

Supplementary Materials 2

Removed items with reasons for removal

No.	Item	Reasons for removal
1	I was able to choose the menstrual materials I most wanted to use	Removed for scale length and balance of materials-focused items, represented by other items
11	I felt comfortable transporting used materials to wash or dispose of them	Low loading (0.28), better represented by 9 and 10.
12	I had a clean place to store my menstrual materials when I was not using them during my period	Cross-loaded negatively with material reliability concerns (-0.39). Storage captured by item 14.
13	(r) I was worried that someone would see my stored menstrual materials when I was not using them	Poor loading in initial EFA. Some cross-loading with urination items (33, 37). Storage remains captured by item 14.
16	I was able to wash my vagina <u>when</u> I wanted to	Items 15, 16, 17 all loaded highly on material and household facility needs factor and were highly correlated with one another. 16 removed for length and focus on menstrual experience.
17	I was able to wash my hands and vagina <u>as often</u> as I wanted to	Removed as above, and for cross-loading with material reliability concerns (-0.38)
18	(r) I was concerned that I would not have enough soap to wash my hands or vagina	Poor loading and removed for length. Focus on menstrual-specific concerns prioritised.
19	I felt clean during my last period	May reflect internalized stigma more than experience of hygiene/menstrual practices. Viewed as value-laden and removed.
20	(r) I worried about where to dispose of my used menstrual materials	Removed for length, items 22, 23, 24 concern disposal.
21	(r) I worried that people, or animals, may be able to access my used menstrual materials after I disposed of them	Removed for length and to reduce number of disposal items, represented by 22.
32	(r) When at home, I worried that someone would see me when I was washing my vagina	Removed for length and to maintain focus on menstrual experience rather than broader washing. Loaded with other privacy concerns. Small cross-load with household facilities (0.20).
33	When at home, I felt comfortable using the same location for urination as when I do not have my period	Urinating in the same location loads with home and school urination items, but not well with other items, poor pairwise correlation with other items except urination items. Remove for scale parsimony.
34	(r) When at home, I worried that others would see my menstrual blood after I had urinated	If many girls do not use latrines when menstruating this question likely to poorly differentiate (those not worrying may be those avoiding usual locations). Loads with school-based urination item.
37	When at school, I felt comfortable using the same location for urination as when I do not have my period	As for 33.
38	(r) When at school, I worried that others would see my menstrual blood after I had urinated	Removed as for item 34, differential responding based on location use and poor loading.
Items relevant to those washing and reusing materials		
48	(r) I worried about how I would get soap to wash my menstrual materials	Excluded for poor loading in EFA.
52	I was satisfied with the place I used to dry my menstrual materials	Removed for scale length.
53	I was satisfied with the appearance of my menstrual materials after I had cleaned them	Rated poorly by FGDs with enumerators in Niger. Concerns of shaming or respondents not answering honestly.
54	I was satisfied with the smell of my menstrual materials after I had cleaned them	

(r) reverse coded