

### Introduction

#### Mali

- Mali has a population of 18 million people and about 68% live in rural areas in the southern region
- In 2017, 9 out of 10 of the top 10 causes of death in the country were due to communicable diseases
  - Including: Malaria, diarrheal disease, protein-energy malnutrition, and HIV/AIDS



#### Siraba School and the Health and Healthy Behaviors Program

- The Siraba School is supported and run by the Siraba School Village (SSV), a non-profit organization
- The Siraba School supports grades 1-6
- Located in a small rural village, Dagabo
- The Health and Healthy Behaviors Program (HHB) was created in 2016 as part of SSV's health education initiative
- The program was created to foster a healthy environment for students to understand their own health, the health of their families, and to help reduce the burden of disease within the community
- HHB is a monthly health class taught by an education consultant
  - 2 hour classes taught to each grade
  - Includes many topics that address aspects of physical, mental, emotional, sexual, social, and environmental health

### Methods

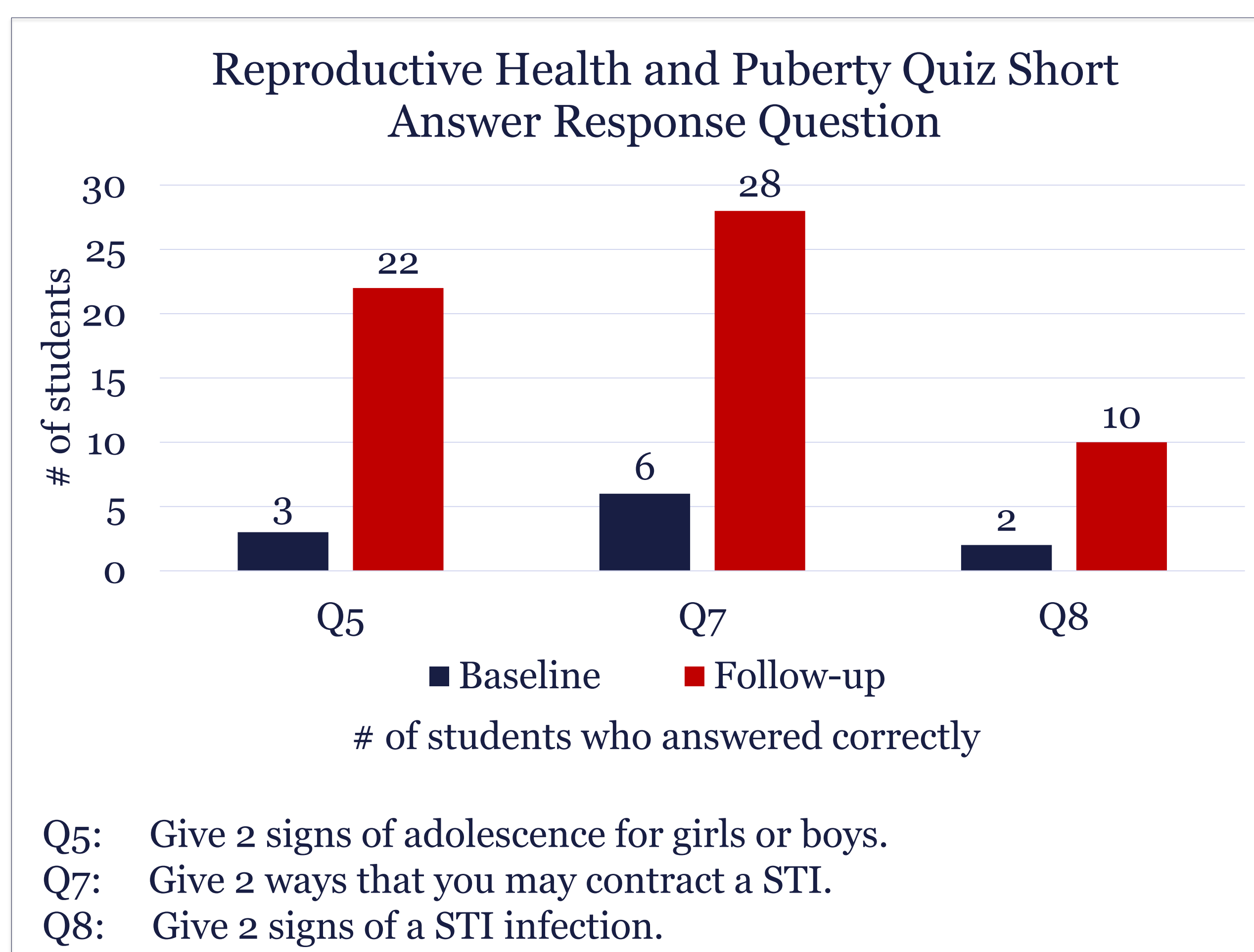
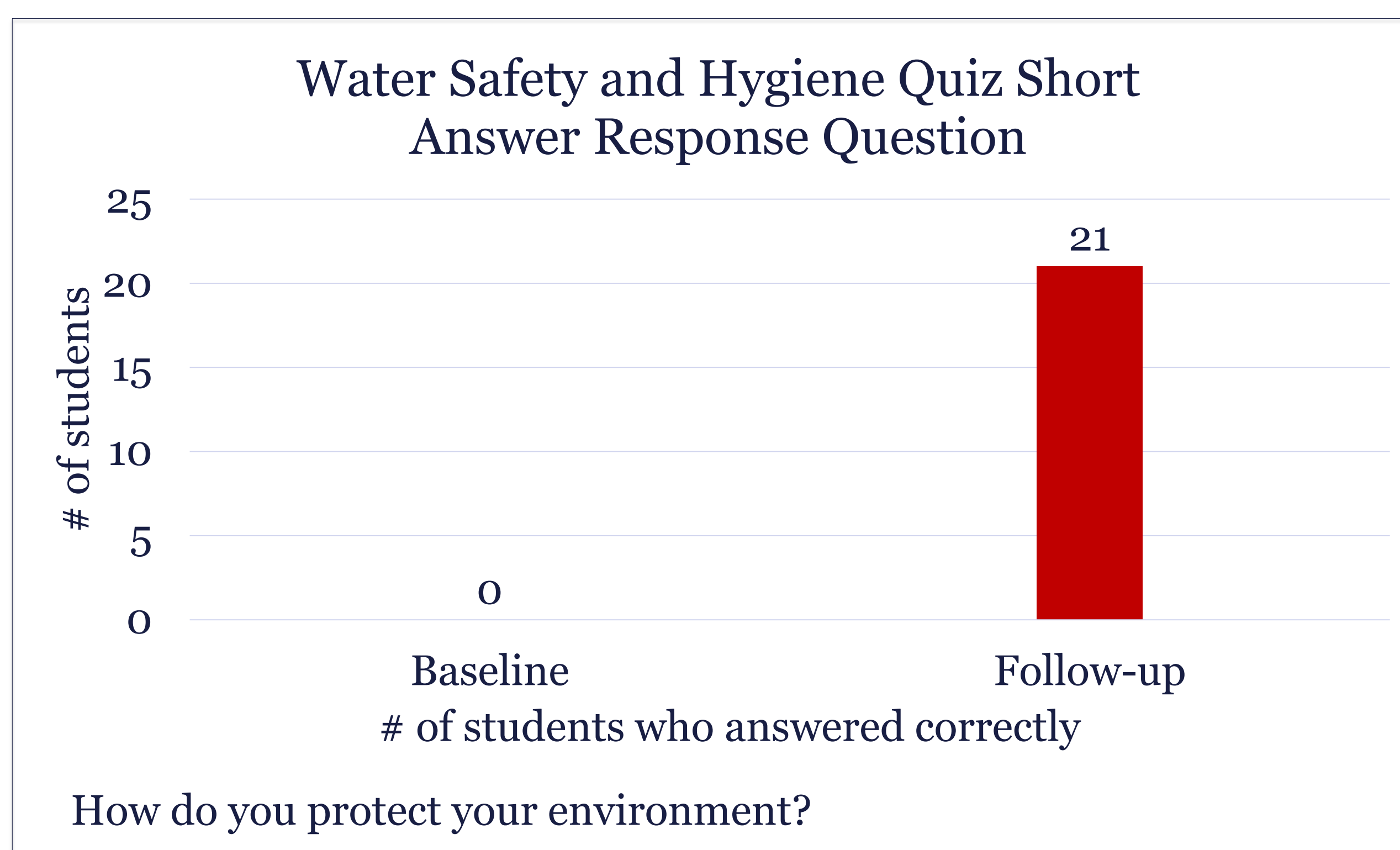
#### Pilot Assessment Project: Baseline and Follow-up Quizzes

- Baseline and follow-up assessments were created by the health education consultant to assess retention of the HHB curriculum
  - Written in French
- Quizzes were given via Pencil and Paper method to students at Siraba School and some students from the local middle school, Piebougou Middle School
- 2 quizzes of 9 questions each (multiple choice and short answer questions)
- Quiz 1: Water Safety and Hygiene Assessment**
  - Baseline:** 4<sup>th</sup> grade students
  - Follow-up:** 5<sup>th</sup> grade students
- Quiz 2: Reproductive Health and Puberty Assessment**
  - Baseline:** 5<sup>th</sup> grade students at Siraba School (orally)
    - 7<sup>th</sup>, 8<sup>th</sup>, and 9<sup>th</sup> grade students at Piebougou (no HHB curriculum)
  - Follow-up:** 6<sup>th</sup> grade students at Siraba School
    - 7<sup>th</sup>, 8<sup>th</sup>, and 9<sup>th</sup> grade students at Piebougou Middle School
- Data analysis was performed using Qualtrics and Excel

### Results

- 43 participants took quiz 1 – Water Safety and Hygiene
  - Baseline: 22
  - Follow-up: 21
- 70 participants took quiz 2 – Reproductive Health and Puberty
  - Baseline: 30
  - Follow-up: 41

Average Scores (multiple choice questions)	Baseline	Follow-up
Water and Hygiene	90%	80%
Rep and Puberty	76%	76%



### Discussion

- The similar averages of the multiple choice questions could be based off previous knowledge the students had
- Incorrect answers could be due to outside sources of information
  - Parents, friends, or community belief
  - Could be supplying students with incorrect answers or answers that are impacted by the culture
- The short answer questions show the retention of information by the follow-up test students
  - Greater number of responses without prompts demonstrate retention of health information from HHB lessons
- From the pilot assessment project, SSV is recommended to continue assessing the HHB program using the Pencil and Paper method
  - Baseline tests should be given to every grade at the beginning of the year and quarterly assessments as follow-ups
  - Possibly changes to the curriculum based on answers from students and needs of the community during the year
  - Include adults in the HHB lessons
    - Given after school hours to increase involvement of parents and positively impact healthy behaviors in the community

### Future Research

- Assessments with multiple choice and short answer questions are an efficient tool to use to assess retention of knowledge of the students
- Students will adapt to pencil and paper method and will become more comfortable with taking quizzes or tests in class
- Assessment grades could be used to demonstrate effectiveness of the HHB curriculum
  - Information could be used for grants and future changes to the curriculum

### Acknowledgements



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