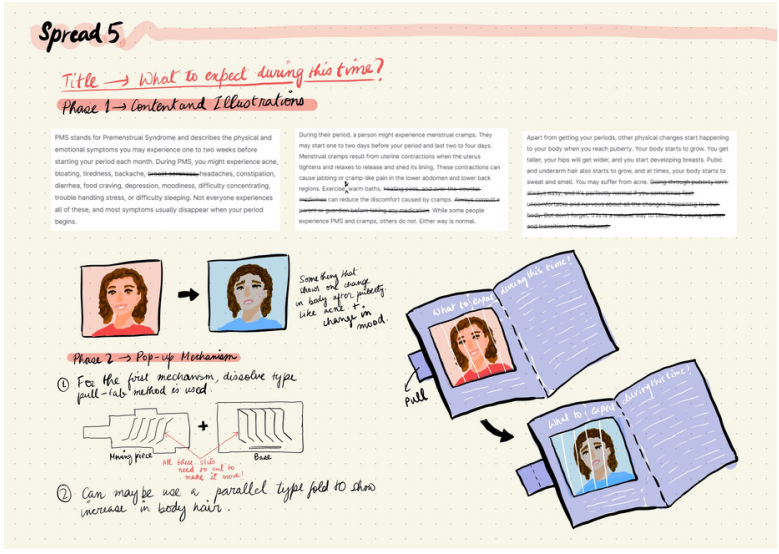


Figure 6: Ideation for Spread 5

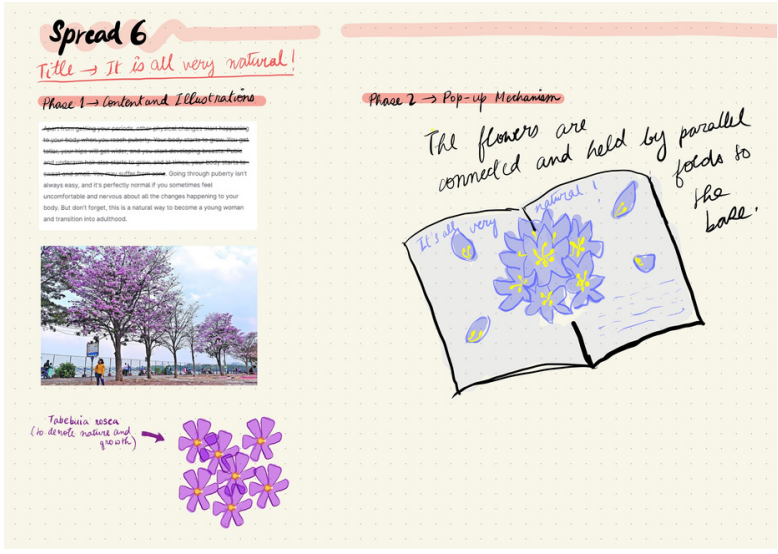


Figure 7: Ideation for Spread 6

Spread 6

It is all very natural: Going through puberty isn't always easy, and it's perfectly normal if you sometimes feel uncomfortable and nervous about all the changes happening to your body. But don't forget, this is a natural way to become a young woman and transition into adulthood.

Illustration: It is an illustration of flowers blooming that symbolizes a young girls growth into adulthood.

Pop-up mechanism used: Here the individual flowers are cut and stuck together so that when the book opens, it seems like a flower blossoming. The two petals attached to the base's left and right are in a parallel fold.

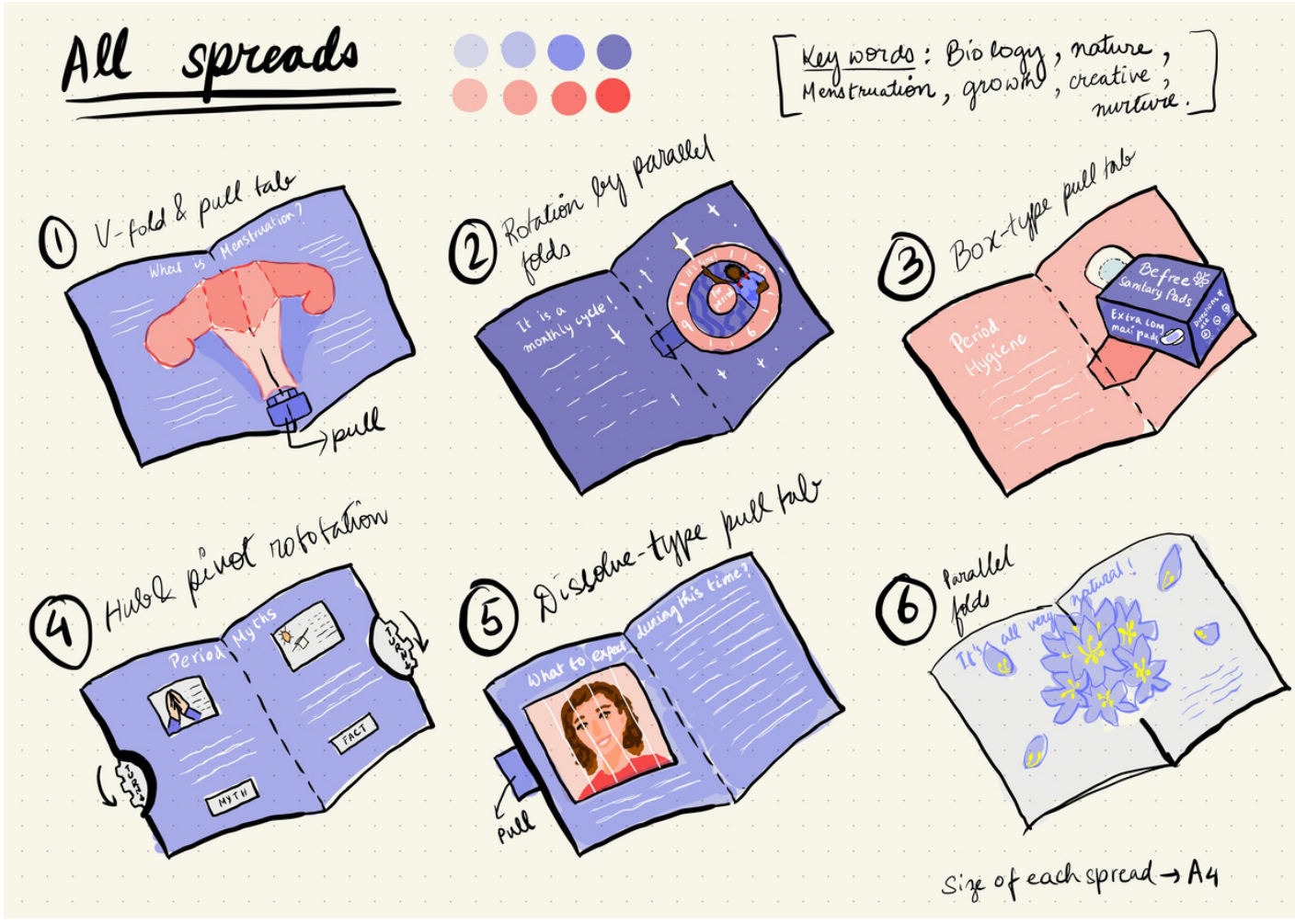


Figure 8: All Spreads

06 Mock Design

After going through the ideation phase, we tried out mock designs to see if the mechanisms worked or not. The pop-up pieces were first measured and cut to fit a spread of A4 size (29.7 x 21 cm) using paper of the thickness of 160 gsm. It was made by hand using local craft supplies.

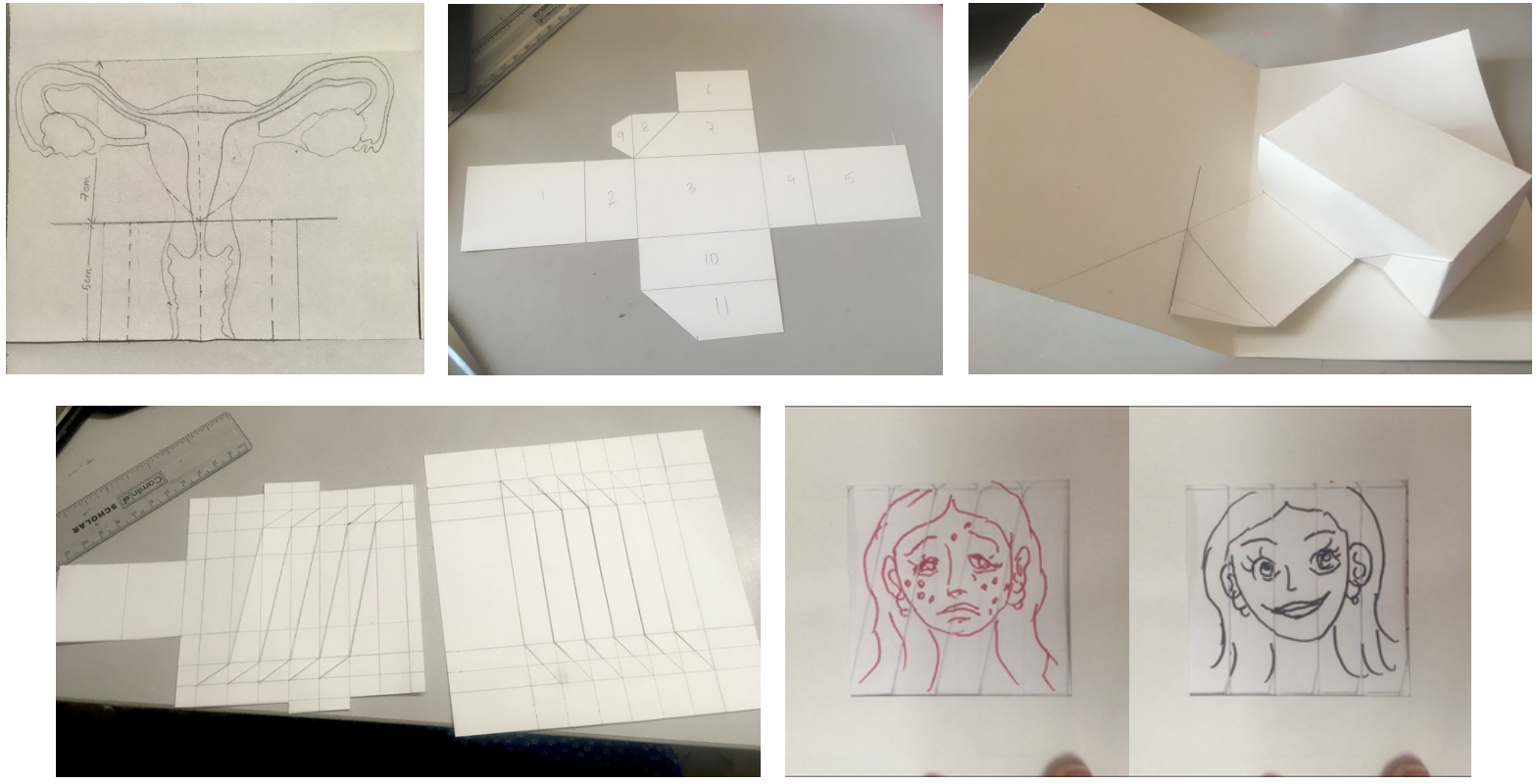


Figure 9, 10, 11, 12, 13: Mock Design Process

Most of them worked in the first trial, except for a few. After this, we moved on to the assembling process.

Figure 14, 14, 15, 16, 17, 19: Assembling Process

First Spread: What is Menstruation?

Inwards V-fold

Pull-tab that shows the final outcome of menstruation.

Second Spread: It is a monthly cycle

Parallel fold strip

These two circles rotate clockwise

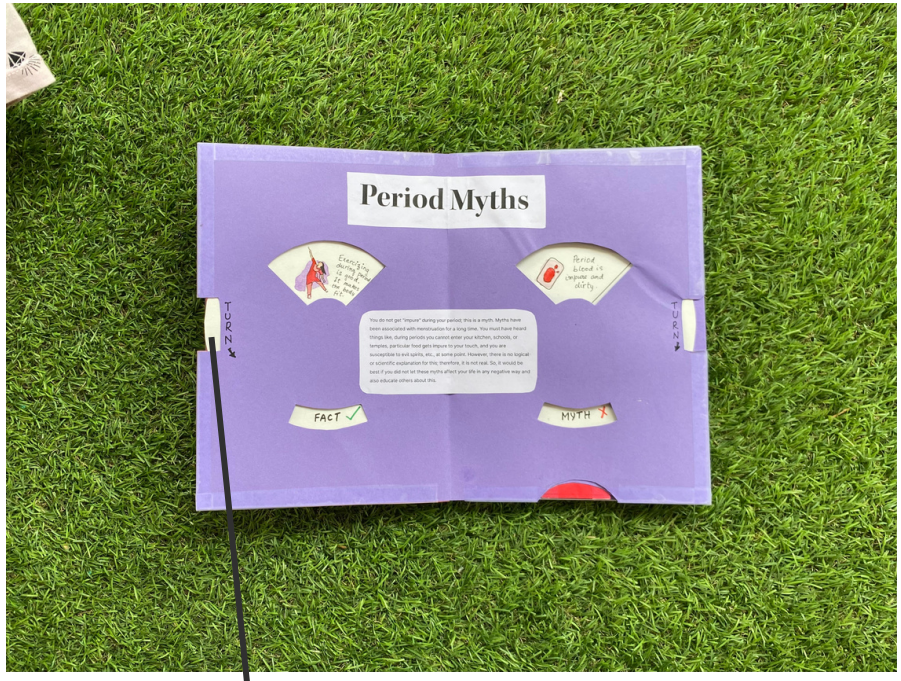
This circle rotates anti-clockwise

Third Spread: Period Hygiene

The pushing strip pushes the fold inwards turning it into a box.

Sanitary pads

Fourth Spread: Period Myths



When we turn this around, the images change where certain information regarding menstruation is given. At the bottom, it tells us if that information is a fact or myth.

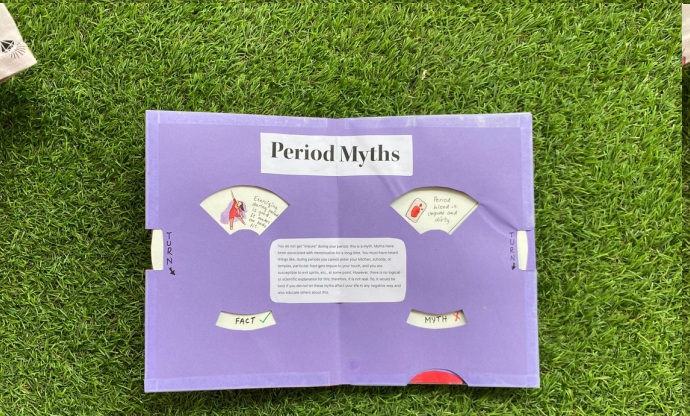
Fifth Spread: What to expect during this time?

When we pull this tab, it dissolves into another picture.
It is used here to show mood swings during periods.

Sixth Spread: It is all very natural.

This is used to signify blossoming to adulthood.

All Six Spreads



07 Final Design

7.1 Visual Design
7.2 Final Spreads

7.1 Visual Design

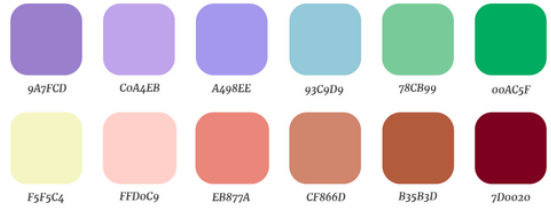
At this stage, the color palette, typography, grid, and final illustrations were decided that is to be used in the book.

Color Palette

Two hues of purple were selected as the primary colors as research suggests that purple is the favorite color of most adolescent girls, i.e., our target audience [46]. The secondary and tertiary colors were selected to complement and balance these two out. Tones, tints, and shades of the primary, secondary, and tertiary colors were used for the accent colors.

Primary, Secondary and Tertiary Colors

Accent Colors



Typography

Two primary typefaces were chosen for the book, Monarcha (Bold Italic) for the heading/title texts and Apertura (Regular) for the body texts. Monarcha was selected for its calligraphic rhythm and fluid strokes, which help denote the nature of menstruation. Monarcha typeface is inspired by the Monarch butterfly, which can also be associated with how menstruation brings a young girl's transition to adulthood. Apertura is a sans-serif typeface selected for the body text because of its clean and legible characters.

Monarcha (Bold Italic) Heading - 47 pt	Apertura (Regular) Body - 9.5 pt
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
a b c d e f g h i j k l m n o p q r s t u v w x y z	a b c d e f g h i j k l m n o p q r s t u v w x y z
1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9

Grid

A 12-column grid with 20 px gutter space was used for the layout of the book.

7.2 Final Spreads

Final spreads were made considering all the above parameters and keeping the project's aesthetic and message in mind.

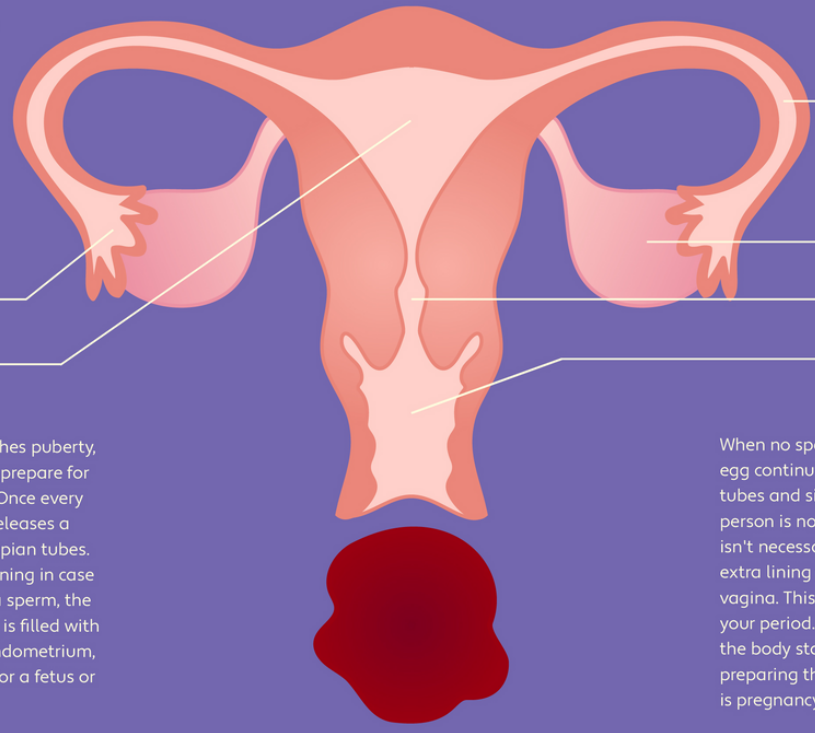
Cover Page

A pop-up book by Nikita Pegu
MENSTRUATION
or getting your periods!
Volume I of the Sex-Ed series

1st Spread

What is Menstruation?

One of the most significant changes of puberty for many girls is menstruation, commonly known as having a period. This usually happens between the ages of 8 and 13 and occurs even older for some people. Everyone goes through puberty when the time is right for their body.



Once a person with a uterus reaches puberty, their hormones tell their body to prepare for the possibility of having a baby. Once every month, one of your two ovaries releases a small egg, or ovum, into the fallopian tubes. The uterus then grows an extra lining in case the egg becomes fertilized with a sperm, the male reproductive cell. The lining is filled with blood and nutrients called the endometrium, which has everything necessary for a fetus or a baby to grow there.

When no sperm is there to meet the egg, the egg continues to travel down the fallopian tubes and signifies to the uterus that the person is not pregnant and the extra lining isn't necessary. The uterus then expels the extra lining filled with blood through the vagina. This is called menstruation or getting your period. After the uterus is cleaned out, the body starts making a new lining, preparing the womb once again in case there is pregnancy the next month.

2nd Spread

It is a Monthly Cycle.

Time for your periods!

Menstruation generally occurs every 21 to 35 days in adults and 21 to 45 days in young teens. It can last from two to seven days. When people start menstruating, they may get them more or less frequently. The menstrual fluid may be heavy, light, or somewhere in between. A person usually expels less than two tablespoons of blood during their period, but it can seem like more because of the other fluids that come out with it.

3rd Spread

Hygiene during Periods.

You can use sanitary pads to keep your clothes clean during your period. A pad is used by placing it on the inside of a person's underwear where it can absorb the menstrual fluid as it leaves the vagina. Pads come in a variety of sizes. Each pad should only be used once and changed at least every three to four hours. The used pad should be wrapped in paper and disposed of in a trash can.

It is advisable to use sanitary pads during periods, but if you use a cloth instead, you must ensure that it is clean, not damp, or infested with insects and rodents. Cloth pads can be safe to use as long as you use them hygienically. They must be washed properly, dried under sunlight, stored in dry and sterile places, and changed from time to time. When menstrual and personal hygiene is not practiced, it can lead to an infection or even Toxic Shock Syndrome.

4th Spread

Are these Myths or Facts?

School and temples should not be avoided during periods.

TURN

FACT

One does not get "impure" during their period; this is a myth. Myths have been associated with menstruation for a long time. You must have heard things like, during periods you cannot enter your kitchen, schools, or temples, particular food gets impure to your touch, and you are susceptible to evil spirits, etc., at some point. However, there is no logical or scientific explanation for this; therefore, it is not real. It is best if one does not let these myths affect their life in any negative way and also educate others about this.

You are susceptible to evil spirits during periods.

MYTH

TURN

5th Spread

What to expect during Periods?

PMS stands for Premenstrual Syndrome and describes the physical and emotional symptoms you may experience one to two weeks before starting your period each month. During PMS, you might experience acne, bloating, tiredness, backache, headaches, constipation, diarrhea, food craving, depression, moodiness, difficulty concentrating, trouble handling stress, or difficulty sleeping. Not everyone experiences all of these, and most symptoms usually disappear when your period begins.

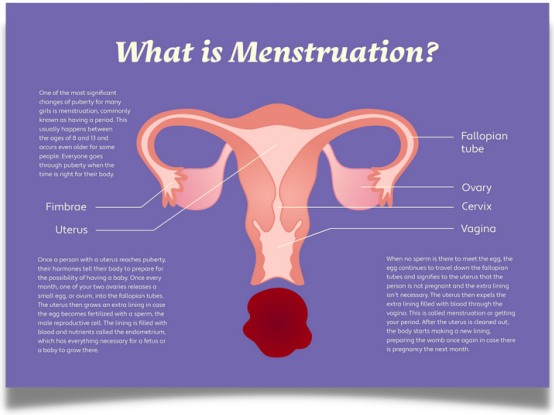
During their period, a person might experience menstrual cramps. They may start one to two days before your period and last two to four days. Menstrual cramps result from uterine contractions when the uterus tightens and relaxes to release and shed its lining. These contractions can cause jabbing or cramp-like pain in the lower abdomen and lower back regions. Exercise and warm baths can reduce the discomfort caused by cramps. While some people experience PMS and cramps, others do not. Either way is normal.

Apart from getting your periods, other physical changes start happening to your body when you reach puberty. Your body starts to grow. You get taller, your hips will get wider, and you start developing breasts. Pubic and underarm hair also starts to grow, and at times, your body starts to sweat and smell. You may suffer from acne.

6th Spread

It is all very Natural.
Going through puberty isn't always easy, and it's perfectly normal if you sometimes feel uncomfortable and nervous about all the changes happening to your body. But don't forget, this is a natural way to become a young woman and transition into adulthood.

All Spreads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Fallopian tube
Ovary
Cervix
Vagina
Fimbrae
Uterus
Once a person with a uterus reaches puberty, their hormones tell their body to prepare for the possibility of having a baby. Once every month, one of your two ovaries releases a small egg, or ovum, into the fallopian tubes. The uterus then grows an extra lining in case the egg becomes fertilized with a sperm, the male reproductive cell. The lining is filled with blood and nutrients called the endometrium, which has everything necessary for a fetus or a baby to grow there.
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It is a Monthly Cycle.
Time for your periods!
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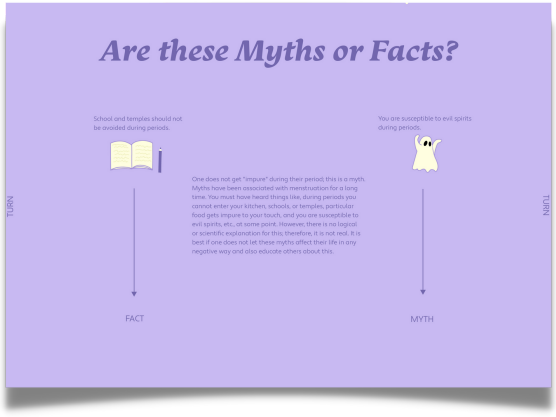
Are these Myths or Facts?
School and temples should not be avoided during periods.
You are susceptible to evil spirits during periods.
One does not get "impure" during their period, this is a myth. Myths have been associated with menstruation for a long time. You must have heard things like, during periods you cannot enter your kitchen, schools, or temples, particular food gets impure to your touch, and you are susceptible to evil spirits, etc., at some point. However, there is no logical or scientific explanation for this; therefore, it is not real. It is best if one does not let these myths affect their life in any negative way and also educate others about this.
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TURN
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What to expect during Periods?
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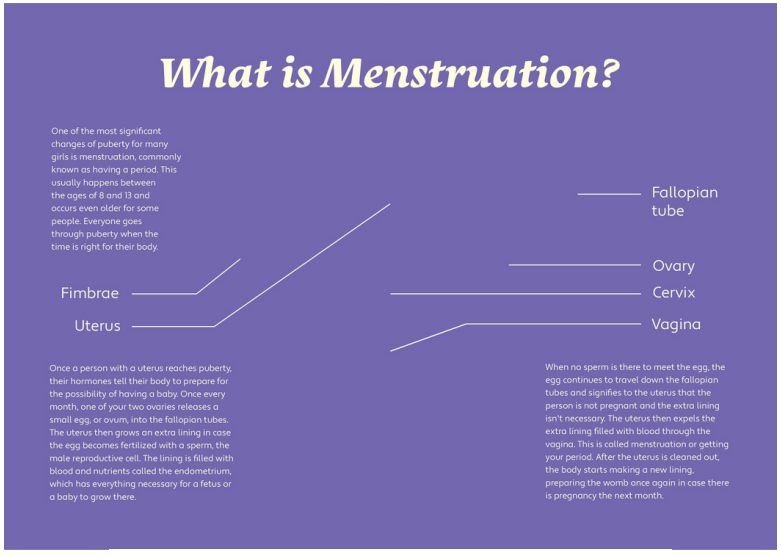
Apart from getting your periods, other physical changes start happening to your body when you reach puberty. Your body starts to grow. You get taller, your hips will get wider, and you start developing breasts. Pubic and underarm hair also starts to grow, and at times, your body starts to sweat and smell. You may suffer from acne.

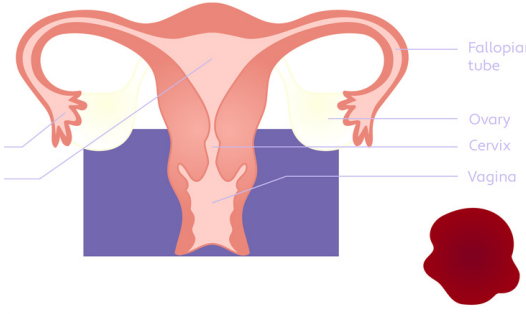
It is all very Natural.
Going through puberty isn't always easy, and it's perfectly normal if you sometimes feel uncomfortable and nervous about all the changes happening to your body. But don't forget, this is a natural way to become a young woman and transition into adulthood.

Illustrations and Cut-outs

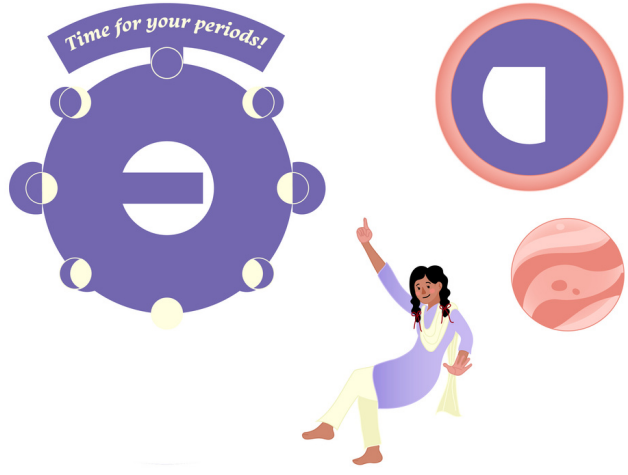
Keeping the above parameters and size of the spreads in mind calculations were done to create paper pieces that would go seamlessly with the digital designs.

1st Spread

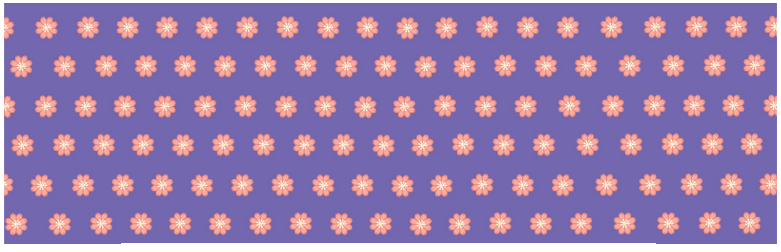




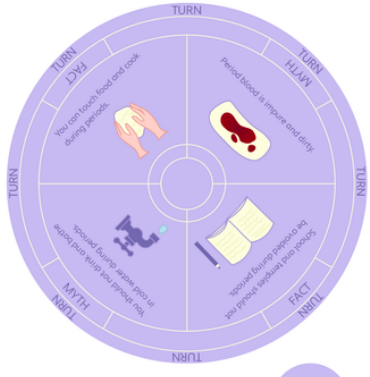
2nd Spread



3rd Spread



4th Spread



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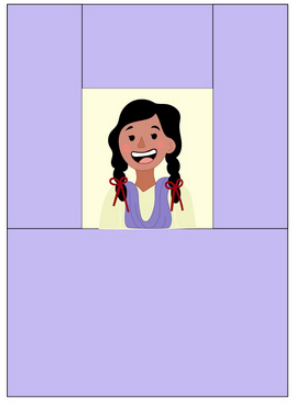

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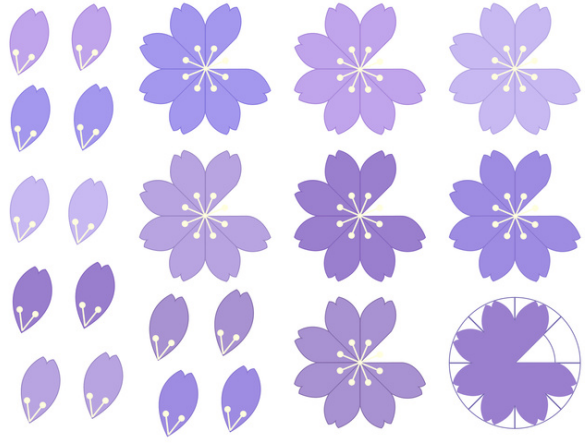

Final Product

Cover Page

1st Spread

What is Menstruation?
One of the most significant changes of puberty for many girls is menstruation, commonly known as having a period. This usually happens between the ages of 8 and 13 and occurs even older for some people. Everyone goes through puberty when the time is right for their body.
Fallopian tube
Ovary
Cervix
Vagina
Fimbrae
Uterus
Once a person with a uterus reaches puberty, their hormones tell their body to prepare for the possibility of having a baby. Once every month, one of your two ovaries releases a small egg, or ovum, into the fallopian tubes. The uterus then grows an extra lining in case the egg becomes fertilized with a sperm, the male reproductive cell. The lining is filled with blood and nutrients called the endometrium, which has everything necessary for a fetus or a baby to grow there.
When no sperm is there to meet the egg, the egg continues to travel down the fallopian tubes and signifies to the uterus that the person is not pregnant and the extra lining isn't necessary. The uterus then expels the extra lining filled with blood through the vagina. This is called menstruation or getting your period. After the uterus is cleaned out, the body starts making a new lining, preparing the womb once again in case there is pregnancy the next month.
PULL

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Time for your Periods!

3rd Spread

Hygiene during Periods.
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Befree
Sanitary Pads

4th Spread

Are these Myths or Facts?
Drying your period cloth in the sun protects you from diseases.
Period blood is impure and dirty.
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08 Discussion

Future Directions

This project explores just one aspect of sex education, which in the future can be made into a series of booklets covering other sex-ed topics such as consent, reproduction, contraception, STDs, and many more, where we dive deeper into each issue. More explorations in designs could be made in terms of experimenting with different mediums and textures of papers, adding a storyline to the narrative, and increasing the complexity of the paper-engineering mechanisms. Also, we can gain more insights into what our target demographic wants by conducting more research, testing, and validating the rough output before launching the final product to the public so that it caters perfectly to the target audience.

Conclusion

Giving sex education to adolescent girls and boys in India might result in many benefits, such as a late start of sexual activity, fewer early and unplanned pregnancies and related difficulties, and a lower risk of sexual abuse. It might also promote more substantial completion of education and delayed marriages, reduce the risk of unsafe abortion, and minimize the spread of sexually transmitted diseases, including HIV. For this, sexuality education must be implemented in schools, and many outreach programs should also be happening. Apart from teachers in schools, other beneficial stakeholders should be incorporated into it, such as social workers, psychologists, gynecologists, etc., as they can be helpful in the long-term in influencing the mindsets and behavior of women and adolescents of rural India in a way which will bring positive changes on their general and sexual health.

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