

Appendix

Appendix 1. Survey Tool

Part B: Demographic and Household Water Condition Information

Now I would like to know a little bit about you and your household.

B.1. How old are you? _____ years (*Probe: Get approximate age if she does not know*)

B.2. Who is the person who collects the water in your household most often?

- a. Self → **Skip to B.4.**
- b. Mother
- c. Father
- d. Sister
- e. Brother
- f. Other girl: _____
- g. Other boy: _____
- h. Other: _____

B.3. Do you ever help to collect water for your family?

- 1. No → **Skip to B.6.**
- 2. Yes

B.4. When you collect water, approximately how much total time does it take you **to travel to your main source of water, collect it, and come back** in the rainy season? And in the dry season?

B.4a. SUMMER (rainy) season? <i>[PROBE: Is it more or less than:]</i>	B.4b WINTER (dry) season? <i>[PROBE: Is it more or less than:]</i>
1. Less than 5 minutes	1. Less than 5 minutes
2. 5-14 minutes	2. 5-14 minutes
3. 15-29 minutes	3. 15-29 minutes
4. 30-44 minutes	4. 30-44 minutes
5. 45-59 minutes	5. 45-59 minutes
6. 1 hour to 1 hour & 29 minutes	6. 1 hour to 1 hour & 29 minutes
7. 1 hour & 30 minutes and more	7. 1 hour & 30 minutes and more

B.5. Can you tell me any problems or challenges you face when you are collecting water?

_____	_____
_____	_____
_____	_____

B.6. Are there ever times when you do not have enough water to meet all your needs in your household?

- 0. No → **Skip to B.9.**
- 1. Yes

B.7. Can you tell me all the different things you do to cope at times when there is not enough water?

_____	_____
_____	_____
_____	_____

B.8. If water was plentiful, can you tell me all of the things that you would do differently during those times?

_____	_____
_____	_____
_____	_____

B.9. Do you have latrine at your home?

- 0. No. → **Skip to B.12**
- 1. Yes

B.10. Do you usually use it?

- 1. Always uses it
- 2. Does not use it much
- 3. Never use it

Instruction: Now I am going to ask you questions about your family experiences on sanitation and water utilization conditions. For many of these questions I want you to answer me whether these conditions are a small problem, a medium problem, a large problem, or it is not a problem at all

Number	Question	Did not answer					Small problem	Medium problem	Large problem	NO problem
			No	Yes	Don't know	Does not apply				
B.11.	In the past 30 days, did you want to use this latrine but could not because... <i>(ask the question by inserting the alternatives from B11a-B11f at the end, multiple answers possible)</i>	99								
B.11a	It was too far away?	99	0	1	77	88				
B.11b	It was too risky / dangerous?	99	0	1	77	88				

Number	Question	Did not answer					Small problem	Medium problem	Large problem	NO problem
			No	Yes	Don't know	Does not apply				
B.11c	It was too dirty or smelly?	99	0	1	77	88				
B.11d	Fear that someone would see you?	99	0	1	77	88				
B.11e	It was full	99	0	1	77	88				
B.11f.	Some other reason: (<i>specify</i>): _____	99	0	1	77	88				
B.11g	<i>If the answer is yes to any of the questions from B11a-B11f, how big of a problem was it for you/that person? Was it a small, medium, large problem, or not a problem at all?</i>	99					1	2	3	4
B.12.	In the past 30 days, did you postpone urinating/defecating because there was not a convenient place to do so?	99	0	1	77					
B12a.	<i>If yes: How big of a problem was it?</i>	99					1	2	3	4

Part C: School Questions

C.1. What is the highest grade in school that you have completed? _____ → **If 98 or 99, skip to C.3.**
(98 = only informal education/literate; 99 = no education/ illiterate)

C.2. Are you currently in school?

0. No

1. Yes → **Skip to C.4.**

C.3. Can you tell me why do you not attend/ stop attending school? (*Circle all that apply. Do NOT read options. Simply listen and circle all choices that relate to what she said*)

1. Too much work at home/ help with chores at home

2. Cannot afford (fees, uniforms, or materials)

3. No latrines/ no place to wash

4. Missed too many days (could not catch up)

5. School is not important/ not necessary

Any response → Skip to Section D

6. Do not like school

7. Too far away

8. Don't want to say/ No answer
9. Other: (please explain): _____

NOTE to enumerator: The rest of the questions in Section C are only for girls currently attending school...

C.4. Is your teacher a man or a woman?

1. Man
2. Woman

C.5. Does your school have latrines that girls can use?

0. No → If no, skip to Question D.6.
1. Yes

C.6. How comfortable do you feel using the latrine at school? Do you feel comfortable, or is there anything that makes you feel uncomfortable?

1. Feel comfortable using the latrine → **Skip to C8.**
2. Feel uncomfortable

C.7. What are the reasons that you do not feel comfortable using the latrine?

(Circle all responses that apply. Do NOT read the choices. Simply listen and circle all choices that relate to what she said.

PROBE if she gives a vague answer like "I don't like it". Get specific reasons.

PROBE to ask, "Is there any other reason?" until she is done.)

0. Not used to using
1. Latrine is full or locked
2. Latrine is unstable/ Fear falling inside
3. Smells bad
4. Dirty
5. Flies
6. Scary / too dark
7. Fear getting sick
8. Too many people/ long lines
9. Lack of privacy
10. Person may hurt me when I go to use it
11. Far from school
12. No water
13. No toilet paper
14. Other
15. Don't know

C.8. When you need to either urinate or defecate while at school, do you use the latrine at school: always, sometimes, never?

1. Always
2. Sometimes
3. Never

		No answer	No	Yes	Don't know	Not applicable	Small problem	Medium	Large problem	Not a problem
C.9.	In the past 30 days, did you go to school late or stay home from school because you had to help with water collection at home?	99	0	1	77	88				
C.9a.	<i>If yes: How big of a problem was it?</i>	99					1	2	3	4
C.10.	In the past 30 days, did you go to school late or stay home from school because there was not an adequate private place to defecate or urinate at school?	99	0	1	77	88				
C.10a.	<i>If yes: How big of a problem was it?</i>	99					1	2	3	4

Part D: Menstruation Questions

D.1. Have you started menstruating yet?

0. No → **Skip to next section**
1. Yes
2. Don't know/ won't answer → **Skip to next section**

D.2. How old were you when you first began menstruating? _____

D.3. What materials/items/supplies do you use to manage your menstruation? (*Multiple responses possible*)

0. Nothing
1. Only underwear
2. Reusable cloth
3. Disposable pad (purchased in market)
4. Other (*specify*): _____

D.4. Where do you obtain these materials/items/supplies? (*Note: may choose more than one*)

1. Made at home/ found at home
2. Purchased at the market by self
3. Purchased at the market by parent
4. Get at school
5. Other: _____

D.5. What material/item would you most like to use? (*Note: choose only one*)

0. Prefers to use nothing
1. Only underwear
2. Reusable cloth
3. Disposable pad (purchased in market)
4. Tampon/ other inserted item
5. Other (*specify*): _____

D.6. If there are any barriers to obtaining these materials, what are they? (*Multiple choices possible. Probe: Are they priced so that you can afford them? Are they easy to purchase?*)

1. There are no barriers/they are easy to obtain
2. They are hard to find/not available
3. They are expensive
4. Not used traditionally
5. Embarrassed to buy them
6. Parent will not buy for her

D.7. Have you learned about your period from anyone? If so, who? (*Probe: Did your mother teach you? Did you learn about it at school or from a friend? Do NOT read options*)

1. Mother
2. Father
3. Sister
4. Aunt or other family member
5. At school/from a teacher
6. From friends
7. Other: _____

D.8. How has beginning menstruation affected your life at home?

NOTE to enumerator: If she does not attend school, → skip to next section.

D.9. How has beginning menstruation affected your life in school?

D.10. At times when you are menstruating, is there a place at school where you can adequately maintain your personal hygiene?

0. No
1. Yes

D.11.	The last time that you had your menstrual cycle, did you ever stay home from school because there was no place to take care of your menstruation at school?	99	0	1	77	88				
D.11a.	If yes: How big of a problem was it?	99					1	2	3	4

Part H: Semantic Differentials

Alright, we are almost done! For this last part, I am going to show you a line that has a word on each side. These words are going to be opposites from one another and ways that you may feel. The line represents where between these two words you feel. I want you to look at the line, and pick the spot you think best represents how you feel. Do you understand?

Probe: Do sample one to ensure concept is understood. For example, "The weather today is: Hot _____/_____/_____/_____/_____/_____/_____ Cold

Probe: Make sure informant knows this is how they feel

H.1. Happy _____/_____/_____/_____/_____/_____/_____ Sad

H.2. Strong _____/_____/_____/_____/_____/_____/_____ Weak

H.3. Educated _____/_____/_____/_____/_____/_____/_____ Uneducated

H.4. Poor _____/_____/_____/_____/_____/_____/_____ Rich

H.5. Free _____/_____/_____/_____/_____/_____/_____ Restricted

H.6. Dumb _____/_____/_____/_____/_____/_____/_____ Smart

H.7. Useless _____/_____/_____/_____/_____/_____/_____ Useful

H.8. Calm _____/_____/_____/_____/_____/_____/_____ Anxious

Closing

Ok, fantastic! Thank you for all your help and thank you for your time!

Appendix 2. Free-listing section

Part A: Free-listing Exercise

For the types of questions I will ask first, I am going to ask you questions that pertain to all girls in your community, not just yourself. Rather than discussing you, answers the questions more generally, thinking about all the girls your age you know here. It is important to remember that we are interested in your experiences and opinions, so there are no wrong answers. I will not share your answers with your teachers, so you should feel free to express your opinion freely.

Now I am going to ask you some questions about different aspects of the life of most girls in your community. I will ask you to list as many things as you can think of that relate to each question. I'll give a simple example. If I asked you to name all the animals a girl might see during a day, you may say: "cattle, goats, donkeys, dogs" and so on. Do you understand what I mean?

Ok, let's get started...

[Note to interviewer: PROBE to understand the meaning and to get specific answers rather than generalities!]

X1. Thinking of most girls your age in this community, what kinds of activities do they do every day?

X2. During these days (whether a school day, market day, or holiday) what kinds of emotions might they experience? *[PROBE: Remember to think of girls in this community]*

A.1. What are things that make their lives happy and enjoyable?

A.2. What are the things that may cause them to experience stress?

A.3. What are things that they want so that they can have a good life? *PROBE: What are things that would help them experience progress or good changes in life?*

A.4. What are the things that prevent girls in your community from having the kind of life they want?

A.5. What are things that would cause a girl to be liked or respected by other people her peers (boys and girls who are the same age)

A.6. Why do you think some girls in your community do not enroll in school?

A.7. What are all the reasons that girls are sometimes absent from school?

Appendix 3. Focus Group Discussion Guide

Focus Group Discussion Guide

Interviewer name: _____

Voice recorder number: _____

Date: _____

Audio file number: _____

Woreda: _____ Kebele: _____ Village: _____

Introduction

I would like to ask some questions about girls in this community, and I invite you to share your opinions with me. You are the expert on this, and we want to learn from you, so any opinions are welcome. In addition, please feel free to say exactly what it is you think on the topic; there are no right or wrong answers. We will not go in order, so please speak when you have something to say, but do still be respectful of others. On that note, please be respectful of other's views on the topics, and keep them confidential outside this discussion. Also, because we are recording this discussion, I will ask that only one person speak at a time.

Does anybody have any questions so far?

To begin, I would like everyone to go around the circle and say your name – first name only – your age, and your favorite color.

Part A: Water, sanitation

A.1. Which kinds of chores do girls have to do at home?

How do girls feel about doing these chores?

A.2. Are girls ever absent from school or late because they have to do chores at home such as collecting water?

How do girls feel about missing school for this reason?

Probe: Is this a problem for them?

A.3. Where do most girls go to defecate and urinate when they are at home?

Is this preferred place?

A.4. Can girls freely go whenever they want, or are there only certain times of day that they

can do this?

A.5. Tell me about the sanitation facilities available at school.

Probe: Do girls use them? Do they like them?

A.6. Is there anything you worry about related to using latrines or going in an open field?

Probe: what happens if someone can see you? Any dangers on the way?

Part B: Stress

Thank you for your answers so far. Now I'm going to ask you a couple of questions about stress and what that means to you.

B.1. So that I better understand, please describe what it feels like to be stressed.

Probe: Do you feel a certain way? Do you act a certain way?

B.2. We recently asked girls in your community about some things that cause them stress, and some of them said [Add issue that arose related to WASH] . Why do you think they said this is stressful?

B.3. We recently asked girls in your community about some things that prevent them from getting ahead in life, and some of them said [Add issue that arose related to WASH] . Why do you think they said this?

Part C: Menstrual Management

Great, thank you. You all are doing a really good job so far. The next thing I want to talk to you about is menstruation and menstrual management. Remember, your opinions and experiences are really important, and there are no wrong answers. Please remember to also show respect to the other girls, even if their opinion is different from yours.

C.1. How do girls in your community learn about menstruation and growing up?

Probe: Do they learn about it from their mother, a sister, a teacher, an aunt, a friend?

C.2. I really want to understand what it's like for girls your age during this time. Is there anything stressful about menstruation?

Note: Have girls explain why these things are stressful.

C.3. Does a girl's menstrual cycle ever interfere with anything she wants to do? How?

C.4. How does beginning menstruation affect a girl's life at home?

C.5. How does a girl's menstrual cycle affect her life at school?

C.6. Please tell me about your school's resources for girls dealing with their menstrual cycles.

Probe: Are there latrines? How are they? Are there products available?

C.7. Are there any problems or barriers to dealing with your menstrual period at school?

Probe: Are the latrines clean? Do you have privacy? Do you feel comfortable using the latrines? Make sure to have girls elaborate on why.

C.8. How could these problems be fixed? Who would be involved?

Part D: Activities

Great, thank you. Now we're going to do a couple of short activities. For the first activity, I want you to break up into group of two or three. It doesn't matter who is in which group, but please include everyone in a group. I'm going to hand you some paper and pens, and with that, I want you to brainstorm and write everything down for the following:

D.1. If you had all the money, supplies and help you needed, how would you improve your school to make it meet the needs that are special to girls? Which of these things are most important?

Note: allow 8 – 10 minutes for brainstorming/writing, but if the groups are all finished, you may stop the activity earlier. Allow some time for groups to share their ideas.

D.2 Ok, next I'm going to hand your group some more paper. On this paper, I want your group to draw the perfect latrine for girls. Think about everything you would want, pretending you had all the money and supplies available. Make sure to include all group members' ideas.

Note: allow 10 – 15 minutes for brainstorming/drawing, but if the groups are all finished, you may stop the activity earlier. Allow time for the groups to share their drawings.

Conclusion

So, we have now reached the end of our discussion. Does anybody have any comments they would like to add or questions for me? If you think of something you would like to add or ask later, please just let me know. I want to thank you all again for your time and your opinions. We have really learned a lot, and this discussion will be really helpful and beneficial to our research. So, thank you once again for contributing!

Appendix 4. Consensus Analysis Results

Consensus results for ranking activities*

	Happy/Good Life Eigenvalue Ratio Negative Competencies	Stress Eigenvalue Ratio Negative Competencies	School Eigenvalue Ratio Negative Competencies	All Eigenvalue Ratio Negative Competencies
Pre-Menarche	2.336 14	1.991 16	2.195 15	3.215 8
Post-Menarche	3.026 8	2.650 14	2.576 6	4.430 7
All	2.613 21	2.447 28	2.432 22	4.208 15

*There is considered to be consensus when the Eigenvalue is greater than 3

Ranking based on cultural consensus analysis results using UCINET

Question 1. Items necessary for a happy and good life

Happy/Good Life					
Pre-Menarche		Post-Menarche		All	
#	Item (Consensus Rank)	#	Item (Consensus Rank)	#	Item (Consensus Rank)
1	Love from family (2.22)	1	Love from family (2.92)	1	Love from family (2.54)
2	Health (3.45)	2	Health (2.98)	2	Health (3.21)
3	An education (3.66)	3	An education (3.58)	3	An education (3.66)
4	Time to study (4.07)	4	Income (4.16)	4	Time to study (4.56)
5	Good hygiene (4.29)	5	Food (4.61)	5	Food (4.80)
6	Food (4.98)	6	Time to study (5.06)	6	Good hygiene (4.95)
7	Income (6.04)	7	Good hygiene (5.69)	7	Income (5.11)
8	Clothes (8.44)	8	Holidays (8.42)	8	Clothes (8.52)
9	Play with friends (8.78)	9	Clothes (8.61)	9	Holidays (8.76)
10	Holidays (9.11)	10	Play with friends (8.95)	10	Play with friends (8.90)
Eigenvalue Ratio: 2.336		Eigenvalue Ratio: 3.026		Eigenvalue Ratio: 2.613	

Question 2. Causes of stress

Stress					
Pre-Menarche		Post-Menarche		All	
#	Item (Consensus Rank)	#	Item (Consensus Rank)	#	Item (Consensus Rank)
1	Death in family (1.74)	1	Death in family (1.12)	1	Death in family (1.55)
2	Early Marriage (2.57)	2	Early Marriage (2.97)	2	Early Marriage (2.74)
3	Drought (3.31)	3	Abduction (3.44)	3	Abduction (3.60)
4	Abduction (3.57)	4	Sickness (3.64)	4	Drought (3.72)
5	Sickness (4.84)	5	Drought (3.88)	5	Sickness (4.27)
6	Grades (6.86)	6	School materials (6.07)	6	School materials (6.62)
7	Menstruation (7.06)	7	Grades (7.66)	7	Grades (7.18)
8	School materials (7.26)	8	Work load (7.82)	8	Menstruation (7.69)
9	Work load (7.73)	9	Menstruation (8.42)	9	Work load (7.69)
10	Having clothes 10.10)	10	Having clothes (9.97)	10	Having clothes (9.97)
Eigenvalue Ratio: 1.991		Eigenvalue Ratio: 2.650		Eigenvalue Ratio: 2.447	

Question 3. Causes of school absence

School					
Pre-Menarche		Post-Menarche		All	
#	Item (Consensus Rank)	#	Item (Consensus Rank)	#	Item (Consensus Rank)
1	Early Marriage (2.45)	1	Early Marriage (2.23)	1	Early Marriage (2.32)
2	Work load (2.67)	2	Absent parents (3.44)	2	Absent parents (3.36)
3	Absent parents (3.24)	3	Family poverty (3.48)	3	Work load (3.51)
4	Family poverty (3.66)	4	Work load (4.20)	4	Family poverty (3.56)
5	Not important (4.29)	5	Not important (4.50)	5	Not important (4.36)
6	Not interested (5.77)	6	Not interested (6.62)	6	Not interested (6.28)
7	Care for others (6.34)	7	Care for others (6.73)	7	Care for others (6.51)
8	Far away (8.32)	8	Far away (7.38)	8	Far away (7.85)
9	Menstruation (8.66)	9	Menstruation (7.39)	9	Menstruation (7.95)
10	No water (9.61)	10	No Water (9.03)	10	No Water (9.30)
Eigenvalue Ratio: 2.195		Eigenvalue Ratio: 2.576		Eigenvalue Ratio: 2.432	

Appendix 5. Mean Rank Order

Question 1. Items necessary for a happy and good life

Happy/Good Life						
Rank Order	Pre-Menarche		Post-Menarche		All	
	Item	Mean (SD)	Item	Mean (SD)	Item	Mean (SD)
1	Love from family	3.75 (2.72)	Love from family	3.56 (2.28)	Love from family	3.67 (2.54)
2	An education	4.14 (2.81)	Health	3.79 (2.53)	An education	4.19 (2.79)
3	Health	4.61 (2.69)	An education	4.25 (2.77)	Health	4.26 (2.64)
4	Good hygiene	4.99 (2.22)	Income	5.02 (2.29)	God hygiene	5.02 (2.21)
5	Time to study	5.04 (2.87)	Good hygiene	5.05 (2.21)	Food security	5.13 (2.67)
6	Food security	5.05 (2.62)	Food security	5.23 (2.75)	Time to study	5.27 (2.79)
7	Income	6.12 (2.43)	Time to study	5.58 (2.66)	Income	5.65 (2.42)
8	Play with friends	6.83 (2.73)	Clothes	7.39 (2.50)	Play with friends	7.08 (2.72)
9	Clothes	6.86 (2.63)	Play with friends	7.40 (2.70)	Clothes	7.08 (2.58)
10	Holidays	7.70 (2.42)	Holidays	7.74 (2.26)	Holidays	7.71 (2.34)

Question 2. Causes of stress

Stress						
	Pre-Menarche		Post-Menarche		All	
Rank Order	Item	Mean (SD)	Item	Mean (SD)	Item	Mean (SD)
1	Early Marriage	3.76 (2.33)	Death in family	4.02 (3.01)	Early Marriage	3.89 (2.34)
2	Death in family	4.41 (3.11)	Early Marriage	4.05 (2.37)	Death in family	4.24 (3.06)
3	Sickness	4.42 (2.41)	Abduction	4.74 (2.68)	Sickness	4.62 (2.59)
4	Drought	4.93 (2.80)	Drought	4.88 (2.77)	Drought	4.91 (2.77)
5	Abduction	5.12 (2.63)	Sickness	4.89 (2.80)	Abduction	4.95 (2.65)
6	High work load	5.91 (2.97)	School materials	5.58 (2.32)	Grades	5.80 (2.64)
7	Grades	5.92 (2.63)	Grades	5.65 (2.66)	School materials	5.95 (2.46)
8	School materials	6.23 (2.54)	High work load	6.51 (2.34)	High work load	6.17 (2.74)
9	Menstruation	6.96 (2.47)	Menstruation	6.65 (2.78)	Menstruation	6.83 (2.60)
10	Clothes	7.36 (2.72)	Clothes	8.04 (2.44)	Clothes	7.65 (2.61)

Question 3. Causes of school absence

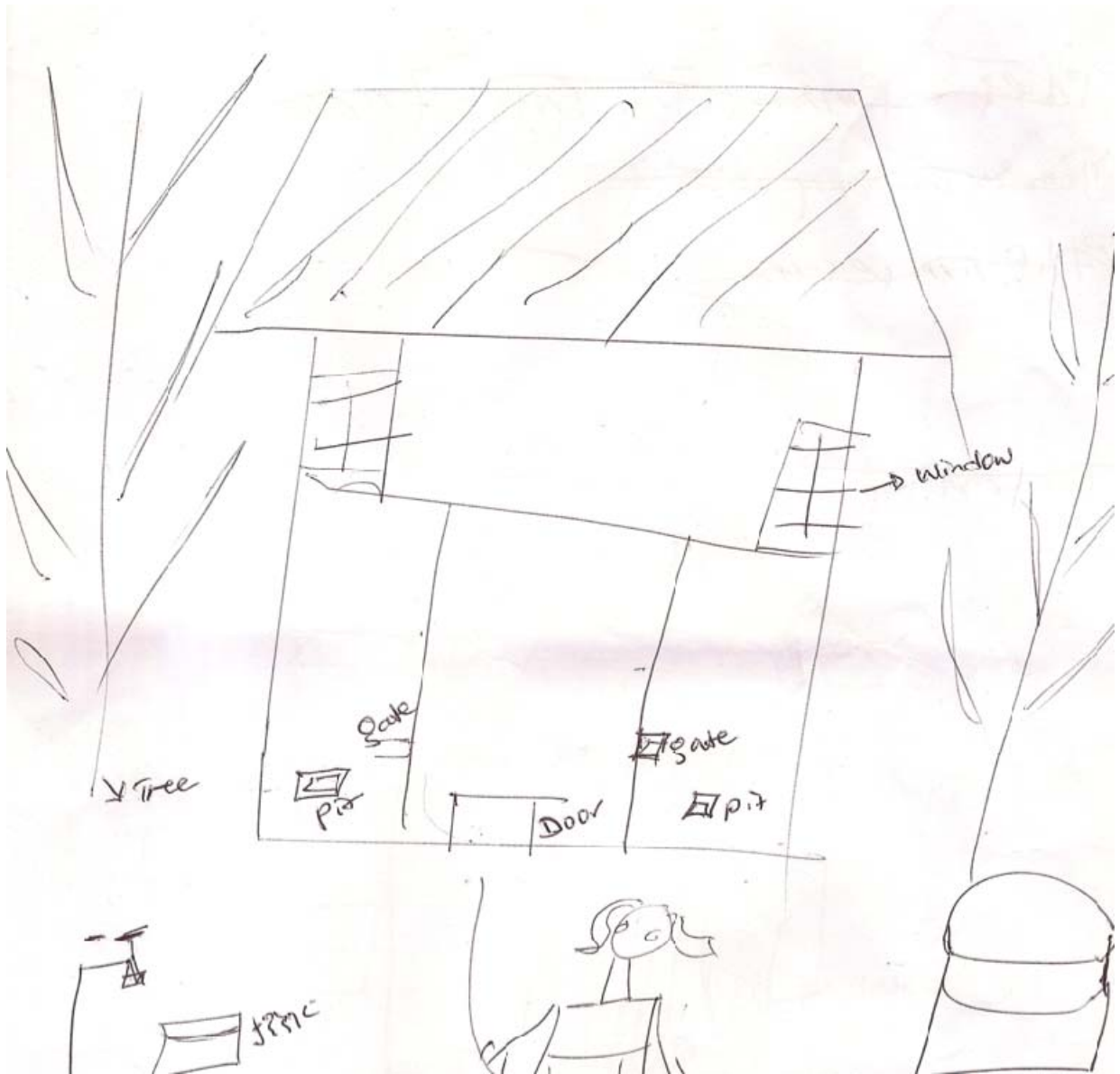
School						
	Pre-Menarche		Post-Menarche		All	
Rank Order	Item	Mean (SD)	Item	Mean (SD)	Item	Mean (SD)
1	Absent parents	4 (2.26)	Early Marriage	2.95 (2.23)	Early Marriage	3.74 (2.71)
2	Early Marriage	4.34 (2.89)	Family poverty	4.02 (2.10)	Absent	4.13 (2.31)
3	High work load	4.64 (2.84)	Absent parents	4.30 (2.38)	High work load	4.60 (2.67)
4	Not important	4.64 (2.77)	Work load	4.54 (2.45)	Family poverty	4.51 (2.49)
5	Family poverty	4.88 (2.69)	Not important	5.16 (2.72)	Important	4.86 (2.75)
6	Not interested	5.99 (2.91)	Not interest	6.32 (2.46)	Not interest	6.13 (2.72)
7	Care for others	6.25 (2.64)	Menstruation	6.39 (3.01)	Care for others	6.34 (2.60)
8	Menstruation	6.66 (2.68)	Care for others	6.46 (2.57)	Menstruation	6.54 (2.82)
9	Far away	6.71 (2.42)	Far away	6.81 (2.52)	Far away	6.75 (2.45)
10	No water	6.88 (2.75)	No water	8.07 (2.27)	No water	7.39 (2.62)

Appendix 6. Ideal Latrine Pictures

Picture 1.



Picture 2.



Picture 3.

