

# From Data to Action: Informing Menstrual Health Management Programs

Wednesday, February 16<sup>th</sup> 2022

8:30am-9:30am      New York

4:30pm-5:30pm      Nairobi

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ZanaAfrica Foundation



# Does Provision of Menstrual Health Supplies Improve Education Outcomes for Girls?

Nicole Haberland, Cara Kraus-Perrotta, Stephanie Psaki, Erica Chuang, Lauren Woyczynski, Barbara Mensch

Population Council  
16 February 2022

A world map in shades of blue and teal, centered on the Atlantic Ocean. The word "Background" is written in white, bold, sans-serif font across the center of the map.

# Background

# The Girls' Education Landscape

## The Good News

- Dramatic increase in girls' enrollment globally
- Gender parity achieved globally in primary and secondary enrollment

## The Remaining Challenges

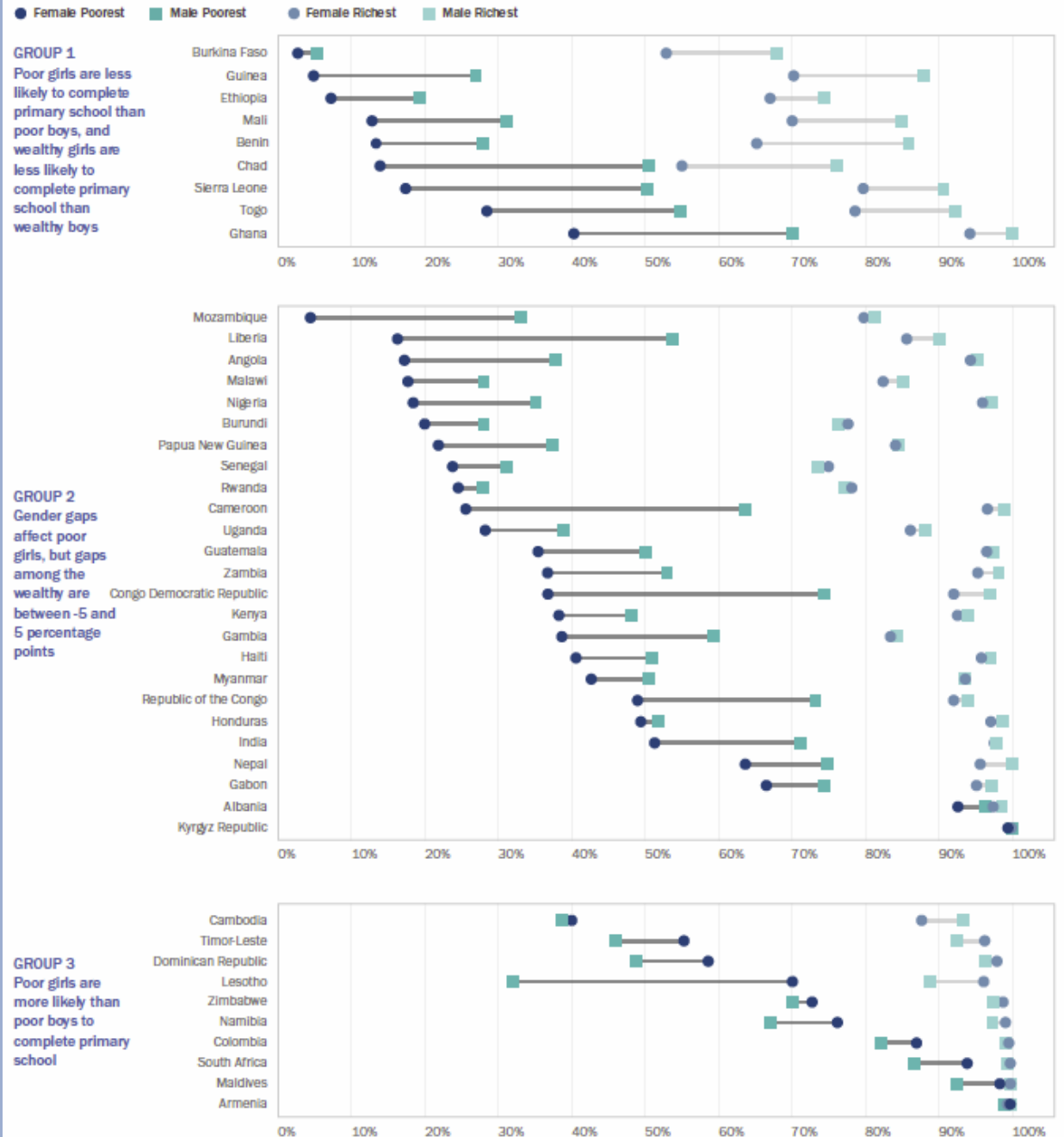
- Extended learning disruptions due to epidemics (COVID-19), environmental disasters, conflict, etc.
- Gender gaps in enrollment remain
- Progress in attainment has stagnated
- Very low levels of learning
- Conflicts between schooling and adult roles (marriage, parenthood)

Gender disparities in education persist, especially when we take an intersectional lens.

The poorest girls have the lowest attainment, worst learning outcomes, and biggest gender gaps.

FIGURE 5 Percent of population aged 20–24 completing primary school, by wealth quintile

This figure shows the gender gap in primary school attainment stratified by the poorest and richest quintiles, as defined by the DHS wealth quintile variable.



# GENDER-RELATED BARRIERS TO EDUCATION

## COMMUNITY



Lack of Safe Spaces & Social Connections



Lack of Support for Girls' Education



Child Marriage & Adolescent Pregnancy



Poor Policy/Legal Environment



Inadequate Sports Programs for Girls



Inadequate Health & Childcare Services

## SCHOOL



Inadequate Life Skills



Insufficient Academic Support



Gender-Insensitive School Environment



Lack of Water & Sanitation



Lack of Teaching Materials & Supplies



School-Related Gender-Based Violence

## HOUSEHOLD



Lack of Access to School



Inability to Afford Materials



Inability to Afford Tuition/Fees



Lack of Information on Returns to Girls' Schooling



Lack of Adequate Food



Inadequate Menstrual Hygiene Management



# Methods

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SYSTEMATIC REVIEW

WILEY Campbell Collaboration  International Initiative for Impact Evaluation

## Policies and interventions to remove gender-related barriers to girls' school participation and learning in low- and middle-income countries: A systematic review of the evidence

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### Funding Information

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### Abstract

**Background:** Gender disparities in education continue to undermine girls' opportunities, despite enormous strides in recent years to improve primary enrollment and attainment for girls in low- and middle-income countries (LMICs). At the regional, country and subnational levels, gender gaps remain, with girls in many settings less likely to complete primary school, less likely to complete secondary, and often less likely to be literate than boys. The academic and policy literatures on the topic of gender-related barriers to girls' education are both extensive. However, there remain gaps in knowledge regarding which interventions are most likely to work in contexts with different combinations of barriers.

**Objectives:** This systematic review identified and assessed the strength of the evidence of interventions and exposures addressing gender-related barriers to schooling for girls in LMICs.

# Search Strategy

- The AEA RCT Registry, Africa Bibliography, African Education Research Database, African Journals Online, DEC USAID, Dissertation Abstracts, EconLit, ELDIS, Evidence Hub, Global Index Medicus, IDEAS-Repec, Intl Clinical Trials Registry, NBER, OpenGrey, Open Knowledge Repository, POPLINE, PsychINFO, PubMed, Research for Development Outputs, ScienceDirect, Sociological Abstracts, Web of Science
- Relevant organizations' websites
- Review of bibliographies
- Inquiries to authors of included studies, relevant researchers and relevant organizations.



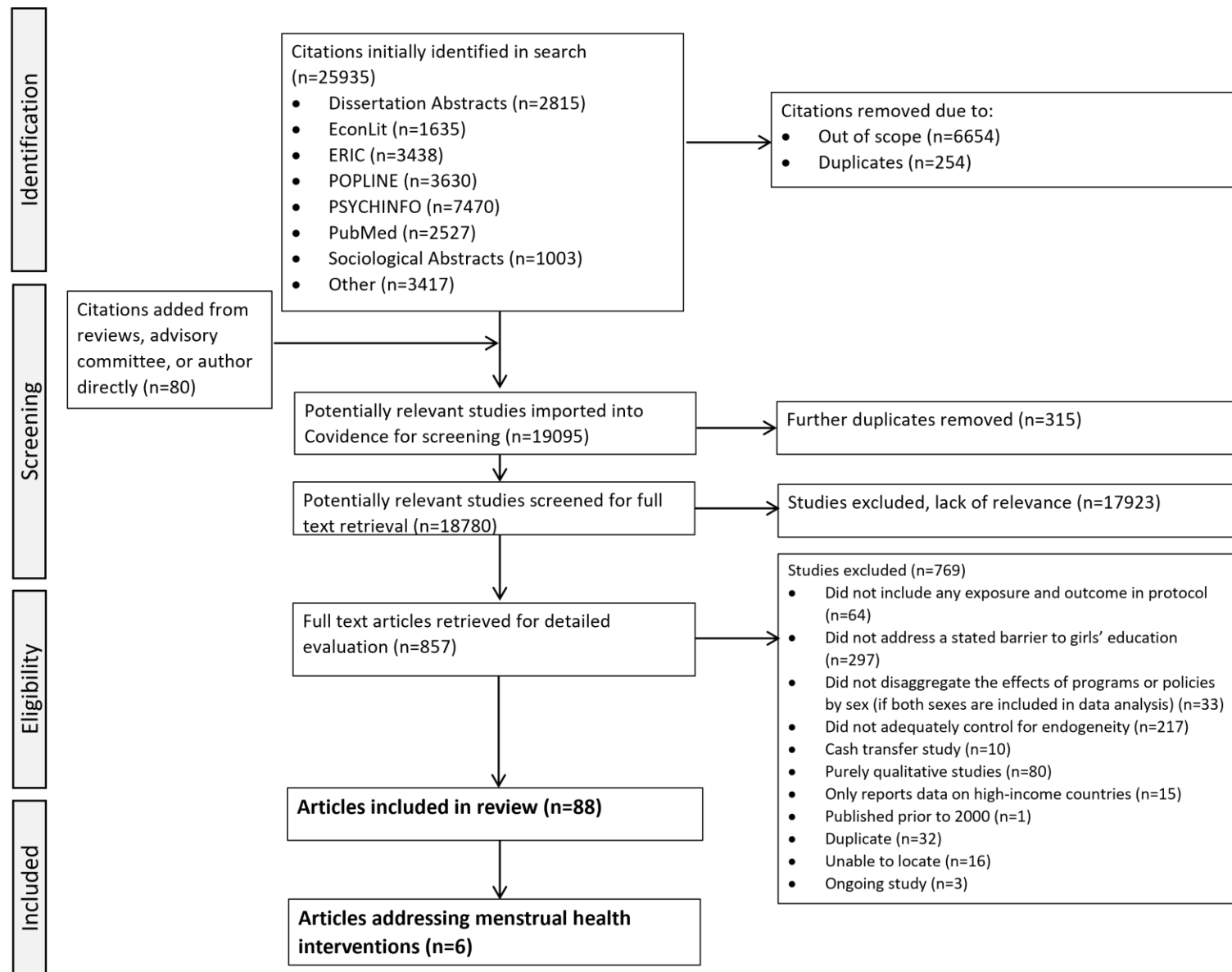
# Inclusion Criteria

- Randomized controlled trials
- Quasi-experimental studies that used quantitative models that attempt to control for endogeneity
- Data from LMICs
- Published, peer-reviewed articles or grey literature such as working papers, reports and dissertations
- Published in or after 2000
- Analyzed the effects of the intervention/exposure on primary outcomes of interest (attainment/learning)
- Intervention or exposure that attempted to address a gender-related barrier to schooling

# Data collection/analysis

- Pairs of reviewers independently screened for relevance, extracted data, assessed risk of bias
- Risk of bias assessed through:
  - RoB 2 tool (experimental studies)
  - ROBINS-I tool (quasi-experimental studies)
- Converted effect sizes to partial correlation coefficients given variety of model types
- Used the GRADE (Grading of Recommendation, Assessment, Development and Evaluation) approach to synthesize research as opposed to meta-analysis, due to heterogeneity of study characteristics and reported outcome measures between studies.

# PRISMA Flow Diagram



A world map in shades of blue and teal, centered on the Atlantic Ocean. The text 'MHM Results' is overlaid in white.

# MHM Results

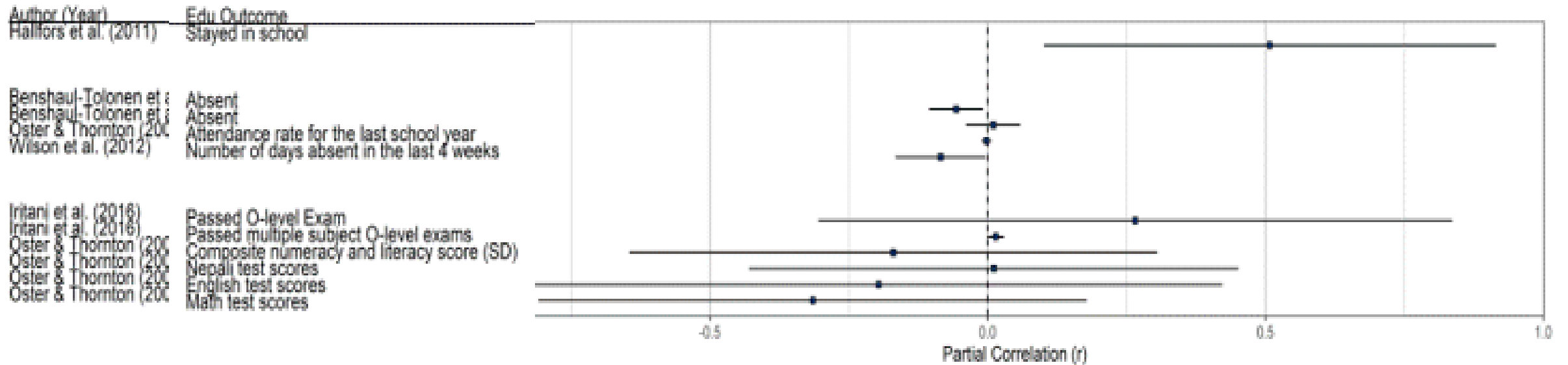
# MHM Results

- Four studies
  - Provision of menstrual cups (Oster and Thornton, 2009)
  - Provision of sanitary pads (Benshaul-Tolonen et al., 2019; Phillips-Howard et al., 2016)
  - Training on how to make reusable sanitary pads (Wilson et al., 2012)
  - Multi-component program including sanitary pad distribution, payment of school fees, uniforms, school supplies, and adult mentor (Hallfors et al., 2011; Iritani et al., 2016)
- All used an experimental design

# GRADE Summary - MHM Interventions

Outcome Description	Effect Direction and Size Summary	Number of Papers and Participants	Certainty in Evidence (Grade Low-High)	GRADE Ranking Based on:
Enrollment in primary school	Two studies showed different results - one finding significant improvement and one finding null/unexpected negative effects on enrollment.	335 participants across 1 experimental paper	Very low ⊕○○○	Very low (due to few studies and serious risk of bias due to imprecision and inconsistent findings)
Absenteeism	Effect sizes ranged from small (negative) to null, with all CIs either crossing 0 or coming close to 0.	1144 participants across 3 experimental papers	Low ⊕⊕○○	Low (due to few studies, imprecision from one study, and a combination of small and null effect sizes)
Academic Skills (literacy and numeracy)	Most effect sizes are null with large confidence intervals; one effect size is small and positive but comes from a study that did not focus directly on this research question.	533 participants across 2 experimental papers	Low ⊕⊕○○	Low (due to only two studies, and imprecision from one study)

# Forest Plot showing partial correlation coefficients and 90% confidence intervals





# Conclusions

- There was not sufficient, quantitative evidence linking menstrual health supplies to education outcomes.
- We concluded that more research is needed to assess the effects of interventions that address menstrual health supplies on education outcomes.
- There are other reasons, apart from education outcomes, why provision of menstrual health supplies may be desirable.
- Those responsible for making decisions about limited education budgets need accurate information about the costs and benefits of the different interventions under consideration.



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# IMPACTS OF SANITARY PAD DISTRIBUTION AND REPRODUCTIVE HEALTH EDUCATION ON EDUCATION AND SEXUAL HEALTH OUTCOMES: A CLUSTER RANDOMIZED CONTROLLED TRIAL

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February 2022



# Background

- The onset of puberty and menarche is a vulnerable time for girls
- According to qualitative studies in Africa, these pressures are exacerbated by\*:
  - girls' lack of knowledge of their bodies and their rights
  - inability to manage puberty and adolescence comfortably due to lack of access to menstrual products
- No rigorous quantitative studies examining combination of hardware and software or both education & SRH outcomes

\*Crofts & Fisher, 2012; Mason et al., 2013; Mukuru, 2008; Sommer, 2009, 2010; Tegegne & Sisay, 2014; Wilson, Reeve, & Pitt, 2014

# Study Design

- Cluster-randomized controlled trial
- 140 schools in three sub-counties in Kilifi County

<b>Arm 1</b> 35 schools	<b>Arm 2</b> 35 schools	<b>Arm 3</b> 35 schools	<b>Arm 4</b> 35 schools
Control (No intervention)	Sanitary Pads	Reproductive Health Ed	Sanitary Pads Reproductive Health Ed



# Intervention

- One pack of Nia Teen pads distributed monthly
- Underwear distributed once per term
- Reproductive Health Education
  - Girls-only sessions conducted in school, led by trained facilitator, 4-6 per term
  - Nia Teen magazine distributed once per term



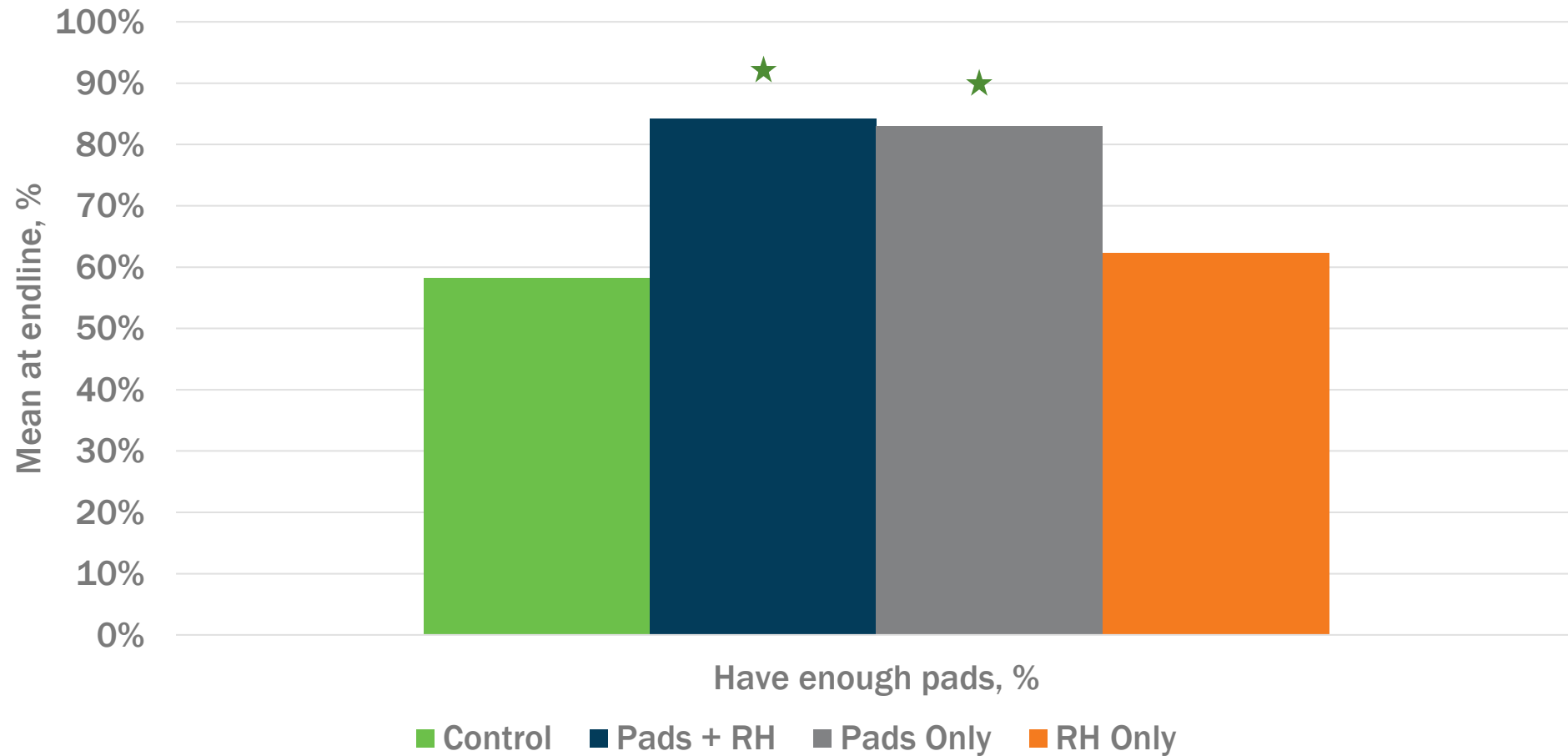
# Research Component

- **Baseline survey (2017):** conducted with 3,489 girls in Class 7 (10-21 years, mean 14.4)
- **School quality survey:** including WASH facilities, information on school characteristics
- **School Attendance data:** collected for 20 consecutive days in Term 3 2017, Term 1 2018 and Term 2 2018 (data collected on all girls and boys who were in Class 7 during Term 2 2017)
- **Endline survey (November 2018):** 94% of baseline sample interviewed (3,276)



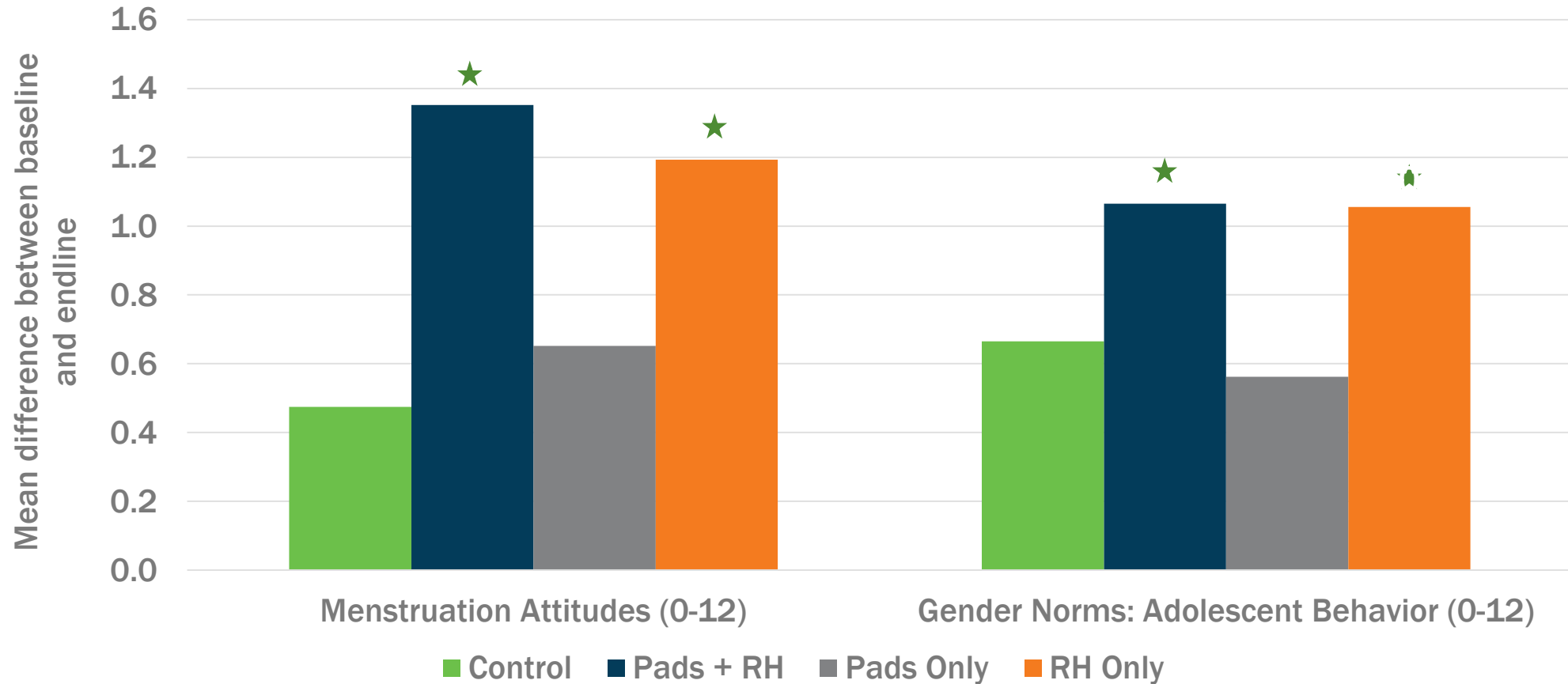
# Endline Results

# Management of Menstruation



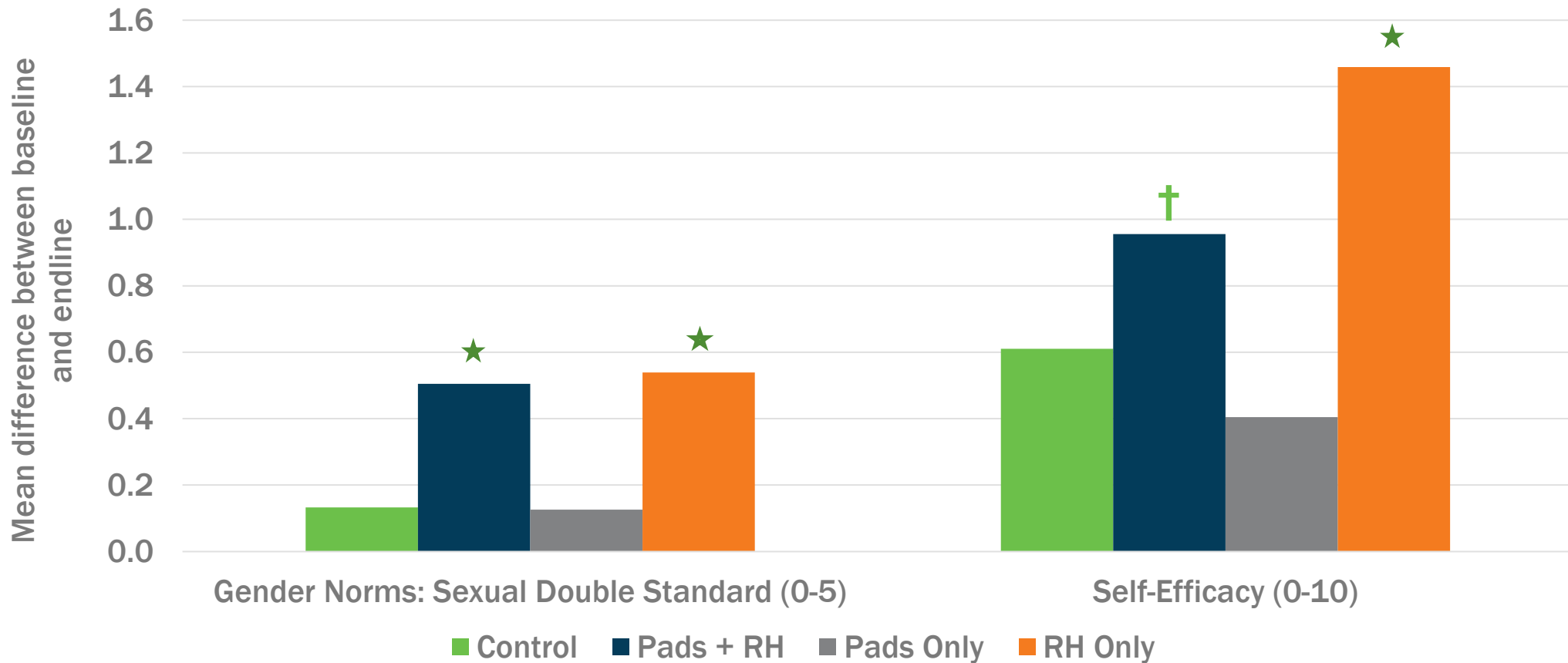
★  $p < 0.05$

# Norms and Attitudes



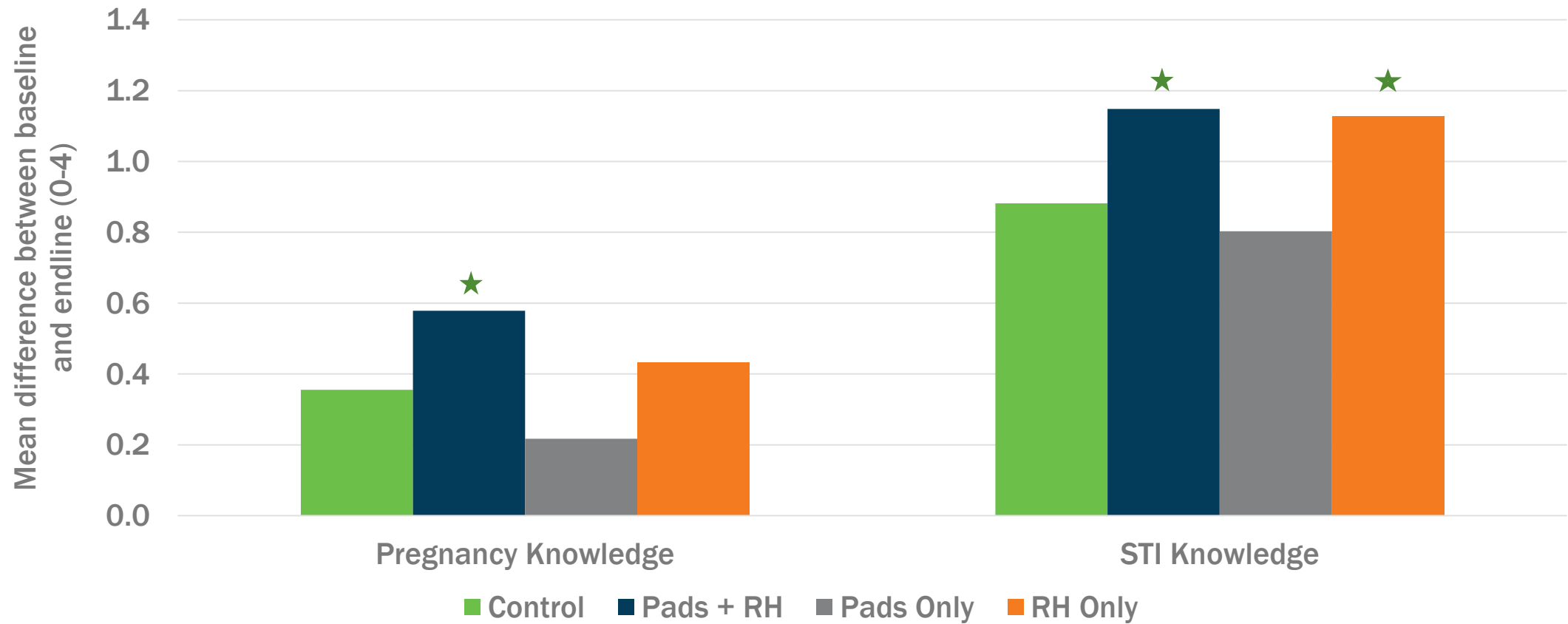
★ p < 0.05

# Norms & Attitudes – cont'd



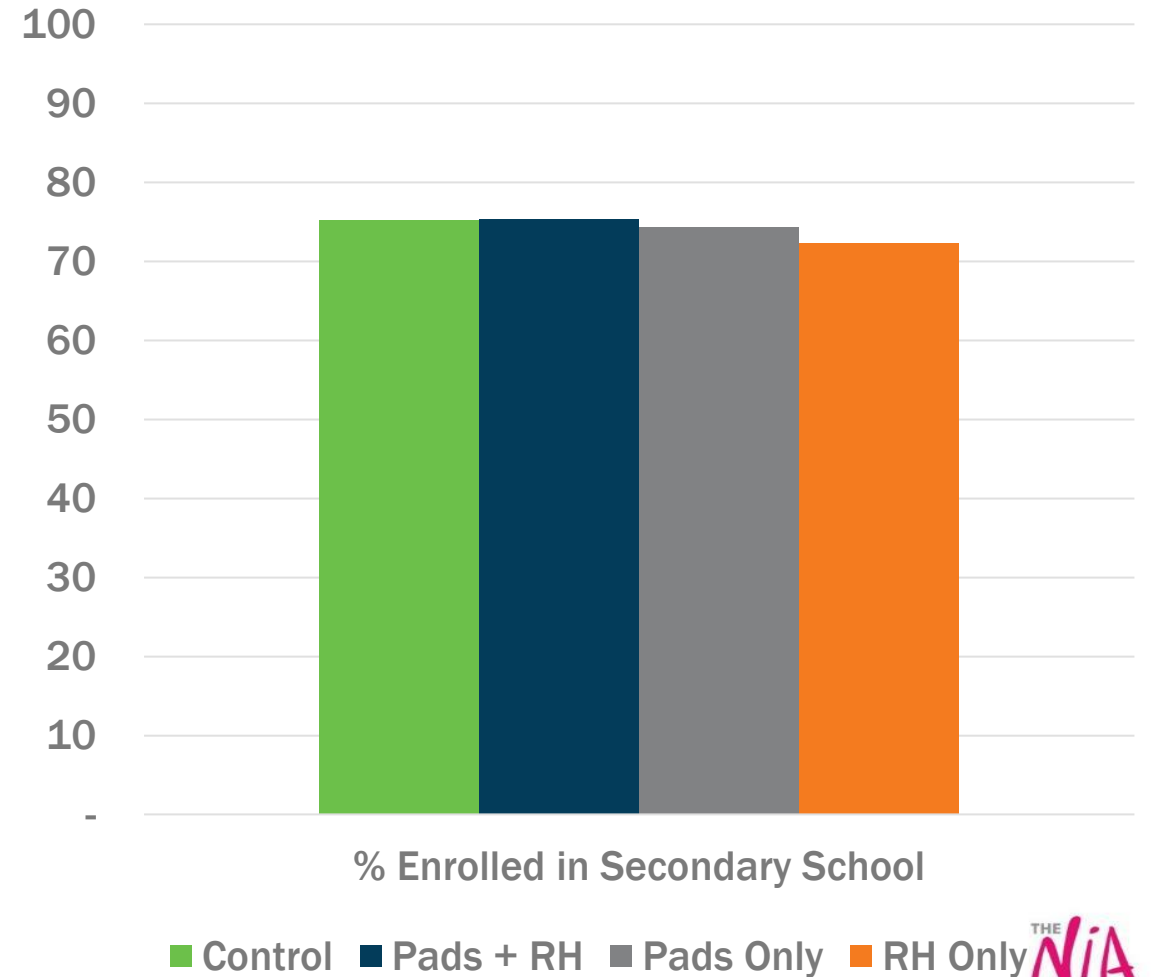
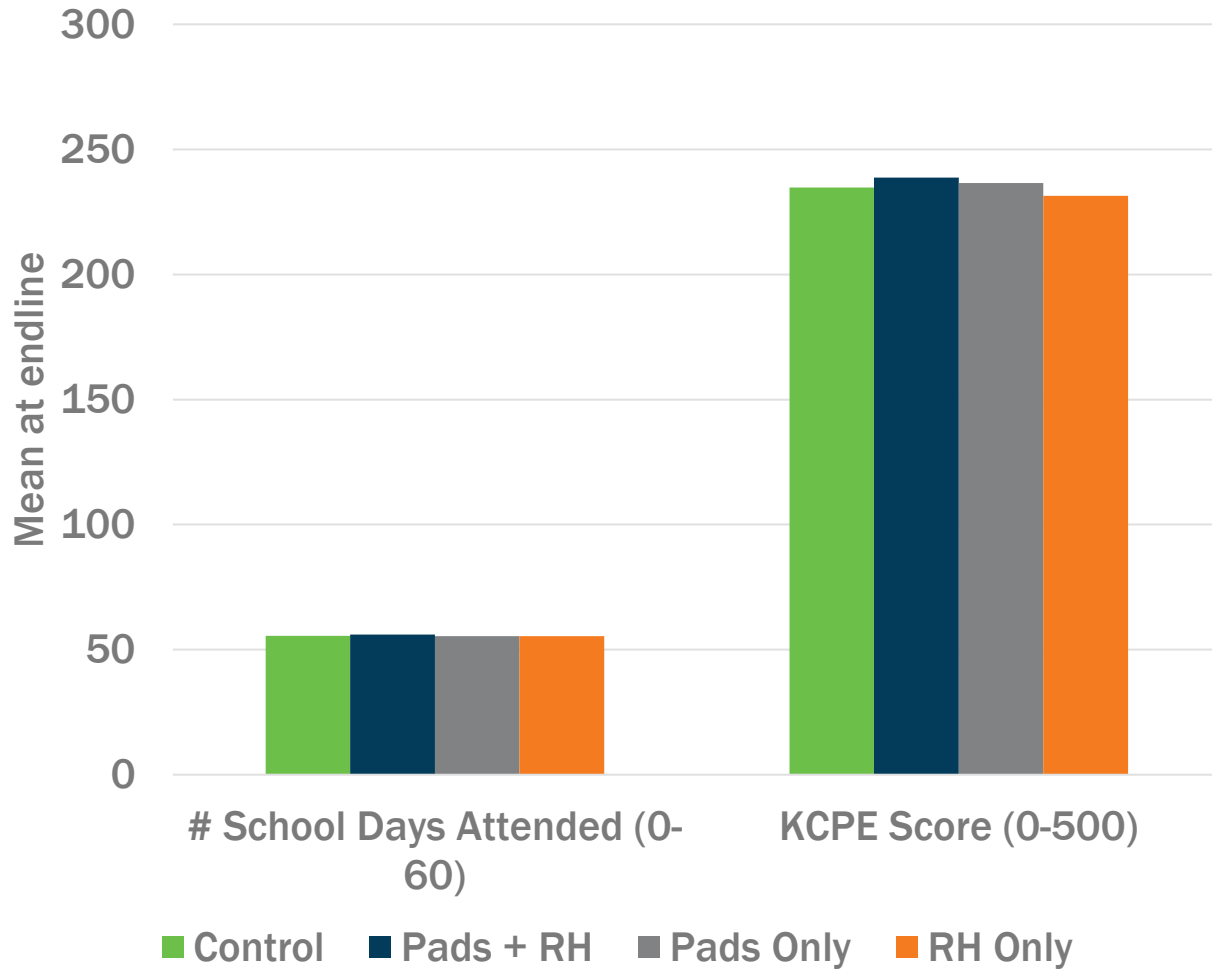
★ p < 0.05; † p < 0.1

# SRH Knowledge



★ p < 0.05

# Education Outcomes



★  $p < 0.05$

# Summary

- Pads led to improved menstrual hygiene management
- RH education led to improved SRH knowledge, self efficacy, gender norms and attitudes on menstruation
  - Combined intervention had stronger impacts on reducing shame/stigma around menstruation
- Neither intervention had an impact on education outcomes



# Acknowledgements



BILL & MELINDA  
GATES *foundation*

# *Thank you for joining!*



## Explore the evidence:



[Global systematic review: Policies and interventions to remove gender-related barriers to girls' education](#)



[Effects of sanitary pad distribution and reproductive health education in Kenya: a cluster randomized controlled trial](#)



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