Addressing Menstrual Stigma and Hygiene to Improve Education and Psychosocial Well-Being among Adolescent Girls in Madagascar

Researchers:

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Sector(s): Education, Gender, Health

Fieldwork: Consultant Associates

Sample: 2,390 schoolgirls in 140 primary and secondary schools

Initiative(s): Post-Primary Education Initiative (PPE)

Target group: Primary schools Secondary schools Students Teachers Rural population Women and girls Families and households

Outcome of interest: Dropout and graduation Enrollment and attendance Student learning Gender attitudes and norms Cognitive development Health outcomes Mental health

Intervention type: Information Social networks Preventive health Training Water, sanitation, and hygiene Empowerment training Norms change Community-driven development Intergroup/social contact School-based inputs

AEA RCT registration number: AEARCTR-0008972

Research Papers: Menstrual Stigma, Hygiene, and Human Capital: Experimental Evidence from Madaga...

Partner organization(s): CARE France, Fonds d'Innovation pour le Développement (FID)

Social stigma surrounding menstruation and lack of knowledge of hygiene practices can be significant barriers to girls' education. Researchers evaluated the impact of a program addressing constraints related to hygiene infrastructure and access to sanitary products while addressing social stigma around menstruation, on girls' learning and psychosocial well-being in Madagascar. The program led to improvements in academic learning outcomes and anxiety. Reduction in stigma and improvements in observed hygiene behaviors were larger in schools with peer leaders who were identified, trained, and coached to address these harmful social norms.

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Psychosocial factors can strongly affect human capital development: one such psychosocial barrier for girls is menstrual stigma. A large body of evidence has documented how issues around menstruation can create obstacles to girls' education and health due to a wide range of physical factors, such as the lack of adequate hygienic products and facilities at schools, compounded by cultural attitudes that create taboos around menstruation[1], . Making discussions about menstruation and knowledge about menstrual hygiene practices more commonplace can help reduce the stigma and physical consequences of menstruation for school girls[2]. However, few interventions have been designed to reduce menstrual stigma for them. Can providing information, infrastructure, and hygiene products and supporting young leaders to foster open communication about menstrual hygiene improve social norms and behaviors thereby increasing girls' human capital and psychosocial outcomes?

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The stigma surrounding menstruation is widespread—approximately one in three menstruating women risk shame and harassment[3]. In Madagascar, where this evaluation took place, there are taboos associated with menstruation, as is the case in many other contexts. Thirty-nine percent of the girls who were surveyed at the start of the intervention mentioned that one should not discuss menstruation openly. With regard to menstrual management, 55 percent of the girls had discussed menstruation with their mothers, and eleven percent had access to sanitary products. The girls interviewed at the intervention's start also faced grade progression delays of 2.2 years on average and belonged to large households (average household size of 6.5 members) living under high levels of poverty.

The **Young Girl Leaders program or YGL** aimed to improve the level of knowledge and awareness of menstrual hygiene among girls (between Grade 4 and Grade 9, on average) by leveraging the presence of "positive social deviants" within school communities to diffuse information about menstrual hygiene practices. Positive deviance relies on the notion that a few individuals within a given community may adopt beneficial strategies in response to a challenge, leading to better outcomes than fellow community members[4]. In the context of this evaluation, these individuals were young girls inclined to break the norm of silence to foster open discussions about menstrual hygiene as well as reduce stigma and change social norms around the topic.

Young Girl Leaders Addressing Menstrual Stigma in Madagascar

Photo: CARE Madagascar

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Researchers partnered with the NGO CARE to conduct a randomized evaluation to test the impact of complementary hygiene and sanitation interventions and peer-to-peer communication on menstrual stigma, menstrual hygiene, and human capital outcomes.

The program consisted of two components: first, building hygiene infrastructure, distributing reusable sanitary pads, and spreading awareness among teachers, and second, addressing harmful social norms around menstruation through the YGL program.

The basic Water, Sanitation, and Hygiene (WASH) program consisted of a package of interventions that included:

- **Infrastructure:** Construction and rehabilitation of latrines and water-access points.
- **Teacher WASH training:** Training teachers on hygienic behaviors and practices, setting up and training in-school hygiene committees, and asking teachers to organize five-minute weekly sessions to talk to students about hygiene.
- **Distribution of sanitary pads:** Promotion of reusable sanitary pads through vouchers to school girls enabling them to get six free pads, produced by local tailors trained by the program.

The YGL component was built on top of this set of WASH activities. The YGLs received intensive training at the start of the program with a refresher training the next school year from CARE. This training aimed to improve their leadership and awareness-raising skills, as well as provide information regarding different WASH practices (e.g., using sanitary pads, handwashing with soap, food hygiene, etc.). YGLs in these schools were first identified by teachers and then shortlisted using a criterion based on their leadership qualities, level of social deviance (i.e., their willingness to go against social norms and speak on topics related to menstrual hygiene), whether they had started menstruating, and their academic records.

To capture the relative effectiveness of varying information diffusion strategies, researchers randomly assigned 140 primary and secondary schools to one of the four groups below:

1. **WASH (35 schools):** Schools received the basic WASH package consisting of the construction of sanitation infrastructure, teacher training, and vouchers for free sanitary pads.
2. **WASH + Formal YGL (35 schools):** Schools received the YGL program, along with the standard WASH package offered by the NGO. Information about menstrual hygiene practices was transmitted during formal structured sessions organized and run by the girl leaders at the school. These sessions were run regularly, with support and feedback from CARE's local partners.
3. **WASH + Informal YGL (35 schools):** Schools received the YGL program, along with the standard WASH activities offered by the NGO. Information was delivered using an informal diffusion mechanism, whereby the girl leaders were encouraged to discuss menstrual hygiene behaviors in informal conversations, outside the classroom.
4. **Comparison (35 schools):** Schools received no intervention during the evaluation period and served as the comparison group.

Before the intervention started, researchers collected school enrollment registry and survey data at the household level in September 2021, interviewing girls as well as their mothers or primary female caregivers and a brother in the same household (if available). Follow-up surveys six months and 1.5 years after the start of the program) were conducted to measure the program's impact on schooling and learning outcomes, attitudes and behaviors around menstrual hygiene and general sanitation, psychosocial well-being, and physical health indicators. During the follow-up after 1.5 years, the researchers also surveyed mothers, teachers and school directors, and male classmates. The survey data was complemented with the data from the official school registry and exam results. The researchers also conducted random checks during the academic year to measure absenteeism.

Due to the stigma surrounding menstruation, the target population might feel uncomfortable or be reluctant to partake in the program. Given that the target population was young girls, the opinion of their parents regarding the program was also relevant. To address these concerns, in addition to standard consent and assent procedures, the following measures were put in place:

- Potential rejection of the program by parents was addressed through awareness campaigns conducted by CARE in the targeted villages, along with the hygiene committees organized at the school level.
- After the voucher distribution of reusable sanitary pads, CARE held mother-daughter focus groups to discuss their experiences of using the pads.

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The WASH interventions including sanitation infrastructure, menstrual products, and teacher awareness improved girls' learning, driven by reduced stress and a better psychosocial environment. Adding YGLs who were willing to speak out against menstrual stigma led to stronger impacts on hygiene knowledge and behavior.

Learning and school attendance: The *WASH program* improved girls' academic skills, memory, and attention. The combined index of academic skills, memory, and attention improved by 0.15 standard deviations for the *WASH* and *WASH + YGL groups* taken together. The learning impacts were stronger for language and math fluency than memory, attention, and other cognitive skills. This improvement translated into girls in the *WASH* and *WASH + YGL groups* increasing their marks in school by 0.11 standard deviations as well as an 9-percentage point increase from a base of 51 percent in their likelihood to progress to the next grade (a 17 percent increase). These learning impacts were largely driven by the *WASH group*.

None of the interventions improved school attendance. This suggests that the quality of learning in the *WASH* and *WASH + YGL groups* improved without an increased quantity of time at school. The researchers posit that the lack of effects on school attendance could be because economic factors like finding a job, not being able to afford school, or not having enough food were bigger binding constraints in this context.

Health and psychosocial well-being: The program had no measurable impacts on self-reported health outcomes or measures of psychosocial well-being.

Anxiety and stress: The girls in the *WASH* and *WASH + YGL groups* had a 2.3 beats per minute lower heart rate, an objective measure of stress, at the end of the program on average. The researchers suggest this improvement in the girls' general stress and anxiety levels could help explain the positive effects on learning.

Hygiene knowledge and behavior: The girls in the *WASH* and *WASH + YGL groups* had 0.33 standard deviations higher general hygiene knowledge and 0.41 standard deviations higher menstrual hygiene knowledge relative to the *comparison group*.

Girls in the *WASH group* reported engaging in better menstrual hygiene behaviors relative to the *comparison group*, but not general hygiene behaviors. In contrast, girls in the *WASH + YGL group* reported improvements in both general and menstrual hygiene behaviors relative to the *comparison group*, and impacts were larger than in the *WASH group*, suggesting that YGLs were important in bridging the knowledge-behavior gap. The researchers corroborated these self-reported findings with observed hygiene practices and found that girls' households in the *WASH + YGL group* were cleaner and their schools more hygienic with the availability of soap, separation of trash, etc.

The researchers also measured the transmission of this knowledge and behaviors to girls' mothers and only saw improvements in menstruation-related knowledge in the *WASH + YGL group* mothers. However, mothers of girls in the *WASH* and *WASH + YGL groups* had more progressive attitudes towards menstruation.

Menstrual stigma: The WASH program reduced the overall stigma around menstruation, while the YGLs led to additional improvements. Girls in the *WASH group* and the *WASH + YGL group* had a 0.41 and 0.74 standard deviation increase on a combined

index of stigma [5] respectively.

Girls in the *WASH + YGL group* were 4.6 percentage points more likely to pick a menstruation-related topic to explain in front of their schoolmates when asked to choose between that and a broader hygiene-related topic (a 22 percent increase). The YGLs were thus instrumental in helping girls be more open to speaking about menstruation in front of others, pointing toward a reduction in social taboos. However, when the girls were prompted to anonymously choose a video on menstruation or general hygiene to be shown to their schoolmates there was no difference between the *WASH* and *WASH + YGL groups*.

The researchers did not find evidence of reduced menstrual stigma among boys based on their behaviors.

Psychosocial environment at school: Girls in the *WASH* and *WASH + YGL groups* had a 0.08 standard deviation reduction in reports of severe intimidation and harassment. The researchers posit that this reduction is largely driven by improvements in relationships between students (i.e., social interactions between girls and boys grew). However, the teasing from boys about menstruation increased in the *WASH* and *WASH + YGL* schools, suggesting that the program was not fully effective in reducing stigma among boys.

Short-term vs. long-term impacts: The program was effective in reducing menstrual stigma relatively quickly as the effects were apparent six months after the program started. Though the knowledge about menstruation and hygiene increased more in the *WASH + YGL group* six months after the program started, the *WASH group* was able to catch up in terms of knowledge 1.5 years after the start of implementation. The researchers conclude that reported behaviors were the slowest to change, with strong and significant effects only evident 1.5 years after the program started, and larger effects for the *WASH + YGL group*.

In sum, this combined intervention of infrastructural improvements, distribution of menstrual products, hygiene information, and efforts to destigmatize menstruation led to large improvements in reported hygiene behaviors (both general and menstrual hygiene) and reduction of menstrual stigma. These impacts were larger in schools with the YGLs, suggesting that positive deviants can help address harmful social norms. Further research is still needed on interventions that target other stakeholders like girls' teachers, parents, and boys.

The impacts on girls' learning outcomes and stress are substantial for a program that did not focus on learning and anxiety explicitly. This highlights the importance of looking beyond the traditional outcomes of menstrual hygiene programs on attendance and health, and incorporating psychosocial channels for studying human capital gains.

Use of Results:

To further explore the role of different components of the intervention, and to test the importance of targeting other stakeholders like parents and boys, CARE and the researchers are exploring other randomized evaluations in Madagascar, while also looking for opportunities to scale the program in other contexts. Early discussions for scaling a version of the program with the Ministry of Education in Madagascar have also started.

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1. Benshaul-Tolonen, Anja, Garazi Zulaika, Marni Sommer, and Penelope A. Phillips-Howard. 2020. "Measuring Menstruation-Related Absenteeism Among Adolescents in Low-Income Countries." *The Palgrave Handbook of Critical Menstruation Studies*: 705-723.

2. Jyoti, Kamal, Mohan Lal, Sanjeev Mahajan, and Tejbir Singh. 2020. "Assessing the impact of information, education and communication activities regarding menstrual hygiene practices among adolescent girls 13-17 years in the rural area of Amritsar." *International Journal of Community Medicine and Public Health* 7(4): 1470-1474.

3. Water Aid. (2013). *We can't wait: A report on sanitation and hygiene for women and girls.* WaterAid International. https://washmatters.wateraid.org/publications/we-cant-wait-a-report-on-sanitation-and-hygiene-for-women-and-girls

4. Marsh, David R., Dirk G. Schroeder, Kirk A. Dearden, Jerry Sternin, and Monique Sternin. 2004. "The power of positive deviance." *Bmj* 329, no. 7475: 1177-1179.

5. This combined index of stigma included (i) how much the girls heard other people speak about menstruation, (ii) how willing were they to speak about menstruation, (iii) how progressive their attitudes were about menstruation, (iv) how progressive they believed others' attitudes were, and (v) their reported reduction in shame and guilt in response to vignettes related to menstruation.