

Water, Engineering and Development Centre
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**Will they cotton on?
An investigation into schoolgirls use of
low-cost sanitary pads in Uganda**

by

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1. Introduction

1.1 Menstruation Hygiene Management

Today, all over the world, millions of women are menstruating. For some, this natural monthly occurrence will pass almost unregistered, yet for others it will cause significant disruption to their daily lives. The disparity in experience may be attributed to factors such as the quality of water and sanitation facilities, accessibility to protection materials and pain relief, physiological understanding and hygiene behaviour. In low-income countries, where many of these factors are invariably limited, women tend to struggle more than their counterparts in high-income countries. Additionally, social systems, political indifference and cultural customs may compound women's vulnerabilities, reducing their capacity to adequately manage their monthly periods. Hygiene interventions are therefore required not only to meet the pressing needs of the poor, but also to address this matter of injustice.

In order to address a matter, it must first be understood. Menstruation Hygiene Management (MHM) in low-income countries is a relatively new area of study, so there are plenty of avenues still to be researched. Fundamental to them all, is a sound comprehension of the experiences of poor women and the reasons for their current behaviours. Both the problems and the coping strategies need to be analysed.

The problems faced during menstruation are all too familiar to poor women. Even the non-poor may be able to correctly identify and empathise with some of them. Information gathering about MHM problems is of little value unless it leads to action. When embarking on this research, it was the author's intention to go beyond publishing facts about menstrual hygiene problems to proposing practical solutions, or, at the very least, paving a way for someone else to do so.

1.2 Research topic

1.2.1 Focus on sanitary pads

The provision, production and use of low-cost sanitary pads constituted the central theme of the research. This focus arose from reading a Cranfield University MSc thesis which concluded by recommending that more research be conducted in Ugandan schools about "provision of menstrual materials that are culturally appropriate, available through domestic supply chains, affordable and environmentally friendly" (Cooke, 2006: 44).

Two new businesses were found to be experimenting with manufacturing such materials on a small scale in Uganda. A decision was made to investigate and compare them. The products, which share the same names as the businesses behind them, were:

- Afripads - sanitary towels made from sewn material which are designed to be washed and re-used
- Makapads - menstrual pads made from papyrus reeds and waste paper products for one-off use.

These products were evaluated against the traditional materials used to absorb blood and products manufactured and used in high-income countries.

1.2.2 Focus on Uganda

Uganda, a landlocked country in central eastern Africa, was an appropriate selection for this work primarily because it is one of only a few countries where entrepreneurs are developing low-cost sanitary products. To have two organisations in the same country addressing similar issues with different products and strategies provided a unique research opportunity. Additionally, finding informants was considered very manageable in a country inhabited by many poor people. With an Human Development Index ranking of 157 out of 182 countries in 2007, Uganda lags behind many countries of comparable natural resources in the areas of health, education and standard of living (UNDP, 2009). Therefore, the researcher was confident in discovering women with menstrual hygiene needs that were in some way related to economic poverty.



Figure 1.1: Location of Uganda in Africa
Adapted from Mapcruzing (2008)



Figure 1.2: Districts in Uganda where research was conducted

Figure 1.1 shows the location of Uganda in Africa. Figure 1.2 highlights the districts that were the focus of this research: Afripads and Makapads work in different geographic areas, as denoted by the coloured locations marked on the map.

1.2.3 Focus on schoolgirls

Schoolgirls were selected as the key informants of the study for the following reasons:

- Afripads were targeting schoolgirls only and, although not exclusively, Makapads also targeted this group.
- Teenage girls are still developing MHM strategies so, in comparison to older women, were deemed to be more open to trialling new products and learning new behaviours.
- Schools are unique places in that they are composed of diverse people of the same age-set. By entering schools there were innumerable opportunities to meet informants in already-established locations.

Additionally, with the advent of Universal Primary Education in Uganda in 1997, the numbers of pupils in schools has multiplied significantly in recent years. The possibility of Universal Secondary Education is being debated. These policies mark a shift in the values placed on education by the Ugandan government and the public in general. With record numbers of schoolgirls now being educated there is urgent need to keep up with their sanitary requirements. To date, very little has been done at the national level to address MHM for these large numbers of schoolgirls. This needs rectifying. It cannot be rectified if the problems and their solutions are not known about. In a small way, this dissertation aims to make them known.

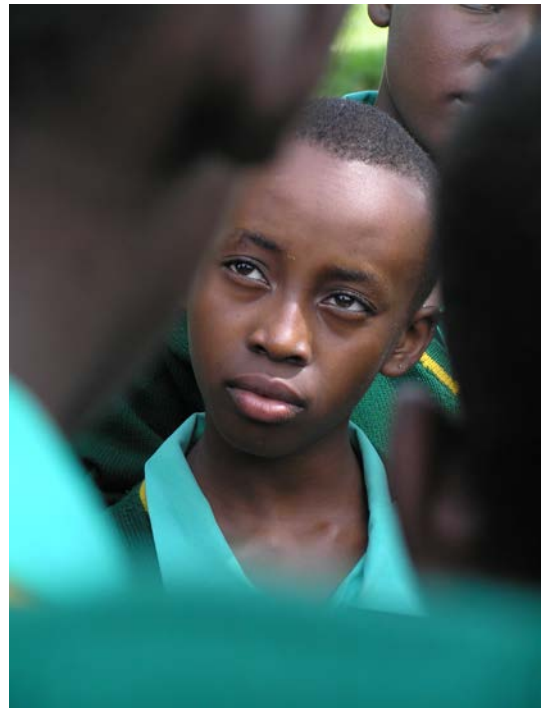


Image 1.1: Schoolgirl intently listening to a presentation by Afripads. This may be the first time she has been advised about coping with her menstrual periods.

1.3 Research aims and objectives

1.3.1 Principal research question

The aim of this dissertation is to answer the principle research question:

To what extent are low-cost sanitary pads a solution to menstrual hygiene problems for school girls in Uganda?

1.3.2 Research objectives

There are four key aspects of the main research question that need to be tackled, as highlighted by the different colours. Building upon one another, these aspects give rise to four stages of investigation that form the research objectives:

- Objective 1:** To summarise the main problems identified by schoolgirls in managing their monthly periods
- Objective 2:** To investigate the solutions to such problems
- Objective 3:** To determine whether the provision and use of low-cost pads significantly alleviates the problems?
- Objective 4:** To evaluate the potential of low-cost pad designs, production and distribution

1.4 Dissertation overview

Consideration is given to both the macro perspective of how MHM fits into the WASH, Health and Education Sectors and the micro-scale details required for schoolgirls' management of menstrual hygiene day-by-day. Using the analogy of a goblet, that starts wide to gather all contents together, the Literature Review (Chapter 2) provides a broad scope of the issues requiring attention. The report then narrows in on specific details during the Methodology (Chapter 3) by defining exact research questions. Chapters 4 and 5, the "results", are presented in detail. The Analysis (Chapter 6) widens the findings by giving them a context, before the main research question is answered in the Conclusion (Chapter 7). This structure is represented visually in Figure 1.3

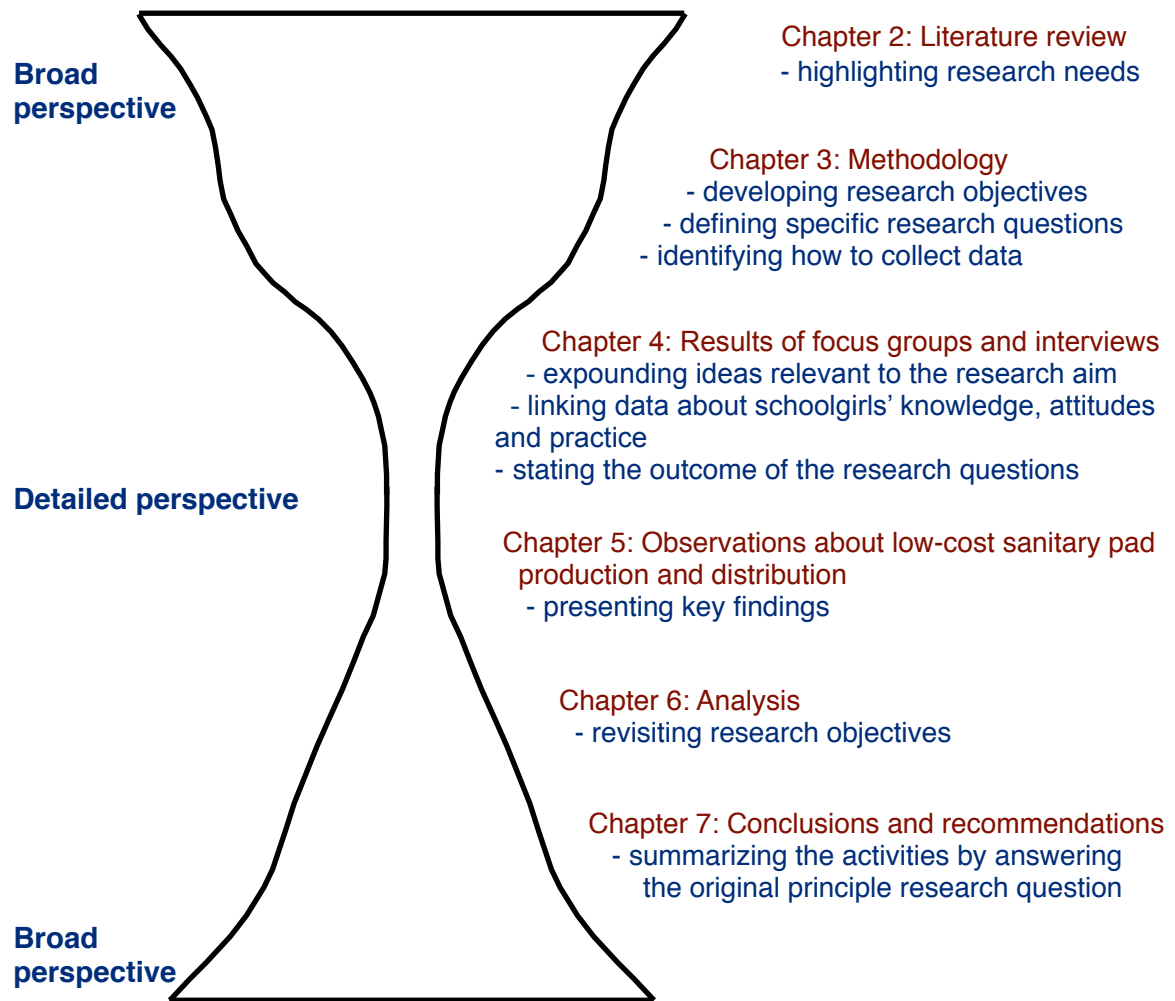


Figure 1.3: Goblet analogy representing the dissertation's structure

2. Literature Review

2.1 Introduction

Considering the significance of managing menstruation and the related hygiene issues faced monthly by women in low-income countries, literature about practices, beliefs, coping strategies and the provision of protective materials is surprisingly limited. Knowledge tends to be contained in agency reports, conference papers, internal documents of NGOs and advocacy materials (McPhedran 2007:11), left unrecorded in the minds of critical thinkers or unvoiced by young women. The majority of findings about MHM are anecdotal, based upon writers' perceptions, rather than upon systematic scientific research.

The purpose of this literature review is to provide an overview of the currently available documentation and studies that exist about MHM in low-income countries. Gaps and inconsistencies in the literature are highlighted and areas requiring more investigation are noted. This is achieved through identifying research issues: questions that academics have yet to answer or hypotheses that have yet to be proved. These can be recognised by the purple numbered insertions (e.g. *Issue 5*). Section 2.2 explains how literature was accessed and section 2.3 outlines the perspectives from which menstruation has been studied. Sections 2.4 to 2.8 compare and contrast the content of the literature currently available by theme: sanitation protection materials, both re-usable and disposable (section 2.4); sanitation facilities in schools (section 2.5); effects of menstruation on school absenteeism and drop out rates (section 2.6); cultural perspectives on MHM (section 2.7); and accessibility to knowledge, training and guidance about female hygiene (section 2.8). Comments about the quality, accuracy and biases of the information are made throughout these sections. The review concludes by recapitulating the identified research tasks, determining those which will be addressed through the research questions in this particular dissertation and defining how they will be answered (section 2.9).

2.2 Literature review methodology

Initially all the strategies listed in Table 2.1 were used to search for relevant literature. As the search continued it became evident that the following four sources were yielding the most useful information: google/ google scholar, dissertations and theses, bibliographies and personal contacts. Due to the limited available literature of an empirical nature about menstrual hygiene in low-income countries, non-professional publications and/or unpublished materials were particularly sought after as recommended by Sedlack and Stanley (1992:81-82).

A snowballing approach was used to gather as much literature as possible. For example, an article summarising eight articles relating to menstrual hygiene was accessed on the "Sanitation Updates" webpage (IRC 2008) which provided a starting point from which information retrieval cascaded. From the eight documents cited, articles that sounded of interest were highlighted from each bibliography and later sought. The same method was then applied to the newly found documents, such that from one initial article, a vast array of information could be generated. This

Table 2.1: Literature search strategies

| Source of information | Search strategy | Justification of approach |
|---|---|--|
| Library Catalogue | Using the 'advanced search' tool, related words and phrases were entered into the 'keyword' field. (e.g. female hygiene, wom*?n AND sanita?, wom*?n AND health, public health AND Development, International sanita?) | Using quite general terms the aim was to find books and journals with the keywords in the title or summary records. The book/ journal could then be scanned to find information specific to the research topic. |
| MetaLib | As a cross-disciplinary topic, various categories of databases were searched (e.g Geography - Human Geography, Civil Engineering - Environment, Medicine and health, Social sciences - social psychology). Keywords had to be well-defined due to the numbers of irrelevant articles that could be generated! Examples of keywords used include menstrua* hygien*, sanita* AND wom*?n AND development, sanita* pad* AND development, fem* hygien* Africa) | MetaLib is a way of searching for academic literature via library catalogues, databases and e-journals. As a gateway to vast quantities of information, MetaLib enabled the main published articles about menstrual hygiene to be found. By searching for keywords <i>within</i> articles (not just in titles), the researcher can be relatively confident of not missing relevant literature. |
| WEDC Resource Centre | Some interesting articles were found by browsing through contents pages of books in 'hygiene' section of the WEDC Resource Centre (Shelfmark 612 and 613) | Within WatSan literature, female hygiene is quite a narrow field of study. Whilst whole books dedicated to the topic are limited, it has traditionally been studied as a sub-category of hygiene promotion. Therefore, searching chapters within hygiene and sanitation books are more likely to yield relevant information. |
| Library Browsing | By noting the recurring shelfmarks when keywords (e.g. menstruation, sanitation) were typed into the library catalogue, certain sections of the library could be identified as places to find background information. For example, books and serials categorized by women's health were found in sections 392, 363.3, 618) | By skimming through books related to the research topic, a broad perspective of the existing literature could be gauged. This method of background research also highlighted the differing focus of various disciplines when studying menstrual hygiene (e.g. health books focus on biological explanations, anthropological books focus on cultural understanding). |
| Personal Contacts | A rich understanding of the topic was developed by networking with individuals, agencies and organisations already researching the topic (e.g WaterAid, FAWE, Post-graduates at the London School of Hygiene and Tropical Medicine) and/ or professionals who regularly deal with menstrual management issues (doctors, hygiene promoters, female teachers). | Due to the large amounts of unpublished literature about menstrual hygiene it is necessary to network with existing researchers and ask for guidance on finding literature and permission to read their work. |
| Google / Google Scholar | Google scholar provided a simple way to search for articles across many disciplines and sources of scholarly literature. Likewise, Google also provided a vast amount of information about the topic which then required sifting for relevance. | The matching of search phrases within google scholar (e.g. 'menstrual hygiene in developing countries') enabled the researcher to read the most easily accessed documents on the topic, without worrying too much about the exact of search words. Google enabled resources outwith academic literature to be accessed. |
| NGO Websites | By browsing the websites of NGOs working in the field of women's health/hygiene, links to their activities, findings and local reports were accessed (e.g. from the annual reports of activities from the Lutheran World Federation). | Based upon an assumption that knowledge on this sensitive topic is likely to be localised and findings recorded in an unpublished or informal sources, a search of actors and their work was necessary to establish who might hold useful information. These NGOs were then approached for support. |
| Dissertations/ Theses | Contacting academic centres that may have unpublished dissertations or theses about female hygiene was another way of accessing information. WEDC, Cranfield and the LSHTM were the key contacts. | This method of research enables access to unpublished, but often highly-relevant, literature. It also acts to prevent duplication of someone else's work. |
| Bibliographies | Looking at the sources of information other researchers have used, provided a starting point for 'snowballing' of information. | A quick overview of the main sources of literature about menstrual management can be quickly ascertained. |
| Magazine articles/ Leaflets/ Newspapers | General browsing of magazines published by NGOs (e.g. TearTimes produced by Tearfund) and online newspapers from Uganda led to nuggets of information being gleaned about menstrual management in low-income countries. | Most day-to-day literature women read about menstrual hygiene comes in the form of leaflets from health centres or educational establishments, newspapers and/or women's magazines. |

method was deemed appropriate owing to the fact that literature about MHM is patchy and disjointed: it allowed connections and flows between work to be made. At the same time, caution was applied when using the snowballing technique for three main reasons:

- 1) The amount of resources available had the potential to quickly mushroom out of control.
- 2) Some of the articles being sought were only indirectly relevant to the main topic.
- 3) The pathway that opened up could have only generated articles of similar agendas, or coming from a common viewpoint.

To overcome problem 3 above, at least fifteen different sources of information were used as the initial 'starting point'. The formal literature search was considered sufficiently executed when the same articles were being repeatedly found: the loop effect.

A problem encountered in conducting the literature search was gaining access to the documents mentioned in bibliographies. Sometimes reports from NGOs were not available for general readership or accessible through usual search methods (e.g. electronic databases). In some cases, the author had to be contacted directly for permission to read his/her work (e.g. Grinvalds & Klumpp 2009) or accessing abstracts of longer papers had to suffice (e.g. El-Gilany et al. 2005).

Google/ Google Scholar and MetaLib were used to trace the articles from the 'snowballing' process as well as to conduct a more generic exploration of other information sources. For the exploration approach, using specific terminology was paramount in finding relevant documents. Table 2.1 provides examples of some of the search terms used. A largely unavoidable, but very real limitation of using such a search method is the language barrier. Without knowing the relevant technical words for MHM in other languages, especially the languages used in Uganda, it is likely that some some nuggets of information were overlooked.

2.3 Types of literature

To date, research into MHM has been patchy and disjointed. No book has been published specifically looking at the physical, socio-cultural and economic aspects of MHM in low-income countries. Even where texts address the problem of hygiene management in schools, only a few specifically address the production and provision of menstrual protection materials. These studies have predominantly focussed on Asia. Therefore, it is not surprising that no formal, comprehensive document has been published about the accessibility, acceptability and affordability of sanitary pads in Uganda. In light of this, the scope of this literature review has been widened to include sanitary protection for school girls in low income countries.

Menstrual hygiene is by no means a new topic, but only in the last few years is MHM beginning to be addressed as an issue in its own right by academia, policy makers and development practitioners. Consequently most of the formal literature available has been written in the 21st century, with increasing numbers of articles published just in the last year. A likely reason for this trend is the attention that this topic needs to be given in order to achieve the Millennium

Development Goals (Tjon Ten 2007). Even though Intermediate Technology Bangladesh (1992) highlighted cultural and physical challenges associated with sanitary production needs almost a decade before the Millennium, it is only now, when governments are becoming more aware of the implications of being a signatory to the MDGs, that focussing on menstruation is finding its way onto more research agendas.

Obtaining information about MHM is not straightforward at present because nuggets of knowledge tend to remain locked in agency reports and NGO internal documents: there is limited MHM literature in the public domain. Common genres of literature found to be highlighting MHM problems are field study reports (e.g. evaluations of projects, health centre case studies, blogs from practitioners) and news bulletins (e.g. on webpages, in newspapers and in advocacy materials such as NGO fundraising campaigns). Knowing how and where to search for such informal and/or unpublished literature can be difficult.

Documents generated primarily for academic purposes are in short supply. Backing for this assumption has been found in a press release accompanying the publication of a study questioning the impact of sanitary protection products on school attendance in Ghana (Scott 2009) boldly declaring it to be “the first empirical research ever to investigate the question” (Saïd Business School 2010:2). However, for reasons mentioned earlier, it seems that the tide is turning. Three years ago, “a lack of courage and political will” was cited by Tjon A Ten (2007:5) as being a significant factor as to why menstrual hygiene problems were relatively unaddressed, but the current combination of academic awakening and political resolve towards MHM is likely to result in the publication of more academic literature in years to come.

An article entitled “Menstrual Hygiene and Management in Developing Countries: Taking Stock” (Bharadwaj & Patkar 2004) outlining the needs and gaps in this research area, has become a foundational article in its field. Many publications about MHM since 2004 justify their work against the inadequacies highlighted. These include the few professionals being actively engaged with the issue, the poor follow-up and dissemination of results from a few pilot studies, the lack of effort by schools to address the topic in relation to absenteeism, the lack of education for men and the minimal effort into the production and social marketing of menstrual products. These problems will be expounded in more detail in 2.4 - 2.8.

The topic of menstruation overlaps with many different academic disciplines (e.g. Biology, Anthropology, Sociology) and government sectors (e.g. Health, Education, WASH). Until recently, it could be claimed that this cross-cutting issue had been acknowledged by all, but owned by none. A legacy of this division is that information about MHM can be found, often unexpectedly, from a wide range of sources. For the purposes of this review, four categories representing four different approaches to MHM have been identified: advocacy for school girls, health, anthropology and water and sanitation. Each approach to the study of MHM highlights and tackles different problems.

2.3.1 Advocacy perspective

Some authors (e.g. Cooke 2005) advocate that MHM is a rights issue owing to the fact that managing menstruation has a direct bearing on the health, education and dignity of school girls. Although some WASH experts such as Bitature and Barebwoha (2005) advocate good and safe sanitation as a human right in schools, there is policy ambiguity as to whether MHM is included under the broader definition of “sanitation”. Whether MHM is included in sanitation advocacy is more than an academic debate: it affects how governments and organisations respond to women’s hygiene needs. The outworking of this rights debate is demonstrated in the differing responses to the provision of sanitary products. For example, those such as FAWEK (Forum for African Women Educationalists - Kenya Chapter) who veer towards hygienic sanitary protection as a right (Kinoti 2008) advocate for the free provision of sanitary pads to disadvantaged girls, whereas those who sell pads as a business venture (e.g. Grinvalds & Klumpp 2009) recognise the needs of schoolgirls without going so far as claiming girls have a right to such products. Yet beyond the differences of opinions in the rights debate, there is a general consensus among activists that at present MHM is largely neglected at policy and programme levels. An example in point: in the well-regarded 304-page comprehensive study recently published by Plan International (2009) focussing on the global issues girls and young women face growing up in the 21st Century, scant mention is made of sanitation requirements in schools, and no mention is made of menstruation needs, let alone how such needs could be managed.

Gender considerations also play a part in the rights-based approach, with some lobbyists claiming that addressing MHM will make a significant contribution to closing the gap in gender inequalities that prevail in many low-income countries. Yet as Oxfam (n.d.) controversially point out, dealing with menstruation is more of a biological need rather than a gender-related need: equality between men and women over an issue affecting only one sex can never be achieved.

Most of the advocacy material relating to MHM is highly emotive and provocative to gain attention. This is particularly true of media releases. For example, a report in the Sunday Times (2006) about the lack of sanitary materials in Zimbabwe described in graphic detail the plight of a woman lobbying for more sanitary protection materials, upholding her as a “rebel” hero who campaigned about a “critical” and “desperate situation”, using language akin to a life-threatening crisis. Similarly, in recent months a significant number of stories have appeared in local and national newspapers around the campaign to keep girls in schools by providing them with sanitary products (e.g. Jones 2010). However, as Oster and Thornton (2010) point out in a more objective report in the New York Times, part of the appeal of the aforementioned campaigns is that the problem can be fixed so easily. In reality, they provide evidence to demonstrate that issues surrounding schoolgirl absenteeism and menstruation are far more complex.

The examples above highlight that a reader should apply caution when obtaining information from literature written from an advocacy perspective. It tends to be biased towards evoking a response from the reader rather than providing objective facts. That said, with limited MHM data

available at present at least stories and opinions rooted in real-life situations ensure that issues relating MHM can no longer be ignored.

2.3.2 Health perspective

Menstruation has been studied by gynaecologists for centuries so there is a significant body of literature available about the biological aspects of women's menstrual cycles. In fact, most of the literature about female hygiene currently available is approached from a scientific perspective. An example in point is the large amount of literature, beginning with McClintock (1971), debating whether or not women living in close association to one another develop synchronised menstrual cycles. Whilst it is good for the general public in developed countries to have access to information about menarche, menopause, infections and diseases, the data is all but useless for meeting the daily needs of women in a low-income country who do not have access to such data and may not be able to read. However, the health sector is showing two promising signs of leading the way in addressing these needs. Firstly, health professionals are acknowledging the need for a better understanding of the social contexts created by culture, religion and geography that contribute to the diversity of personal experience regarding menstrual practices (Gallant and Derry 1995). Secondly, more data about hygiene practices is becoming available from health professionals in low-income countries largely due to donors requiring regular situation reports from INGOs and field workers informally sharing their experiences through blogs on the internet.

One aspect of menstrual hygiene that has not received much attention from the health sector is the effects of lifestyle on the duration of women's periods in low income countries. The length of a menstrual period of poor women is often assumed to be five days (e.g. Devraj 2009) although very little research has been conducted about whether this figure is dependent upon variables such as ethnicity, diet, climate and/or number of children birthed. From the authors' discussions with IDP women in Uganda, a diet lacking in nutrients seemed to decrease menstrual blood flow, yet no comprehensive health studies have been found that prove or disprove this observation. If proved to be true, this could have bearing on the quantity (and quality?) of sanitary protection materials donated by aid agencies in emergency relief situations (*Issue 1*).

2.3.3 Anthropological perspective

Anthropologists' contributions to female hygiene mostly involve documenting the practices and beliefs associated with menstruation. They aim to understand people's stories and their related values. Menstruation is a taboo topic in many cultures, such that the facts of life can become shrouded in myths. Anthropologists would argue that to study menstrual hygiene one has to be conversant with the meaning of blood and the symbolism represented by certain hygiene practices (Van de Walle and Renne 2001). Owing to the complexity of culture, most anthropological studies are longitudinal with the intention of documenting and understanding practices rather than changing them. This methodology stands in sharp contrast to the coercion and marketing techniques commonly employed by NGOs and governments. An eloquent example of the complexity of cultural meaning can be found in an article by Agyekum (2002) who, although describing menstruation as a verbal taboo among the Akan of Ghana,

demonstrates how the onset of menses is simultaneously positively and negatively perceived: positive linguistic phrases celebrate fertility whereas the practice of seclusion during menstruation evoke the use of negative language. Although the details of this particular study may not be relevant in alternative settings, the concept of paying attention to the semantics of language should be heeded.

2.3.4 Water and sanitation perspective

In the water and sanitation sector, hygiene is receiving increasing attention. This is demonstrated by the way in which the sector, once filled with “WatSan” professionals now more commonly recruits “WASH” (WATER, Sanitation *and* Hygiene) experts (e.g. Medair 2010): the importance of hygiene is becoming fundamental in the water and sanitation programmes. The expansion of the sector has forced a group of people whose backgrounds are likely to have been engineering-based to consider the social aspects of community functioning. Typically, WASH experts’ method of handling menstrual hygiene has been to find ‘hard’ solutions to problems encountered (e.g. distribution of western-style sanitary pads), but they are increasingly having to adopt social science skills to understand the ‘soft’ side of the industry. Additionally, a sector traditionally dominated by males is rapidly having to adapt to take into account female issues. For example a criticism in an evaluation by WaterAid (2005) of a watsan project in Ethiopia was that no consideration had been given to gender in the plans about construction and maintenance of latrines.

Despite the expectation that modern water and sanitation projects include a hygiene component, research by watsan experts into menstrual hygiene remains limited. Five years ago, Verdmato (2005) noted how, in the watsan sector, menstruation received “only a cursory mention in a few texts”. Furthermore, when specifically looking into the needs of women in IDP camps, she came to the conclusion that “the lack of research on menstrual hygiene in emergencies emphasises the void of knowledge on the subject and the disregard it has been paid in water and sanitation programmes”. Although encouraging progress has been made to fill this void in the last few years (particularly by Wateraid, UNICEF and BRAC), menstrual hygiene is still far from being considered a major component of the sector. Instead, better menstrual hygiene is typically perceived as an added benefit of improved water and sanitation services.

2.4 Sanitary protection materials

Having considered how MHM is tackled in literature, attention now turns to considering the content of such literature. Written works about protection materials will be tackled first because sanitary pads are the focus of this dissertation.

In 2004, Bharadwaj and Patkar commented that “Minimal effort has gone into the production and social marketing of low-cost napkins, reusable materials and research into bio-degradables. Research and development efforts have been limited to commercial ventures that... are unable to market products that are affordable for the poorest of the poor” (2004:1). This is confirmed by Averbach et al (2009:463) who note that “virtually no peer-reviewed data is available on

menstrual protection practices in sub-Saharan Africa”. For years there has been a general understanding that women in low-income countries usually use homemade protection rather than shop-bought products due to the purchasing cost and also the fact that disposable items cannot be reused (WHO 1983), but few studies have looked into the details of such practices and women’s attitudes behind them. This study is intended to improve understanding, thus addressing this void (*Issue 2*).

Humanitarian actors are increasingly being encouraged to consider the hygiene needs of females, but it is only recently that some forward-thinking NGOs are researching ways to meet this need. An unpublished theses from Cranfield University looked at the lack of consideration given to menstrual hygiene in emergency relief (Verdemato 2005). The quantity of material each woman should have access to and the need for facilities for washing, drying, changing and disposing of materials were highlighted as being overlooked by humanitarian actors. For example, the Sphere Project standards (Sphere 2004) outlining guidelines for watsan requirements in emergency settings, make brief reference to menstruation, and even those references are subjective. Although unlikely to remain this way for much longer, there are currently still no MHM quality control tools to which NGOs can refer nor standards to which they are obliged to adhere. Consequently, it is likely that humanitarians presently supply their beneficiaries with inappropriate or inadequate sanitary protection materials. This is an assumption that needs researching (*Issue 3*).

Sanitary protection materials differ between cultural, demographic and socio-economic groups. From leaves to disposable wicking pads, tampons to toilet paper, rags to menstrual cups, women’s coping strategies are diverse. Yet not all women are aware of all the options, largely because some products are not readily available in some parts of the world. For example, a study by Fernandes (2010) about 2500 women in rural India highlighted that more than 50% of them were unaware of sanitary pads (or “sanitary napkins” as they are more commonly referred to in Asia). This finding highlights the need for more research to be conducted about women’s knowledge of sanitation protection practices (*Issue 4*) because knowledge precedes practice and practice is linked to long-term behaviour change, the ultimate goal of any hygiene intervention.

Most sanitary protection products require underwear to hold them in place. Even where studies address menstrual products, very few have been found that consider the use and availability of knickers. A study by Odaga and Heneveld (1995) is one exception, citing a lack of underwear as a major problem for schoolgirls in Sub-Saharan Africa. Usually, however, underwear usage is assumed, for example in UNICEF’s educational materials providing instructions about pad usage (UNICEF n.d.). Research about sanitary wear would be incomplete without an investigation into underwear usage (*Issue 5*). Without the latter, there is little point developing the former.

In recent years a number of programmes or businesses in East Africa have begun to trial or produce low-cost sanitary pads. Table 2.2 compares the key products and the organisations/

donors responsible. Both disposable products made from local materials and washable products made from cotton based materials are being made. No detailed comparison has ever been conducted between such products, hence this study being the first of its kind.

Table 2.2: Sanitary interventions in sub-Saharan Africa

| Product/ Program | Organisation/ donor | Intervention | Country |
|--------------------------------|---|---|--------------------------|
| Makapads | Technology for Tomorrow at Makerere University | Disposable sanitary pads made of papyrus and waste paper | Kampala, Uganda |
| Afripads menstrual kits | Afripads | Washable sanitary pads made from sewn fabric | Masaka, Uganda |
| SHE 28 Campaign | SHE (Sustainable Health Enterprises) | Disposable pads made from local materials such as banana stem fibres and bamboo | Rwanda |
| Sanitary napkins programme | Watoto Wa Baraka | Providing free sanitary pads to underprivileged girls | Nairobi, Kenya |
| Femipads | Familia Care Trust | Pads made from banana fibres and recycled papers | Kenya |
| Reusable sanitary kits | Huru International | Washable sanitary towels made from cotton sheeting | Kabondo, Kenya |
| Protecting Futures program | Always and Tampax | Providing disposable pads, education | Namibia and South Africa |
| Locally produced sanitary pads | GEM (Girls Education Movement) clubs through FAWE (Forum for African Women Educationalists) | Providing education and materials for girls to sew their own pads with strings attached | Lango, Uganda and Kenya |

Nuggets of information about the products used or trialed in low-income countries are summarised in the two following sub-sections.

2.4.1 Reusable materials

Cloths, or rags as they are sometimes referred to, are reported to be the main absorbent used by poor and/or rural women. These usually take the form of folded strips of material placed in the underwear or a length of cloth attached at the front and rear to a waistband. The quality and type of material used is very dependent upon availability, hence different users having differing experiences, although Verdemato (2005) notes how cotton is the preferred material in Uganda. Nawaz et al (2006), recommend that dark, rather than white cloth be provided by humanitarian agencies so that stains do not show. Yet with dark coloured cloth, it may be hard for women to ascertain if the material is completely clean. It would be interesting to research cloth colour preference in Uganda (*Issue 6*). Additionally, an article by Bwengye-Kahororo and Twanza (2005) set in IDP camps in Uganda suggested that young women were more reluctant to use cloths than older women. This was because schoolgirls perceived cloths to be for illiterate and

older women, suggesting cloths are viewed as traditional and associated with poverty. This hypothesis requires testing (*Issue 7*).

The biggest problems associated with using cloths are having clean water available for washing them, needing to own a few strips of cloth to allow time for other cloths to be washed and having a discrete place for drying them. Problems occur in places with limited clean water, as voiced by Ms Musomi of the Girl Child Network who, referring to rural kenyans poses the question: "If they lack even clean water to drink, how are they going to get the water to wash the reusables?" (Mawathe 2006:2). This is the principal argument for not using washable products. Other arguments point to the fungal infections and bad odours that can result from wearing dirty or damp cloths. To compensate for the former problem, Goonji, an NGO in India devised a business where women take old cotton sheets and rags, sterilise them and sell them on for a small price (Devraj 2009). To compensate for the latter problem, girls are advised to place cloths in sunlight to kill bacteria, but as to how many do remains unknown (hence, another area for further research (*Issue 8*)). During the rainy season in Bangladesh, the SHEWAB initiative encouraged schoolgirls to dry their cloths over kacha (large cane baskets) placed upside down over cooling cooking fires (Seymour 2009). Problems of hygiene can also occur if women in the same household share cloths throughout the month, which sometimes happens in India, as indicated by Devraj (2009). Little is known about this practice; whether it is considered a taboo amongst some people groups or rather a matter of begrudged survival for the poorest. Enquiry is needed to discover if there is evidence of this practice in Africa also (*Issue 9*).

Pads especially designed to be washed are not common in Africa: Afripads claim to be the first of their kind. They have been modelled on similar products in Developed Countries such as Lunapads in Canada or Plushpants in the UK. Unlike cloths, they contain a waterproof fabric layer intended to impede blood soaking through and have been especially shaped and designed for menstrual needs. Yet not all reusable materials are pads. Menstrual cups, silicone insertion products that collect blood internally are becoming more popular in developed nations leading to a handful of entrepreneurs and development practitioners wondering if such products could and/or should be marketed and produced in low-income countries. Empirical research into this is severely lacking: there is a need for more (*Issue 10*). One of the only studies however, conducted by Averbach et al. (2009) in Zimbabwe looked at the acceptability of the 'Duet' menstrual cup and concluded that hypothetically it would be a low-cost and easy-to-clean solution. They noted how enthusiastically women responded to the concept. However, the study was not conclusive about whether the women's interest was due to the menstruation management, or because of added perceived benefits of acting as a contraceptive and preventing STDs. Additionally, the cultural acceptance of insertion materials was not adequately addressed in the study: a symptom of current research failings in general.

2.4.2 Disposable materials

Disposable products refer to one-use pads and tampons. Typically disposable sanitary pads are imported from high-income nations and sold at a price out of reach to most African girls. Even in

a relatively wealthy African country like Nigeria, less than one third of adolescent girls use commercially produced sanitary materials (Adinma and Adinma 2008). Recently charities and corporate social responsibility initiatives have followed this model but by providing pads for free. For example, the Once a Month Campaign, run through U.S. embassies, provides sanitary pads to girls in Zambia through corporate donors (Bergin 2008). Similarly the Protecting Futures Campaign of Proctor and Gamble ships pads and provides education from its US base (Proctor and Gamble 2010). The long-term sustainability of these interventions is dubious, not only in terms of creating dependency but also in terms of the impact thousands of one-use sanitary pads are having and will have on the environment, especially where solid waste management systems are not as well-developed as those of donor nations. It seems that no comprehensive report is yet available to the public about the environmental impact of these well-intentioned donations: a piece of work that is urgently required (*Issue 11*). Scott et al (2009), who monitored the distribution of disposable pads in Ghana, consider but do not address this problem:

“Disposal issues will of course have to be addressed at the policy level with this intervention. However, we would caution that the behaviour of uneducated girls poses an environmental hazard for a number of reasons (remember that lower education rates lead to higher fertility rates and, in turn, higher population rates, which, in general, place greater strain on the environment), just as does sanitary pad disposal; these two issues must be evaluated as a trade-off” (Scott et al. 2009:7)

This argument is weak and elusive, especially if the link between school drop out rates and sanitary pad provision is not as strong as Said et al would believe (see 2.6).

Thinking on this conundrum, a few entrepreneurs such as Dr. Musaaazi of Technology for Tomorrow and Elizabeth Scharpf of SHE have started to develop eco-friendly products from locally available resources. Unlike modern disposable products, these pads are intended to be more biodegradable, cheaper and simpler to manufacture. Interestingly this is not a new idea. Tribes for centuries have been using naturally available resources such as absorbent leaves or pounded tree bark (Ngales 2007). The difference with the new inventions is that, unlike before, they produce, or aim to produce, sanitary pads on a large scale.

In the last few years campaigners have been lobbying African governments to waive taxes on imported women’s sanitary wear. Kenya was one of the first countries to do so in 2004 under President Kibaki. This was deemed a successful milestone for women’s lobby groups such as the National Council of Women in Kenya who argued for the waive from the viewpoint that menstruation is not something that women choose, rather it is a “natural issue” (IRIN 2004). This standpoint is slightly flawed though in that it assumes purchasable disposable products are the only way for women to deal with menstruation: no mention is made about the alternative solution of accessibility to re-useable, home-made products that would not depend on a change of law.

One aspect of MHM that has received little attention is the decomposition rates of various disposable female hygiene materials used in low-income countries. Research is required in this area (*Issue 12*) if latrine designers are to adequately calculate latrine capacity. Even advocates

of gender-sensitive toilets, rarely state that pits below women's latrines need to be bigger than those required by the equivalent number of male users, because women's latrines often double up as refuse pits for menstrual hygiene materials.

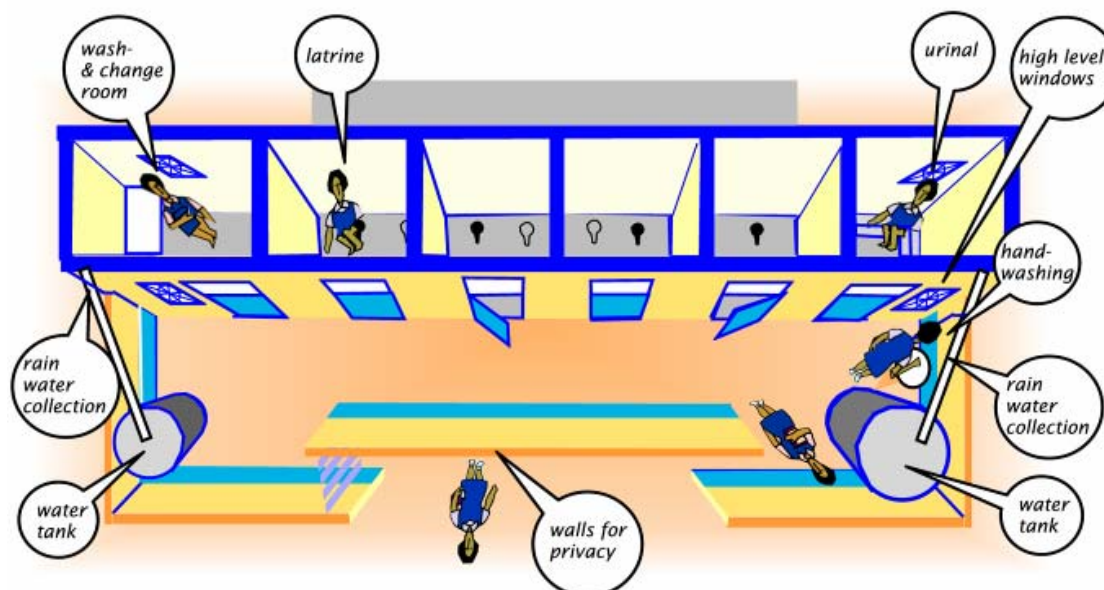
2.4.3 Supply Chain

From studies about sanitary pad usage, it appears that distribution networks and accessibility are part of the reason why girls do not use more specially-manufactured products. The extent to which poor accessibility is the primary hindrance to the uptake of the such products, especially for rural girls is not widely known. Fernandes (2010) notes that vendors in rural India reported that there was no demand for sanitary napkins, but this is probably because more than 50% of women she interviewed were not aware of sanitary pads. Supply and demand go hand in hand, and the connection between them requires more research (*Issue 13*). An alternative to customers going to a store to purchase sanitary products, is having the products move with the distributors. This distribution system has proved successful in Maneckganj, Bangladesh where BRAC community health workers take products to the rural areas and in return take a small commission on each sale (Bharadwaj and Patkar 2004:8). Consideration also needs to be given not just to how young women in rural areas get supplies, but from whom. For example, in parts of Bangladesh where MHM materials are available in Sani Marts (markets that sell sanitary items), women reported feeling more comfortable buying products from female vendors (Nahar, 2006). An interesting attitudinal study would be to ascertain if the gender of the vendor affects sales of MHM products (*Issue 14*).

2.5 Sanitation facilities and resources

The terms "women-friendly" or "girl-friendly" are used by those striving for gender sensitivity in the design of latrines and sanitation facilities. This usually implies that attention has been given to the female squatting position for urinating (and defecating), privacy during squatting and facilities to deal with menstruation. However, sometimes literature exaggerates what is deemed as a gender concern. For example, when reporting about a model girl-friendly latrine block designed by Plan International (Ghana) (see Figure 2.1), IRC (2006) suggested there were five aspects that made it gender-specific. In fact, three of the aspects (a latrine hole large enough for urinating and defecating, rain water collection and water and soap availability) are just as applicable for male latrines. The most significant difference between male and female latrine blocks should be facilities for menstruation.

A report about Oxfam's construction of emergency sanitation units in Pakistan found that when menstruation units were constructed apart from the latrines on the edge of the IDP camp, women were reluctant to use them because the purpose for which they were entering would be obvious (Nawaz et al. 2006). But when the menstruation unit and latrines were combined into comprehensive women's 'hygiene unit', the facilities were more widely used. A permanent version of the hygiene unit would not look too dissimilar to the one below by Plan International. WaterAid Bangladesh have gone one step further in the provision of washing facilities for



© Drawing by Jaap Zomerplaag

Figure 2.1: A girl-friendly latrine block

Source: IRC (2006)

menstrual cloths by including washing platforms next to each squatting hole because they found that women preferred having an all-in one cubicle, rather than separate cubicles within a sanitation block (Ahmed and Yesmin 2008) (See Image 2.1).



Image 2.1: A latrine cubicle containing all-in-one menstrual hygiene facilities

Source: Ahmed and Yesmin (2008)

It is usually assumed that women in Africa change their menstrual cloths/pads in the latrines at the same time as relieving themselves, but an observation by Verdemato (2005) about women's practices in Northern Uganda suggests this may not be the case. She noted how IDP women usually changed their menstrual cloths in the bathing shelters at night. This observation could be potentially significant in that, if proved common practice, the priority focus for gender-sensitive designs should be on

bathing shelters, rather than latrines. This is a point for investigation (*Issue 15*). In any case, perhaps the usual separation of blocks for excretion and blocks for bathing needs to be contended if MHM is to be seriously addressed.

Very little research has been conducted into the bathing shelter/washroom behaviour in schools, especially with reference to the removal of menstrual blood. One novel idea by Water Partners International was to provide movable superstructures, normally used over latrine pits, to create a private bathing area (SWASH+ 2008). A comprehensive study is required to assess the use of

these mobilets, as they are known, (*Issue 16*) but initial evidence suggests that they were misused as urinals and the lack of accompanying planned drainage made them conducive to mosquito-breeding.

The siting of female latrines is crucial: a lack of privacy significantly decreases their usage (Ngales 2007) (Wateraid 2005). It is commonly assumed that schoolgirls avoid coming to school if the facilities are not private enough for them to deal with their menstrual hygiene (Mooijman et al. n.d.), but Grant et al (2010), challenge the extent to which students' privacy is a major concern to them by noting that only 8% of respondents in their study reported a lack of privacy to be a problem. This inconsistency between reports necessitates further enquiry (*Issue 17*).

Another factor affecting latrine usage is cleanliness. Although there are few empirical case studies directly linking increased latrine maintenance and hygiene with decreased absenteeism, the link is all too obvious in other ways. For example, the health hazard posed by inadequate and poorly maintained sanitation facilities can lead to disease outbreaks, as evidenced by the 1997-8 cholera epidemic in Uganda where 560 schools had to be closed (Snel and Shordt 2005). The students' decision about whether to attend school was made for them. Reflecting on this particular epidemic, no-one appears to have acknowledged that in the years prior to the outbreak there had been a massive campaign by the Ugandan Government to provide hygiene training and educational resources to all primary and secondary schools in the country (Faul-Doyle and Doyle 1996). Somehow, there seems to have been a discrepancy between theory and practice: another topic necessitating more research (*Issue 18*).

The discrepancy between government hygiene promotion and the reality of sanitation practice is also a problem with regard to the 'secondary' facilities required for MHM, such as incinerators to burn soiled materials. For example, despite the SACOSAN 2008 declaration where the Indian government committed to improve knowledge and facilities for MHM, including school incinerators, there is little evidence of these being constructed and used in India. Fernandes (2010) blamed this on a lack of training for both masons in technical construction and for teachers and students about operation and usage. Aniebue et al (2009) went so far as to conclude a journal article by declaring that the absence of waste disposal containers and incinerators could be the root cause of menstrual-related absenteeism. However, the authenticity of their conclusion must be questioned as there is no empirical justification for such a statement throughout the whole article. Credibility aside, at least these two studies highlight that the use of incinerators for the disposal of menstrual materials in schools may not be commonplace. This needs investigation (*Issue 19*).

It is not only the layout and privacy of the sanitation facilities that affect schoolgirls' experiences, but also the associated resources such as water, soap, mirrors, toilet paper, buckets and vending machines. Few studies have considered these hygiene requirements in regard to menstruation. Table 2.3 outlines a few key findings from these few studies and suggests specific

areas into which further research is required. The specific details outlined could be amalgamated to form a general field of research (*Issue 20*).

Table 2.3: Resources inside school sanitation facilities

| Hygiene resource | Observations or omissions in literature | Associated questions that need more research <i>Issue 20</i> |
|---------------------------------------|---|--|
| Water availability inside the latrine | <ul style="list-style-type: none"> - Insufficient water for washing meant that cloths were seldom clean (Scott et al. 2009:2) - Access to water is a problem: girls were shy about carrying it for personal use as it drew attention to themselves (Verdemato 2005:24) - Lack of literature about the purchasing, cleanliness and use of public water carrying containers to enable the washing menstrual blood from the body. | <ul style="list-style-type: none"> - How much water is required to clean cloths each cycle? - Does the provision of water inside the sanitation facility significantly affect girls' experiences? - What (if any) water containers are provided for anal cleansing? |
| Soap | <ul style="list-style-type: none"> - Lack of soap in schools (McPhedran 2007:36) - Odour from menstrual blood put girls at risk of being stigmatized. (Kirk and Sommer 2006:4) | <ul style="list-style-type: none"> - Is soap available in schools in Uganda? Why not? or Who provides it? - Are girls more interested in using soap to kill bacteria or to smell fresh? |
| Mirrors | <ul style="list-style-type: none"> - Mirrors attracted girls to the sanitation facilities (SWASH+ 2009b) | <ul style="list-style-type: none"> - How do mirrors affect the frequency of latrine use? |
| Toilet paper | <ul style="list-style-type: none"> - Lack of literature about the provision of toilet paper in school latrines, especially the quantities used for absorption and removal of menstrual blood. | <ul style="list-style-type: none"> - Do schools provide toilet paper? - What is the main use of toilet paper: padding or cleaning? |
| Pad vending machines | <ul style="list-style-type: none"> - Girls in an Indian school can access sanitary pads from a vending machine. However, the location of the machine in the staff room causes embarrassment (Rajeesh n.d.) | <ul style="list-style-type: none"> - Are pad vending machines feasible inside school sanitary blocks? |

2.6 School absenteeism and dropout

Attention now turns to considering the reasons for school dropout and absenteeism rates among girls. Advocates of sanitary pad distribution to African schoolgirls commonly use the argument that by providing protection materials, schoolgirls' confidence increases leading to a decrease in absenteeism. The arguments for and against this hypothesis are evaluated by reviewing a significant proportion of the current published literature available on this subject.

Fourteen years ago Kirk and Sommers (1996) called for more rigorous international research to ascertain whether there is relationship between a lack of appropriate sanitary facilities and school drop-out rates of adolescent girls in developing countries. Such research has been forthcoming starting in Bangladesh when Cairncross (1998) noted how improved school sanitation increased girls enrolment by 11%, a figure, he noted, that even educational reforms would be pushed to achieve. Since then it has become a commonly accepted fact that improved WASH facilities in school encourage girls to attend, although as McPhedran (2007) points out, caution must be applied so as not to jump to the conclusion that attendance is directly attributed to improvements in school sanitation. She notes that human behaviour is complex, such that improving school attendance requires more than the construction of facilities.

Almost a decade after Kirk and Sommer's recommendation, an article was published in the *New York Times* quoting UNICEF as estimating that "one-in-ten school age African girls either skip

school during menstruation or drop out entirely because of lack of sanitation” (Lafraniere 2005). This “fact” has gone on to be widely quoted, but it lacks substance not only in that it is an estimate but also in that it is unclear whether menstruation or poor sanitation is the root cause of absenteeism. Few authors cite its source and where attempts have been made (e.g. to the UNICEF’s State of the World’s Children Report (1999) no evidence of such numbers is apparent. Similar references also lack empirical evidence. For example, an article by BBC Kenya noted, “it is estimated that an average girl loses more than a full month of classes in a school year” (Mawathe 2006) but there is no explanation of how this estimate was generated. Perhaps, these could be considered as cases of data manipulation to meet an advocacy agenda, as mentioned in 2.3.1.

Encouragingly, in the last few years, researchers have begun trying to prove or disprove the correlation between the onset of menses and decreased school attendance. Proposing the former, Stewart and Mutunga (2007) claim they have “exploratory evidence” for school drop out that is due to “a lack of affordable menstrual protection, coupled with an uninformed or uncaring institutional culture and inadequate school sanitation facilities”. Yet, as with the often-cited UNICEF “fact”, the extent and ranking of the problems is unclear. Even if menstruation is main cause of female absenteeism (as suggested by the New Vision Newspaper (2004)) the exact aspect of menstrual hygiene that causes a girl to stay at home is left open to interpretation. For instance, Wateraid (2009) identified the lack of privacy for cleaning and washing as the major reason for girls being absent during menstruation, whereas Nair (2008) blames a lack of education and counselling, and Rukunga and Mutethia (2006) suggest it is a combination of a lack of pads, a lack of separate toilet facilities and a lack of access to water sources. Evidently, there is a need for more comparative studies of such a detailed nature (*Issue 21*).

However, there is a small group of academics who refute the idea that there is a direct and *significant* link between menstruation and absenteeism. For example, Grant et al. (2010), using data from the Malawi Schooling and Adolescent Survey (2007), noted how only 2.4 per cent of female absences were attributed to menstruation. Similarly, Emory University (2009) and the Great Lakes University of Kisumu conducted a pupil assessment to determine the impact of WASH interventions on pupil absenteeism in Kenya. Throughout the article, no mention is made about interventions for menstruation and no pupil is noted to have admitted to menstrual issues as being a reason for absenteeism although “illness”, the main reason given for missing school, could be a euphemism that girls used to account for this. This is a speculative suggestion, although it does highlight the need for astute, probing questioning techniques that allow for all possible (sensitive) answers and rigorous triangulation of results if a depth of understanding about absenteeism is to supercede current generic conclusions.

Whatever the extent of menstrual-related absenteeism, there is literary consensus that monthly periods affect school girls in some way or other. The most popular reason currently being put forward for menstrual-related absenteeism is the lack of sanitary products. To date it seems that there are only two empirical studies that consider the the impact of the provision of products on

girls' school attendance: a comparison of two villages in Ghana where all young women were provided with sanitary pads by Scott et al. (2009) and a randomised trial of menstrual cups in the Chitwan Valley, Nepal by Oster and Thornton (2010). What is intriguing is that the authors come to different conclusions: Scott et al. (2010) claim that the provision of sanitary products significantly decreases absenteeism, whereas Oster and Thornton claim that products make very little difference to the number of schooldays skipped. Despite the geographical and product differences, such opposite conclusions are surprising and indicate that more studies are needed to strengthen the debate (*Issue 22*).

The study by Scott et al. (2009) noted that there was a difference in menstrual-related absenteeism in the rural and peri-urban areas of Ghana, with absenteeism being more of a problem in the remote locations. Although an interesting study that has brought menstrual-related problems into the academic world, its integrity has been disputed: Grant et al. (2010) question whether the village level randomization made it difficult to disentangle the effects of the sanitary pad availability from the presence of a large intervention in the community. Additionally, a further limitation of the study was that attendance could have been skewed by the very fact that girls were monitoring their presence in school. Moreover, as challenged by Oster and Thornton (2010), although the study argues for the benefits of sanitary pads (BBC 2010), Scott et al. find very similar effects when only menstrual education is provided.

The research by Oster and Thornton (2010) found that there was no significant impact on the school attendance rates of the girls who were provided with menstrual cups. In a working paper they summarise their findings by suggesting "policy claims that barriers to girls' schooling and activities during menstrual periods are due to a lack of modern sanitary protection may not be warranted" (Oster and Thornton 2009:1). They use the fact that their survey was conducted over a longer time scale (up to a year) than that of Oxford University's study as a justification for better accuracy of findings. In any case, they argue that the correlation between increasing sanitary products and improving the educational standards of poor girls (the ultimate goal of most intervention campaigns) is dubious: even if the problem of absenteeism was solved, it is only one of many factors affecting girls' academic achievements. As the Figure 2.2 shows, at each stage there are likely to be many other factors at play (represented by the blue boxes).

Managing menstrual blood is only one factor of sexual maturation that can affect school absenteeism and drop out. Other factors include early marriages (UNICEF 2001), child bearing (Lloyd and Mensch 2008) and girls being targeted for sexual abuse by teachers and fellow students (Teicher 2005). Grant et al. (2010), who recently looked at a whole series of factors affecting absenteeism in rural Malawi, are also sceptical of the direct link. Combined with socio-demographic factors, they suggest pupils' mental resolve and relationships are significant: "academically motivated female students may be more determined not to let menstruation interfere with their schools attendance" (Grant et al. 2010:17), while students who considered their teachers to be supportive and respectful displayed lower rates of absence. This is one of the first studies that implies behaviour and lifestyles ('soft' solutions) rather than facilities or

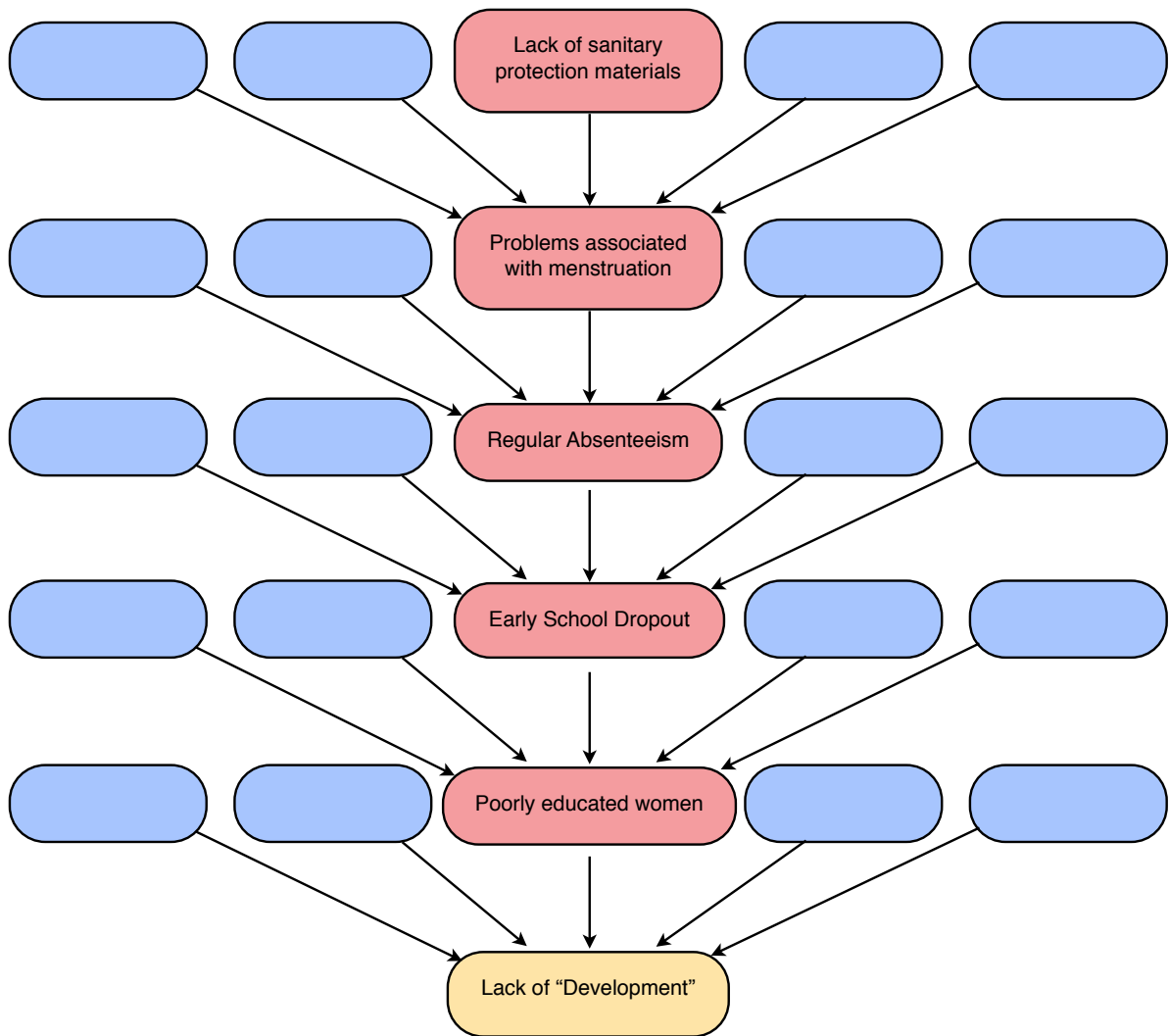


Figure 2.2: Diagram showing that there are many factors affecting girls' education, not just a lack of sanitary pads

products ('hard' solutions) should be the focus of attention in tackling school girl absenteeism. This idea is strengthened with the recognition that behaviour is a learnt phenomenon:

"Girls who have reached puberty have already developed a level of school engagement and patterns of attendance in prior years. Thus a small change in attendance rates among those who are menstruating is unlikely to have large effects on longer term school outcomes such as grade attainment." (Grant et al. 2010:20)

2.7 Cultural considerations

As suggested in the concluding remarks of 2.6, even if small-scale manufacture of low-cost sanitary pads was more widespread, this alone would not fully address the difficulties experienced by poor women. This is because the problems are more to do with cultural restrictions as opposed to an inability to find appropriate technical solutions. Instead of concentrating efforts on developing menstrual products, Intermediate Technology (1992) recommend focussing action towards education and raising awareness in order to lift the shame experienced by many women. They argue that only by dispelling certain cultural beliefs, such as

that women are 'polluted' when menstruating, that they should adhere to dietary restrictions and that they are vulnerable to evil spirits, can women experience dignity during their monthly cycles. As a taboo topic in many cultures, it is therefore just as necessary for public health practitioners to understand the beliefs and perceptions behind menstruation as it is for them to improve the capacity of women to meet practical needs (Nawaz et al. 2006).

In the last 5 years more institutions and agencies have taken to writing about the cultural variations in menstrual acceptance. For example, IFRC (2006) note how girls in rural Pakistan, are often not prepared for their menstruation and mothers are too shy to explain what is happening; in Nepal, Tjon Ten (2007) observes how the Kumari (girls who have the status of living goddesses) lose their divine strength when they menstruate; or in Bangladesh WaterAid female staff are reported to have taken a year to break through their initial shyness about menstruation and openly discuss the inclusion of menstrual hygiene management in a new DFID supported programme (Ahmed and Yesmin 2008). Even the term 'sanitary protection' is considered taboo and associated with negative definitions by product advertisers in the USA, who prefer to use the term 'feminine hygiene' instead (Berg and Block Coultts 1994). As to whether such semantics make any difference in addressing the problems faced by women in low-income countries or not, it should be noted that even the language used to refer to menstruation is culturally-composed.

For many, religion plays a significant role in determining the rules and etiquettes surrounding menstruation. Although outworked differently by individual ethnic groups, social classes or families, some generalisations can be made about religious practices:

- Jewish tradition sets out that menstruating women and everything they touch is 'impure'. Orthodox Jews often take this to include a woman's breath, spit, footprints, voice and nail clippings (Ahmed and Yesmin 2009:285).
- Hindus consider menstruation to be polluting, and therefore restrict women from entering temples, praying and cooking. In strict Hindu families, a menstruating woman is supposed to keep her distance from other family members to avoid touching anybody (Tjon Ten 2007:6).
- Muslim women who are bleeding are restricted from touching Arabic copies of the Koran, entering mosques, participating in fasts, undertaking salat (a type of formal prayer) and having sex. Once their bleeding stops they must fully immerse and wash themselves in water (known as ghusl) before resuming normal religious duties (Finle 1999).
- Christian women are less restricted in their religious practice during menstruation, although in some some African independent churches Women leaders are excluded from performing baptisms and distributing Holy Communion (Bird 1997).

Additionally, cultural myths and superstitions can affect women's views, experiences and practices of menstruation. Table 2.4 summarises some of these beliefs, based around people groups and geographical locations.

Table 2.4: Cultural practices and beliefs about menstruation

| People group/ place | Expectations of menstruating women | Belief | Further information |
|---|---|---|---|
| Bangladesh | <ul style="list-style-type: none"> - Stay inside as much as possible + Upon menses there is a family celebration - Menstrual cloths have to be buried - Not allowed to prepare food or work in the rice fields - Not allowed to touch cows or the cow-shed | <ul style="list-style-type: none"> - Blood is polluting + Daughter is now considered to be marriageable - The blood on exposed cloths will attract evil spirits - A menstruating body is weak and shameful - Cows are holy and are at risk of becoming contaminated if touched | <p>Blanchet 1987</p> <p>Tjon Ten 2007</p> <p>Seymour 2009</p> |
| Nepal – Bahun, Chhetri and Newar caste groups | <ul style="list-style-type: none"> - Abstinence from religious activities - Upon first menstruation, confinement for 7–11 days in a relatives house. Not allowed to see the sun or close male relatives. - Women are discouraged from teaching | | <p>Wateraid 2009</p> <p>Kirk and Sommer 2006</p> |
| Uganda | <ul style="list-style-type: none"> - Not allowed to drink milk - Not allowed to plant groundnuts - Keep menstruation a secret and refrain from discussing it... | <ul style="list-style-type: none"> - Menstruation affects cow's milk production, especially production of bloody milk - The yield of groundnuts would be negatively affected ... although this is changing with scientific education in schools | <p>Tjon Ten 2007</p> <p>Verdemato 2005</p> |
| Sierra Leone | <ul style="list-style-type: none"> - Uncertainty about the use of sanitary pads | <ul style="list-style-type: none"> - Concerns that they may cause sterility | <p>Hanciles in Tjon Ten 2007</p> |
| Ethiopia and certain tribes in Nigeria | <ul style="list-style-type: none"> - Isolation in women's huts where rituals are conducted and wisdom and experiences exchanged. | <ul style="list-style-type: none"> - Menstrual blood pollutes the home | <p>Ngales 2007</p> |
| Indigenous Indians | <ul style="list-style-type: none"> + Women provided with times to rest when hiking | <ul style="list-style-type: none"> + Women should be treated with respect | <p>Tjon Ten 2007</p> |
| Egypt, Pakistan, | <ul style="list-style-type: none"> - Women bathe less during menstruation | | <p>WHO 1993</p> |
| Kashmir | <ul style="list-style-type: none"> - Prohibition from using water sources and looking at your reflection in water | | <p>Mahon and Fernandes 2010</p> |
| Aboriginies of Australia | <ul style="list-style-type: none"> + Female healers treat wounds with cloth soaked in menstrual blood | <ul style="list-style-type: none"> + Wounds heal quicker and no scars are left | <p>Tjon Ten 2007</p> |
| Maroons of Suriname | <ul style="list-style-type: none"> - Stay in a separate part of the house - Use special pots and pans to cook her food - Take a bath at the end of her period as a cleansing ritual + A girl receives jewellery when she starts menstruating | <ul style="list-style-type: none"> - Menstrual blood is powerful in black magic and as a way for a woman to impose her will on a man | <p>Polime in Tjon A Ten 2007</p> |

The extent to which societal taboos surrounding menstruation prevent women from articulating their hygiene needs is still relatively unknown. What can be safely assumed, though, is that menstrual problems faced by women are often ignored and misunderstood, especially in

patriarchal communities. In this dissertation, such problems and cultural taboos need to be explored if a true understanding about sanitary pad usage among the Buganda is to be ascertained (*Issue 23*).

Not all cultural traditions negatively impact women. In fact, some practices, even those initially perceived as oppressive, may have developed over time to relieve females of daily burdens during their menstrual periods (Buckley and Gottlieb 1998). For example, women may appreciate being 'banished' to menstruation huts because it allows for unrushed social interaction with others and relieves them of the burden of heavy household chores. Similarly women in some indigenous Indian tribes are forced to rest on long journeys, as a sign that they are respected and being cared for. Entrepreneurs seeking to develop sanitary pads to prevent menstruation interfering with daily life need to be aware that their philanthropic inventions may not always be received positively if they threaten the existence of such valued traditions.

The views of men towards menstruation considerably affects women's perceptions of themselves and their practices. In an interview with Linda Scott on The Sanitation Updates blog, attention is drawn to the fact that once schoolgirls are known to have begun menstruating they may become victims of unwanted sexual advances, especially from male teachers (IRC 2010). Also, they may experience pressure from their families to marry young. Consequently, one would expect this to be a significant reason behind schoolgirls remaining silent about menstruation: they don't want others to know. This theory needs to be tested (*Issue 24*). Another hindrance to women is that lack of female medical practitioners in low income countries (Fernandes 2010). The non-availability of such people discourages women who need medical treatment from seeking it, thus infections are likely to be left untreated posing unnecessary health risks.

2.8 Education and counselling

Good hygiene practices in school require both 'hardware' and 'software' components. Girls require latrines, a reliable water supply, washing facilities, pads and anal cleansing materials ('hardware') to adequately manage menstruation, but priorities are often skewed towards obtaining such things that hygiene education, social marketing of good practice and operation and maintenance ('software') are lacking (Lidonde 2005). Recent evidence suggests that when hardware and software aspects of MHM are equally addressed, girls are more confident about attending school (BBC 2010).

In African schools, MHM is an often-neglected training topic because it does not neatly fit into existing teaching curriculums (Ngales 2007:12). Sex education in Biology or life skills training in PIASCY (a Ugandan HIV/AIDS training curriculum for Primary Schools) are the subjects through which MHM is usually addressed in Uganda. The delivery of such educational material is focussed towards knowledge acquirement as opposed to understanding practical applications. For example, the PIASCY information about menstruation provided for schoolteachers to deliver simply advises, "Girls, always go to school during your menstruation. Never miss school because of your monthly period" (Government of Uganda 2004). No mention is made about

managing pain, acquiring protection materials, how to monitor the monthly cycle or changing padding, the very practical issues that need to be addressed if, realistically, girls' attendance patterns are to change. One has to question whether dictatorial teaching methods really lead to behaviour change; a question that would be interesting to investigate (*Issue 25*).

The importance of training adolescent girls in menstrual hygiene practices is emphasized by Narayn et al. (2001) who stress that attitudes towards menstruation and menstrual practices developed at menarche often persist throughout life. Yet Information, Educational and Communication (IEC) materials to assist such MHM training are very limited in low-income countries. UNICEF are making headway in addressing this void, of which three sponsored publications are particularly noteworthy:

1. "Sharing Simple Facts" is an information booklet published in India about menstrual health and hygiene (Nair 2009). The detailed information is well-presented, although the intended audience is not clear. It is probably too detailed for schoolgirls with basic literacy, too basic for health-care professionals and lacking in training tools for teachers. The constant subject swapping between second and third person supplements this confusion.
2. "Menstrual Hygiene - A Brief Guide for Girls" is a fun booklet for African schoolgirls (UNICEF n.d.) that one hopes could be distributed more widely than just Sierra Leone, where it is currently produced.
3. "Growth and Changes", a new publication developed in Tanzania by Marni Sommers is by far the best tool currently available for African schoolgirls (Sommers 2010). Combining facts, stories and practical suggestions for maintaining good hygiene, UNICEF are planning to publish the book in other African languages for distribution to countries beyond Tanzania. However, at present no distributions are planned for Uganda.

There is evidence to suggest that the level of knowledge a girl has about MHM affects both her attitudes and practice. A study in Nigeria proved that there is a correlation between schoolgirls who don't receive pre-menarcheal training and the use of unhygienic material as menstrual absorbent: hygiene behaviour is affected (Aniebue et al. 2009). Also, a lack of knowledge about MHM and maturation processes impacts

upon schoolgirls' attitudes through the powerlessness experienced in their inability to communicate well. Beausang and Razoe (2000) writing about Americans, argue that schoolgirls without understanding about bodily maturation processes are at greater risk of unwanted pregnancies and sexually transmitted diseases. If this is true in a developed country, how much more so in a low-income country such as Uganda where gender discrepancy is even more pronounced.

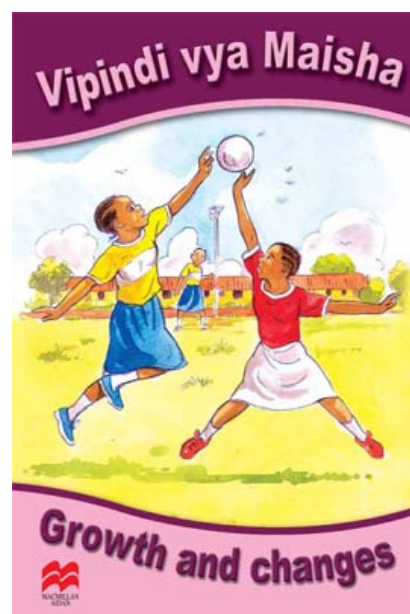


Figure 2.3: Front page of a Tanzanian educational resource about menstruation

In Ugandan IDP camps, Bwengye-Kahororo and Twanza (2005:37) found that trickle down formal training programmes about MHM did not work well, suggesting people need to be educated individually. However, there is some debate about who the primary MHM educators of schoolgirls are. A study by Wateraid (2009) in Nepal concluded that more than half of the girls obtained information from their mothers, whereas two other studies from Kenya refute this. Kariuki and Kakonga (2000) report that only a small number of girls learn about menstruation practices from their mothers and SWASH+ (2009c) describe how schoolgirls prefer discussing menstrual hygiene issues with older sisters, sisters-in-law or best friends because mothers were viewed as being unsupportive. The contrast in outcomes could be due to cultural differences between the two countries or it could be because literature at present does not distinguish between informants and confidants. Perhaps the juxtaposition is caused by the girls' educators being different people to those with whom they feel vulnerable enough to turn to for advice. The need for more study into this (*Issue 26*), was the reasoning behind two different research activities and questions in this dissertation (Compare 4.3.4 with 4.4.4).

It is intriguing that the management of menstrual hygiene is nearly always taught alongside sex education. Owing to the fact that sex education is potentially fraught with cultural, religious and ethical sensitivities, many teachers feel ill-equipped and/or embarrassed to handle such topics, to the point that girls are often not provided with adequate practical advice for managing their periods. Additionally parents may be concerned by what is being taught in schools. In an interview with Elizabeth Younger of AED/The Manoff group (2010) she suggested that there needs to be a de-linking of MHM training from sex education for this very reason. Marni Sommers would concur with this, hence why her book (mentioned above) has no references to sex.

A hypothesis about MHM education in schools proposed by Cooke (2006) is that girls are less aware about menstruation in schools situated in remote locations. This should be tested (*Issue 27*). Other studies show that information dissemination about MHM issues are effective when conducted by non-teachers. For example, health clubs such as the Tuseme Clubs promoted by FAWEK (Kinoti 2008) and the GEM Clubs promoted by FAWE-U (Bitature and Barebwoha, 2005) encourage peer-to-peer education with prefects and student counsellors facilitating the meetings and activities. Not only do such clubs provide a comfortable and safe learning environment where girls can receive counselling and guidance, it also empowers those in leadership by developing their organisational and communication skills. The effectiveness of such clubs is worth investigation (*Issue 28*). An additional method of education worth investigating is through health professionals (*Issue 29*). In India, Dongre et al. (2007) found that over three years hygiene education through health centres led to a rise in awareness of menstruation, an increase in ready-made pads usage from 5% to 25% and a decrease in re-use of cloth from 85% to 57%. At present there are minimal such studies from Africa, hence a potentially untapped resource for improvements in MHM practices.

2.9 Conclusion

In summary, although there is ample literature on environmental sanitation and a growing body of literature about the health needs of women in low-income countries, there is a lack of published research about menstrual protection materials and the hygiene practices surrounding them. This deficiency provides justification for the this dissertation.

Throughout this review, issues have been highlighted that require more research. These have been summarised in Table 2.5 and have been used to inform the research questions in this study. Owing to the amount of investigation still required, only certain issues have been chosen to be tackled in this dissertation. These issues directly or indirectly have been the base for establishing the fifteen “KAP” research questions presented in Chapter 3.

Table 2.5: Research issues highlighted from literature review

| Issue No. | Possible Research Issue | Is this issue addressed in this dissertation? | Related research question* or chapter |
|-----------|--|---|---------------------------------------|
| 1 | Does a lifestyle of poverty affect the length of women's periods? | Partly | A5 |
| 2 | Are purchasing cost and the non-reusability of sanitary pads the main reasons why products like Always are not more widely used in Africa? | Yes | P11 |
| 3 | What sanitary protection materials do humanitarian actors supply to their beneficiaries? | No | |
| 4 | What do women know about the range of sanitary protection materials available? | Yes | K2 |
| 5 | Do women in sub-Saharan Africa wear underwear at all times? | Partly | K3 |
| 6 | What colour of cloth to women prefer to use? | Partly | A5 |
| 7 | Do schoolgirls perceive cloths to be associated with poverty and inappropriate for modern young women? | Yes | A6 |
| 8 | How do girls dry their menstrual cloths and why is this method chosen? | Yes | P13 |
| 9 | Do African women in the same household ever share menstrual cloths? | No | |
| 10 | Is the use of menstrual cups culturally and practically feasible in Uganda? | No | |
| 11 | What are the environmental impacts of disposable sanitary pads donations? | Yes | P13 |
| 12 | How long does it take for female hygiene products to decompose in a pit latrines? | No | |
| 13 | How dependent is supply of manufactured sanitary products on the demand for them? | Yes | Chapter 5 |
| 14 | Does the gender of the sanitary product vendor affect sales? | Partly | A7/ P10 |
| 15 | Where do women usually change their menstrual cloths/ pads? | Yes | P13 |
| 16 | Are mobilelets feasible as bathing shelters in schools? | No | |
| 17 | How significant is privacy on the use of sanitation facilities? Does it affect school attendance? | Yes | P12 |
| 18 | How significant is the gap between theory and practice in terms of maintaining cleanliness or sanitation facilities? | No | |
| 19 | How commonplace are incinerators or waste disposal facilities for used menstrual materials in schools? | Partly | P13 |
| 20 | What materials or resources do girls require inside a latrine block to handle MHM effectively? | Yes | P12 |

| Issue No. | Possible Research Issue | Is this issue addressed in this dissertation? | Related research question* or chapter |
|-----------|--|---|---------------------------------------|
| 21 | What aspect of menstrual hygiene causes school girls to stay away from school? | Yes | P14 |
| 22 | Is there a correlation between the provision of sanitary products levels of absenteeism? | Yes | P14 |
| 23 | What are the cultural and religious taboos surrounding menstruation and menstrual hygiene practices among the Buganda? | Yes | A9 |
| 24 | Why do girls remain silent about menstrual hygiene issues? | Partly | A6 |
| 25 | To what extent do PIASCY and Biology lessons affect MHM behaviour of Ugandan schoolgirls? | Partly | K4 |
| 26 | Is there a difference between MHM educators and the people to whom schoolgirls turn for advice? | Yes | K4/ A8 |
| 27 | Is there a correlation between school remoteness and girls' awareness of the facts about menstruation? | Yes | K1 |
| 28 | How effective are health clubs in disseminating information about MHM? | Partly | K4 |
| 29 | How effective are health professionals in disseminating information about MHM? | Partly | K4 |

** See Chapter 3 for an explanation of the research question referencing*

3. Methodology

3.1 Methodological approach

Over the past three decades there have been changes in the methodology employed when researching the needs of the poor, concurring with the changes in development theory. Whereas the poor were once perceived as an homogenous ‘other’ who were weak and required the ‘help’ of the ‘stronger’ developed nations, there was a realisation among many aid and development practitioners that this undermined the voice and dignity of real people. With the shift from modernism to postmodernism, the whole notion of “poverty” itself has been questioned. The traditional methodologies of identifying and solving a community’s problems (needs analysis) has given way to forms of community interaction that enable the root causes of problems to be tackled (social analysis). In the late 1980s, social scientists such as Mary Anderson and Peter Woodrow (1989) began talking about development in terms of reducing vulnerability and increasing capacity, not only with regard to physical assets, but also with reference to social and attitudinal spheres. Consequently, the investigative, information-collecting methodologies used in the 1980s through tools such as the Rapid Rural Appraisal (RRA) developed into an approach where the researcher’s role became one of facilitating and empowering local people to determine their own development agendas. The trend towards Participatory Learning and Action (PLA) grew in the 1990s. Yet, Myers explains:

“The evolution of the RRA into the PLA represents not so much a change in the tools as a change in the way the tools are used. There has been a reversal in power and expertise. As outsiders help the local people to pose the questions and then find ways to answer their own questions, the local people are the ones who learn, who are empowered.” (Myers 1999:174)

It was through the conceptual framework of PLA that the methodology for this study was conceived. The schoolgirls were placed as the central subject. Learning was intended to be three way: schoolgirls would acquire new knowledge about menstrual hygiene from the planned activities (facilitator-to-participant learning), reflection on their attitudes towards monthly periods would provide a platform for often-taboo subject to be discussed (peer-to-peer learning), and an evaluation of current practices would enable the researcher to better understand daily experiences of schoolgirls (participant-to-facilitator learning). Such investigations that consider knowledge, attitude and practice are referred to as KAP surveys. The KAP survey approach has become popular among public health practitioners because it serves as “an educational diagnosis of a community” (Kaliyaperumal, 2004: 7). Although this study is not entirely related to public health, educational diagnoses nor community at large, the KAP model was deemed to be the best-fit methodology to accomplish the stated research objectives.

Both quantitative and qualitative data was sought in order to relate human practice to scientific theory. KAP surveys typically generate quantitative data from a large number of randomly selected individuals. Part of reason the for choosing this tool was to address the void in

quantitative information in the MHM field, as outlined in the literature review. Yet, KAP surveys go beyond collecting facts to discerning beliefs. In other words, they can be used as a springboard into qualitative analysis and the presentation of data in narrative form. Conversely, qualitative research can also enhance quantitative research by placing quantitative data into meaningful social contexts (Bowling, 2004: 352). So, by using KAP Surveys to collect a variety of types of data, the research approach was designed to be as holistic as possible.

An indicative approach was adopted. Such reasoning allowed enquiry to come before theory so that ideas emerging during the research could be explored further (Kitchen and Tate, 2000: 23). Consequently, theories were generated only after data was collected and patterns had been identified. This choice of research approach complemented the postmodern principle of ensuring all ‘voices’ were heard before being evaluated. Not presuming to understand schoolgirls’ problems and practices made it easier to listen to the issues that they considered they faced. This positioning enabled the researcher to come as close as possible to the research subjects.

3.2 Formulation of research methodologies

The choice of research tools changed as their relevance (or irrelevance!) to an MSc dissertation was explored and became better understood. Initially, a competition between schoolgirls was proposed, which became modified to organising a small conference, before the chosen tool of focus group activities was settled upon. Figure 3.1 summarises the development of ideas.

| Research tools explored | Justification of the idea | Reason for choosing or rejecting the idea |
|---|---|--|
| Competition between schoolgirls to create solutions to their MHM problems | This suggestion came from reflecting on the case studies in the literature review and realising that most enquiries focussed on the problems: there was a need to generate solutions. A successful method trialled in Pakistan (Ahmad, Malik and Shrestha, 2001) used competitions as a motivational and promotion tool. Heeding this advice, in keeping with the ideology of the centrality of the schoolgirls, the idea was to provide a platform for girls to create a product or device that would improve their ability to cope with menstruation in school. | Rejected, due to advice from Dr. Shelley Jones of New York University that there may be a tendency for girls to come up with grandiose solutions when actually the simple things that were already being done, just needing scaling up, could be overlooked. Also, upon reflection, creativity generation through competitiveness is a Western concept. In Uganda, where community is typically more valued, it was decided that a uniting, rather than divisive strategy may be more conducive to creativity. |
| Conference for selected schoolgirls from different backgrounds to exchange and generate ideas about MHM | The idea for a conference arose from a desire for girls to spark solutions to their problems from one another. Not only would the exploration for solutions inform the researcher of the biggest needs they felt they faced, it would provide an interesting study about whether girls, given some practical guidance and financial help, had the creativity to solve their own problems. | Rejected. The cost and logistics of organising such an event were deemed unrealistic with the budget and time available for this study. Also, although the event itself would no doubt prove an enjoyable and fascinating experience, it was not the sort of work usually undertaken for an MSc research project. |
| Focus group activities | A set of activities would provide a way for the researcher to gain a broad understanding of MHM issues. To avoid asking intimidating questions, kinesthetic tasks could stimulate discussion about sensitive topics in a non-threatening way. This would quickly enable a rapport to be built between facilitator and participants. | Chosen tool. The range of data collection tools corresponding with different MHM topics, enabled there to be flexibility in each focus group. Conversations were encouraged to ‘flow’ as much as possible, with the questionnaires acting as anchor points for occasional re-directioning if they strayed too far from the themes of investigation. |

Figure 3.1: Development of ideas for methodology

To complement the competition strategy, the author began to develop a set of teaching tools, named 'COPE' (Competition-Orientated Participatory Education). Although the research strategy changed and COPE was abandoned, the process of beginning to develop a teaching resource enabled the author to think about creative ways to exchange information about MHM. These ideas were fundamental in the conception of the activities for the focus groups.

Other data collection techniques were employed to accompany the focus group activities, such as questionnaires (see 3.7), interviews (see 3.8) and observations (see 3.9). Written forms of secondary data were also collected. These included NGO reports and promotional materials, stories documented on websites, newspaper articles and emails from education, hygiene or sanitation specialists.

3.3 Informants

Schoolgirls were the main focus of the research for reasons mentioned in section 1.2.3. One hundred and thirty four (n = 134) girls took part in focus group activities, most of whom were from the Buganda tribe, the dominant people group in southern Uganda. Secondary schoolgirls were targeted for two reasons: firstly, the likelihood of finding post-pubescent young women who had already begun using sanitary products was greater than in primary schools and secondly, at the time of research, Afripads were only marketing their product to secondary schools. In the Ugandan school system school years do not correspond to age: students only progress to the next year when they pass annual exams. Consequently, although the intention had been to target school girls between the ages of 14 and 17, for ease of organising focus groups, it made more sense to target the year groups predominantly containing girls of those ages, namely S2, S3 and S4. In actual fact this meant that the participants' ages ranged from 13 to 20 years, with the average age being 16.0.

Apart from the schoolgirls, other people vital to this study were Pauls Grinvalds and Sophia Klumpp, the directors of Afripads and Dr. Moses Musaazi, the inventor of Makapads. They were considered key informants because they fit the description provided by Crabtree and Miller of such people: "individuals who possess special knowledge or status... who have access to perspectives or observations denied the researcher" (Crabtree and Miller, 1992: 182). Conversations with these key informants enabled the researcher to develop an understanding of the two businesses and learn how to access other informants.

People who held an interest in the welfare of schoolgirls and/or the production and distribution of sanitary pads were also targeted for interviews. These included teachers and school workers, pad business producers, shopkeepers, NGO staff, university lecturers, a doctor and a social work student. The details of the interviewees can be found in Appendix A and an overview of the numbers of informants can be found in Table 3.1.

Table 3.1: Summary of informants

| Informants | Data collection method | Groupings | Number of informants |
|------------------------------------|---|---|----------------------|
| Category A schoolgirls | Focus group activities and questionnaires | 25 groups in 10 schools | 85 |
| Category B schoolgirls | Focus group activities and questionnaires | 8 groups in 4 schools | 27 |
| Category C schoolgirls | Focus group activities and questionnaires | 7 groups in 4 schools | 22 |
| Teachers and school workers | Semi-structured and unstructured interviews | 1 or 2 adults in 10 schools | 12 |
| Pad business leaders | Structured, semi-structured and unstructured interviews | 4 Afripads managers 5 Makapads managers | 9 |
| Pad producers | Semi-structured and unstructured interviews | 7 Afripads employees 3 Makapads employees | 10 |
| NGO staff | Semi-structured and unstructured interviews | 8 organisations | 10 |
| Shopkeepers | Semi-structured interviews | 2 store managers 2 pharmacists | 4 |
| Others | Semi-structured and unstructured interviews | 2 university lecturers 1 doctor 1 social work student | 4 |
| | | TOTAL | 183 |

3.4 Selection of schools

The schoolgirls were arranged into three categories depending on the involvement of Afripads and Makapads in their schools. By forming such research groupings, comparisons could be made between the girls' perceptions and/or access to the low-cost products under investigation. The categories were named as follows:

- Category A: Girls attending schools that had been targeted for interventions by Afripads
- Category B: Girls attending schools that had been targeted for interventions by Makapads
- Category C: Girls attending schools that had not been targeted for interventions by Afripads or Makapads.

The intention had been to interview equal number of students from all three categories, but due to the following reasons, more Category A schoolgirls were interviewed:

- The directors of Afripads were more prepared for the fieldwork and had arranged visits to ten schools on the researcher's behalf. In comparison, contacts in Category B and C schools had to be forged by the researcher once in Uganda.
- Makapads do not have close working relationships with any particular school because their distribution is done by NGOs and agencies. Therefore, to approach schools where their products are distributed required contact and negotiation with their partners. This took more time than anticipated.
- Category B schoolgirls were difficult to access because they were not specifically targeted for intervention. Makapads have a close link with UNHCR who purchase ninety per cent of

the produced pads and distribute them to women in the refugee settlements. Consequently the beneficiaries of Makapads are females of reproductive age, not just schoolgirls.

- Category C schools were intended as a control factor in the study. Priority was given to girls using low-cost pads in order to remain focussed on the main research aim. Therefore it was deemed unnecessary to interview more girls from non-intervention schools than had been interviewed in Category B (or A) schools.

The selection of Category A and B schools was based on recommendations by the Afripads' and Makapads' managers. The intention had been to conduct focus group activities in middle- to low-quality secondary schools in semi-rural areas or small towns or trading centres but, in reality, the choice of schools was somewhat limited. Afripads, as a newly-created business, had only strategically marketed and sold products in ten schools. All ten schools were visited. Makapads provided the names of three organisations involved with purchasing and distributing their products to schoolgirls, namely Concern for the Girl Child, CoBIN and GTZ (in partnership with UNHCR). These contacts were sought and followed up in the ways described in Table 3.2.

Table 3.2: Networking strategy to access users of Makapads

| Organisation | Background information and networking strategy | Outcome |
|----------------------------------|--|---|
| Concern for the Girl Child (CGC) | CGC provides sponsorship for poor schoolgirls, which includes distribution of scholastic and basic living materials, including Makapads. Girls in four secondary schools receive such support; two in Luwero District, one in Nakasaka District and one on the outskirts of Kampala. All four schools were contacted and agreed to the research. | Focus group activities were conducted in three out of the four possible CGC schools. The fourth school could not be reached due to poor road access. |
| CoBIN | CoBIN is a small NGO working towards nutrition and health improvements through village health projects. Local workers identify needy schoolgirls and provide them with Makapads. Girls in four secondary schools in Kiruhura and Yantonde Districts benefit from the scheme. | Permission was not granted to visit any of the four schools. This was because the distribution of Makapads was a new programme and CoBIN first wished to conduct their own evaluation before allowing an external researcher to do so. |
| GTZ | GTZ manages activities in some of the UNHCR refugee settlements in Uganda. UNHCR procures the majority of Makapads and distributes them to refugee women. Kyaka II settlement was chosen because it includes two Makapads workshops, making it the main Makapads production centre. | After ten days of networking and negotiation, permission was granted from the Office of the Prime Minister to enter Kyaka II Refugee Settlement. Focus group activities were undertaken in the only secondary school in the settlement. |

The selection of Category C schools was made through pursuing contacts. The main sampling specifications were that the schools needed to be varied in terms of quality, located in semi-rural or small towns in areas where the socio-cultural background of the students was similar to those represented in categories A and B. Four schools in Luwero District were chosen in collaboration with a church worker, who had a good understanding of the social dynamics in their diocese, and the research translator who had grown up in the District and knew the location of many secondary schools. For convenience, the four schools chosen were near, or on, the routes to the specific Category B schools. In order to account for the differing qualities of schools visited and any biases in sampling methods, each school was given a quality ranking score, as outlined in

section 3.9. Whenever possible, the headteacher was telephoned or visited at least a 24 hours before the proposed day for research to explain the purpose of the study and request permission to remove girls from their timetabled activities. Most of the headteachers were supportive of the study and willingly cooperated with the researcher's requests. The headteachers' biggest concern was that girls would miss important lessons, tests or exams. Where this was deemed a significant barrier, plans were made for the focus groups to take place during lunch time, after school or on one of two public holidays that coincided with the research timings. Expectations were clearly agreed upon at this early stage which, in a few instances, meant that explanations had to be politely given as to why no remuneration was being provided. The schoolgirls' level of English proficiency was also discussed at this stage. If the headteacher considered language to be a significant barrier to participation a translator was sought. Eight out of the 18 schools visited were deemed to require a translator. Three different people acted as translators and were hired from within the locality of the school(s) (see 3.11).

3.5 KAP survey and research questions

The three parts of a KAP survey, Knowledge, Attitude and Practice, provide a framework for awareness of menstrual hygiene matters affecting schoolgirls. The 'knowledge' possessed refers to their understanding of both the biological facts of menstruation and methods for managing their monthly periods. The term 'attitudes' refers to the schoolgirls' feelings towards bleeding each month as well as any preconceived ideas that may have been imparted to them through their social, cultural and religious environments. 'Practice' refers to the schoolgirls' actions regarding hygiene behaviour, which specifically, in this study, is taken to mean the accessing, changing, washing, drying and disposing of sanitary products.

Fifteen research questions were formulated in order to fulfill the four objectives of the study. All questionnaires, interviews and group activities were based around obtaining answers to these questions. Each research question was designed to correspond with one of the KAP headings and was been assigned a number, as shown in Figure 3.2 overleaf.

| Aspect | Key questions |
|----------------------|--|
| Knowledge (K) | K1: What do girls know about the biological facts of menstruation? K2: Are girls aware of the range of products available for managing menstruation? K3: Do the girls know how to use the pads effectively? K4: What are the key sources of information about menstrual hygiene? |
| Attitudes (A) | A5: How do the pads compare with previously used materials? A6: Have the pads affected the girls' confidence and sense of dignity? A7: What are the attitudes of others (e.g. men, older females, non-user) towards the production and use of low-cost products? A8: Who do girls confide in regarding issues of menstrual hygiene? A9: What are the cultural and religious views about menstruation that the schoolgirls (consciously or subconsciously) adhere to? |
| Practice (P) | P10: Are pads readily available? P11: Are pads affordable? P12: How do girls keep themselves clean during their menstrual cycles? P13: Where and how do the girls wash or dispose of the pads? P14: Is absenteeism related to the management of menstrual hygiene? P15: What are the benefits and problems with the current pad design? |

Figure 3.2: Research questions of the KAP survey

3.6 Focus group activities

Forty focus groups were conducted in eighteen schools. The group sized varied between 2 and 4 girls, with the average being 3.3. Owing to the potential for embarrassment in research of this nature, getting the contextual dynamics correct was crucial. Small, as opposed to large groups were chosen to make the girls feel at ease with sharing personal stories. Yet in preference to

one-to-one discussions, the presence of one, two or three peers who were also participating in activities was considered important as a way of building each schoolgirl's confidence and allowing for interesting group dynamics to develop. All group sessions took place in private locations within the schools' compounds. The settings ranged from huddling around a cluster of desks in a spare classroom to sitting in a circle on the grass



Image 3.1: Schoolgirls participating in focus group activities

under a tree to perching on concrete blocks in a meeting shelter. The focus group sessions were designed to last between 45 and 75 minutes, depending on the time available within the school timetable and the participants' concentration and interest. Each session included a mixture of up to seven possible activities. The focus groups began with Activity 1 and then, depending on the ease and enthusiasm with which the first task was completed, the researcher took the liberty of choosing topics for further exploration using the remaining activities. This meant that not all the

groups completed all the activities in the allocated time. A summary of which activities were completed by the different groups can be found in Appendix B.

The seven activities were devised to ascertain answers to all fifteen research questions. Table 3.3 displays the correlation between questions and activities. The following sub-sections provide further details about the activities.

Table 3.3: How activities correlate with the KAP research questions

| Research Questions | Activities | | | | | | |
|--------------------|-----------------------|-----------------------------|-------------------------|-----------------------|---------------------|-------------------------------|---------------|
| | 1 True/ false quiz | 2 Brainstorming problems | 3 Charting Solutions | 4 Listing products | 5 Questionnaires | 6 Sources of info pyramids | 7 Scenario |
| K1 | ✓ | | | | | | |
| K2 | | | | ✓ | | | ✓ |
| K3 | | | | ✓ | | | |
| K4 | | | | | ✓ | ✓ | ✓ |
| A5 | | | ✓ | | ✓ | | |
| A6 | | | ✓ | | ✓ | | ✓ |
| A7 | | ✓ | | | | ✓ | |
| A8 | | | | | | ✓ | |
| A9 | ✓ | ✓ | | | | ✓ | ✓ |
| P10 | | ✓ | ✓ | | ✓ | | ✓ |
| P11 | | ✓ | ✓ | | ✓ | | ✓ |
| P12 | | ✓ | ✓ | | ✓ | | ✓ |
| P13 | | ✓ | ✓ | | ✓ | | |
| P14 | | | | | ✓ | | ✓ |
| P15 | | ✓ | ✓ | | ✓ | | |

3.6.1 Activity 1: True/ False quiz - Knowledge about MHM

Purpose for participants: peer learning about the facts of menstruation

Purpose for researcher: to assess what the girls know about the biological facts of menstruation and to hear myths or misconceptions that they have

Data collection method: photograph of placed cards



Image 3.2: Example of completed Activity 1

The participants were given 11 statements on pieces of card (as shown in Figure 3.3). They had to place the statements on one of three pieces of paper that read 'true', 'false' or 'neither/ unsure'. When all the cards had been placed, the facilitator and participants went through the choices and discussed why the cards had been placed as they were. Image 3.2 shows an example of the activity when completed.

1. All women menstruate
2. A period lasts about 14 days
3. Menstruation is a disease
4. Old women do not menstruate
5. Blood comes from the stomach where food is digested
6. Menstruation happens twice every year
7. After many periods a woman can run out of blood
8. Menstrual blood contains harmful substances
9. Pregnant women have periods
10. It is harmful for a woman's body if she runs or dances during her period
11. Pain during menstruation means that someone is unhealthy

Figure 3.3: Statements for sorting in Activity 1

3.6.2 Activity 2: Brainstorming - Identifying and prioritising problems

Purpose for participants: to acknowledge what problems they face in menstrual management in school

Purpose for researcher: to learn about what girls consider to be the biggest problems when managing menstruation

Data collection method: Photograph of cards in priority order

The participants were asked to brainstorm some of the problems they face in managing menstruation in school. They wrote each problem on a separate card, as shown in Image 3.3.

Once they exhausted most of their ideas they were asked to rank the problems by placing them in a ladder formation, with the greatest problem at the top. In order to rank and compare problems a scoring system was devised. For the purposes of analysis each group's top problem was given a score of five points, the second biggest problem four points and so on. If more than five problems were identified each additional problem was assigned one point.



Image 3.3: Schoolgirls completing Activity 2

3.6.3 Activity 3: Charting - Identifying solutions

Purpose for participants: to consider ways to handle menstruation

Purpose for researcher: to evaluate how readily girls perceive pads to be a significant solution to the problems they face

Data collection method: Recording discussion on a dictaphone machine

Going back through the problems identified in Activity 2, the girls were asked if there were solutions to the problems identified, and if so, who or what was required to make their suggestions to happen. Their ideas were recorded on a dictaphone machine, as seen in Image 3.4, to save the facilitator having to write which enabled better listening.



Image 3.4: Use of a dictaphone in Activity 3

3.6.4 Activity 4: Speedy lists - Knowledge about managing menstruation

Purpose for participants: peer learning about MHM products

Purpose for researcher: to assess what the girls know about the range of products available for managing menstruation

Data collection method: Keeping the lists the girls make and writing key words or phrases they say during the feedback about the products mentioned.

The girls were set a challenge of making the longest possible list in two minutes of ways to manage menstruation. If there were four girls in a group, sometimes they raced in pairs. The task was kept quite generic, so they were at liberty to mention any methods they knew or had heard about. After two minutes the girls had to feedback their 'answers' and they were questioned about the usage of each product. Myths or gaps in knowledge were noted. Image 3.5 show a list being drawn up.



Image 3.5: Schoolgirls completing Activity 4

3.6.5 Activity 5: Questionnaire and discussion - Low-cost pads

Purpose for participants: to have an opportunity to talk about use of sanitary pads

Purpose for researcher: to gain insight into the use and acceptance of low-cost pads

Data collection method: completing questionnaire answer sheet as girls provide answers

Various questionnaires were used to guide discussions about low-cost pads. The details of the questionnaire design are explained in 3.7.

3.6.6 Activity 6: Importance pyramids - Sources of information

Purpose for participants: to think about how they receive information and advice about MHM

Purpose for researcher: to ascertain the main sources of information about menstruation and whether these are the same as the people to whom the girls turn for advice about management

Data collection method: Photographs of cards on pyramid base



Image 3.6: Schoolgirls completing Activity 6

The participants were given flash cards on which were written the names of people in their family or community: mother, father, grandmother, sister, aunty, brother, cousin/sister-in-law, boyfriend/husband, female teacher, NGO worker, traditional healer, nurse/health visitor and friend. They were asked to place the cards on the importance pyramid to represent who they considered schoolgirls would be most likely to seek advice from about menstruation management. The flashcard representing the person they would most confide in was placed at the top of the pyramid, flashcards

of people of secondary importance were placed on the next 'row' and those of some importance were placed on the bottom 'row'. The other cards were left off the pyramid. Image 3.6 shows the activity in action.

3.6.7 Activity 7: Scenario - Big picture thinking

Purpose for participants: to encourage thought about hygiene management and education at the national scale

Purpose for researcher: to understand what schoolgirls consider to be the biggest MHM needs and to evaluate their creativity in offering solutions to problems of governance

Data collection method: Recording discussion on a dictaphone machine

The participants were asked to imagine they were the President of Uganda, who had plenty of money and total authority. They were asked to make a policy which would help those Ugandan schoolgirls who struggle during the time of the monthly periods. As the participants described their proposals, they were questioned about how they would enforce their policies and the mechanisms they would establish to ensure help reached the most needy. Image 3.7 shows some schoolgirls explaining their ideas to a translator.



Image 3.7: Schoolgirls completing Activity 7 with the assistance of a translator

3.7 Questionnaire design

Seven questionnaires were created to cater for the range of products used by schoolgirls, loosely correlating to the three categories of schoolgirls. The questionnaires were conducted orally in small groups. The flowchart in Figure 3.4 was used to decide which questionnaire(s) to use. Templates of the questionnaires actually used (B, C, D, E and G) can be found in Appendix C. A tally of the answers to all the questions can be found in Appendix D. In the end questionnaire A was not used because all girls said they had begun menstruating and questionnaire F was not used because no girl admitted to using free disposable products as the predominant way of absorbing her menstrual blood.

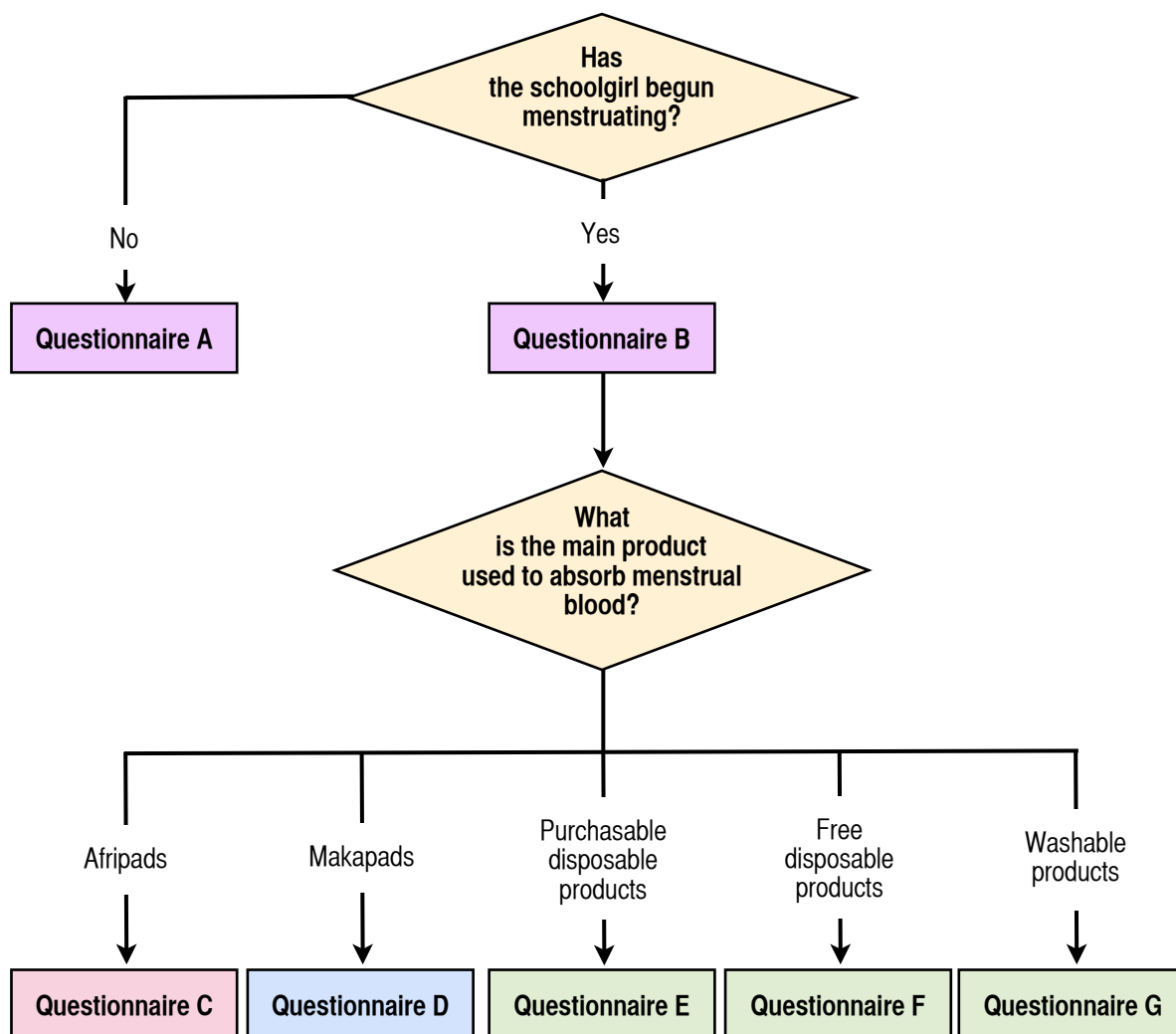


Figure 3.4: Flowchart depicting how questionnaires were chosen

The purpose for having separate questionnaires, despite some overlapping questions, was to make KAP analysis more straightforward: the answers from each type of user could be quickly evaluated. Most of the questions were ‘closed’ questions that had pre-coded choice answers allowing for simple recording of information and the formulation of quantitative data. However, care was taken not to force the girls’ responses into inappropriate categories. If they responded to a question in an unexpected way, their answer was recorded as ‘other’ with a brief explanation in the margin. If an unexpected answer recurred more than twice it was added as a new possible answer on the template. Hence the research tool was adapted as the study progressed. A

ranking question was trialled about bathing facilities but the schoolgirls' found the concept hard to comprehend: their expectation was to answer binary 'yes/no' questions. This experimentation with question-asking taught the researcher that, when working with such respondents, simple questions requiring simple answers prove to be the most accurate form of data collection. Nevertheless a few open-ended questions were asked to allow space for personal expression and as a way of cross-checking the answers already given.

Most of the questions were related to hygiene behaviour. This relied upon honesty from the respondents, something which could not always be guaranteed especially where embarrassment could have been caused. Therefore, throughout this study, allowances have been made for the fact the girls' were probably trying to present themselves in their best light, a phenomenon that Bowling and Ebrahim (2008: 420) refer to a "social desirability bias". Such allowances include emphasizing the narrative and qualitative data over statistical findings and displaying caution if expected problems (i.e. those mentioned in the literature review) do not at first seem apparent.

For some key topics where it was thought social bias could prevail, the subject was approached in different ways to allow for triangulation of findings. For example, girls were asked directly about whether they had been absent from school due to menstruation, whether they knew of girls who had been absent and they were each asked to estimate what percentage of girls in Uganda (generally) miss one or more days of school each month. By comparing their declared practice with their perceptions of other girls' practice provided an indication of the magnitude of bias. Another form of bias that may have affected the results was the questionnaires were asked in a focus group setting. This meant that the views the group's most dominant character were likely to influence those who were less vocal. Aware of this constraint, the group questioning technique was still considered to be best for reasons stated in 3.6.

3.8 Interviews

Forty nine structured, semi-structured and unstructured interviews made up part of this study. In Uganda, all interviews were conducted face-to-face, but an interview with Dr. Shelley Jones from the University of British Columbia was conducted by email and an interview with Elizabeth Younger in Washington DC was conducted through skype. The type of interview undertaken was determined by the level of formality and flexibility required. A structured interview took place with Dr. Moses Musaazi, the inventor of Makapads, where a rigid structure of questions maintained a controlled range of responses. This was primarily to generate a descriptive outcome about the background to Makapads in a limited amount of time. In contrast, most of the interviews in this study were semi-structured, where a list of topics for discussion were covered, but in no particular order. This non-standardised approach was chosen when interacting with NGO staff and pad producers to allow for some questions to be omitted if they were deemed irrelevant, but for additional questions to be created if required to elicit more information. Where an informant was unexpectedly met, unstructured interviews took place to explore a topic in depth. For example, one morning, while trailing a cameraman making a promotional film about Afripads, a conversation developed with a doctor about women's dignity and access to pads. Although the

researcher had no pre-determined questions in mind, an intentional non-directive conversation resulted through the posing of open-ended questions. As recommended by Easterby-Smith et al. (2002: 98) in such circumstances, the aim was to guide rather than lead the interview. Although providing fascinating insights, the main problem encountered with the unstructured interviews was how to use the data collected to meet the research objectives.

3.9 Observational walks

Throughout the research period field notes were kept about interesting or unusual observations regarding facilities or behaviour that could have had bearing on the management of



Image 3.8: A headteacher showing his school's water supply on an observational walk

menstruation. Over three hundred photographs were taken to record such observations. The main purpose of observations in schools was to evaluate their quality, so as to have another variable against which to analyse menstrual hygiene practices. Five criteria were selected: water supply, sanitation facilities, handwashing facilities, classroom resources and environmental cleanliness. Each school was awarded points out of ten for each criteria, hence a possible maximum score of 50. An outline of the marking criteria can be found in Appendix E. Although subjective, this method enabled rough comparisons to be made between schools.

3.10 Experiment about pad absorbency

One vital component of a good sanitary pad is its ability to absorb blood. In order to test absorbency, a simple experiment was designed to compare low-cost pads with the conventional pads currently on the market in Uganda. The pads were laid on a rack covered by a cotton cloth. Each pad had 2ml of water applied to it after which it was rubbed five times, to simulate real-life movement. The process was repeated until the water leaked onto the cotton cloth, whereupon the pads maximum retention capacity was recorded. Image 3.9 shows a sanitary pad undergoing testing.




Image 3.9: An Afripad liner being tested for absorbency

3.11 Challenges and changes of the chosen methodology

A number of challenges were encountered with the methodology which have not already been mentioned. These are outlined in Table 3.4, with indications of how the problems were rationalized or resolved.

Table 3.4: Challenges encountered during the research

| Challenge encountered | Example | Action taken to overcome the challenge |
|--|--|--|
| English proficiency of groups without a translator: potential misunderstanding of some key words | A number of girls mentioned feeling "comfortable" wearing certain pads. This was taken to mean the pads were soft and did not cause chaffing but it transpires that usually this term means socially comfortable implying confidence | Probing question technique, often asking the girls to explain their answers in more detail. They were encouraged to talk freely rather than just answer questions with one or two words. |
| Use of untrained translators meant they sometimes assumed the role of facilitator | If a girl asked a question there was temptation for the translator to answer it themselves | Briefing and debriefing sessions with the translators about expectations |
| Poor road conditions making driving slow, if not impossible |  | Being prepared to change the plan and visit a different school to the one intended. |
| Getting the girls to tell their real experiences, not just those they thought the researcher would like to hear. | One girl stated how she always used Always, but then later was answering questions about drying cloths. Loyalty and dignity are values prized above honesty in Bugandan culture. The taboo nature of MHM exacerbated this. | Cyclical questioning, where the same topics were covered at least twice at different times in the focus group activities. This triangulation method enabled authenticity of responses to be monitored |
| Few opportunities to pilot the questionnaires or trial the activities before they were used. | Piloting in the UK prior to departure was not considered suitable as schoolgirls in the UK have different experiences of MHM so many of the questions would have been irrelevant. | The first four focus groups were viewed as a substitute pilot of the activities. Revisions were made such as setting aside Activity 4, re-arranging the order of some questions, and adding new answer boxes to allow unexpected answers to be recorded. |
| Researcher effects and environmental effects | By the 40th focus group the researcher had to make a concerted effort to listen to what was being said and not interpret it based on the outcome of previous sessions. | Limiting the number of focus groups to a maximum of 5 a day and critically analysing behaviour, tone of voice and expectations at all times. |
| Environmental effects | On one occasion the girls did not speak freely until the focus group relocated beyond earshot of the staffroom window. | Making an effort to set up the focus groups in a private yet not secluded location, away from other students and teachers in the shade. |

3.12 Presentation of findings

Chapters 4 and 5 present the outcomes of the activities described above. Instead of listing the study limitations, assumptions and conclusions at the end, they are included throughout the report. Chapter 6 reflects on the research findings in light of the four research objectives. Here, justified opinions are given as well as recommendations about Afripads, Makapads and the management of menstrual hygiene generally.

Table 3.5 outlines the connections between the various parts of this dissertation. The 15 research questions have been formulated from the issues identified in the literature review (see 2.9), and have been designed to be answered through focus group activities and questionnaires. All questions in the questionnaires were devised in relation to a specific research question to the level of detail outlined in column 4 of the table below. The questions themselves can be found in Appendix C.

Table 3.5: Cross-reference of the research questions, formed from issues in the literature review, with focus group activities and questionnaire questions.

| Research Question | Topic | Issue from literature review | Questionnaire question | Focus group activity |
|-------------------|---|------------------------------|---|----------------------|
| K1 | Biological facts | 27 | | 1 |
| K2 | Awareness of available products | 4 | | 4, 7 |
| K3 | Effective use of pads | 5 | C9, C25, D8, D18, D19 | 4, 5 |
| K4 | Sources of information | 25, 26, 28, 29 | B1, B2, | 5, 6, 7 |
| A5 | Comparison with previously used materials | 1, 6 | B12, C1, C4, C5, C9, C10, C11, D1, D4, D5, D8, D10, D11, E2, E12, E12a, E13, E13a, E14, E14a, G2, G14, G14a, G15, G15a, G16, G16a | 3, 5 |
| A6 | Effect of pads on confidence and dignity | 7, 24 | C2, C22, C23, C24, D2, D12, D13, D14, E5, E6, E7, E11, G7, G8, G9, G13 | 3, 5, 7 |
| A7 | Attitudes of non-users towards pads | 14 | | 2, 6 |
| A8 | Menstrual hygiene advisors / 'confidants' | 26 | | 6 |
| A9 | Cultural and religious viewpoints | 23 | | 1, 2, 6, 7 |
| P10 | Availability of pads | 14 | B12, C6, C8, D7, D9, D19, E3 | 2, 3, 5, 7 |
| P11 | Affordability of pads | 2 | C7, C13, C13a, E4 | 2, 3, 5, 7 |
| P12 | Keeping clean | 17, 20 | B5, B6, B7, B8, B9, B10, B11, D12, E5, G7 | 2, 3, 5, 7 |
| P13 | Washing and disposing of pads | 8, 11, 15, 19 | B8, B9, B10, B11, C13, C13a, C15, C16, C17, C20, C21, D15, D16, D17, E8, E9, E10, G5, G6, G10, G11, G12 | 2, 3, 5 |
| P14 | Absenteeism | 21, 22 | B3, B3a, B4, B4a | 5, 7 |
| P15 | Pad design | — | C12, C14, C18, C19, D20, | 2, 3, 5 |

The data was sorted and analysed in the following ways:

- Quantitative data from the questionnaires were coded and entered into spreadsheets. This enabled trends to be seen at a quick glance, correlations to be tested, and data manipulation through graphical representation.
- Interesting quotes which had been noted during the focus groups were typed up under headings associated with the research questions.
- Relevant personal stories and opinions from the dictaphone recordings of interviews and focus group discussions were transcribed and filed under the relevant headings.
- Other key data was brought together in the form of charts and tables.

In this report pseudonyms have been used to protect the identity of all the schoolgirls interviewed. However, all other informants are referred to by their real names. The emphasis on naming respondents has been deliberate. This writing style is intended to focus the reader on the often-marginalised people who are affected by the issues under discussion, in keeping with the chosen methodological approach (see 3.1).



Image 3.10 : A discussion about the facts of menstruation

4. Results of Focus Groups and Interviews

4.1 Introduction

The findings from the focus group activities, interviews and observations are presented in this chapter by clustering relevant information together to answer research questions 1-14. The findings related to question 15, about the problems and benefits of pad design, are presented in Chapter 5. Chapter 6 then draws the answers to the research questions together by addressing the four research objectives using the outcomes of this chapter and the next.

4.2 Problems and solutions

The main problems identified by the schoolgirls were grouped into categories so that the ranking scores could be calculated (see Appendix F). Each category was then grouped according to whether the problems were mostly about health, social, economic, technical or institutional aspects. The corresponding scores were totalled and the outcome of this data analysis can be seen in Table 4.1. The main limitation of this method of analysis was the accuracy of grouping the issues, especially when some problems could have been included in more than one group. For instance, the problem of “bad smells” was grouped as a social concern, although odours could also be deemed a health problem in that blood is being poorly managed or a technical problem assuming that a lack of water is responsible for bathing difficulties. However, exact scores aside, there is a clear verdict about the types of problems faced. The health and social aspects of MHM are the main cause of concern for schoolgirls with technical and institutional aspects being less so, as shown through percentage comparisons the pie chart in Figure 4.1.

Table 4.1 Problems identified by schoolgirls with scores indicating the magnitude of each problem

| Health | | Social | | Economic | | Technical | | Institutional | |
|-------------------------------------|------------|------------------------------------|------------|------------------------------|-----------|------------------------------|-----------|---------------------------------|----------|
| Stomach pain | 137 | Fear of cloth falling down | 12 | Unable to afford pads | 74 | Stains difficult to wash out | 1 | No counsellor or female teacher | 6 |
| Back pain | 43 | Fear of stains of clothes/ leaking | 39 | Inaccessibility of pads | 6 | Lack of water – poor hygiene | 25 | Not time to change pads | 3 |
| Body weakness/ tiredness | 29 | Reluctance to join in activities | 9 | Unable to afford painkillers | 3 | No place to change pads | 4 | | |
| Feeling unwell/ need to lie down | 24 | Worry about treatment by boys | 7 | Lack of knickers | 4 | | | | |
| Long periods/ heavy flow | 16 | Not able to talk to men | 6 | | | | | | |
| Irregular/ unpredictable flow | 10 | Shy/ embarrassment | 34 | | | | | | |
| Sore breasts | 12 | Loss of concentration in class | 10 | | | | | | |
| Pimples on face | 11 | Bad smells | 10 | | | | | | |
| Malaria/ fever | 9 | | | | | | | | |
| Loss of appetite/ bloating | 17 | | | | | | | | |
| Leg pain | 1 | | | | | | | | |
| Headache | 16 | | | | | | | | |
| Infection/ rubbing in private parts | 12 | | | | | | | | |
| Mood changes | 4 | | | | | | | | |
| | 341 | | 127 | | 87 | | 30 | | 9 |

The two leading problems were abdominal pain during menstruation and a lack of sanitary pads. Surprising results from Activity 2 were how influential physical pain and ailments were upon school experience and how inconsequential access to knowledge and counselling seemed to be. Maybe the latter was because girls do not have high expectations about receiving social support. Chapter 6 discusses these problems and the girls’ suggestions for solutions for this in more detail.

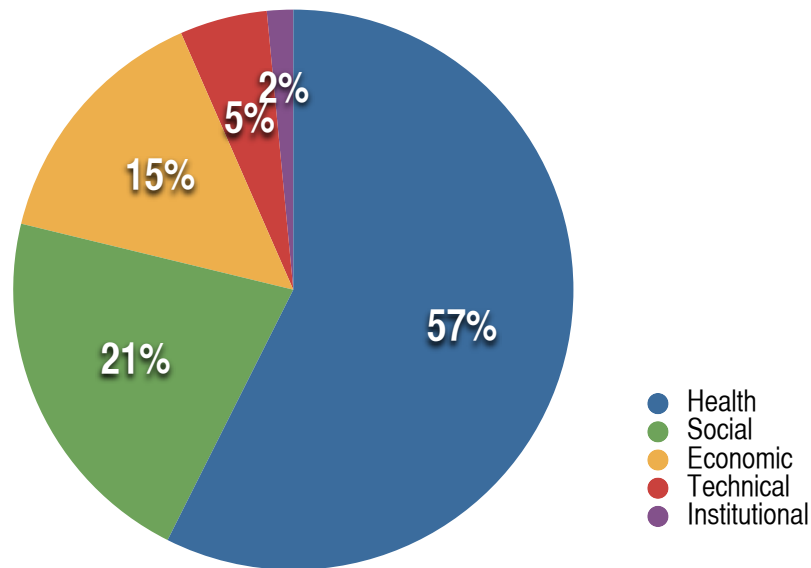


Figure 4.1: Comparison between the types of problems schoolgirls face

4.3 Knowledge

4.3.1 K1: Biological facts

Of 39 groups of girls asked to classify 11 statements about menstruation, only 2 groups were able to respond correctly in all cases and explain the biological facts. This provides evidence that basic information which adolescent girls should know is not being communicated clearly through school or home. There was no correlation between the higher scoring groups with the quality of schools from which they came, suggesting that a lack of female hygiene education is an endemic problem across Ugandan schools. However, the remoteness of the schools was significant. When the correct placement of facts was compared by three equal groups of six schools (remote, average or non-remote, depending on their distance from a tarmaced road), on average the non-remote schools got 1.02 more answers correct than the remote schools. This lends credence to the hypothesis by Cooke (2006) that the more remote the location of the school, the less aware girls are about menstruation (see 2.8). However, more detailed research needs to be done to quantify the significance of this correlation and also explore the reasons behind it.

During Activity 1 a number of answer cards were placed on the “unsure/neither” sheet. With hindsight this category was not helpful as it did not allow the researcher to quickly distinguish between language misunderstandings and ignorance. This discrepancy was often rectified through questioning, although the facilitator did not probe too much as for the girls to admit ignorance may have caused unnecessary embarrassment. To account for this methodological flaw, all potentially misunderstood facts were counted separately in the results tally as shown in Table 4.2

Table 4.2: Results from Activity 1

| Facts | Correct Answer | Wrong Answer | Misunderstood fact |
|--|----------------|--------------|--------------------|
| All women menstruate | 36 | 3 | 0 |
| Old women do not menstruate | 27 | 5 | 7 |
| After many periods a woman can run out of blood | 16 | 10 | 13 |
| Blood comes from the stomach where food is digested | 33 | 1 | 5 |
| Pain during menstruation means that someone is unhealthy | 27 | 8 | 4 |
| Menstruation is a disease | 33 | 5 | 1 |
| It is harmful for a woman's body if she runs or dances during her period | 21 | 12 | 6 |
| Menstruation happens twice every year | 34 | 0 | 5 |
| A period lasts about 14 days | 30 | 2 | 7 |
| Pregnant women have periods | 37 | 1 | 1 |
| Menstrual blood contains harmful substances | 15 | 11 | 13 |

Some statements provoked more uncertainty than others. Nearly all girls knew that pregnant women do not have periods, suggesting an understanding of the link between menstruation and reproduction. Most groups were also able to articulate in one way or other that menstrual blood and food waste production are two different biological systems in the body. Similarly, most girls knew that menstruation was normal and could be expected about once a month. The main misconceptions were regarding the finer anatomical details and the effect of menstruation on daily activities. The four facts that caused most uncertainty are explored below:

- Menstrual blood contains harmful substances

The purpose of posing this fact for discussion was to ascertain whether biological or cultural reasoning dominated, especially for those who considered blood to be “dirty”. Only two groups mentioned the HIV infection risk and, while all the other groups said they were aware of HIV, it was interesting that this was not at the forefront of most of their thinking. Instead, most girls thought of the blood as a waste product that needed to be disposed of carefully. There was a severe lack of understanding about the biochemical composition of blood, as proved when Lilian suggested that the harmful aspects were “the black bits in the blood” (the uterine lining). Many girls hinted there being something mysterious about the blood that made it powerful - hence why witchdoctors could use it to curse people. This implies that the distinction between biological harmfulness and spiritual harmfulness is not always apparent.

It must be [harmful] because we have to dispose of it. If it wasn't it wouldn't come out.
- Flora, schoolgirl

- It is harmful for a woman's body if she runs or dances during her period

There was some confusion about the cause and effect of menstrual pain. Many girls acknowledged dysmenorrhea (severe uterine pain) led them to skipping physical education classes and other strenuous activities, but few girls knew if there would be long term damage to their bodies if they continued exercising through such pain.

- After many periods a woman can run out of blood

This statement provided an insight into what girls knew about the origin of menstrual blood.

A woman can run out of blood if she does not drink enough water: the flow will be less.

- Silvia, schoolgirl

About half the girls questioned could not explain that blood came from the shedding of the uterine lining, rather they just knew it had something to do with the female reproductive system. Additionally, many girls did not realise that blood cells could replicate and create more blood.

- Pain during menstruation means that someone is unhealthy

Almost a third of participants were unaware that menstrual cramps and pain were a normal phenomenon for adolescent girls. Pain was a particular concern for those without such knowledge who regularly experienced dysmenorrhea. Angel explained how it was more logical for girls to think pain indicated unhealthiness, because with nearly all other bodily functions, there is an association between pain, suffering and poor health.

If there is pain in your abdomen it can be blood clotting inside the tubes. If you press the towel with hot water there it can avoid the clot.

- Kenya, schoolgirl

4.3.2 K2: Awareness of available products

After the first few focus groups, Activity 4 (making lists about menstrual hygiene products) was abandoned. The researcher took this liberty to save time because the necessary information could be gleaned from the other activities, especially the questionnaires. The materials most commonly mentioned were rags/cloths, Always, toilet and cotton wool wrapped in gauze or cloth. Only one girl and a few teachers had heard about tampons or insertion products in general. No girls in Category B schools knew about Makapads and no girls in Category C schools knew about Afripads, suggesting knowledge about menstrual padding materials is localised. It also implies there is a lack of marketing or poor marketing by the producers of MHM materials. However, when shown new products, all girls showed interest and many asked questions, indicating conditions are favourable for organisations/ companies to trial low-cost pads.

4.3.3 K3: Effective use of pads

89% of Afripads users and 73% of Makapads users received training about how to use the pads. Leonarda, an Afripads user who missed the training session, explained that she had sufficient knowledge about how to use Afripads from the information leaflet that came with the kit. Instructions were in both Luganda and English. She predicted that the English translation was referred to more because that was the language schoolgirls were familiar with reading. Makapads users who were not informed about the product by the CGC didn't appear concerned to have missed the instruction session, as the use of Makapads seemed obvious to them. Most girls seemed to learn about the length of time they could go between pad changes through trial and error: it was different for each user.

All girls interviewed stated that they wore underwear all the time, implying that all girls had at least two pairs of knickers. A few CGC or refugee girls who were used to receiving handouts admitted that they would like to receive more underwear. Half of them claimed to have never received underwear from their sponsors and the refugees who had done so explained how it had been a few years ago: they were awaiting another distribution. The distribution of underwear by CGC appeared a little haphazard: the girls couldn't explain why some had received underwear and others hadn't, although Alice and Juliet had come to the conclusion that underwear was a reward for those sponsored girls who had performed well in exams.

Initially CGC had distributed basic Makapads (those without the adhesive strips) and knickers, but had received feedback from the girls that the pads moved too much. To compensate for this CGC requested that Makapads supply underwear with elastic sewn into them to hold the pads in place (as shown in Image 4.1). These were still being trialled at the time of the interviews, but initial responses indicated that the pads moved less, but that the elastic strips were too close together and often soaked up blood. This meant that the knickers needed to be washed more



Image 4.1: Example of knickers distributed by Makapads, with elastic to hold the pads in place

regularly. Positioned on average at only 8cm apart and often with evidence of poor quality tailoring, this intervention seemed crude and probably not designed by a user. In comparison, the Makapads distributed by UNHCR in the refugee settlements had self-adhesive strips on the base which seemed a better solution. A further reason for discouraging the distribution of knickers with elastic was highlighted by Shikira who noted that during non-menstruation usage the elastic in the underwear caused unnecessary discomfort.

More girls knew about using incinerators or burning pads than actually did so. This is discussed more in 4.5.4, but demonstrates that knowledge does not necessarily lead to action.

4.3.4 K4: Sources of information

Half the schoolgirls (n=130) interviewed said they had acquired just enough information before they started their monthly periods to be able to cope. A quarter stated they were completely prepared whereas a quarter professed they did not have enough information about their body changes and what to expect. A few admitted they were very concerned and frightened by the sight of blood for the first time because they were unaware of menstruation. A story told by an American woman volunteering with the Foundation for Sustainable Development about such a girl is told in Figure 4.2

Menstruation is not taught in the curriculum. They [schoolgirls] learn from their parents. Teachers might teach them in Biology... but not much.
- Florence, teacher

Maria, a teenage girl, had not been informed about menstruation. Upon seeing blood for the first time she was frightened and thought she had contracted a disease. She confided in her boyfriend who took advantage of the situation. He told her that sleeping with him was the way to cure the "disease". She did so, unaware of his HIV status. Maria is now dying from AIDS.

Figure 4.2: Story

Most schoolgirls (88% (n=119)) received information about menstruation verbally from people known to them. This indicates that the pedagogical style in Uganda is predominantly auditory, as opposed to visual or kinesthetic. Interestingly only 33% stated school-related sources (teachers, books and leaflets) as their primary source of information, with teachers contributing to 29% of that number, as shown in Figure 4.3. This is more than the 20% in WaterAid's research in Nepal (WaterAid, 2009) but is somewhat negated by the fact that only 10% of the girls regarded teachers as their main confidants (see 4.4.4).

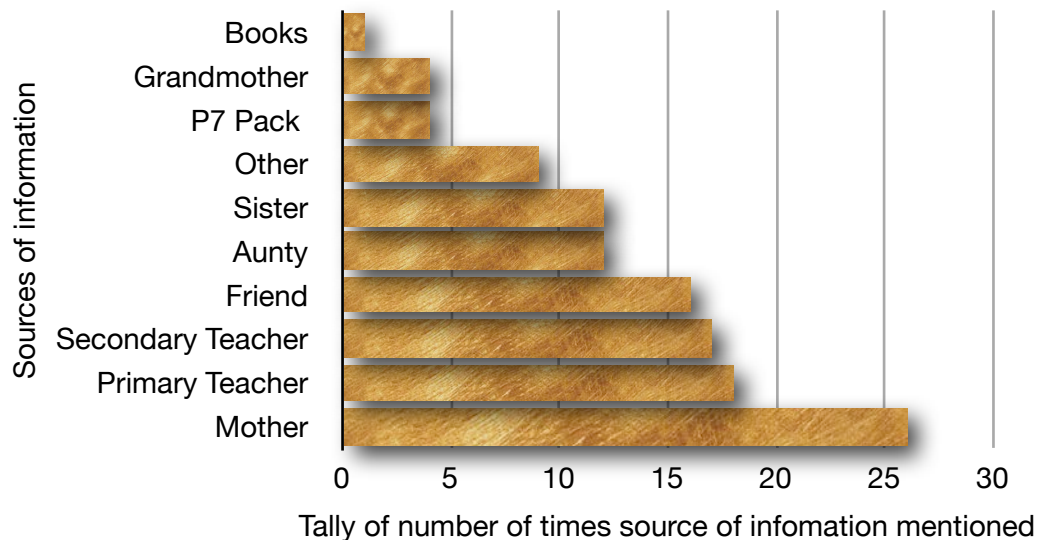


Figure 4.3: Sources of information

Interestingly primary teachers were slightly more significant educators than secondary teachers, highlighting the need to train such people well. Of the secondary school teachers interviewed, only a handful had received training about how to teach MHM, and they were science teachers. This demonstrates the extent to which MHM is still a taboo subject and explains how ill-prepared many teachers feel about addressing such issues. A few who were questioned about why more teaching about MHM did not take place, cited time pressure as their reason: time was proportionately devoted to examinable curriculum topics, of which menstruation is only a minute part of science syllabuses. An additional element in the teaching of MHM is the lack of female role models in many



Image 4.2: Ugandan classroom

schools. For example, in the best quality school visited there were only 2 full-time women teachers for 740 schoolgirls. The reason given by Diane, one of these teachers, was that being a full time mother and teacher is not possible (or acceptable) for many in Ugandan culture: “You are either a female and a spinster or... if you are married your job is at risk”.

Close female relatives and friends were cited as the main sources of information, especially mothers. This is an interesting finding because one has to question what is being taught by such people, especially if these women are illiterate or unschooled. It is likely that biological facts are presented along with cultural myths, which would explain some of the confusion over facts presented in 4.3.1. This finding is also significant for educationalists: perhaps the training of village women who are mothers, aunties and sisters may be more effective for information dissemination than the training of teachers. Peer-to-peer information sharing also accounted for 14% of knowledge sources, underlining the importance of accurate understanding of MHM facts if such information is going to be passed from one girl to another.

Information, education and communication (IEC) materials, such as brochures, posters, leaflets were severely lacking. Even though radio programmes and newspapers were popular sources of information, only one schoolgirl reported receiving information about MHM this way. More research needs to be conducted into the impact such materials could have on schoolgirls’ understanding of MHM issues.

4.4 Attitudes

4.4.1 A5: Comparing female hygiene protection materials

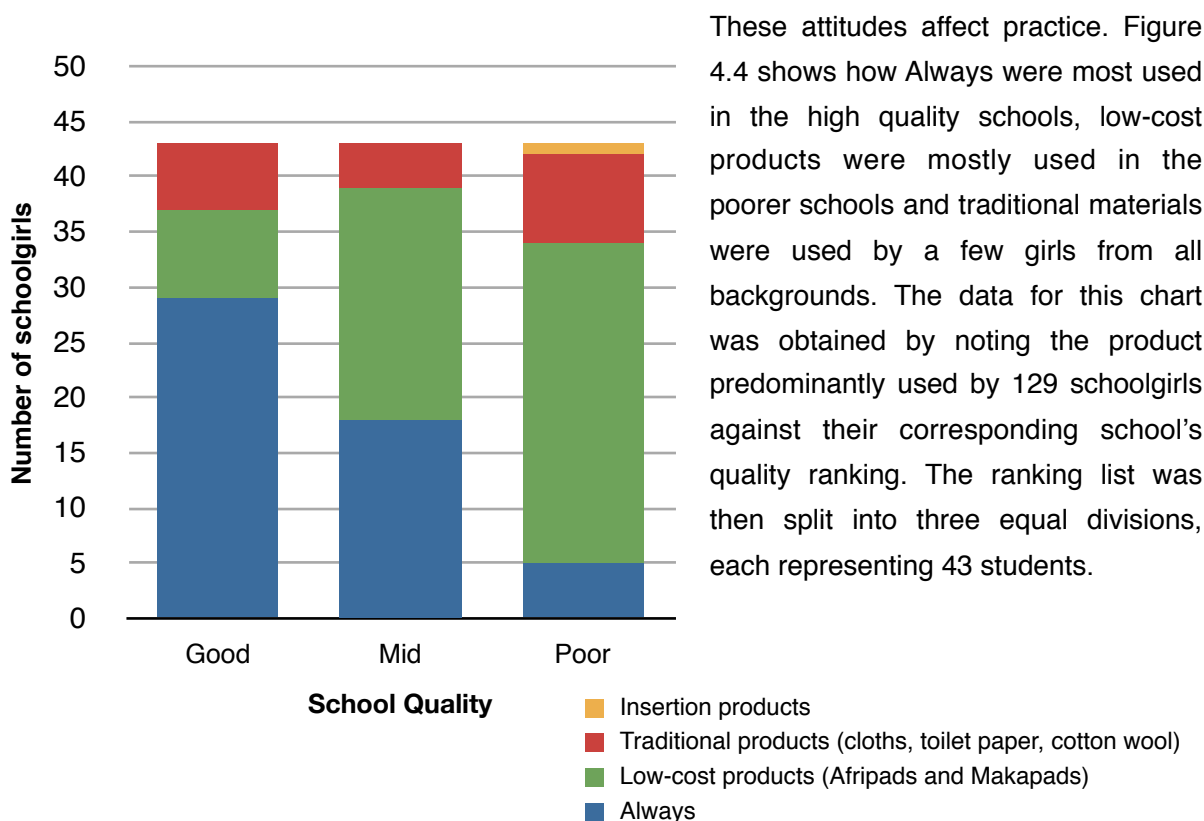
a) Overview of materials used

Schoolgirls reported using cloths, Always, Afripads, Makapads, toilet paper, cotton wool wrapped in gauze and tampons to absorb their menstrual blood. The most reported used items were Always, although, based on social biases (see 3.7) and inconsistencies in the data provided (see Table 3.4) the accuracy of this finding is questionable.

If Always, or an equivalent purchasable disposable sanitary pad, were given freely to Ugandan schoolgirls, there is no doubt they would be widely used. Comments from nearly all schoolgirls implied Always would be the protection material of choice if price were not a consideration. Always are perceived to be a high-quality product; a perception which has developed, or at least been reinforced by the fact that they are expensive and consequently used by the wealthy. An added dimension to this attitude is that for rural dwellers, cities are perceived to be centres of affluence, opportunities and modern ways. Hence why cloths and poverty, a traditional lifestyle and rural living were often expressed as intertwined concepts, as articulated by the matron of a good quality boarding school when asked what products the girls use: “Here is modern. They use sanitary pads. They

Rural parents are poor and they can't afford to buy Always. They use rags, some toilet papers, some cotton wool and a few can afford Always. But when they hear about Afripads most of them use Afripads because they are cheap and comfortable.
- Irene, Afripads Workshop Manager

don't use cloths. Pads are part of the school requirements." When asked about the girls use of rags, she continued "They are rich... they don't see why they should wash [cloths/low-cost pads]. Their fathers have money so they can buy."



These attitudes affect practice. Figure 4.4 shows how Always were most used in the high quality schools, low-cost products were mostly used in the poorer schools and traditional materials were used by a few girls from all backgrounds. The data for this chart was obtained by noting the product predominantly used by 129 schoolgirls against their corresponding school's quality ranking. The ranking list was then split into three equal divisions, each representing 43 students.

Figure 4.4: Comparison of products used with quality of schools

Only the product used the most during a girl's period was taken into consideration in the data analysis above. However, most girls reported using a combination of products depending on the following factors:

- The day's activities: Girls reported wearing materials they considered to be more protective when they had to walk long distances, travel on public transport or undertake activities away from home.
- The day of the week (or year): More protective materials were worn for religious or cultural ceremonies where discretion regarding menstruation was of paramount importance. Churchgoing students, accustomed to wearing their 'Sunday best', also took this to include wearing the best possible padding materials.
- The day of the month: It was very common for girls to wear the most protective materials on the days of their heaviest flow, typically days two and three.
- The day in the term: Boarding students would often begin the term with disposable products as part of their school requirements, but if they ran out in the course of time, they would revert to washable, cheaper or free materials.
- The time of day: Day scholars tended to wear traditional products or those that might leak in the evenings and at the weekends when accessibility to a bathing area and/or other protection materials was usually better than at school.

Thirteen out of the 18 schools visited were boarding schools, containing a mixture of boarding students and day scholars. There was no significant correlation between schools' quality and the presence of boarding facilities. However, there were some noteworthy findings about the sanitary materials used by boarders in comparison to those used by day scholars. No boarding student claimed that the predominant product used for absorbing blood was traditional or insertion products, as shown on Figure 4.5. Also, it is interesting to note that Always were used more by boarding students than day scholars.

Not all girls in the intervention schools (Categories A and B) used the intervention products. In order to understand the reasoning for this, each user group was asked in turn about each of the four product types highlighted above. The following four sections summarise their responses.

b) Use of Afripads

The main reasons given for using Afripads were that they were soft to wear, reliable (as in leak proof) and cheap (in comparison to Always). All Afripads users preferred them to cloth, especially because they are more comfortable. This was not surprising: if Afripads were not better than a free product why would girls spend money on them? What was interesting, however, was that when Afripads users were asked to compare Afripads to Always, 28 out of 29 respondents still said Afripads were better overall. The extent to which these judgements were based upon value for money as opposed to product design was not clear.

There were two main reasons given by schoolgirls who could have used Afripads but didn't:

1. Girls attending good quality schools, thereby assumed to be from more affluent backgrounds, were uncomfortable at washing materials containing their menstrual blood. It was considered "dirty" and "irritating".
2. Girls attending poor quality schools, thereby assumed to be from poorer backgrounds, perceived Afripads to be expensive especially by those used to using rags. However, on a few occasions the girls hadn't considered the price difference of Afripads with purchasable local items. For example, Stella stated that she didn't use Afripads because she couldn't afford 3000 UGX, but when she was asked to calculate how much she spent each year buying toilet paper (the material she used) she was interested to discover it was more than 3000 UGX (US \$ 1.36).

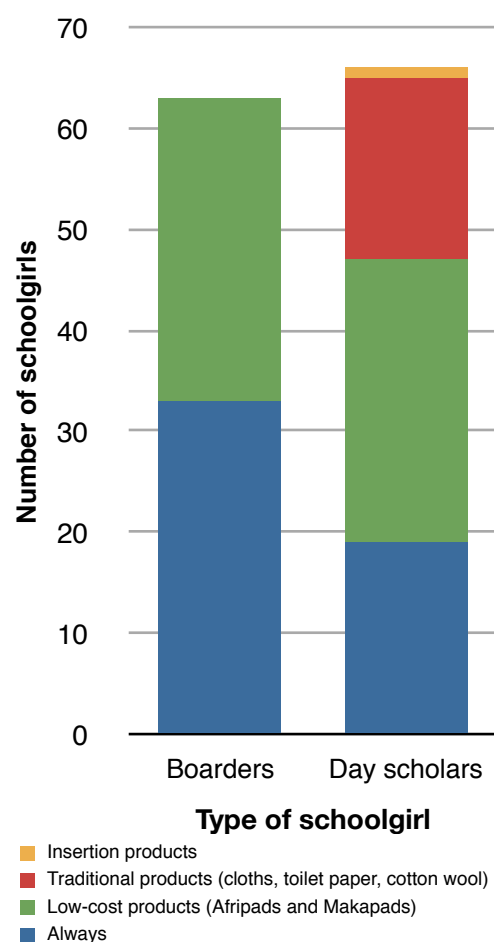


Figure 4.5: Comparison of products with type of students

Ancilla also mentioned that Afripads appeared bulky. She was concerned that if she used them, a bulge would become apparent in her skirt. However, this was a concern voiced by some girls who used Always and traditional rags as well, suggesting this is an apprehension about sanitary pad usage in general.

c) Use of Makapads

56% (n=27) of schoolgirls who were supplied with Makapads had used them more than once, although some had only been supplied with them two weeks before the interview so had not yet had chance to trial them. The fact that Makapads were supplied for free was the main reason given for their use and, out of the seven girls asked to compare them to cloths, none said Makapads were worse. The absorbency, especially with regard to the pads' thinness in comparison to Always was the biggest concern as voiced by Patience: "Makapads easily become wet and cause wounds". Hence a few girls admitted to having tried Makapads, but reverted back to cloths as they felt more confident in the protection rags offered.

Makapads are better [than cloths] because they are disposable. Cloths are unhygienic, especially if there is a soap problem.

- Perican, Makapads user

Non-users, when shown Makapads for the first time, had mixed opinions about the product. If they had to purchase them at 900 UGX (for a packet of 10), only 30% (n=34) said they would do so. But if given free, more schoolgirls would be interested. Again, the small size was given as the main concern: the girls questioned whether menstrual blood would leak around them (as they don't have 'wings') or through them.

d) Use of Always

As mentioned in section a), Always, or similar disposable sanitary pads, were the product that most girls aspired to using. A few girls reported changing from using Always to Afripads for the sole purpose of saving money. However, most users of Always were satisfied with the product and therefore not in any rush to change their hygiene behaviour. In the same way that someone who progresses up the sanitation ladder rarely reverts back to a lower 'rung' out of choice, so schoolgirls who can afford to buy Always (the aspired-to female hygiene product) admitted an unlikelihood of using low-cost products. For such schoolgirls, low-cost was associated with low quality.

Always hold blood for a long time: it doesn't go through onto your clothes.
- Medias, Always user

The common reasons given for preferring Always were that they do not require washing, they are absorbent and rarely leak and they are lightweight and secure in underwear. According to a few girls their choice of Always was due to them being perceived as the product that caused least sweating and therefore the least chafing at the top of the legs. However, this was not universally agreed: some users of Afripads and cloths also made similar claims regarding their chosen products.

e) Use of traditional materials: cloths, toilet paper and cotton wool

Cloths or rags were used because they were readily available and free. Likewise, toilet paper and cotton wool were accessible in most small stores and many kiosks.

Cloths were typically old strips of material that a schoolgirl had been given by her mother or female relative. Examples include ripped up old skirts, shirts and bed sheets. Cotton was the preferred type of material although the girls admitted to using anything that was available. The wad of cloth would be created by folding the material and placing it on the crotch of the knickers. There was a fear among many girls that if they moved too much the cloth would fall out of their underwear, which discouraged them from participating in sports or long walks during menstruation. To compensate for this girls would use their tightest knickers during menstruation. No girl questioned had considered wrapping the strip of cloth around the crotch of their knickers as a holding mechanism, perhaps because this would use up more material than the wadding technique.

Cotton wool was only used by a few girls, most of whom had access to a health centre or pharmacy from where they purchased a roll. Typically girls would take a patch of cotton wool, wrap it in gauze or a thin cotton material. Once blood-filled, they would dispose of the cotton wool but wash the gauze or cloth for re-use. The girls calculated how much cotton wool they would require for each change by trial and error. Monica went so far as to explain how she had learned about the need for the cotton wool to be wrapped in gauze or cloth by unfortunate experience: unconfined, hot, moist cotton wool has a tendency to disintegrate and cause irritation when it rubs against skin.

Toilet paper (or “TP” as it was called by the schoolgirls) was used in a similar manner to cloths. Connected sheets would be folded about five times to form a pad that was placed inside a girls’ underwear. Typically a girl required two rolls of toilet paper for each menstrual cycle, and had to change the TP more regularly than if Always was being used because of its lower absorbency capacity. Julie, one of a few girls who often used TP, admitted that she thought that she walked differently during her periods to limit the chance of TP falling from her underwear. This was a cause of embarrassment for her.

f) Use of tampons

Only one schoolgirl used tampons although many were intrigued by the product when shown. The main reasons given by schoolgirls for not using tampons were a lack of knowledge about, and accessibility to them, and a fear of unknown hygiene practices. About two thirds of the girls who were shown the product admitted that even if tampons became more available they probably wouldn’t use them for reasons outlined in the following quotes:



Another factor affecting the use of tampons is their cost in comparison to locally available materials. Typically costing 3000 UGX (US\$1.36) for 20 tampons, the cost is comparable to Always. Like Always, tampons remain a product associated with the rich women from urban centres.

These products [tampons] are not common. I read about them at university. The rich classes had come across them in Kampala. In Masaka I have not seen anyone using them and I have not seen them anywhere.

-Esther, school counsellor

The one schoolgirl and few teachers who did use tampons were impressed by the product, describing how tampons enabled them to continue with everyday activities without fear of leaking, having bulky underwear or material falling down with movement.

4.4.2 A6: Effect of pads on confidence and dignity

Overall, girls' confidence and sense of dignity had somewhat improved by using low-cost products, but probably not as much as would have been hoped for or anticipated by the producers. It was assumed by the author that reducing the likelihood of leakage would be the primary way to build confidence but this appeared to be only one aspect of a bigger picture. Certainly many users of Afripads who had previously used cloths commented positively on the difference they experienced, although the reasons for this, whether leakage reduction, comfort, the reassurance of owning a pre-made product or improvements in general hygiene, were difficult to disentangle from each another. By contrast, the confidence of schoolgirls who used Makapads did not increase as much as Afripads users because of the product's perceived (and perhaps actual) absorbency problems related to their small size.

The hygiene practices surrounding the low-cost products seemed to be mentioned more as a reason for affecting dignity than the actual products used. This was particularly evident with regards to changing pads (see 4.5.3). Another significant challenge to the long-term dignity of schoolgirls were social and psychological obstacles. The perception from nearly all the schoolgirls interviewed was that menstrual periods were annoying, embarrassing and painful. Talking about menstrual hygiene practices was a taboo and, apart from in two boarding schools where there were counsellors, there was no forum for the girls to openly discuss and question menstrual hygiene. Schoolgirls even said they found it hard to trust one another, fearing rumours would spread about their state and they would be teased by other students, both boys and girls. For many, menstruation remained a very personal matter where they perceived seeking ways to address their questions and concerns to be culturally inappropriate: a sad reflection on the voice of young women in Ugandan society. As a consequence, fears and misunderstandings were evident. These psychological preconceptions were deemed by the author to be the biggest barrier to improving self-confidence, especially for the poorer schoolgirls.

4.4.3 A7: Attitudes of non-users towards pads

a) The male teachers approached in this research were far more open to discussion than expected. Many of them were not aware of the extent of embarrassment felt by some schoolgirls

when menstruating, as voiced by headteacher Moses who stated “We do not have cases where girls leak in class. I have taught for some years but I’ve never seen that!” As to whether leakage is more of a perceived problem or an experienced problem, the fact that there are low-cost



Image 4.3: Male teachers learning about Afripads

products available to enable schoolgirls to feel more confident was of interest to the men. Their questions tended to revolve around price, marketing and business opportunities, with at least three male teachers enquiring if they could sell Afripads on commission. Such enquiries indicate that men perceive that there is a need for such products. Although there was interest in the papyrus inner lining and manufacturing techniques of Makapads, when the two products were compared, men thought Afripads were better products overall because of their re-usability factor.

Such interest was apparent when, following an explanation from the Afripads director (see Image 4.3), some male teachers purchased Afripads for their female relatives. In contrast, the benefits of Makapads highlighted by a male headteacher of a Category C school, were the employment opportunities created for schoolgirls in manufacturing them. Little mention was made about the quality of the product itself.

b) NGO workers were generally interested in both products. A few knew about Makapads, whereas only one (FAWE) had seen Afripads. This is no doubt due to the media attention Makapads have received in recent years, especially in Kampala. As with the male teachers’ interest, the holistic approach to addressing the pad problem and the employment opportunities accompanying the production of Makapads, is what NGOs found attractive about the product. For example, the Watoto Living Hope project approached Makapads about opening a workshop to employ vulnerable women. Opened in Gulu in June 2010, the Makapads partnership is primarily seen as “a skills development opportunity for the ladies” (Watoto, 2010). The actual product development and use of pads seems to be of secondary importance, probably because demand is not being contested: UNICEF and UNHCR have MoUs to purchase most of the pads. However, when donors and NGOs who purchased Makapads were introduced to Afripads, all were interested. Representatives of a few NGOs even stated that their knowledge of Afripads was going to make them reconsider their choice of donation product, especially because washable pads could save them money. Interestingly there was no mention about trialling which pads are the most absorbent, comfortable and acceptable to the girls: a sad reflection that beneficiary opinions were not a foremost consideration of the NGOs interviewed. At the time of research, Afripads were not selling to any NGO in bulk so a comparison between Makapads and Afripads purchasers could not be made.

4.4.4 A8: Menstrual hygiene advisors / schoolgirl ‘confidants’

There are similarities between the people from whom schoolgirls obtain information about menstruation and who they confide in about managing their periods. This is not probably not surprising but a few subtle differences are noteworthy. Whereas teachers are the primary source of information, they lag behind mothers, aunties, sisters and friends when it comes to being sought for advice (see Figure 4.6). Many girls explained that this was because they had reservations about talking to their teachers because such figures of authority were often perceived to have harsh, rather than compassionate personalities. Many girls did not feel confident asking embarrassing questions or disclosing problems to such people. This was no doubt exacerbated by teachers’ lack of confidence and time pressures. One school matron’s unsympathetic attitude was displayed when she claimed there were no girls in the school who suffered with dysmenorrhoea, whereas 5 girls out of the 11 girls interviewed in the school claimed they did, and had to take time out with the school nurse. Unless this particular matron was genuinely unaware of the problems, it is no wonder the girls chose not to approach her for advice if she just denied MHM problems existed.

I don't trust the teachers because they can talk
-Gertrude, schoolgirl

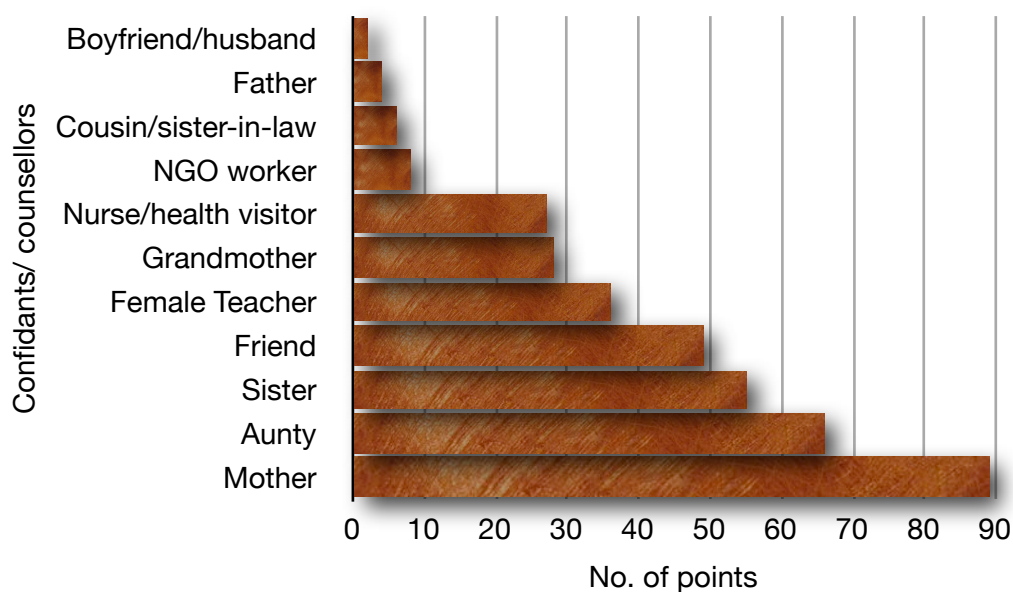


Figure 4.6: Schoolgirl preference about confidants

Other noteworthy outcomes from the girls’ answers are stated below:

- While friends are approached more than sisters and aunties for information, the opposite is true when girls need MHM counselling. This suggests personal matters are deemed to be family matters, accounting for why 3 out of 4 girls cited turning first to a family member for advice.
- Very few of girls felt comfortable speaking with men about MHM issues, even male family members.
- Refugee or orphaned schoolgirls tended to seek more formal sources of counselling such health professionals or NGO workers. This indicates that the services of such professionals are reaching the most needy, the people group often targeted for such interventions.

4.4.5 A9: Cultural and religious viewpoints

No schoolgirl viewed menstruation as a positive experience. At best, periods were regarded as occurrences that had to be endured. At worst they were feared owing to the pain, embarrassment and disruption they caused to daily life. This was not aided by the myth in the Buganda tribe that menstrual blood could be used to curse. Typically aunties (literally the sister of a girl's father) would demand or steal the first menstrual cloth from their nieces and keep it as a tool for bribery throughout the girl's young adult life. A number of schoolgirls explained that their aunties were at liberty to take the blood-stained cloth to a witchdoctor who could pronounce infertility, long periods or painful childbirth over them. Hence many girls had a fearful respect towards their aunties, as described by Allen in Story 3 below. Interestingly a number of older women, including a school matron, did not believe in this superstition but used it to wield authority over the girls. Teacher Sarah explained how she kept up the myth because she viewed it as a training tool in personal hygiene: without it "girls would throw materials everywhere ruining a clean school environment". This myth perturbed many schoolgirls though, as was evident when girls in at least four different focus groups asked about the reality of this superstition. (This posed a slight ethical dilemma for the researcher.) The myth was often expanded to suggest that anyone who *saw* another's menstrual blood could curse them, hence girls' fear of leaving blood-stained materials in public places. At times even this old wives' tale was elaborated to the extent that adolescent girls would not leave clean or unused cloths or pads in public places.

A girl's first period is culturally significant for the Buganda tribe. According to tradition, this occasion is important because it signifies a girl is of marriageable age provoking a father to covet bride wealth. This is still partly true today. Whether or not a girl's parents intend her to marry young, nearly all Buganda parents initiate some rituals for their daughter to undertake. Such rituals usually last four days and are referred to as 'kwer panon' which, translated means 'celebration for four days'. This is an ironic expression owing to the fact that it has connotations of isolation for girls. There is a lot of secrecy surrounding 'kwer panon' but a number of schoolgirls had common experiences and disclosed the following constraints:

- A schoolgirl is contained in her bedroom
- She is not allowed to cook, fetch water, sweep or do any other housework
- She is to avoid speaking with male relatives, especially those of the older generation
- She must eat alone
- She is made to count something (e.g. roof beams, sticks on the floor) and the number she reaches signifies the number of days that her menstrual cycle will last.
- She is not allowed to walk outside the compound or cross roads.
- She should bathe regularly, often with herbs prescribed by a traditional healer.

A number of schoolgirls were told that the 'punishment' for non-compliance with such conventions would result in reproductive difficulties in later life. About 65% of girls questioned underwent some such procedure when they began menstruating. School attendance for the others was not disrupted, mostly because they were boarding students and away from home.

Figure 4.7 puts some of the points above into context by narrating three stories told by schoolgirls about their first menstrual experiences.

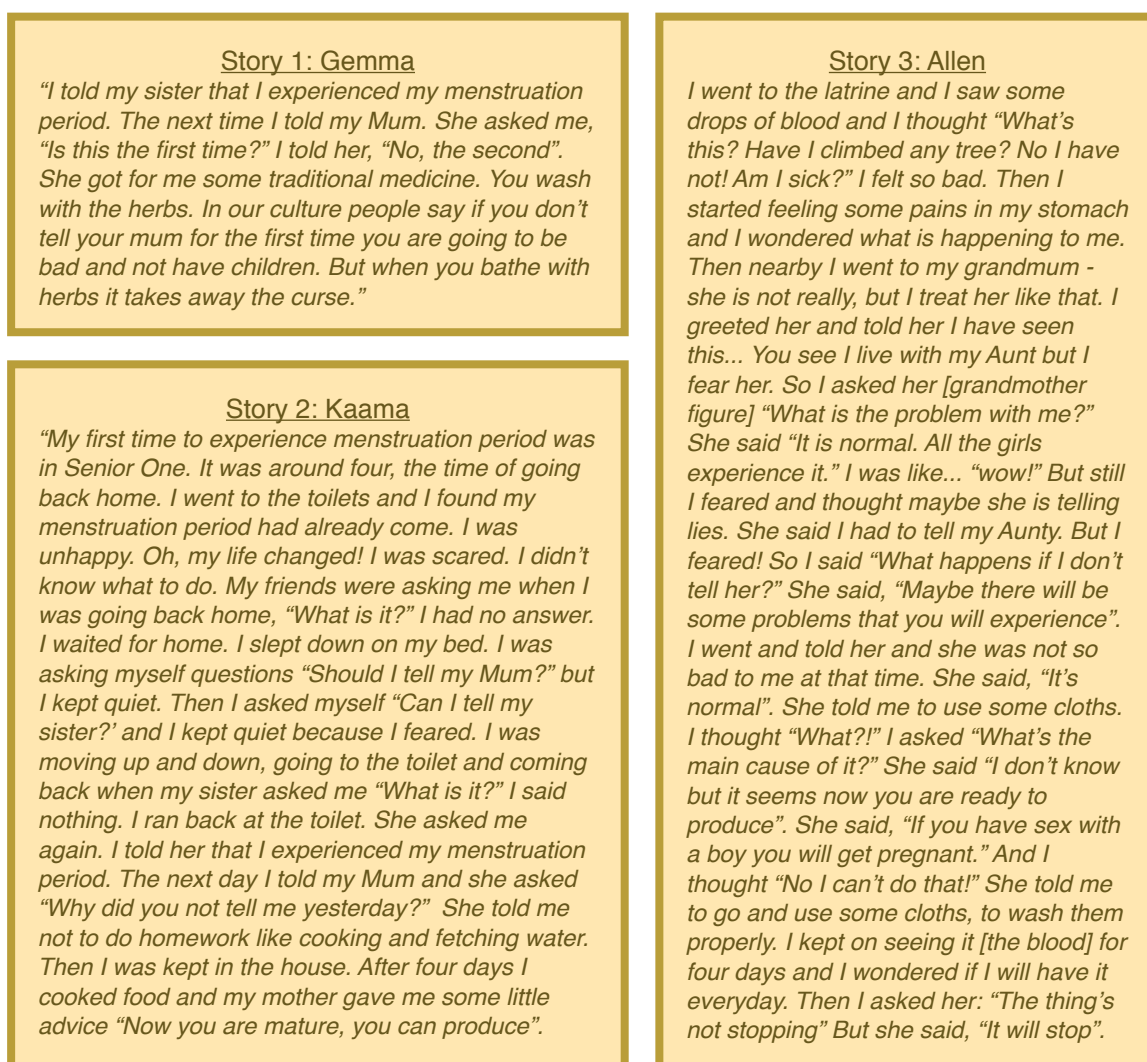


Figure 4.7: Schoolgirls' stories of their first period

Beyond the first period, Buganda girls did not have to miss school during menstruation. However, there were still myths that, to a greater or lesser extent, evoked adherence to certain practices depending on family upbringing. Elizabeth Kalemera of FAWE-U succinctly outlined some of the key taboos displayed in Table 4.3.

Table 4.3 Myths about menstruation in Bugandan culture

| Restrictions on menstruating women | Consequence of breaking the custom |
|--|---|
| a) Do not touch a young girl's waist | The young girl will also experience menstruation immediately no matter the age. |
| b) Do not cross a pumpkin garden or a field where groundnuts are growing | Pumpkins in the garden will get rotten and the groundnut field will produce a poor yield. |
| c) Do not shower with a lot of water | The running water will cause a woman to bleed too much. |
| d) Do not look in the mirror | The mirror will rust. |
| e) Do not enter a kraal (cattle pen) containing pregnant cows | The cows will miscarry. |
| f) Do not carry a baby | The baby will develop rashes. |
| g) Do not use wells | The well may dry up or become filled with blood. |
| h) Do not leave pads/cloths where a dog can sniff it | The woman whose pad the dog sniffs will become infertile |

Many of these beliefs concur with what was discovered during the literature review (see 2.7). Of particular interest to water and sanitation specialists are restrictions c) and g), although a few girls who were asked about these did not strictly adhere to them. They considered that such constraints were practiced by less educated people, dwelling in the “bush” (i.e. remote rural areas such as Karamoja).

No girls mentioned religious restrictions placed on them during menstruation although Amina, a Muslim student teacher suggested girls should refrain from entering the mosque during their periods. She explained how the use of tampons would not be acceptable to many Muslim families. But this was inconsistent with the fact that the only schoolgirl found who used tampons was a Muslim. Perhaps this suggests that menstrual practices are more determined by culture than by religion.

4.5 Practice

4.5.1 P10: Availability of pads

a) Afripads

Probably the biggest reason why Afripads were not used by more schoolgirls was because they were not readily available to purchase. 83% of users (n = 41) obtained their pads from a promoter who visited their school or directly from Afripads employees. Afripads menstrual kits seemed popular products, mostly because of the re-usability factor, but demand alone was not enough: there needed to be more supply. A marketing strategy was still being established during the time of research as the views of schoolgirls and teachers were becoming better understood. For instance, boarding school students explained how their parents often bought them sanitary pads at the start of each term for their school requirements. Rather than Afripads turning up at a school unannounced or with minimal notice during term time when the girls may not have pocket money available, it was suggested that Afripads set up a stall during visiting days at the beginning of each term, so that parents would be able observe and purchase kits. This suggestion was being heeded.

On one occasion an Afripads outreach worker had left pads in the school canteen (small shop), after agreeing to a trial with the shop owner where she sold them on commission. However, when girls in the same school were questioned about their accessibility to Afripads it became apparent that they did not know such products were available to purchase from a small shelf in their own school. This situation demonstrated the need for clear communication and good marketing.

Two pharmacists and two store managers interviewed had not heard about Afripads but all said they would be prepared to test demand by stocking a few and trialling their popularity. They considered the re-usability factor to be the product's main benefit.

b) Makapads

Similarly, Makapads were not available for purchase in shops at the time of research. Most packs were purchased in bulk by UNHCR and distributed to the women in the camps by GTZ. A few NGOs were able to purchase packs for a higher price which they then distributed to beneficiaries. At the time of the research, there was no mechanism for schoolgirls to purchase Makapads directly from the workshops. However, there were plans for Makapads to become commercially available in shops when more production sites opened and they are able to produce the pads in large quantities.

Schoolgirls supported by CGC were able to access pads more readily from their sponsor. Groups in three schools explained that they could take up to three packs at the beginning of each term as part of the school requirements kit provided by CGC. If they ran out, in the course of time they knew they could obtain more free from the the CGC office or the female teacher in the school office who had been supplied with extra pads. However, no girl interviewed had been found to have gone for more Makapads, even though a few admitted they had none left. The reason for this was unclear although the researcher deduced embarrassment associated with asking for such products and a lack of affinity with the product itself as the major grounds for this.

c) Always

In comparison to low-cost products, Always (and equivalent brands) could be found in most well-managed stores in trading centres. Due to the fact that a store may only stock a small number of packets at a time and that supplies were not always predictable, the availability in one store could not be relied upon. However, owing to the fact that small stores typically would locate in buildings situated next to one another, the chance of someone being able to find Always in one of the stores if they searched a little was quite high. The main reason given by shopkeepers for not selling more packets of Always was that the price was beyond reach for many women.



Image 4.4: Always being sold in a local store

4.5.2 P11: Affordability of pads

71% (n=42) of Afripads users thought the price of 3000 UGX (US\$ 1.36) per kit was reasonable or even low. Only 5% said this amount was far too high, usually those comparing Afripads with cloths which can be obtained for free. Most girls realised the cost-effectiveness of purchasing reusable products in comparison to one-use purchases. As Madrine pointed out, an additional benefit of re-usable pads was that fewer trips to the shops are required, which could reduce

The Afripads group came and they are helping these poor girls. You can re-use them [Afripads] meaning that they are economical.
- Charles, headteacher

transportation costs. When the girls were asked if they would be prepared to pay more for a kit containing 2 base pads and 8 liners, 90% (n=29) replied affirmatively, with the maximum amount they would be willing to pay ranging from 3500UGX (US\$ 1.59) to 6000UGX (US\$2.72) with the median being 4320 UGX (US\$ 1.96). This is a notable finding, implying that Afripads could be charging more for their product. However, a balance needs to be maintained if the poorest girls are going to be able to benefit from Afripads also (see Chapter 5 for more details).

Makapads do not sell directly to schoolgirls but to NGOs and UNHCR. Makapads are sold to UNHCR at a discounted rate owing to the MoU that they have with them and the fact that UNHCR helped to generate the idea of Makapads in the first place. Makapads have a variable price structure for their range of customers which is also dependent on the type of product purchased. Prices range from 800 UGX (US\$ 0.36) to 1500 UGX (US\$ 0.68) as outlined in more detail in 5.2.3.

A pack of Always (or equivalent disposable product) containing 10 pads usually cost between 2500 UGX (US\$ 1.14) and 3500UGX (US\$ 1.59), which was not affordable each month for girls from poor or unsupportive families.

Most of these girls come from humble backgrounds so a girl can't just go to her parents and say "I want these pads". Parents will just say "Ahh, use that rag". But the rags are unhygienic."
- Moses, teacher

4.5.3 P12: Keeping clean during menstruation

a) Bathing shelters

Most girls (87% (n=115)) bathed at least once a day in outside bathrooms made of bricks. This figure could have been exaggerated because girls were asked where they usually bathed, which for half of them meant in boarding school facilities. Out of all the bathing places mentioned 59% had no roof and 49% had no door. This potential lack of privacy did not seem to unduly trouble the girls. Only 20% (n=98) considered their bathing facilities to be inadequate or very inadequate: much fewer than expected considering the conditions they described. Unfortunately the reason for this was not established, although one might hypothesize it is because they have low expectations and have developed strategies to avoid embarrassment when bathing (e.g. washing when it is dark). Examples of bathing shelters observed are displayed in Figure 4.8.



Figure 4.8: Examples of bathing shelters

Problems were voiced by day scholars who needed to wash themselves during the school day but did not have access to bathing facilities, either because they were not available onsite or that they were for boarders only. Even where day scholars were allowed to use boarders' facilities, most did not for fear that people would know they were dealing with menstruation. Instead they preferred to try and cope as best they could in the latrines or by over-paddling themselves and waiting for the end of the school day.

When you go to school and you don't have a friend in the dormitory there is nowhere you can wash.
- Ritah, day scholar



b) Water supply

Water accessibility was very varied both in the girls' schools and at their homes. In both locations the water sources predominantly used were outside taps and open wells, followed by boreholes at home or water tanks at school. Indoor piped water was uncommon: only 1 girl out of 75 questioned had a tap inside her family house. The length of time taken to walk to the main water source also varied considerably, from less than a minute to more than 50 minutes for both places. However, on average water was more accessible in schools: 40% of students could access water at school in less than one minute, whereas the figure was only 13.5% at home, and at the other extreme 31% of pupils had to walk for more than 30 minutes from home to collect water compared with 17% from school. Nevertheless, brief walking time to a water source does not necessarily equate to speedy access to a water source as voiced by Edith (below).



Although water on site, there is a big line coz there is only one tap. It can take 30-40 minutes to get ready to bathe.
- Edith, boarding student

Many schools had more than one water source, typically a tank onsite, perhaps a tap and



a back up source outwith the compound, such as a community well. In three schools students explained how they got water from a rainwater harvesting tank for 2-3 months of the year. In one quite remote school rainwater was stored for emergency purposes so the tap was padlocked and such water was not usually accessible (see first picture in Figure 4.9). Instead students had to walk to a nearby borehole to fetch water.

In all 18 schools visited, only one latrine/sanitation block had an internal water supply, and even that was a single tap with an inconsistent supply. Interestingly this was at one of the most esteemed girls' schools in the country. All other water for

Figure 4.9: Examples of school water supplies

bathing had to be taken by bucket, basin or jerrycan into the bathing shelter. Also, only one other school was found to have pre-collected water ready for use inside the sanitation block, but even that in total came to less than 20 litres. Anette explained how this was not a problem for boarders before or after school, but few would dare to be seen carrying water into the bathing shelter during the daytime. The reason for washing would be too obvious to classmates.

Three consequences of not having water available in a private space were noted:

- 1) Schoolgirls did not wash during the daytime, hence hygiene was compromised, infections were likely, as were odours. A good number of schoolgirls mentioned their embarrassment at smelling malodorous but not being able to do much about it.
- 2) Schoolgirls had nowhere to wash menstrual cloths, so they would tend to wear as much padding as possible to last as long as possible and then wash themselves and their rags in the evenings.
- 3) Schoolgirls were unable to discreetly wash any blood from their hands after changing their protection materials. Typically girls used their handkerchiefs or bits of newspaper for such purposes instead, but those who admitted this practice explained how it was far from ideal.

c) Changing menstrual protection materials

Female hygiene materials were usually changed at least once a day in school, although a few girls admitted avoiding changing altogether. This was due to the poor hygiene conditions of the changing facilities and/or a lack of privacy. Combining home and school data from 41 students, Figure 4.10 shows that over half of them used the latrines as their main changing area. This contrasts with Vermato's observation (2005) (see 2.5) that Ugandan women predominantly change in bathing shelters. Perhaps the behaviour difference was because the girls in this research were not living in IDP camps. The percentage of girls who changed their materials in the bathrooms could be accounted for by their daily bathing habits, suggesting that the girls would change their protection material after washing, but would not deliberately enter a bathroom just to change.

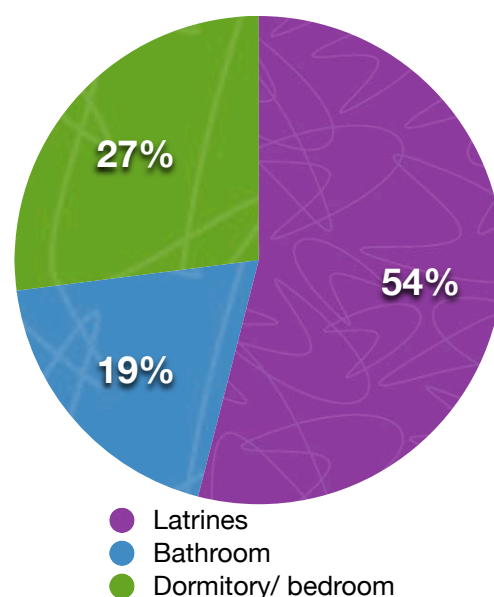


Figure 4.10: Pie chart showing where most girls change their menstrual protection materials

This needs further research, as too does the link between having somewhere to dispose of used menstrual materials and how much a changing place is used. Perhaps the predominant use of latrines can be attributed to there being discrete disposal points available.

I change pads in the dormitory because the latrines are dirty.
- Costa, boarding student

Despite proportionately being the most used locations, latrines were not deemed to be the most hygienic or pleasant place for

such a task. For many girls, especially those with shared bedrooms and living spaces, there were few other options if they wished to change in private. Those who were less self-conscious often used dormitories and bedrooms for changing. Unfortunately a distinction was not made between boarding and day students although the combined figure of 27% (n = 41) was surprisingly high. Numerous boarding students admitted changing in the dormitories when other girls were present, although they would try and hide behind or between the bunkbeds. Those



Image 4.5: Example of a school dormitory where there is not much privacy for changing menstrual protection materials

without bedframes tried to be discreet in the corner of the dormitory when few others were looking. Phyllis even mentioned that she changed her pads under the bedsheets to ensure privacy.

When questioned about the privacy of their changing location 43% (n= 58) of girls said they didn't feel they had enough privacy to change at school, compared to only 13% (n=30) who said this was the case at home. The addition of doors and locks were considered to be the most significant ways to lower these statistics.

4.5.4 P13: Washing and disposing of pads

a) Washing pads

No day scholar was found to clean her pads/cloths at school, for the reasons mentioned in 4.5.3a). 95% of those questioned washed their pads/cloths in the bathroom, usually whilst bathing themselves. The other 5% washed them in a basin in their dormitory or bedroom. No-one admitted to washing menstrual materials in a public place, probably owing to the fear of others seeing their menstrual blood and cursing them (see 4.4.5). All schoolgirls said they used bar soap or OMO (soap powder) to wash their pads: the ratio being of 70:30 respectively. Users of Afripads were questioned about whether the product looked dirty after washing. Only 1 out of 39 respondents replied "often", 3 said "sometimes" and 35 answered "never". Dorcus explained that the level of cleanliness which could be attained from washing Afripads was dependent on the length of time for which they had been soaked prior to being rubbed with soap. She reckoned Afripads that had been soaked for more than one hour pretty much washed themselves as the blood naturally leached out into the water. Interestingly, of the girls who left their Afripads to soak for the recommended time, most did so by leaving a covered bucket in their dormitory/bedroom. In the end though, once rinsed and rubbed, 35 out of 39 people questioned answered that Afripads "never" smelt bad, 3 said "sometimes" and 1 said "often". The low level of dissatisfaction suggests that the problem may be more to do with the washing technique employed by a few individuals rather than the product itself.

b) Drying pads

Figure 4.11 displays the results from a question posed to 47 girls about where they usually dry their reusable menstrual materials. Less than 2% of materials were exposed to direct sunlight, the optimum drying situation as recommended by Afripads owing to the bacteria-killing properties of UV light. As with underwear, menstrual materials were usually dried inside on pant

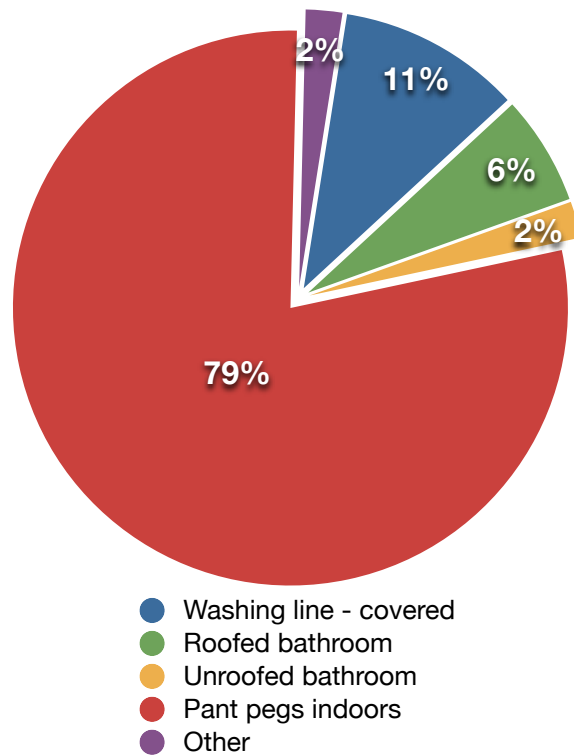


Figure 4.11: Pie chart showing where girls dry their menstrual protection materials

menstrual materials out to dry in direct sunlight, but intermediary practices are needed to set a chain of small behaviour change steps in motion. These could include training schoolgirls to hang their pant pegs outside covered by a cloth, or placing materials in a basin on the roof a building above eye-level or hanging them in a dry area of a female-only no-roofed bathing facility below the height of the top of the wall. Additionally inventors could create a drying device which allows for penetration of UV rays and heat but where underwear cannot be seen. The only problem with such a device would be that non-

We dispose of Always down the latrine. It's the only convenient place we have.

- Molly, schoolgirl

users would soon discover what they were for, hence the root of the problem - cultural intolerance - would not be resolved.

pegs (as shown by Image 4.6) because it was culturally unacceptable to have such items on public display (see 4.4.5). Even materials and underwear hanging indoors were usually covered by a cloth for extra modesty. The consequence of this practice was that pads and cloths took longer to dry than if they were outside, and in damp conditions they sometimes became malodorous. Typically it took 2 days for pads/cloths to dry thoroughly. Owing to the limited number of Afripads and cloths that some girls had, the slow drying rate meant that at times girls ran out of padding materials. Consequently 5 out of 33 girls admitted to sometimes wearing damp pads, which, as Josephine admitted, caused rubbing and skin irritation which made movement uncomfortable.

It may be a long time (if ever) before girls feel free enough to hang their underwear and



Image 4.6: Pant pegs being used to dry underwear in a dormitory

c) Disposing of pads

At home, all girls disposed of used pads or materials in pit latrines. At school the figure was 65% (n = 54). Other disposal points were buckets next to the squatting holes, incinerators or rubbish heaps.

Although incinerators for menstrual materials were observed in two schools, another three schools had burning areas that could be used. However, there seemed to be a discrepancy between having facilities and using them. For example, in one school there was no system in place for the pads to be collected from the buckets in the latrines and taken to the incinerator. Olive explained how this duty was a punishment for ill-disciplined girls, hence there being an added stigma associated with transporting others' used sanitary products. In that school, and many others, no regular routine had been established. Also, girls whose waste products were left for transportation admitted feeling embarrassed that someone else might see their used product and feeling anxious about whether their pads



Image 4.7: Incinerator without a door

would be taken to witch doctors. This sentiment was voiced by Katherine who said that unless an incinerator had a sealed chute leading into it, she would not dispose of her products in such a place. Neither of the two incinerators observed had such systems. In fact, one of the incinerators didn't even have a door and there was evidence that vermin and small animals had rummaged through the waste (see Image 4.7). This could be a frightening prospect for girls who believed the myth that a dog licking their sanitary materials would make them infertile (see 4.4.5).

Those who didn't hold such beliefs were found to be more casual about pad disposal, and teachers often mentioned being disgusted with the behaviour of girls who "scatter pads everywhere". Girls, on the other hand, were often at odds as to what to do: teachers told them not to dump menstrual materials in pit latrines but when the incinerators were far away or



Image 4.8: Sanitary pads disposal point in a latrine block. The pads dry out before being burnt.

involved walking through public places, their good hygiene principles were compromised. For example, Teklah confided that although there was a burning drum that girls were supposed to use, she had never done so because it was situated next to a guard's shelter where her actions would be observed. This point is strengthened in that the

incinerator/burning area that was deemed to be used the most was only accessible from inside the latrine block. Although girls had to walk from the latrine cubicle to the incinerator, disposal could happen relatively discreetly.



Image 4.9: A high-temperature incinerator, capable of burning sanitary pads

Source: Technology for Tomorrow (2010)

The problem with disposing of cloths, pads and other cleansing materials down pit latrines is that they fill up quickly. This is especially true of Always that are not particularly biodegradable. As highlighted in the literature review, no communal female pit latrines were found to have been constructed any bigger to cope with such additional waste material. In one school which had a lined cesspit, the pads and cloths hindered its emptying, as described by teacher Diana:

“Our toilets are having a problems because that’s where they drop them [sanitary pads]. They have to be evacuated every term. It becomes so expensive. Those pads block the pump of the cesspit emptier, so those men say ‘Your toilets are full of pads! Add more money!’ They leave the pads in the pits. They push them to the edge. Actually around two toilet rooms are not used now, because they are full [of pads]. So after two years the Sister [headteacher] will have to build more toilets.”

Such a problem adds leverage to the use of low-cost pads that easily decompose (such as Makapads) or do not need to be thrown away (such as washable pads like Afripads).

An alternative solution for the disposal of female sanitary materials is a specially-designed incinerator that can cope with the fact that pads may be wet at the time of ignition. Dr. Musaaazi, the inventor of Makapads, has trialled various designs of incinerators such as the one shown in Image 4.9. What was intriguing was that this device was not seen in any of the schools visited, nor even known about in all but one.

4.5.6 P14: Absenteeism

Trying to obtain accurate data about absenteeism was difficult, which could account for why such contention was identified about this issue in the literature review. Initially girls were asked whether they had missed any school due to menstruation in the last month. The succession of negative answers led the researcher to question the integrity of what was being heard. Two new questions were added to allow for triangulation of results (as described in 2.7): whether they knew of any girls who had missed school and if so, to estimate the percentage that had been absent. Comparing the results revealed some interesting facts:

- 14% (n=129) of girls admitted that they took time off school during their last period
- Most repondents (91% (n=107)) knew of girls who were often absent during their monthly periods.

- When 92 participants were asked to estimate the percentage of schoolgirls who miss one or more day of school each month due to menstruation, the average figure given was 30.4%, although the range was large.

These statistics reveal there is a discrepancy (of 16%) between the perceived level of absenteeism and the admitted level of absenteeism. The reason for this is not clearly known, but it does emphasize how caution must be applied when interpreting such data. It is likely that girls under-state their level of absence due to shame, but even if this is not the case, 14% is still more than the 10% usually quoted in literature (see 2.6). Another reason why 14% is likely to be a lower-than-actual figure is because nearly half the students in this research were boarders, for whom getting to the classrooms was easier and convincing adults to let them rest was likely to be harder (considering the point in 4.4.4 about the harshness of school staff).

There was also an inconsistency between the personal reasons given for menstrual-related absenteeism and why they perceived girls were absent. 71% of girls who admitted staying at home did so because of abdominal pains, whereas bodily problems, not having products and fearing leakage all ranked significantly as the perceived reasons for why girls generally were absent. The finding has crucial implications on the main research question. If less than 30% of menstrual-related absences are related to poor products, maybe development practitioners are tackling the wrong problem. 6.4 elaborates more on this matter.

There was no evidence to suggest that there was a direct link between a lack of pads or poor quality menstrual protection materials and school dropout. In fact, when suggested to Lilian and Sarah, two teachers, they both refuted the idea, claiming that early marriages and pregnancies were the main reasons for girls failing to complete their secondary schooling. Sarah noted how, sadly, many of these pregnancies from came from prostitution:

“If you get pregnant from school and everyone gets to know they usually don’t allow you to come back. You find some of them are forced into it. Most of the girl students here come from poor families and you may find that they have got a lot of needs, so... they fall into love with those bodaboda men...”

Two focus groups from good quality schools suggested that the percentage of absent girls depended on the economic status. They both reported that girls from wealthy families were far less likely to miss school than those from poor families. Although a lack of menstrual materials was given as the main reason for this, one has to wonder if attitudes towards education also explain the absenteeism: parents’ lack of encouragement may lessen a girls’ determination to attend classes.

6. Analysis

6.1 Revisiting the research objectives

Following the detailed presentation of findings in Chapters 4 and 5, this chapter aims to analyse the data from a wider perspective (see goblet analogy in 1.4) by returning to the four research objectives. Combining the material previously presented with the researcher's opinions, each research objective is handled in turn (6.2 - 6.5). The outcome from one objective is used to inform the next, owing to their progressive nature. Meeting the research objectives enables the main research question to be answered, as presented in the subsequent, concluding chapter.

6.2 Problems with MHM in school

Schoolgirls were specifically asked what problems they faced managing menstruation to avoid assuming their difficulties were predominantly related to a lack of sanitary pads. This approach proved to be valuable in that it highlighted that pain has a significant effect on the wellbeing of schoolgirls. Abdominal pain alone is the cause of most misery each month, ranked twice as problematic as a lack of padding material (a clear second scorer). Yet not one NGO or agency was found to be tackling this issue in the whole research period. The researcher can also not

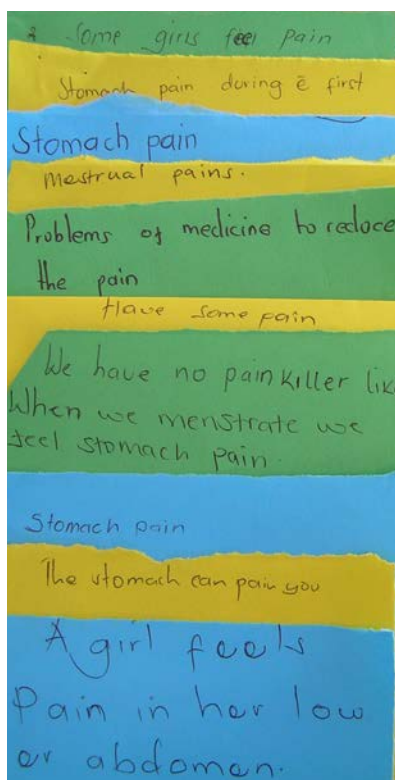


Image 6.1: Many groups of girls noted pain as a problem

recall hearing about any NGO doing so during 18 months of previously working in Uganda. This unaddressed issue is the silent feature of MHM. It needs to be made known and then tackled if there are going to be improvements to girls' experiences at school.

A corollary element to this finding adds weight to dispelling the idea that school attendance is linked to sanitary pad provision. The often-quoted fact that 1 in 10 schoolgirls skip school each month due to menstruation (see 2.6), is likely to be because of pain rather than a lack of protection materials. This suggestion is backed up by a quote on a UK health information website that states:

"Pain [during periods] is often mild, but in about 1 in 10 women the pain is severe enough to affect day-to-day activities. The pain can be so severe that they are unable to go to school or work." EMIS, 2009

If this is the situation in the UK, it is not ridiculous to expect this is the case in Uganda. If proved to be true, part of the justification behind the very existence of MHM programmes and businesses, including Afripads and Makapads, could be called into question.

Other health-related problems like back pain, weakness and nausea were often mentioned hence their high scores shown in Table 4.1 Overall, social concerns were the next major category of problems highlighted, ranging from fear of leakage to engaging with men, being shy to not being able to concentrate in class. The extent to which these problems are perceived or actual, imposed by culture or developed through experience would make for a fascinating further piece of research. Social change is not easy and it may take several generations to address some of the issues highlighted.

As expected and shown in Image 6.2, the other significant problem highlighted by schoolgirls was their inability to afford commercial sanitary pads. Secondary problems such as inaccessibility to pads and a fear of traditional materials leaking are also related, as were tertiary problems such as the lack of water for washing pads and unsatisfactory washing, drying and disposal facilities. Details 90 about the problems associated

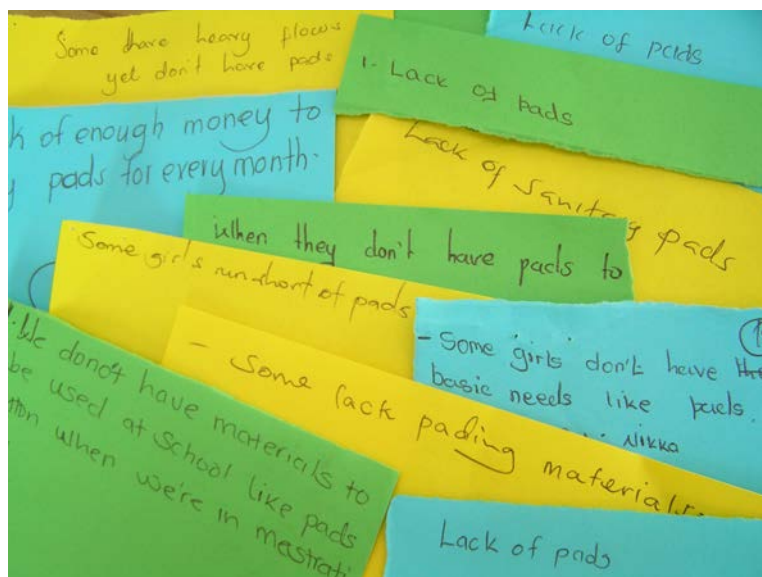


Image 6.2: Many groups of girls noted a lack of sanitary padding material as a problem

with all sanitary protection materials are mentioned through chapters 4 and 5. The lack of money for sanitary pads and other necessities was found to encourage some girls into prostitution. One group of girls explained how often men would not pay what they promised, receiving as little as 500UGX (US\$ 0.0004): not nearly enough for a packet of Always. These girls were aware of the dangers of HIV, STDs and early pregnancies but admitted not having other means of generating income. For such girls, the technological chasm between rags and Always was found to be very real. There is clearly still a need for Afripads and Makapads to be building bridges, even if a lack of pads is not *the* biggest MHM problem,

“As girls we need a lot of things. We need a lot of care and some of us don’t have parents. No one is there to take responsibility about us, so that forces you to do immoral things.”
-Shakira, schoolgirl

The lack of knowledge and understanding about MHM was a problem not so much uttered by the girls who were often unaware of the unknown, but observed by the researcher. More counselling and guidance is desperately needed in schools, especially taking into account a point raised by Marni Sommers in a recent webinar. She commented how, owing to modern trends in urbanisation and family dispersion from places of origin, grandmothers and aunts were less accessible. Traditionally these women had a role of teaching young girls about MHM. Schools are well-placed to confront this loss. However, for reasons mentioned in 4.3.4 and 4.4.4, this does not seem to be happening at the moment which, unless addressed expeditiously, may cause girls to be less informed about MHM in years to come than in years gone by.

In summary, the main problems identified in order of significance are 1) pain, 2) cost of commercial sanitary pads and 3) lack of education and counselling. Interestingly these problems incorporate all three aspects of KAP (knowledge, attitudes and practice) suggesting that the problems in managing menstrual hygiene are wide-ranging.

6.3 Solutions to the problems identified

Suggestions for how to tackle the three problems identified in 6.2 are given below. Although succinct solutions are proposed, they must not be misinterpreted as quick-fix formulas. Development practitioners know that it can take years to facilitate hygiene behaviour change, especially when reckoning with such a taboo topic.

6.3.1 Pain

Providing girls with basic pain killers would work out far cheaper than supplying them with sanitary pads, even low-cost ones, and may prove to be more helpful. Such programmes would have to include education to warn girls about the dangers of overdosing and to dispel any myths (see opposite). Additionally, in a culture where injected medication is often preferred to oral medication, attitudes towards ingestion methods would need to be modified.

In some ways tablets are dangerous. If you take too much of those tablets they can cause problems to your health... They tell us that instead of your period lasting four days it can last a week.
- Rose, schoolgirl



Image 6.3: A girl curls up in pain among firewood on the edge of the school compound

At the start of an era promoting corporate social responsibility, one wonders whether pharmaceutical companies could manufacture and distribute such tablets free of charge. At the very least, advocacy groups could lobby such multinational corporations to lower the prices of existing products to make them more affordable to the poor. In recent years Johnson and Johnson and Proctor and Gamble have supported the export of commercial sanitary pads to Africa (through projects such the Protecting Futures Campaign), which shows there is enough public (and subsequently political) resolve for

MHM issues to be tackled at high levels by multinational corporations. If the same amount of money put into sanitary pad provision was put into supplying pain killers, far more schoolgirls would benefit.

If I was the president I would bring lessons to the school to teach the girls [about menstruation] and bring them some medicine for the pain.
- Teopista, schoolgirl

An alternative suggestion is for research to be conducted into locally available herbs and plants that also have analgesic properties. To encourage local manufacturing in parts of Uganda, national health professionals and traditional healers could be given opportunities to develop their own pain relief. This would obviously require careful monitoring and supervision.

Finally, one must not forget the importance of a supportive, comforting environment in aiding schoolgirls cope with pain. Interestingly, in schools where there was a nurse, counsellor or a place to go and rest, girls appeared much more confident about talking about their problems and managing dysmenorrhoea. In essence, it comes down to the attitudes and motivation of the school staff. Although nurturing environments can be taught about and modelled, they can only be created through the willingness and determination of school leadership.

6.3.2 Cost of commercial sanitary pads

There are four solutions to tackling the problem of expensive sanitary pads:

a) Lower the cost This could be sought in a number of ways: pressurising manufacturers to lower their profit margins, reducing transport costs by manufacturing the products in Africa or lobbying governments to abolish the taxes on imported sanitary wear. Apart from the latter, these are probably unrealistic solutions.

b) Subsidise the cost As some smaller NGOs and well-meaning social groups are currently doing, benefactors can buy commercial sanitary products at market price in countries like UK and America and sell them on at reduced prices or even distribute them free (e.g. WISER and Lions-Rotary). These are unsustainable solutions.

Some large manufacturers of commercial sanitary pads such as Proctor and Gamble and Libresse have realised the need (and potential market) for sanitary wear in Africa and are trying to address it with their own products. For every packet of sanitary pads sold in the West, the corporations promise to donate a small percentage of the profit to supplying African schoolgirls with their product. The Dutch advert on the packet of Libresse sanitary pads appeals to the socially-conscious shopper (see Image 6.4). However, such campaigns are controversial, largely due to their underlying motives. In an article questioning the morality and cultural relativism of such campaigns, Huston (2010) points out, that “a cynical observer might note that P&G’s rationale behind their effort might be to create new consumers”. He goes on to note how “some argue that sanitary pads are a



Image 6.4: Advert on packet of sanitary pads from Holland

Western imposition on African societies, an infringement on traditional beliefs and systems”. Certainly the dependency created by free handouts must be questioned especially if young girls do not develop other sanitary protection practices. If large corporations were really interested in helping poor African schoolgirls one would think they would pour their profits into research and development of low-cost products. Consequently, corporate distributions of free high-quality sanitary pads are ethically-questionable solutions.

c) Promote re-usable materials Washable sanitary pads and menstrual cups can be re-used. They rely upon access to water, soap and good standards of hygiene. Menstrual cups, such as mentioned in 2.4.1, could be an effective solution, although, as noted about tampons, changes in cultural perception may first have to be tackled if insertion products are ever to become popular. Studies are needed to ascertain their feasibility in Uganda. In contrast, re-usable sanitary pads are culturally acceptable to all but the upper classes, because their method of use resembles that of cloth with which most poor women are familiar. Well-designed, leakproof re-usable pads are an obvious solution to MHM problems. Afripads have found a niche in the market.



Image 6.5: Visual comparison between the number of Always and washable pads required by a schoolgirl each year

Another washable pad occasionally promoted in Uganda, which is one step up from cloths, is the homemade pad (see Image 6.6). These come in all shapes and sizes depending on the teacher or CBO that is promoting them. Typically they are made of layers of new cotton material that can be fastened around the knicker’s crotch by material straps on either side of the pad. Some homemade pads



Image 6.6: A schoolgirl holding a basic material pad
Source: Twinomujuni (2008)

have the straps attached along the length of the pad so that they can be tied onto a material waistband. These are notorious for not being comfortable and restricting movement. More research is needed in the affordability, acceptability and washability of these pads.

d) Produce disposable pads more cheaply

Proponents of this solution argue that there is no need for sanitary pads to cost so much: they can be made locally with cheaper, natural materials. Although quality may be compromised, it is anticipated that their availability and affordability will make these relatively new products popular in the future. Whether made from papyrus, banana fibres, bamboo fibres, ash or pounded tree bark, there are plenty of African-based natural resources that could be used. To date,

Makapads are leading the way in terms of how far they have come with their product development, but more research, testing and business investment is needed if such products are really going to succeed in expanding the market.

6.3.3 Education and counselling

More education about the facts of menstruation and more counselling about the management of menstruation are desperately needed in Ugandan secondary schools. The most obvious way for this to be accomplished would be for the Ministry of Education to improve the MHM content of the national curriculum, provide IEC resources, promote hygiene groups such as GEM clubs, train teachers in how to teach such topics and counsel girls. Additionally schools need to take more responsibility for developing nurturing environments, ensuring good management and maintenance of water and sanitation facilities and providing soap and cleaning materials. Parent Teacher Associations exist in most schools in Uganda and could be utilised more in the promotion of menstrual hygiene to parents so that they know how to support their daughters each month and convey accurate information.

Boys also need to fully understand menstrual processes so as to reduce mysteries and dissipate misconceptions. These are best learned from sincere male role models. Such responsible male teachers should be trained in gender equality at teacher training colleges, so they learn to show respect to women and empathise with their monthly needs.

In the interim, before products such as Afripads and Makapads become more widespread, girls could be taught how to make cloth sanitary pads in school in order to move a small way up the ladder to improved hygiene. Such an activity would provide a reason for girls to initiate discussions with one another about MHM (peer learning) as well as present an opportunity to redress the lack of kinesthetic learning in Ugandan secondary schools (see 4.3.4). Health extension workers and female teachers would be the ideal people to facilitate such activities.

6.4 Significance of low-cost pads in alleviating problems

Research Objective 3 evaluates the impact low-cost sanitary pads have on schoolgirls' experiences. Simply put, they do make a difference, usually a positive one. Of the girls and schools visited, Afripads seem to have made more of an impression on girls than Makapads. Considering that Makapads performed better than Afripads in the absorbency tests, this is a little surprising. It may have something to do with the fact that, unlike the beneficiaries of Makapads, the users of Afripads had chosen to buy the product. Those who were not interested would not have purchased them (see 6.5). Assuming Afripads last for one year, as promoted, they work out about 11 times cheaper than Always and anywhere between 3 and 11 times cheaper than Makapads depending on the number and type of Makapads used.

As to the significance of alleviating broad MHM problems, the impact of the production and provision of low-cost pads is not as great as initially anticipated. This is because pain, rather than a lack of products was the biggest MHM problem encountered. For example, if a new

programme aimed at reducing schoolgirl MHM-related absenteeism could only have one priority, focussing on pain reduction rather than pad provision would probably achieve more. However, in reality, one aspect of a problem should not be tackled alone. Additional ‘hardware’ (in the form of pad provision) and ‘software’ (in the form education and counselling) would proportionally boost the success of the fictitious programme.

6.5 Future potential of low-cost pad designs, production and distribution

Afripads and Makapads are innovative products that have a lot of potential. In the author’s opinion, the designs both designs need revision in ways recommended in 5.1.2 and 5.2.2. For Afripads to be internationally accepted, the product’s absorbency needs to be improved. For Makapads to become commercially viable in the open market its size needs to be increased.

With regards to production, both the Afripads and Makapads models have been well-thought through. Afripads are easier and simpler to produce. There are fewer stages in their manufacturing and less time is required at each stage, hence, with a team of three people, an Afripads menstrual kit can be made from start to finish in less than an hour. In comparison, the production of Makapads necessitates at least two locations (one indoor and one outdoor) and electricity. The linear production of Makapads means that one stage is highly dependent on the previous one. When a few of these stages are so dependent upon the weather (because sunlight is needed to dry the absorbent material and generate energy through solar panels) production can be grind to a halt in the wet season. Although more people are required in the various Makapads manufacturing stages, more pads can be produced per hour in the long-run. Consequently, overall the manufacturing capacity of the two groups is about the same per employee. When compared on replicability and scalability, the manufacturing process of Afripads is better. As long as a village contains a few skilled tailors, has a secure, spacious building and is within easy reach of a road, a branch of Afripads could be established in just about any African setting. In comparison the location of a Makapads processing site needs to be near a water supply and ideally a wetland where papyrus plants grow.

Just like any hygiene product, the ideal distribution strategy would be through key suppliers. To date, neither Afripads nor Makapads have such suppliers, accounting for why they are not yet competitive products on the market. Owing to the MoU Makapads have with UNHCR, there is no need for them to be seeking new markets. At present demand and capacity seem to be equally matched and there does not appear to be much practical enthusiasm to scale up (see 5.2.3). Afripads, on the other hand, are keen to extend their business as quickly as possible, especially through supplying to international NGOs. The NGOs, in turn, would be able to distribute and train users where and how they choose. Care needs to be taken when scaling up in this fashion not to compromise the community spiritedness and the communication with users that Afripads currently have. Once a break-even point has been reached and the product has become more widely known, the Afriapads’ dream is to distribute directly to shop suppliers which will trickle down to being available to girls in local stores. Although still a far-off dream, if the entrepreneurial strategies and the business astuteness demonstrated by the directors in their

first year of production are anything to go by, it is a realistic dream. The choice Afripads made to start as a business and not an NGO, mean that they are dependent upon profit not donations for survival. As hinted at above, charging for a product has the benefit of empowerment because customers take ownership and responsibility for their spending. Chosen rather than coerced hygiene practices are more likely to have lasting effects on young women. In fact, a successful business cannot function without charging its customers. With Makapads the difference is the customers are not the consumers. Sooner or later this will need to be addressed if Makapads are to become a named household brand in the future.

7. Conclusions and Recommendations

This chapter returns to the main research question and provides an answer about the extent to which low-cost sanitary pads are a solution to menstrual hygiene problems for schoolgirls in Uganda both now and in the future (7.1). To enable future progress in MHM, concerted efforts need to be made towards practical action and conducting further research. Recommendations for such actions and research are outlined in 7.2, with specific proposals being put forward for schools, pad producers and NGOs. Section 7.3 reflects on the outcome of this dissertation, both in terms of evaluating the products and the chosen research methodologies. The chapter concludes by considering the essential people for whom this work has been conducted - the schoolgirls (7.4).



Image 7.1: Ugandan schoolgirls in a classroom

7.1 Significance of low-cost pads

The market for low cost sanitary pads lies in the void between free unhygienic rags and expensive commercial female hygiene products. This dissertation has proved that the need is very real, especially for the many Ugandan schoolgirls who are positioned in such a situation. Low-cost sanitary pads, be they re-usable or disposable, are a timely and innovative solution to this need. Both Afripads and Makapads are simple technological inventions that are appropriate for African schoolgirls from mid- to low- income families. Rooted in pro-poor principles and developed with an eco-friendly consciousness, both Afripads and Makapads have potential to positively affect the lives of thousands, if not millions of schoolgirls. Both groups are at an exciting stage in their development and, with further publicity, skillful marketing and shrewd management, there is no reason why, in the next decade, they will not become brand names known by schoolgirls and aid and development professionals all over Uganda.

The main research question set out to discover the *extent* to which low-cost pads were a solution to schoolgirls' MHM problems. The conclusion is that they are not as significant as initially anticipated (see 6.4). The lack of pain relief and education are other MHM problems which are greater than, or on a par with, a lack of pads in terms of magnitude. This discovery highlights that if MHM issues are to be taken seriously by schools and development professionals, an holistic approach needs to be adopted. Along with making low-cost pads accessible, increasing pain relief availability and providing education and counselling services, the corresponding requirements of adequate safe water provision, clean and private latrines, hygienic and secure bathing facilities, soap, sealed waste disposal points, private drying places, anal cleansing materials and facility operation and maintenance strategies also need to be considered. In short, the development of one aspect of MHM without the others will have a limited, if not futile, outcome. Low-cost sanitary pads are a significant aspect of MHM but should

not be considered as a quick-fix solution. If Afripads and/or Makapads were to diversify into other aspects of MHM mentioned above it is likely that their impact on schoolgirls' wellbeing would be even more significant. Yet even if pads remained their only priority, Afripads and Makapads would be wise to partner with, or continue forging relationships with, educational organisations, water and sanitation professionals and NGOs whose work would complement theirs and vice versa.

7.2 Recommendations

7.2.1 Recommendations about further research into MHM

Throughout this dissertation suggested topics for further research have been proposed. As a starting point, the six unanswered issues highlighted from the literature review could be tackled (see 2.9). Additionally the other 23 issues which have, to a greater or lesser extent, formed this study could all benefit from additional research, even if just to ratify the outcomes of this dissertation. Owing to MHM being a relatively new topic of research, especially from a water and sanitation perspective, there is no shortage of areas for research. So, rather than deliberating what to study, a more pertinent question would be where to start. The top ten suggestions for research questions have been provided in Figure 7.1, loosely ranked upon the author's perception of importance with which they need to be addressed.

1. What are the environmental implications of increasing numbers of commercial, disposable sanitary pads being used by African schoolgirls?
2. How can the absorbency of Afripads be improved?
3. Do low-cost pads (such as Afripads and Makapads) directly have an effect on schoolgirl absenteeism?
4. How could existing government and private health services be extended to providing pain relief to menstruating schoolgirls?
5. What are the cost benefits or drawbacks of installing incinerators onto/ into existing girls latrine blocks?
6. Would adhesive wings and extra layers of papyrus absorbent significantly improve schoolgirls' perceptions and use of Makapads?
7. What would be the key features of an ideal, all-in-one, community menstruation management facility?
8. Are menstrual cups a feasible, sustainable MHM resource in Africa?
9. Why is most of the funding for MHM currently being used in supplying Western disposable products rather than investing in research and development of more sustainable products?
10. What are the experiences of, and lessons learned by, other low-cost pad producers in other countries?

Figure 7.1: Recommended MHM research questions requiring further study

7.2.2 Recommendations to schools and education professionals

Suggestions for how teachers, school staff, parents, education officials and educational agencies can assist in the promotion of MHM are outlined in 6.3.3. Summarising these points and referring back to the suggestions made by others in the literature review, nine priority action points have been noted in Figure 7.2.

1. Ensure that a counsellor or nurse visits the school regularly, and ensure there are opportunities throughout the school day for the girls to go to her for advice
2. Initiate hygiene clubs where younger girls learn about MHM from older girls through peer advisory methods
3. Improve the privacy of sanitation facilities
4. Provide places for girls to bathe and wash their menstrual materials
5. Install incinerators inside the female latrine block
6. Develop and oversee the implementation of hygiene rotas, so that there is always enough water for handwashing and water or toilet paper for anal cleansing
7. Provide teacher training on how to present the biological facts of menstruation and how to counsel girls about coping strategies
8. Teach girls how to make their own low-cost pads to enable them to be self-sufficient
9. Distribute IEC materials to every student so that they can read about MHM for themselves in a private manner

Figure 7.2: Recommendations to schools and education professionals

To realise these action points funding needs to be found. At a national level pressure needs to be applied to the Ugandan government and multilateral donors to budget for activities that relate to all schools. At the local level the PTA or health extension workers could assist.

7.2.3 Recommendations to pad producers

Detailed suggestions for Afripads and Makapads product and business improvements are given throughout Chapter 6. Five overall recommendations can be made that affect both businesses, although the way each outworks the recommendation will be different as shown in Table 7.1.

Table 7.1: Recommendations to pad producers

| Recommendation | What this means for Afripads | What this means for Makapads |
|--|---|---|
| Define and pursue a marketing strategy | <ul style="list-style-type: none"> - Develop product branding - Promote the kits at events - Widen the channels of distribution | <ul style="list-style-type: none"> - Decide how to can compete on the commercial market |
| Strengthen the management | <ul style="list-style-type: none"> - Continue to train local staff into management positions - Employ other directors as the business grows | <ul style="list-style-type: none"> - Form a private business, with independent staff focussed on profit-making |
| Improve the products' reliability | <ul style="list-style-type: none"> - Enhance the absorbency of the liners | <ul style="list-style-type: none"> - Manufacture pads with adhesive wings - Insert thicker layers of papyrus in the pads |
| Secure more funding | <ul style="list-style-type: none"> - Network with education, health and watsan agencies in Kampala and other African capital cities. | <ul style="list-style-type: none"> - Formulate ways to be be less dependent on UNHCR for business |
| Establish mechanisms for continuous customer/ beneficiary feedback | <ul style="list-style-type: none"> - Formalise the regular use of existing feedback questionnaires | <ul style="list-style-type: none"> - Evaluate how pads are being distributed to schoolgirls - Develop strong links with the NGOs who are acting as distributors |

7.2.4 Recommendations to NGOs considering purchasing low-cost pads

Both Afripads and Makapads provide an adequate level of menstrual protection. NGOs should seriously consider buying and distributing such products. In comparison to commercial, disposable pads, buying low-cost products would allow their financial resources to stretch further and assist more beneficiaries. As to whether disposable or washable pads are more appropriate, the following factors need to be taken into consideration:

- How available is water availability for potentially washing pads?
- Are there places to burn or dispose of one-use pads?
- Are one-use or washable products usually used by the beneficiaries?
- How hygienic and effective are underwear drying practices? (This acts as an indicator about how washable pads are likely to be dried.)
- How accessible are the beneficiaries? (If supplies are likely to be sporadically distributed due to poor road conditions during certain times of the year for example, re-usable pads would be preferable.)
- Are beneficiaries from high-, middle- or low-income backgrounds? (Schoolgirls from high income backgrounds prefer disposable products).

NGOs need to be careful not to fall into the trap of seeing low-cost pads as a quick-fix solution. For there to be long-lasting change in schoolgirls' MHM experiences and practices, other factors such as education and pain relief need to be taken into consideration. One way to address this would be to develop holistic menstrual packs that contain 'solutions' to all three problems identified in this study:

- 1) Low-cost pads to act as hygiene protection materials
- 2) Specially-labelled "for MHM" pain relief tablets, which might also contain some iron and vitamin supplements, and
- 3) Education booklet or leaflet explaining the facts of menstruation and hygienic coping strategies.

7.3 Author's reflections on this study and its outcomes

7.3.1 Author's evaluation of the products

Personal reflections and evaluations have been made throughout this dissertation with regards to low-cost pads and MHM practices in general. If the author were to be pushed to make a decision about which product is better, Afripads would be chosen. This is predominantly due to the product's re-usability factor and being good value for money. If the absorbency issue is addressed and the brand becomes more widely known, the author envisages Afripads menstrual kits becoming popular accessories for women in Uganda. They meet a need and solve a problem that desperately required attention.

7.3.2 Author's evaluation of this dissertation

The scope of the dissertation was ambitious. Although there was a clear focus on evaluating Afripads and Makapads, broader MHM issues were also tackled. This was to achieve an overall view of how low-cost pads integrated into the experiences of schoolgirls. With hindsight the various methods of data collection generated more data than could be adequately analysed in the time available. For example, over 30 hours of interviews were recorded in addition to completing at least four activities with, and posing two questionnaires to, 134 girls. Although this report provides an adequate overview of the data collected, more could be done with the data if it were examined in more detail. For instance, if the interviews were transcribed and coded, more empirical links could be made between attitudes and practice. Similarly, if the quantitative data had been manipulated using data analysis software such as SPSS, the strength of correlation between variables could have been calculated.

Although fifteen questions were addressed in this work, many more have been generated. In digging to find the root of the problems associated with sanitary protection materials, other MHM problems have been unearthed. There is a saying that the solution of every problem is another problem. This seems to ring true.



Image 7.2: The author collecting data from schoolgirls

7.4 Future for schoolgirls

Meeting the schoolgirls in the normality of their daily lives was a privilege. It is interesting to ponder what will become of them. Some may continue to live in poverty, use unhygienic methods to manage their menstruation and fail to explain the facts of life to their daughters. Others, through pursuing opportunities, chasing dreams and exploring new ideas have unlimited potential for good. Such potential begins with creativity, an attribute displayed by just a few girls in this study. Grace was one such girl. Imagining she were president, she dreamed up a strategy for MHM in schools:

“I would organise two bodies. One to make sure the girls get counsellors to guide them on how to go about their menstruation periods... what happens... some of the problems... and the solutions. The other body would supply pads in the schools... Afripads.”

One day President Grace may be the champion for Ugandan schoolgirls. MHM education may become widespread and low-cost pads may become commonplace. In the meantime, a lot still needs to be done to support the millions of women, all over the world, who are menstruating today.



Image 7.3: Ugandan schoolgirls

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Appendix A: Details of non-schoolgirl interviewees

| Person | Name | Position | Organisation/School | Location | Date | Data collection method | |
|---------------------------------|-----------------------------|---------------------------------------|----------------------------|--|----------------------|--|---|
| Teachers/ School workers | Divine | Teacher | Kitengesa SS | Kitengesa, Masaka | 2 Jun 2010 | Semi-structured interview | |
| | Specioza | Teacher/ counsellor | Kako SS | Masaka | 3 Jun 2010 | Semi-structured interview | |
| | Mildred | Matron of boarding house | Kako SS | Masaka | 3 Jun 2010 | Semi-structured interview | |
| | Esther | Assistant Senior Woman | Matale SS | Kalisizo, Rakai | 4 Jun 2010 | Semi-structured interview | |
| | Charles | Deputy Headteacher | Hulson SS | Saza, Masaka | 7 Jun 2010 | Semi-structured interview | |
| | Moses | Director | Hulson SS | Saza, Masaka | 7 Jun 2010 | Semi-structured interview | |
| | Daniel | Director of Studies | Centenary SS | Nyendo, Masaka | 7 Jun 2010 | Unstructured interview sat in his office waiting for schoolgirls | |
| | Florence | Senior Female Teacher | Lakes High | Kalinga, Masaka | 8 Jun 2010 | Semi-structured interview | |
| | Diane | Biology Teacher | St Teresa's Girls SS | Villa Maria, Masaka | 9 Jun 2010 | Semi-structured interview | |
| | Elizabeth | Headteacher | Kiwoko SS | Kiwoko, Nakaseke | 22 Jun 2010 | Unstructured interview | |
| | Sarah | Headteacher | Kasanga Senior SS | Kasanga, Luwero | 23 Jun 2010 | Semi-structured interview | |
| | Amina | Student CRE Teacher | Green High SS | Luwero | 24 Jun 2010 | Unstructured interview | |
| | Pad business leaders | Sophia Klumpp | Director | Afripads | Masaka Town | 29 May - 11 Jun 2010 | Many informal discussion over dinner, in the car, in the workshop |
| | | Pauls Grinvalds | Director | Afripads | Masaka Town | 29 May - 11 Jun 2010 | Many informal discussion over dinner, in the car, in the workshop |
| Irene Nakima | | Workshop Manager | Afripads | Kitengesa, Masaka | 4 Jun 2010 | Unstructured interview about cultural beliefs | |
| Hamida Nakiyemba | | Workshop Manager | Afripads | Kitengesa, Masaka | 4 Jun 2010 | Unstructured interview about cultural beliefs | |
| Dr. Moses Musazzi | | Team Leader and Senior Lecturer | Makapads, T4T | Makerere University, Kampala | 14 Jun 2010 | Structured interview | |
| Juliet Nakibuule | | Manager | Makapads, T4T | Makerere University, Kampala | 15 Jun 2010 | Semi-structured interview | |
| Katharine Nakitto | | Site Supervisor | Makapads, T4T | Makerere University, Kampala | 15 Jun 2010 | Semi-structured interview | |
| Ruth Bikara | | Workshop Manager | Makapads, T4T | Bujubuli, Kyaka II Refugee Settlement | 28 Jun 2010 | Semi-structured interview | |
| Ibrahim Rumanyika | | Site Supervisor | Makapads, T4T | Bukere, Kyaka II Refugee Settlement | 28 Jun 2010 | Unstructured interview | |
| Judith | | Taylor Supervisor | Afripads | Kitengesa, Masaka | 31 May 2010 | Semi-structured interview | |
| Agnes | | Taylor | Afripads | Kitengesa, Masaka | 1 Jun 2010 | Semi-structured interview | |
| Flavia | | Taylor | Afripads | Kitengesa, Masaka | 1 Jun 2010 | Semi-structured interview | |
| Doreen | | Taylor | Afripads | Kitengesa, Masaka | 1 Jun 2010 | Semi-structured interview | |
| Immaculate | | Taylor | Afripads | Kitengesa, Masaka | 1 Jun 2010 | Semi-structured interview | |
| NGO Staff | Coretti | Taylor | Afripads | Kitengesa, Masaka | 1 Jun 2010 | Semi-structured interview | |
| | Ruth | Taylor | Afripads | Kitengesa, Masaka | 2 Jun 2010 | Semi-structured interview | |
| | Florence | Papyrus Production Supervisor | Makapads, T4T | Nateete, Kampala | 15 Jun 2010 | Unstructured interview | |
| | Marie | Pad maker | Makapads, T4T | Bujubuli, Kyaka II Refugee Settlement | 28 Jun 2010 | Unstructured interview | |
| | Evelyn | Quality Controller | Makapads, T4T | Bukere, Kyaka II Refugee Settlement | 28 Jun 2010 | Unstructured interview | |
| | Ida Watula | Co-founder | ROWAN | Nansena, Kampala | 27 May 2010 | Semi-structured interview | |
| | Margaret Kasozi | Acting Executive Director | Concern for the Girl Child | Ninda, Kampala | 17 Jun 2010 | Semi-structured interview | |
| | Edward Bwengye | WES Specialist/ Partnerships | UNICEF Uganda | Kampala | 18 Jun 2010 | Semi-structured interview | |
| | Beatram Okalany | Program Officer | GTZ (UNHCR Partnership) | Kampala | 18 Jun 2010 | Semi-structured interview | |
| | Mary Namweebe | Advocacy and Policy Specialist | UWASNET | Luzira, Kampala | 18 Jun 2010 | Semi-structured interview | |
| | Hillary Azaanwa | Finance and Administrator Manager | UWASNET | Luzira, Kampala | 18 Jun 2010 | Semi-structured interview | |
| | Elizabeth Kalemera | ? | FAWE- Uganda Chapter | Bukoto, Kampala | 21 Jun 2010 | Semi-structured interview | |
| | Lilian Busingye | Project Coordinator | CoBIN | Liontonde | 29 Jun 2010 | Semi-structured interview | |
| | Patrick Tuhaine | Field Coordinator - Kiruhira District | CoBIN | Liontonde | 29 Jun 2010 | Semi-structured interview | |
| Shopkeepers | Steven Katamba | Finance Director | Uganda Development Trust | Kamwolya, Kampala | 30 Jun 2010 | Semi-structured interview | |
| | Margaret | Deputy Manager | | Masaka Town, Masaka | 10 Jun 2010 | Semi-structured interview | |
| | Resty | Pharmacist | | Masaka Town, Masaka | 11 Jun 2010 | Semi-structured interview | |
| | Halinah | Pharmacist | | Masaka Town, Masaka | 11 Jun 2010 | Semi-structured interview | |
| University Lecturers | Nsamba | Shop keeper | | Muyenga, Kampala | 20 Jun 2010 | Semi-structured interview | |
| | Dr. Shelley Jones | Director of Research and Education | YouLead | University of British Columbia, Canada | 17 Feb - 11 Apr 2010 | Unstructured interview | |
| | Elizabeth Younger | Senior Behaviour Change Specialist | AED/ The Manoff Group | Washington DC, USA | 27 Apr 2010 | Semi-structured interview | |
| Others | Dr. Kyuba Ivan | Doctor | Kalisizo Hospital | Kalisizo, Rakai | 31 May 2010 | Unstructured interview after filming | |
| | Claire Namuli | Social Work Student |University | Luwero | 24 Jun 2010 | Unstructured interview | |

Appendix B: Summary of which activities were completed by different focus groups

| FG No. | Yr | No. of girls | Transl ator? | Activities Completed | | | | | | | | | | | | | School | |
|--------|------|--------------|--------------|----------------------|----------|-----------|----------|---------------------------------|---|---|---|---|---|---|---------------|----------|--------|----------------------------------|
| | | | | 1 | 2 | 3 | 4 | 5 Questionnaire parts completed | | | | | | | 6 | 7 | | |
| | | | | True/false quiz | Problems | Solutions | Products | A | B | C | D | E | F | G | Info pyramids | Scenario | | |
| 1 | S2 | 4 | N | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | ✓ | | | Kitengasi Community SS |
| 2 | S3 | 4 | N | ✓ | | | ✓ | ✓ | ✓ | ✓ | | | ✓ | | ✓ | | | Kitengasi Community SS |
| 3 | S4 | 4 | N | ✓ | | | ✓ | ✓ | ✓ | ✓ | | | | | ✓ | | | Kitengasi Community SS |
| 4 | S2 | 3 | N | ✓ | ✓ | ✓ | | | ✓ | ✓ | | | | | | | | Kako SS |
| 5 | S3/4 | 3 | N | ✓ | ✓ | ✓ | | | ✓ | ✓ | | | | | ✓ | | | Kako SS |
| 6 | S4 | 3 | N | ✓ | ✓ | ✓ | | | ✓ | | | | ✓ | | ✓ | | | Kako SS |
| 7 | S5 | 2 | N | ✓ | ✓ | ✓ | | | ✓ | ✓ | | | ✓ | | ✓ | | | Kako SS |
| 8 | S2 | 4 | Y | ✓ | ✓ | ✓ | | | ✓ | ✓ | | | ✓ | | ✓ | | | Matale CoU SS |
| 9 | S3 | 4 | Y | ✓ | ✓ | ✓ | | | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | Matale CoU SS |
| 10 | S4 | 2 | N | | | | | | ✓ | | | | | | | | | Matale CoU SS |
| 11 | S2 | 4 | Y | ✓ | ✓ | ✓ | | | ✓ | ✓ | | | | | ✓ | | | Hulson SS |
| 12 | S3 | 4 | Y | ✓ | ✓ | ✓ | | | ✓ | ✓ | | | | | ✓ | | | Hulson SS |
| 13 | S5 | 3 | N | ✓ | ✓ | ✓ | | | ✓ | ✓ | | | | | ✓ | | | Centenary SS |
| 14 | S3 | 3 | N | ✓ | ✓ | ✓ | | | ✓ | ✓ | | | | | ✓ | | | Centenary SS |
| 15 | S4 | 3 | N | ✓ | ✓ | ✓ | | | ✓ | ✓ | | | | | ✓ | | | Lakes High |
| 16 | S2 | 3 | N | ✓ | ✓ | ✓ | | | ✓ | ✓ | | | | | ✓ | | | Lakes High |
| 17 | S3 | 3 | Y | ✓ | ✓ | ✓ | | | ✓ | ✓ | | | | | ✓ | | | St. Martins Vocational SS |
| 18 | S3 | 3 | Y | ✓ | ✓ | ✓ | | | ✓ | ✓ | | | ✓ | | ✓ | | | St. Martins Vocational SS |
| 19 | 2nd | 3 | Y | ✓ | ✓ | ✓ | | | ✓ | ✓ | | | | | ✓ | | | St. Ponsiano Technical School |
| 20 | 1st | 3 | Y | ✓ | ✓ | ✓ | | | ✓ | ✓ | | | ✓ | | ✓ | | | St. Ponsiano Technical School |
| 21 | S4 | 4 | N | ✓ | ✓ | ✓ | | | ✓ | | | | ✓ | | ✓ | | | St. Teresas SS |
| 22 | S2 | 4 | N | ✓ | | | | | ✓ | ✓ | | | | | ✓ | | ✓ | St. Teresas SS |
| 23 | S2 | 4 | N | ✓ | ✓ | ✓ | | | ✓ | ✓ | | | ✓ | | ✓ | | | St Andrews SS |
| 24 | S3 | 4 | N | ✓ | ✓ | ✓ | | | ✓ | ✓ | | | ✓ | | ✓ | | | St Andrews SS |
| 25 | S4 | 4 | N | ✓ | ✓ | ✓ | | | ✓ | | | | ✓ | | ✓ | | ✓ | St Andrews SS |
| 26 | S2 | 4 | N | ✓ | ✓ | ✓ | | | ✓ | | | | ✓ | | ✓ | | ✓ | Kalinabiri SS |
| 27 | S1 | 4 | N | ✓ | ✓ | ✓ | | | ✓ | | | ✓ | ✓ | | ✓ | | ✓ | Kalinabiri SS |
| 28 | S2 | 3 | N | ✓ | ✓ | ✓ | | | ✓ | | | | ✓ | | ✓ | | ✓ | Kiwoko SS |
| 29 | S3 | 3 | N | ✓ | ✓ | ✓ | | | ✓ | | | | ✓ | | ✓ | | ✓ | Kiwoko SS |
| 30 | S2/3 | 3 | N | ✓ | ✓ | ✓ | | | ✓ | | | | ✓ | | ✓ | | | Luwero SS |
| 31 | S3 | 3 | N | ✓ | ✓ | ✓ | | | ✓ | | | | ✓ | | ✓ | | | Luwero SS |
| 32 | S3 | 3 | Y | ✓ | ✓ | ✓ | | | ✓ | | | | ✓ | | ✓ | | | Muwanguzi SSS |
| 33 | S2 | 3 | Y | ✓ | ✓ | ✓ | | | ✓ | | | | ✓ | | ✓ | | ✓ | Muwanguzi SSS |
| 34 | S3 | 3 | Y | ✓ | ✓ | ✓ | | | ✓ | | | | ✓ | | ✓ | | ✓ | Muwanguzi SSS |
| 35 | S2 | 3 | Y | ✓ | ✓ | ✓ | | | ✓ | | | | ✓ | | ✓ | | | Kasanga SS |
| 36 | S3 | 3 | Y | ✓ | ✓ | ✓ | | | ✓ | | | | ✓ | | ✓ | | | Kasanga SS |
| 37 | S2 | 3 | Y | ✓ | ✓ | ✓ | | | ✓ | | | | ✓ | | ✓ | | | Green High SS |
| 38 | S3 | 4 | Y | ✓ | ✓ | ✓ | | | ✓ | | | | ✓ | | ✓ | | | Green High SS |
| 39 | S2/3 | 3 | N | ✓ | ✓ | ✓ | | | ✓ | | | | ✓ | | ✓ | | | Luwero High |
| 40 | S2 | 3 | N | ✓ | ✓ | ✓ | | | ✓ | | | | ✓ | | ✓ | | | Luwero High |
| 39 | S2/3 | 3 | N | ✓ | ✓ | ✓ | | | ✓ | | | | ✓ | | ✓ | | | Bujubuli Community Vocational SS |
| 40 | S2 | 3 | N | ✓ | ✓ | ✓ | | | ✓ | | | | ✓ | | ✓ | | | Bujubuli Community Vocational SS |

Appendix C: Questionnaires

QUESTIONNAIRE B: MENSTRUATING GIRLS

FG no.

Information

1. Do you think you had enough information about what to expect when you started your period?

Yes, completely

Enough to get by

Not really

Comments _____

2. Where did you get information about menstruation?

Radio

Magazines

Leaflets

Text books

Teachers

Mother

Grandmother

Sister

Aunty

Other _____

Absenteeism

3. When you last had you MP during term time, did you take any time off school?

No

Yes - Few hours

1 day

2 days

3 days

4+days

3a. What was your main reason for missing lessons?

a) Cultural restrictions

b) Not having products

c) Poor/ no bathing facilities

d) Fear of leakage

e) Pain

f) Not having products

g) Low self-esteem

h) Lack of privacy to change materials

i) Other _____

4. I have heard a rumour that often girls are absent from class during their MPs. Is this true?

No Explain _____

Yes 4a. What is the main reason why girls are absent?

a) Cultural restrictions

b) Not having products

c) Poor/ no bathing facilities

d) Fear of leakage

e) Pain

f) Not having products

g) Low self-esteem

h) Lack of privacy to change materials

i) Other _____

4b. In one month, please estimate what percentage of menstruating girls miss one or more days of school: _____% _____% _____% _____%

Bathing

5. Where do you usually bathe?

a) School - boarding area

b) School - day scholar area

c) Home - inside

d) Home - outside bathroom, sticks no roof

e) Home - outside bathroom, sticks with roof

f) Home - outside bathroom, bricks no roof

g) Home - outside bathroom, bricks with roof

h) Other _____

6. On a scale of 1-5, where 1 is not private and 5 is very private, how would you rank the privacy of the place where you usually bathe?

1

2

3

4

5

Comments _____

7. Are there facilities for you to wash yourself in school?

No Boarders only Yes, available to all What? _____

7a. Do you often use the facilities in school?

Yes No - Why not? _____

Water access

8. From where do you usually get water for bathing at home?

Open well Covered well Outside tap Inside tap Borehole Other _____

9. How long does it take to walk between water source from the place you bathe (at home)?

<1min 1+ mins 5+ mins 10+ mins 20+ mins 30+ mins 40+ mins

10. Where do you get water for use in school?

Open well Covered well Outside tap Inside tap Borehole Other _____

11. How long does it take to walk between water source and your school?

<1min 1+ mins 5+ mins 10+ mins 20+ mins 30+ mins 40+ mins

Products

12. What do you usually use to absorb menstrual blood?

| | | |
|---|---------------------------------------|---------------------------------|
| Afripads <input type="checkbox"/> | | <i>Go to Part C</i> |
| Makapads <input type="checkbox"/> | | <i>Go to Part D</i> |
| Always <input type="checkbox"/> Toilet tissue <input type="checkbox"/> | (Purchasable disposable alternatives) | <i>Go to Part E</i> |
| Leaves <input type="checkbox"/> Paper <input type="checkbox"/> Mud <input type="checkbox"/> | (Free disposable alternatives) | <i>Go to Part F</i> |
| Cloths/rags <input type="checkbox"/> Extra clothing <input type="checkbox"/> | (Washable alternatives) | <i>Go to Part G</i> |
| Other <input type="checkbox"/> _____ | | <i>Go to most relevant Part</i> |

QUESTIONNAIRE C: AFRIPADS

FG no.

1. What is the main reason for choosing to use this product?

- Cheap Re-usable Hygienic Comfortable/soft Available
- Secure (won't fall out of underwear) Fashionable Reliable/ does not leak
- Other _____

Timing and usage

2. For how long does your period usually last?

- 2 days 3 days 4 days 5 days 6 days 7days 7+ days

3. For how many of those days do you use Afripads?

- 1 day 2 days 3 days 4 days 5+ days

3a. *If different from Q2...* Why do you use Afripads on some days but not others?

Comparison with previous products

4. Before using Afripads, what did you usually use to absorb the menstrual blood?

- Cloths/rags Always Toilet tissue Extra clothing Paper
- Insertion product Nothing Other _____

5. Are Afripads better or worse than ...what used previously?

- Better Same Worse

Why? _____

Availability and accessibility

6. How did you hear about Afripads?

- Afripads trainer Afripads taylor Friend Teacher Mother
- Other _____

7. Do you think the price is reasonable?

- Reasonable A little too high Far too high Too low
- Other _____

8. How can you obtain more Afripads?

- Afripads outreach worker Teacher Canteen Health worker Drug store
- Shop Unsure Other _____

Usage

9. Did you receive any training or demonstrations about how to use Afripads?

- Yes 9a. Was the training adequate? Yes No

Explain: _____

- No 9b. Do you think training would have been helpful? Yes No

Explain: _____

10. *If relevant:* Are Afripads more or less comfortable than cloths/rags?

- More comfortable Same Less comfortable

11. *If relevant:* Are Afripads more or less comfortable than Always?
More comfortable Same Less comfortable

Product design

12. Are there enough pads/liners in a pack to adequately deal with each menstrual cycle?
Yes
No Explain: _____
13. If there was a kit that contained 2 pad bases and 8 liners would you be prepared to pay more for it?
No Explain: _____
Yes 13a. What is the maximum price you would be willing to pay for such a kit?
3500 UGX 4000 UGX 4500 UGX 5000 UGX 5500 UGX 6000+ UGX
14. How could the design of the product be improved?

Washing pads

15. What do you use to clean your pads?
OMO/NOMI or equivalent detergent Bar soap Water only
Other _____
16. Where do you usually clean your pads at home?
a) Inside house - bathroom b) Inside house - bedroom c) Outside - bathroom
d) Outside - in compound e) Outside - beyond compound f) Outside - by water source
g) Other _____
17. Do you ever clean your pads at school?
No
Yes 17a. What is the reason?
Boarder Water more available at school Other _____
17b) Where do you clean your pads?
a) Inside - bathroom b) Inside - dormitory c) Outside - bathroom
d) Outside - in yard e) Outside - open grassy area f) Outside - by water source
g) Other _____
18. Do Afripads look dirty after you have washed them?
Never Only sometimes Often Always
19. Do Afripads smell after they have been washed?
A lot A little No

Drying pads

20. Where do you dry your pads?
a) Outside in direct sun b) Outside in woods/ bushes c) Outside bathroom - no roof
d) Outside bathroom with roof e) Inside bathroom f) On pegs in room/ dormitory
g) Under bed h) Other _____
21. Do you sometimes wear pads or liners that are not completely dry?
No
Yes 20a) Does this happen often or just occasionally
Often Occasionally
Comments _____

Changing pads

22. Do you change Afripads in school?

Yes 21a. Where?

Latrine/toilet Bathroom Dormitory Other _____

No 21b. Is there a reason why not?

Nowhere private No need Other _____

23. Do you have enough privacy to change your Afripad at school?

Yes Explain _____

No Explain _____

24. Do you have enough privacy to change your Afripad at home?

Yes Explain _____

No Explain _____

Underwear

25. How often do you wear underwear?

Always Often Occasionally Never

If not always, do you wear underwear only during your MP?

Explain _____

Message

26. If you could send a message to the directors of Afripads, what would it be?

QUESTIONNAIRE D: MAKAPADS

FG no.

1. What is the main reason for choosing to use this product?

- Cheap Disposable Hygienic Comfortable/soft Available
Secure (won't fall out of underwear) Fashionable Reliable/ does not leak
Other _____

Time

2. For how long does your period usually last?

- 2 days 3 days 4 days 5 days 6 days 7days 7+ days

3. For how many of those days do you use Makapads?

- 1 day 2 days 3 days 4 days 5+ days

3a. *If different from Q2...* Why do you use Makapads on some days but not others?

Comparison with previous products

4. What did you use before Makapads?

- Always Cloths/rags Toilet tissue Extra clothing Paper
Insertion product Other _____

5. Are Makapads better or worse thanwhat used previous?

- Better Same Worse

Explain _____

Availability and accessibility

6. Do you think the price is reasonable?

- Reasonable A little too high Far too high Too low Other _____

7. How can you obtain more Makapads?

- NGO _____ Teacher Canteen Other _____

Usage

8. Did you receive any training or demonstrations about how to use Makapads?

- Yes 8a. Was the training adequate? Yes No
No 8b. Do you think training would have been helpful? Yes No

9. Are there enough pads in a pack for one menstrual cycle?

Yes

No Please estimate how many pads do you usually need for one cycle: _____

10. Are Makapads more or less comfortable than clothes?

- More comfortable Same Less comfortable

11. Are Makapads more or less comfortable than Always?

- More comfortable Same Less comfortable

Changing pads

12. How often do you change your Makapad in school?
Never Once a day Twice a day Three times a day
Depends _____

13. Do you have enough privacy to change your Makapad at home?
Yes Explain _____
No Explain _____

14. Do you have enough privacy to change your Makapad at school?
Yes Explain _____
No Explain _____

Disposing of pads

15. At home, where do you usually dispose of your Makapads?
Latrine Incinerator Rubbish pile/ drum Other _____

16. At school, where do you usually dispose of your Makapads?
Latrine Incinerator Rubbish pile/ drum Other _____

16a. If answers to 15 and 16 are different, what is the reason for this?

17. Do you consider the disposal place at school to be very adequate, acceptable or not adequate?
Very adequate Acceptable Not adequate

17a. What are your reasons? _____

Underwear

18. Before using Makapads, did you always wear underwear or only during your MP?
Always Only during MP Explain _____

19. Did you receive any underwear with your Makapads?
No
Yes 19a. How many pairs? 1 2 3 4 5 5+

Design

20. How could the design of the product be improved?

21. If you could send a message to the directors of Makapads, what would it be?

QUESTIONNAIRE E: PURCHASABLE DISPOSABLE PRODUCTS

| |
|--------|
| FG no. |
|--------|

1. What is the main product used?
Always Secrets Toilet Paper O.B. Cotton Wool
Other _____

2. What is the main reason for using [this product]?
Disposable Comfortable Provided by family/guardian
Provided by NGO Other _____

Acquisition

3. From where do you get [the products]?
Local store Supermarket Friend/family supplier Other _____

4. How much do you usually pay for a packet of 10? (pro rata the amount)
2000+ 2250+ 2500 + 2750+
3000+ 3250+ 3500+ 3750+
4000+ 4250+ 4500+

Changing

5. How often do you change your [the product] in school?
Never Once a day Twice a day Three times a day
Depends /Other _____

6. Do you have enough privacy to change [the product] at home?
Yes Explain _____
No Explain _____

7. Do you have enough privacy to change [the product] at school?
Yes Explain _____
No Explain _____

Disposing of pads

8. At home, where do you usually dispose of your used [product]?
Latrine Incinerator Rubbish pile/drum Other _____

9. At school, where do you usually dispose of your used [product]?
Latrine Incinerator Rubbish pile/ drum Other _____

9a. If answers to 8 and 9 are different, what is the reason for this?

10. Do you consider the disposal place at school to be very adequate, acceptable or not adequate?
Very adequate Acceptable Not adequate

10a. What are your reasons? _____

Timing

11. For how long does your period usually last?
2 days 3 days 4 days 5 days 6 days 7days 7+ days

Comparison with Afripads/ Makapads/ tampons)

12. Would you consider using Afripads?

No No opinion Not heard about the product

Explain: _____

Yes 12a. Is there is a reason why you do not use this product at the moment?

Can't afford them Not sure where to get them They are not readily available

Fear of unknown Cultural restrictions Other _____

13. Would you consider using Makapads?

No No opinion Not heard about the product

Explain: _____

Yes 13a. Is there is a reason why you do not use this product at the moment?

Can't afford them Not sure where to get them They are not readily available

Fear of unknown Cultural restrictions Other _____

14. Would you consider using tampons?

No No opinion Not heard about the product

Explain: _____

Yes 14a. Is there is a reason why you do not use this product at the moment?

Can't afford them Not sure where to get them They are not readily available

Fear of unknown Cultural restrictions Other _____

QUESTIONNAIRE G: WASHABLE PRODUCTS

FG no.

1. What is the main product used?

- Rags Cavaras Strips of cloth Other _____

2. What is the main reason for using [this product]?

- Re-usable Comfortable Available Traditional Other _____

Acquisition

3. From where do you get [the products]?

- Rubbish pile Household Friend/family supplier Other _____

(4. If purchased, how much does one month's supply cost? (N.B Divide cost over lifecycle of product))

- <100 100+ 250+ 500 + 750+
1000+ 1250+ 1500 + 1750+
2000+ 2250+ 2500 + 2750+ 3000+

Drying pads

5. Where do you dry [the product]?

- a) Outside in direct sun b) Outside in woods/ bushes c) Outside bathroom - no roof
d) Outside bathroom with roof e) Inside bathroom f) On pegs in room/ dormitory
g) Under bed h) Other _____

6. Do you sometimes wear pads or liners that are not completely dry?

- No
Yes 6a. Does this happen often or just occasionally
Often Occasionally

Comments _____

Changing pads

7. How often do you change your [the product] in school?

- Never Once a day Twice a day Three times a day
Depends /Other _____

8. Do you have enough privacy to change [the product] at home?

- Yes Explain _____
No Explain _____

9. Do you have enough privacy to change [the product] at school?

- Yes Explain _____
No Explain _____

Washing

10. What do you use to clean your pads?

- OMO/NOMI or equivalent detergent Bar soap Water only
Other _____

11. Where do you usually clean your pads at home?

- a) Inside house - bathroom b) Inside house - bedroom c) Outside - bathroom
d) Outside - in compound e) Outside - beyond compound f) Outside - by water source

g) Other _____

12. Do you ever clean your pads at school?

No

Yes 17a. What is the reason?

Boarder Water more available at school Other _____

12b) Where do you clean your pads?

a) Inside - bathroom b) Inside - dormitory c) Outside - bathroom
d) Outside - in yard e) Outside - open grassy area f) Outside - by water source

g) Other _____

Timing

13. For how long does your period usually last?

2 days 3 days 4 days 5 days 6 days 7days 7+ days

(Comparison with Always/ Afripads/ Makapads/ tampons)

14. Would you consider using Always?

No No opinion Not heard about the product

Explain: _____

Yes 14a. Is there is a reason why you do not use this product at the moment?

Can't afford them Not sure where to get them They are not readily available

Fear of unknown Cultural restrictions Other _____

15. Would you consider using Afripads?

No No opinion Not heard about the product

Explain: _____

Yes 15a. Is there is a reason why you do not use this product at the moment?

Can't afford them Not sure where to get them They are not readily available

Fear of unknown Cultural restrictions Other _____

16. Would you consider using Makapads?

No No opinion Not heard about the product

Explain: _____

Yes 16a. Is there is a reason why you do not use this product at the moment?

Can't afford them Not sure where to get them They are not readily available

Fear of unknown Cultural restrictions Other _____

17. Would you consider using tampons?

No No opinion Not heard about the product

Explain: _____

Yes 17a. Is there is a reason why you do not use this product at the moment?

Can't afford them Not sure where to get them They are not readily available

Fear of unknown Cultural restrictions Other _____

Appendix D: Tally of all the answers to the questionnaires

| Topic | Question No. | Question | Answers | | | | | | | | | | | | |
|--------------------------------|------------------|---|---------------------|------------------|---------------------|-----------------------|----------------------|-----------------|---------------------|---------------|-----------|-----------|-----------|-----------|--|
| Information about menstruation | B1 | Do you think you had enough information about what to expect when you started your periods? | Yes, completely | Enough to get by | Not really | | | | | | | | | | |
| | | | N = 130 | 65 | 32 | | | | | | | | | | |
| | % | | 50 | 50 | 25 | | | | | | | | | | |
| Absenteeism | B2 | Where did you get information about menstruation? | Mother | Sister | Aunty | Friend | Grandmother | Primary teacher | Secondary teacher | P7 pack/ info | Books | Other | | | |
| | | | N = 119 | 26 | 12 | 4 | 18 | 17 | 4 | 1 | 9 | | | | |
| | % | | 22 | 10 | 10 | 14 | 15 | 14 | 3 | 1 | 1 | | | | |
| | B3 | When you last had you MP during term time, did you take any time off school? | No | Yes - 1 day | Yes - 2 days | Yes - 3 days | Yes - 4 days | Yes - 5 days | Yes - 6 days | Yes - 7 days | | | | | |
| | | | N = 129 | 111 | 6 | 4 | 2 | 1 | | | | | | | |
| | % | | 86 | 5 | 3 | 4 | 1 | | | | | | | | |
| | B3a | What was your main reason for missing lessons? | Not having products | Fear of leakage | Pain | | | | | | | | | | |
| | | | N = 17 | 4 | 1 | 12 | | | | | | | | | |
| | % | | 23 | 6 | 71 | | | | | | | | | | |
| | B4 | I have heard a rumour that often girls are absent from class during their MPs. Is this true? | No | Yes | Unsure | | | | | | | | | | |
| | | | N = 107 | 8 | 97 | 2 | | | | | | | | | |
| | % | | 7 | 91 | 2 | | | | | | | | | | |
| | B4a | What is the main reason why girls are absent? | Not having products | Fear of leakage | Pain | Cultural restrictions | Poor/no bathing area | Low self-esteem | Weak/feeling unwell | Other | | | | | |
| | | | N = 94 | 31 | 28 | 1 | 2 | 2 | 5 | 4 | | | | | |
| | % | | 33 | 22 | 30 | 1 | 2 | 2 | 6 | 4 | | | | | |
| Bathing | B5 | Where do you usually bathe? | Inside building | no roof | with door | with roof | no roof | with door | with roof | no roof | with door | with roof | with door | with roof | |
| | | | N = 115 | 4 | 9 | 1 | 1 | 1 | 1 | 32 | 28 | 11 | 31 | | |
| | % | | 3 | 8 | 0 | 1 | 1 | 1 | 28 | 23 | 9 | 27 | | | |
| | B6 | On a scale of 1-5, where 1 is not private and 5 is very private, how would you rank the privacy of the place where you usually bathe? | 1 - not private | 2 | 3 | 4 | 5 - very private | | | | | | | | |
| | | | N = 98 | 10 | 10 | 29 | 17 | 32 | | | | | | | |
| | % | | 10 | 10 | 30 | 17 | 33 | | | | | | | | |
| | B7 | Are there facilities for you to wash yourself in school? | No | Yes | Boarders only | | | | | | | | | | |
| | | | N = 112 | 25 | 29 | 58 | | | | | | | | | |
| | % | | 22 | 26 | 52 | | | | | | | | | | |
| Water | B8 | From where do you usually get water for bathing at home? | Open well | Covered well | Outside tap | Inside tap | Borehole | Water tank | | | | | | | |
| | | | N = 75 | 21 | 2 | 29 | 19 | 3 | | | | | | | |
| | % | | 28 | 3 | 39 | 1 | 25 | 4 | | | | | | | |
| | B9 | How long does it take to walk between water source from the place you bathe (at home)? | <1 min | 1+ mins | 5+ mins | 10+ mins | 20+ mins | 30+ mins | 40+ mins | | | | | | |
| | | | N = 75 | 10 | 24 | 4 | 11 | 12 | | | | | | | |
| | % | | 13.5 | 32 | 5 | 13.5 | 5 | 15 | | | | | | | |
| | B10 | Where do you get water for use in school? | Open well | Covered well | Outside tap | Borehole | Water tank | | | | | | | | |
| | | | N = 85 | 18 | 5 | 29 | 16 | 17 | | | | | | | |
| | % | | 21 | 6 | 34 | 19 | 20 | | | | | | | | |
| | B11 | How long does it take to walk between water source and your school? | <1 min | 1+ mins | 5+ mins | 10+ mins | 20+ mins | 30+ mins | 40+ mins | | | | | | |
| | | | N = 85 | 34 | 16 | 5 | 9 | 7 | | | | | | | |
| | % | | 40 | 19 | 6 | 7 | 11 | 8 | | | | | | | |
| Length of periods | C2, D2, E11, G13 | For how long does your period usually last? | 1 day | 2 days | 3 days | 4 days | 5 days | 6 days | 7 days+ | | | | | | |
| | | | N = 73 | 1 | 5 | 31 | 24 | 4 | 3 | | | | | | |
| | % | | 1 | 7 | 42 | 33 | 6 | 4 | | | | | | | |
| Changing | D12, E5, G7 | How often do you change your pads/ cloths in school in one day? | Once | Twice | Three times | Four or more times | Never | | | | | | | | |
| | | | N = 32 | 5 | 12 | 11 | 3 | | | | | | | | |
| | % | | 16 | 38 | 34 | 3 | 9 | | | | | | | | |
| | C22 | Where do you usually change your pads/ cloths? | Latrine | Bathroom | Dormitory | | | | | | | | | | |
| | | | N = 41 | 22 | 8 | 11 | | | | | | | | | |
| | % | | 54 | 19 | 27 | | | | | | | | | | |
| | C23, D14, E7, G9 | Do you have enough privacy to change your pad/cloth at school? | Yes | No | | | | | | | | | | | |
| | | | N = 56 | 32 | 24 | | | | | | | | | | |
| | % | | 57 | 43 | | | | | | | | | | | |
| | C24, D13, E5, G8 | Do you have enough privacy to change your pad/ cloth at home? | Yes | No | | | | | | | | | | | |
| | | | N = 30 | 26 | 4 | | | | | | | | | | |
| | % | | 87 | 13 | | | | | | | | | | | |
| Disposal | D15, E8 | At home, where do you usually dispose of your pads/ cloths? | Latrine | Other | | | | | | | | | | | |
| | | | N = 43 | 43 | 0 | | | | | | | | | | |
| | % | | 100 | 0 | | | | | | | | | | | |
| | D16, E9 | At school, where do you usually dispose of your pads/ cloths? | Latrine | Incinerator | Rubbish pillar/drum | Bucket | | | | | | | | | |
| | | | N = 54 | 35 | 14 | 2 | 3 | | | | | | | | |
| | % | | 65 | 26 | 4 | 5 | | | | | | | | | |
| | D17, E10 | Do you consider the disposal place at school to be very adequate, acceptable or not adequate? | Very adequate | Acceptable | Not adequate | | | | | | | | | | |
| | | | N = 20 | 6 | 8 | | | | | | | | | | |
| | % | | 30 | 40 | 30 | | | | | | | | | | |

| Topic | Question No. | Question | Answers | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|-----|-----|------|----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Washing | C15, G10 | What do you use to clean your pads/ cloths? | % | 30 | 30 | 40 | | | | | | | | | | | | | | | | |
| | | | N = | 46 | 14 | 32 | | | | | | | | | | | | | | | | |
| | C16, G11 | Where do you usually clean your pads/ cloths? | % | 30 | 70 | | | | | | | | | | | | | | | | | |
| | | | N = | 22 | 1 | 21 | | | | | | | | | | | | | | | | |
| | G12 | [For day scholars] Do you ever clean your pads at school? | % | 5 | 95 | | | | | | | | | | | | | | | | | |
| | | | N = | 4 | 0 | 4 | | | | | | | | | | | | | | | | |
| | C18 | Do Afripads look dirty after you have washed them? | % | 0 | 100 | | | | | | | | | | | | | | | | | |
| | | | N = | 39 | 35 | 3 | | | | | | | | | | | | | | | | |
| | C19 | Do Afripads smell after they have been washed? | % | 90 | 8 | 2 | | | | | | | | | | | | | | | | |
| | | | N = | 28 | 35 | 3 | | | | | | | | | | | | | | | | |
| Drying | C20, G5 | Where do you dry your pads/ cloths? | % | 92 | 7 | 0 | | | | | | | | | | | | | | | | |
| | | | N = | 47 | 5 | 3 | | | | | | | | | | | | | | | | |
| | C21, G6 | Do you sometimes wear pads or liners that are not completely dry? | % | 11 | 6 | 2 | | | | | | | | | | | | | | | | |
| | | | N = | 33 | 28 | 3 | | | | | | | | | | | | | | | | |
| | C25, D18 | How often do you wear underwear? | % | 85 | 9 | 6 | | | | | | | | | | | | | | | | |
| | | | N = | 57 | 57 | 0 | | | | | | | | | | | | | | | | |
| | Choice of products | B12 | What do you usually use to absorb menstrual blood? | % | 100 | 0 | 0 | | | | | | | | | | | | | | | |
| | | | | N = | 129 | 43 | 15 | | | | | | | | | | | | | | | |
| | | C1 | What is the main reason for choosing to use this product? | % | 33 | 11.5 | 40 | | | | | | | | | | | | | | | |
| | | | | N = | 44 | 10 | 10 | | | | | | | | | | | | | | | |
| C9 | | Did you receive any training or demonstrations about how to use Afripads? | % | 23 | 23 | 29 | | | | | | | | | | | | | | | | |
| | | | N = | 35 | 31 | 4 | | | | | | | | | | | | | | | | |
| Afripads: comparison with other products | | C4 | Are Afripads better or worse than cloths? | % | 89 | 11 | | | | | | | | | | | | | | | | |
| | | | | N = | 28 | 28 | 0 | | | | | | | | | | | | | | | |
| | | C5 | Are Afripads better or worse than Always? | % | 100 | 0 | | | | | | | | | | | | | | | | |
| | | | | N = | 29 | 28 | 0 | | | | | | | | | | | | | | | |
| | C10 | Are Afripads more or less comfortable than cloths/rags? | % | 97 | 0 | 3 | | | | | | | | | | | | | | | | |
| | | | N = | 20 | 20 | 0 | | | | | | | | | | | | | | | | |
| | C11 | Are Afripads more or less comfortable than Always? | % | 100 | 0 | 0 | | | | | | | | | | | | | | | | |
| | | | N = | 16 | 13 | 1 | | | | | | | | | | | | | | | | |
| | Afripads: availability and accessibility | C6 | How did you hear about Afripads? | % | 81 | 6 | 13 | | | | | | | | | | | | | | | |
| | | | | N = | 41 | 34 | 3 | | | | | | | | | | | | | | | |
| C7 | | Do you think the price is reasonable? | % | 83 | 7 | 10 | | | | | | | | | | | | | | | | |
| | | | N = | 42 | 2 | 10 | | | | | | | | | | | | | | | | |
| C8 | | How can you obtain more Afripads? | % | 5 | 24 | 57 | | | | | | | | | | | | | | | | |
| | | | N = | 32 | 11 | 6 | | | | | | | | | | | | | | | | |
| Afripads: product design | | C12 | Are there enough pads/liners in a pack to adequately deal with each menstrual cycle? | % | 35 | 19 | 22 | | | | | | | | | | | | | | | |
| | | | | N = | 43 | 8 | 35 | | | | | | | | | | | | | | | |
| | | C13 | If there was a kit that contained 2 pad bases and 8 liners would you be prepared to pay more for it? | % | 19 | 81 | | | | | | | | | | | | | | | | |
| | | | | N = | 29 | 26 | 3 | | | | | | | | | | | | | | | |
| | C13a | What is the maximum price you would be willing to pay for such a kit? (in Ugandan Shillings) | % | 90 | 10 | | | | | | | | | | | | | | | | | |
| | | | N = | 29 | 2 | 5 | | | | | | | | | | | | | | | | |

| Topic | | Question No. | Question | Answers | | | |
|---|--|---|-----------------------|-----------------------|----------------------|-------------------|---------------|
| Makapads: usage | D1 | What is the main reason for choosing to use this product? | Comfortable/ soft | Given to them | Hygienic | | |
| | | | N = 15 3% | 11 | 1 | | |
| | D8 | Did you receive any training or demonstrations about how to use Afripads? | Yes | No | | | |
| | | | N = 15 11% | 4 | | | |
| | D4 | Are Makapads better or worse than cloths? | Better | Same/ no opinion | Worse | | |
| | | | N = 7 73% | 27 | | | |
| | D5 | Are Makapads better or worse than Always? | Better | Same/ no opinion | Worse | | |
| | | | N = 7 86% | 14 | | | |
| | D10 | Are Makapads more or less comfortable than clothes? | More comfortable | Same/ no opinion | Less comfortable | | |
| | | | N = 7 29% | 0 | 71 | | |
| D11 | Are Makapads more or less comfortable than Always? | More comfortable | Same/ no opinion | Less comfortable | | | |
| | | N = 4 0% | 0 | 4 | | | |
| Makapads: availability and accessibility | D7 | How can you obtain more Makapads? | NGO worker | Teacher | Unsure | | |
| | | | N = 15 8% | 6 | 1 | | |
| | D9 | Are there enough pads in a pack for one menstrual cycle? | Yes | No | | | |
| | | | N = 13 46% | 7 | | | |
| | D19 | Did you receive any underwear with your Makapads? | No | Yes, 1 pair | Yes, 2 pairs | Yes, 3 pairs | Yes, 4+ pairs |
| | | | N = 15 53% | 1 | 7 | 3 | 20 |
| Disposable products | E2 | What is the main reason for using [this product]? | Disposable | Comfortable/ soft | Doesn't leak | Given to them | Other |
| | | | N = 40 20% | 6 | 8 | 8 | 12 |
| Disposable products: availability and accessibility | E3 | From where do you get [the products]? | Local store | Supermarket | Family/friends | Health Centre | |
| | | | N = 92 22% | 5 | 1 | 3 | |
| | E4 | How much do you usually pay for a packet of 10 Always? (in Ugandan Shillings) | 2000+ | 2750+ | 2500+ | 2750+ | 3000+ |
| | | | N = 14 7% | 1 | 6 | 5 | 1 |
| Washable cloths/rggs | G2 | What is the main reason for using [this product]? | Available | | | | |
| | | | N = 8 100% | 8 | | | |
| Opinions of other products [non-users] | E12, G15 | Would you consider using Afripads? | Yes | No | Other | | |
| | | | N = 51 84% | 10 | 6 | | |
| | E12a, G15a | Is there is a reason why you do not use Afripads at the moment? | Can't afford them | Unsure how to acquire | Unavailable/uncommon | Not heard of them | Other |
| | | | N = 51 18% | 19 | 3 | 3 | 2 |
| | E13, G16 | Would you consider using Makapads? | Yes | No | | | |
| | | | N = 34 30% | 24 | 70 | | |
| | E13a, G16a | Is there is a reason why you do not use Makapads at the moment? | Unsure how to acquire | Unavailable/uncommon | | | |
| | | | N = 10 6% | 4 | | | |
| | G14 | Would you consider using Always? | Yes | No | | | |
| | | | N = 6 100% | 0 | | | |
| G14a | Is there is a reason why you do not use Always at the moment? | Can't afford them | | | | | |
| | | N = 6 100% | 6 | | | | |
| E14 | Would you consider using tampons? | Yes | No | Other | | | |
| | | N = 15 7% | 12 | 2 | | | |
| E14a | Is there is a reason why you do not use tampons at the moment? | Unsure how to acquire | Unavailable/uncommon | Fear of unknown | Other | | |
| | | N = 9 11% | 4 | 2 | 2 | 22 | |

Appendix E: Outline of school quality rating marking criteria

| Rating | Water | Sanitation | Hygiene - handwashing facilities | Hygiene - Site cleanliness | Classroom Environment |
|--------|----------------------------------|---|---|--|---|
| 10 | Reliable piped water supply | Indoor flush toilets | Taps and sinks with soap for handwashing | Many rubbish bins, not full | Posters on walls, plenty of learning resources. Windows in classrooms. |
| 9 | Mostly piped water inside | Some flush toilets | Taps with drainage and soap for handwashing | Many rubbish bins full | Clean learning environment, Some learning resources evident. Windows in classrooms. |
| 8 | Some piped water inside | Well-constructed VIPs, with excellent maintenance (e.g. toilet paper available) | Taps with drainage | Few rubbish bins, not full | Just enough learning resources and books per student. |
| 7 | Water onsite e.g. tap stands | VIPs | Taps without drainage | Few rubbish bins, full | Few learning resources. Some windows in classrooms. |
| 6 | Water onsite e.g. tap stand | Some VIPs but maintenance issues | Handwashing devices containing water outside each latrine block perhaps with soap available | No visible bins, but obvious rubbish collection area/ pile | No windows. Enough reasonable quality desks per student. |
| 5 | Water onsite e.g. tank | Basic pits - mostly private | Handwashing devices some containing water outside each latrine block, no soap | No visible bins, but rubbish patches/ piles | Enough desks per student but poor quality. |
| 4 | Water onsite e.g. handpump/ well | Basic pits - moderate privacy | A few handwashing devices containing water not near latrines | Paper waste scattered in compound | Just enough desks if students squash together |
| 3 | Not onsite: 1 - 10 mins walk | Basic pits - poor privacy | A few handwashing devices, not containing water, not near latrines | Food wrappers and waste scattered in compound | Cramped environment with hindrances to learning e.g. dark or airless |
| 2 | Not onsite: 10+ mins walk | Basic pits no concrete slab | Disused or locked handwashing device | Odd bit of organic waste and more than 10 pieces of food waste | Not enough desks per child. Poor quality blackboard, if at all. |
| 1 | Not onsite: 20+ mins walk | None | No evidence of handwashing | Organic waste scattered in compound | No classroom: children are taught outside |

Appendix F: Table of problems and ranking scoring

| FG no. | School | Bonnet scholar | Stomach Pain | Back Pain / Itches | Fear of falling down | Fear of stains / leaking | Reluctance to participate in activities | Shyness / difficult to wash out | Washed / treatment by boys | Unable to afford pads | Spending / unable to afford to clean | Low heavy flow | Back area / in absorbable | Sores / breast on face | Menstrual / flow / bloating | Loss of appetite / pain | Head / sore to talk to men | Shy / embarrassed | Unable to afford pantliners | Loss of concentration in class | Bad smell / unpredictable flow | Infections / rubbing in private parts | Lack of water / poor hygiene | No pads to change pads regularly | Mood changes | No assembly / female teacher for support | Lack of knickers | Not keen to change pads | |
|--------|----------------------------------|----------------|--------------|--------------------|----------------------|--------------------------|---|---------------------------------|----------------------------|-----------------------|--------------------------------------|----------------|---------------------------|------------------------|-----------------------------|-------------------------|----------------------------|-------------------|-----------------------------|--------------------------------|--------------------------------|---------------------------------------|------------------------------|----------------------------------|--------------|--|------------------|-------------------------|---|
| 1 | Kilengai SS | D | 4 | | | 3 | 1 | | | | | | | | 2 | 1 | | 1 | | | 5 | | | 1 | | | | | |
| 2 | Kilengai SS | D | 5 | | | | | | | | 3 | | | | | | | 2 | | 4 | | | | | | | | | |
| 3 | Kilengai SS | D | 4 | | 1 | | | | | | | | | | | 1 | | 2 | | | | | | | | | | | |
| 4 | Kako SS | B | 5 | 4 | 2 | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | |
| 5 | Kako SS | B | 3 | 3 | | 5 | | | | | 2 | | | | | | | | | | | | | | | | | | |
| 6 | Kako SS | B | 2 | 1 | 1 | | | | | | 4 | | | | | | | | | | | | | | | | | | |
| 7 | Kako SS | B | 5 | 4 | 2 | | 1 | | | | | 5 | 3 | 1 | 1 | | | | | | | | | | | | | | |
| 8 | Mitale COU SS | D | 5 | 4 | 1 | | | | | | 3 | 1 | | | 2 | | | | | | | | | | | | | | |
| 9 | Mitale COU SS | D | 2 | | | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| 10 | Mitale COU SS | D | 5 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | Huison SS | B | 5 | 2 | | | | | | | | | | | | 2 | | 3 | | | | | | | | | | | |
| 12 | Huison SS | B | 5 | 2 | | | | | | | | | | | | 3 | | 4 | | | | | | | | | | | |
| 13 | Centenary SS | B | 4 | 2 | 1 | | | | | | 1 | | | | | 3 | | | | | | | | | | | | | |
| 14 | Lakes High | D/B | 5 | 2 | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| 15 | Lakes High | D/B | 5 | 2 | | | | | | | 2 | 4 | 3 | 1 | | | | | | | | | | | | | | | |
| 16 | Lakes High | D | 4 | | | | | | 5 | | 1 | 1 | 4 | | | | | | | | | | | | | | | | |
| 17 | St. Martin's Vocational SS | B | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | St. Martin's Vocational SS | D/B | 5 | | | | | | | | 1 | 4 | | | | | | | | | | | | | | | | | |
| 19 | St. Ponsiano Technical School | B | 4 | | | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| 20 | St. Ponsiano Technical School | B | 5 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | St. Teresas SS | B | 5 | 4 | | | | | 1 | | | | | | | | | | | | | | | | | | | | |
| 22 | St. Teresas SS | B | 5 | 4 | | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| 23 | St. Andrews SS | D/B | 5 | 3 | | | | | | | 4 | 2 | | | | | | | | | | | | | | | | | |
| 24 | St. Andrews SS | D/B | 3 | | | | | | | | 5 | 2 | | | | | | | | | | | | | | | | | |
| 25 | St. Andrews SS | D/B | 2 | | | | | | | | 4 | | | | | | | | | | | | | | | | | | |
| 26 | Kalinabri SS | D/B | 3 | 1 | | | | | | | 4 | | | | | | | | | | | | | | | | | | |
| 27 | Kalinabri SS | D | 4 | | | | | | | | 5 | | | | | | | | | | | | | | | | | | |
| 28 | Kiwoko SS | D | 4 | | | | | | | | 5 | 1 | | | | | | | | | | | | | | | | | |
| 29 | Kiwoko SS | D | 5 | 4 | 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | Luwero SS | D | 5 | 4 | 2 | | | | | | 3 | | | | | | | | | | | | | | | | | | |
| 31 | Luwero SS | D | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 32 | Mwanguzi SSS | D | 3 | | | | | | | | 5 | | | | | | | | | | | | | | | | | | |
| 33 | Kasanga SS | D | 5 | 3 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| 34 | Kasanga SS | D/B | 4 | | | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| 35 | Green High SS | B | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 36 | Green High SS | D/B | 5 | | | | | | | | 2 | | | | | | | | | | | | | | | | | | |
| 37 | Luwero High | D/B | 5 | 3 | | | | | | | 4 | 2 | 3 | | | | | | | | | | | | | | | | |
| 38 | Luwero High | D/B | 5 | 3 | | | | | | | 2 | | | | | | | | | | | | | | | | | | |
| 39 | Bujubuli Community Vocational SS | B | 1 | | | | | | | | 5 | | | | | | | | | | | | | | | | | | |
| 40 | Bujubuli Community Vocational SS | D/B | 1 | | | | | | | | 5 | | | | | | | | | | | | | | | | | | |
| TOTALS | | | 137 | 43 | 29 | 12 | 39 | 9 | 1 | 7 | 74 | 24 | 16 | 6 | 12 | 11 | 9 | 17 | 1 | 16 | 6 | 34 | 3 | 10 | 10 | 10 | 4 | 4 | 3 |