

Amritha Ramesh, Economics

Mentor: Professor Anja Benshaul-Tolonen, Economics

## Introduction

Existing literature has affirmed that menstrual cups are a safe and reliable novel technology for feminine hygiene (Eijk et. al., 2019), but a gap in research exists regarding successful approaches for large-scale adoptions of menstrual cups in middle and low-income countries. Various interventions have proven the health and sanitary benefits of menstrual cups (Phillips-Howard et. al., 2016), its affordability (Babagoli et. al., 2020), its sustainability, and its benefits towards female empowerment, but menstrual cup uptake and long-term use has not been thoroughly studied, specifically in situations where the user would have to purchase the menstrual cup, as customers would have to do for the technology to be adopted on a large-scale. Thus, we review the uptake of menstrual cups in past interventions and resulting implications on large-scale adoption of menstrual cups, with a focus on improving women's empowerment.

## Methods

Literature regarding menstrual health and hygiene and sexual and reproductive health education interventions were identified through PubMed, Google Scholar, The Lancet, and JSTOR, and this selection was filtered to identify menstrual cup interventions in particular, with an emphasis on middle and low-income countries.

Quantitative data on rates of related infections and uptake rates of menstrual cups were collected and analyzed, and qualitative data on attitudes towards menstrual cups with or without supporting education, cultural norms, and uptake patterns were also examined.

## Conclusion

- Due to the importance of peer use, an ideal intervention would encourage uptake through peer-to-peer marketing, leading us to consider the impacts of a nanoenterprise model for women to sell cups to members of their own communities. Nano-enterprises play a unique role in empowering women and have not yet been researched in regards to menstrual hygiene, but previous interventions involving microenterprises have been successful at addressing other sexual and reproductive issues (Sherman et. al., 2010).
- Future research will focus on examining uptake at different price points when sold by female nano-enterprises
- This model is ideal when considering the benefits of peer support for improving menstrual cup uptake (Oster and Thornton, 2012).
- Next steps include launching a pilot project to research the nanoenterprise model, wherein we aim to identify women as potential vendors, provide them with sufficient training, lend them menstrual cups, and follow up with an in-depth interview to identify profit margins, uptake, and their experience as vendors in their community.

## Results

Although uptake rates in past interventions have been reported up to **60%** (Oster and Thornton, 2012), many cultural and environmental barriers still exist preventing uptake. Cultural stigmas against the insertion of a foreign object as well as seasonal availability of water are prime examples of barriers to adoption of menstrual cups, but interventions have also demonstrated the benefit of a peer network of menstrual cup users in long-term uptake.

Further, despite existing taboos, menstrual cups reduce absenteeism (Benshaul-Tolonen et. al., 2021), increase comfort during menstruation (Pokhrel et. al., 2021), and decrease the risk of sexually transmitted and reproductive tract infections (Phillips-Howard et. al., 2016), making it easier for women and girls to go to school and work. Notably, socioeconomic status, family size, and education are key determinants of uptake for menstrual cups.

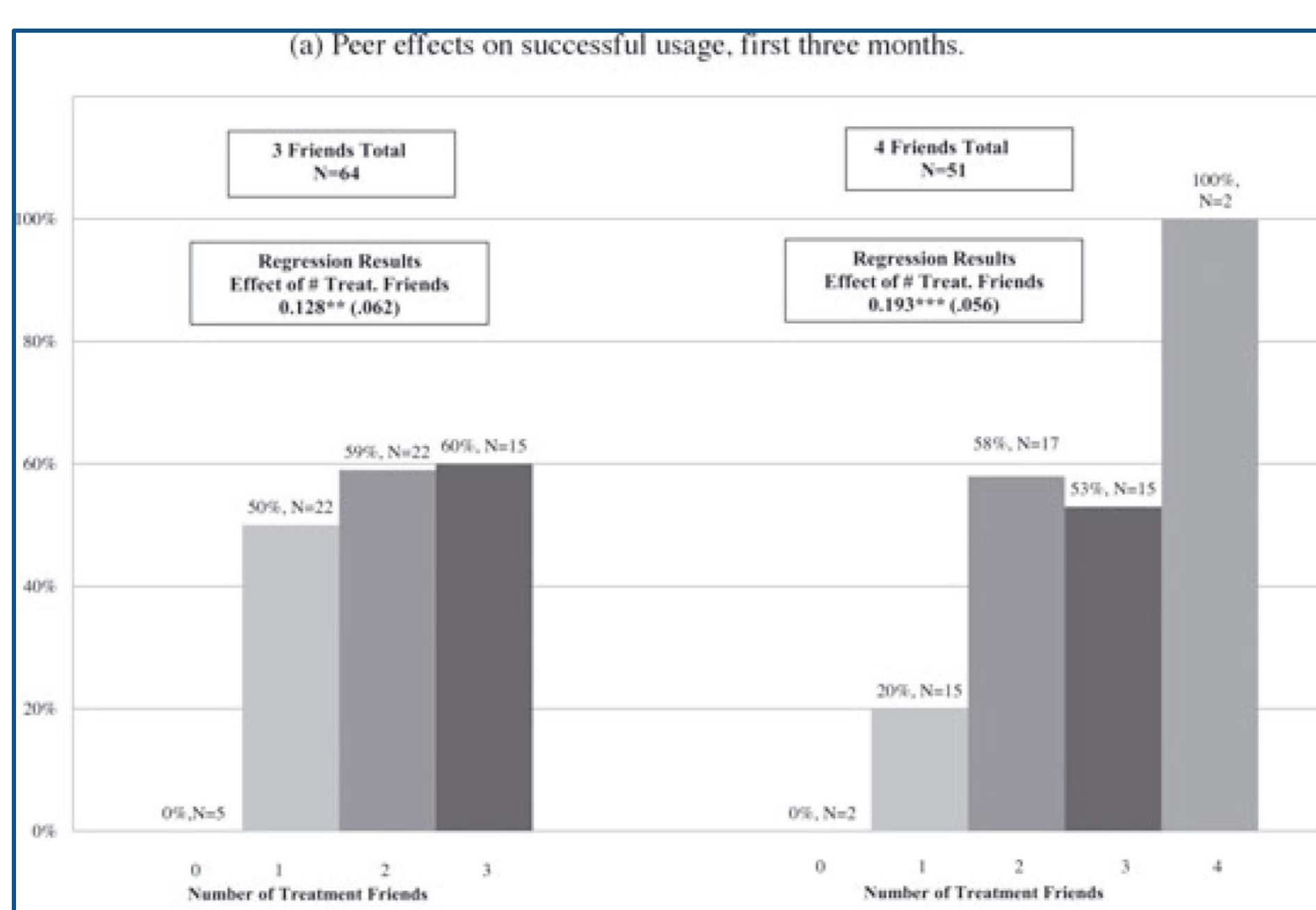


Fig. 1. Usage by number of treatment, grouped by number of total friends (Oster and Thornton, 2012)

## References

- Babagoli, M., Benshaul-Tolonen, A., Kerubo, E., Ngere, I., Edwards, R., Zulaika, G., Phillips-Howard, P., Laserson, K., Nyothach, E., Oduor, C., Mason, L., & Obor, D. (2020). *The Cost-Benefit and Cost-Effectiveness of Providing Menstrual Cups and Sanitary Pads to Schoolgirls in Rural Kenya*.
- Benshaul-Tolonen, A., Zulaika, G., Nyothach, E., Odour, C., Mason, L., Obor, D., Alexander, K. T., & Laserson, K. F. (2021). *Sanitary products, absenteeism and psychosocial well-being: Evidence from a three-arm cluster randomized controlled feasibility study in Western Kenya*. 31.
- Eijk, A. M. van, Zulaika, G., Lenchner, M., Mason, L., Sivakami, M., Nyothach, E., Unger, H., Laserson, K., & Phillips-Howard, P. A. (2019). Menstrual cup use, leakage, acceptability, safety, and availability: A systematic review and meta-analysis. *The Lancet Public Health*, 4(8), e376–e393. [https://doi.org/10.1016/S2468-2667\(19\)30111-2](https://doi.org/10.1016/S2468-2667(19)30111-2)
- Oster, E., & Thornton, R. (2012). Determinants of Technology Adoption: Peer Effects in Menstrual Cup Take-Up. *Journal of the European Economic Association*, 10(6), 1263–1293. <https://doi.org/10.1111/j.1542-4774.2012.01090.x>
- Phillips-Howard, P. A., Nyothach, E., ter Kuile, F. O., Omoto, J., Wang, D., Zeh, C., Onyango, C., Mason, L., Alexander, K. T., Odhiambo, F. O., Eleveld, A., Mohammed, A., van Eijk, A. M., Edwards, R. T., Vulule, J., Faragher, B., & Laserson, K. F. (2016). Menstrual cups and sanitary pads to reduce school attrition, and sexually transmitted and reproductive tract infections: A cluster randomised controlled feasibility study in rural Western Kenya. *BMJ Open*, 6(11). <https://doi.org/10.1136/bmjopen-2016-013229>
- Pokhrel, D., Bhattarai, S., Emgård, M., von Schickfus, M., Forsberg, B. C., & Biermann, O. (2021). Acceptability and feasibility of using vaginal menstrual cups among schoolgirls in rural Nepal: A qualitative pilot study. *Reproductive Health*, 18(1), 20. <https://doi.org/10.1186/s12978-020-01036-0>
- Sherman, S. G., Srikrishnan, A. K., Rivett, K. A., Liu, S.-H., Solomon, S., & Celentano, D. D. (2010). Acceptability of a Microenterprise Intervention Among Female Sex Workers in Chennai, India. *AIDS and Behavior*, 14(3), 649–657. <https://doi.org/10.1007/s10461-010-9686-z>