

## **Period Product Preferences – a cup half full?**

*A study of Swedish high school students' choice of menstrual products with a focus on sustainable, reusable products.*

*Tea-Maria Munk*

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(30hp/credits)



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Submitted May 9<sup>th</sup> 2023

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## **Abstract:**

The most used menstrual products in Sweden are disposable pads and tampons, contributing to plastic pollution and harmful resource use; an environmental impact that could be reduced by using reusable products, such as menstrual cups and reusable pads. This cross-sectional study of high school students in Malmö and Lund researches their menstrual product preferences and the factors that influence these. Using a mixed methods approach, data were collected with an online self-completion questionnaire and semi-structured interviews and discussed by applying the integrated behavioural model for water, sanitation, and hygiene (IBM-WASH). The findings show that comfortability, convenience, and stigma influence the participants' choice to varying degrees depending on the product and participant. In conclusion, it is necessary to promote and heighten knowledge of the benefits of reusable menstrual products while acknowledging and addressing social and cultural stigma that influence product choices.

**Keywords:** Menstrual health management, sustainability science, menstrual products, cross-cultural, IBM-WASH, Swedish high-school students

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## **List of Abbreviations**

IBM-WASH: Integrated Behavioural Model for Water, Sanitation, and Hygiene

LCA: Life-cycle assessment

MHM: Menstrual health management

WASH: Water, sanitation, and hygiene

## 1. Introduction

“It’s the only time the bathroom trashcan actually gets full” – Interviewee #4

The average menstruator<sup>1</sup> in the Global North uses around 11.000 disposable menstrual products in their lifetime (Borunda, 2019). Most popular menstrual products in high-income countries are disposable pads and tampons (Kantar Sifo, 2021; Ramsay et al., 2023; Trant et al., 2020). These products contain plastics and cotton that are resource heavy when produced, and difficult to recycle due to the nature of them (Fourcassier et al., 2022). Furthermore, improper disposal of menstrual products can lead to eutrophication and affect marine ecosystems (Hait & Powers, 2019; Harrison & Tyson, 2022). Some menstruators flush the products, resulting in clogged sewers and polluted waterways (Hait & Powers, 2019). The use of reusable products such as the menstrual cup, reusable pads, or menstrual underwear can be more sustainable alternatives (Fourcassier et al., 2022).

However, the variety of products is almost as big as the diversity of people who use them (see illustration 1 below for examples) and the utilisation of reusable period products is not straightforward: in some contexts, lack of clean, running water and sanitation facilities, makes it difficult to ensure proper hygiene during the use of the product (Anand et al., 2022a; Hennegan et al., 2019), and the lack of proper sanitation facilities in general can make them difficult to clean (Tembo et al., 2020). Some reusables also have a higher upfront cost than disposables which is a barrier for purchasing, especially for people with little income (Hait & Powers, 2019; van Eijk et al., 2019).

Moreover, the use of reusable products faces the challenge of menstrual stigma which intersects with issues of gender, religion, and culture (e.g. Notten et al., 2021). Menstruation has throughout history been stigmatised in Western society as dirty and polluting wherefore hiding one’s period has become imperative for menstruating people in order to be part of everyday life and general social practices (Bobel et al., 2020). The imperative goes even further to the stigmatisation of bodily fluids (Bramwell, 2001; Persdotter, 2022). In some contexts, this stigma intersects with not only issues of gender but further religious norms and cultural values, linked to the purity of the menstruating person and the acceptable use of certain products, such as not using products that require vaginal insertion (Farage et al., 2011; Maharaj & Winkler, 2020; Newton, 2016b).

Due to the cultural, social, and environmental factors the choice and use of period product is not straightforward. It is influenced by the sociocultural context that the individual menstruator lives

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<sup>1</sup> This paper will refer to people who menstruate as menstruators, as I recognise that not all who menstruate are women and not all women menstruate (Bobel et al., 2020). However, “women” and “girls” might be used when referring to studies in which these identifiers were specifically used.

in, as well as structural factors such as access to sanitation facilities and products (Barrington et al., 2021; Hennegan et al., 2019). Furthermore, for most menstruators these stigmas are experienced already from menarche, i.e., the first period:

“attitudes toward menstruation [...] are shaped by the immediate environment and the culture in which a girl grows up. Prior to menarche, girls internalize many of the prevailing cultural views of menstruation; unfortunately, these views are mainly negative.” (Marván & Alcalá-Herrera, 2019, p. 31).

Adolescents experience embarrassment in school, segregation and silence in the home, and parents, most often the mother, are a pivotal, albeit not always positive, influence in providing knowledge and the first period products (Beausang, 2000; Burrows & Johnson, 2005; Koff & Rierdan, 1995; Kumar & Srivastava, 2011; Maharaj & Winkler, 2020). At this young age, they are highly susceptible to these outside influences, which can affect their experience and attitude towards menstruation and associated practices throughout their lives (Jackson & Falmagne, 2013).

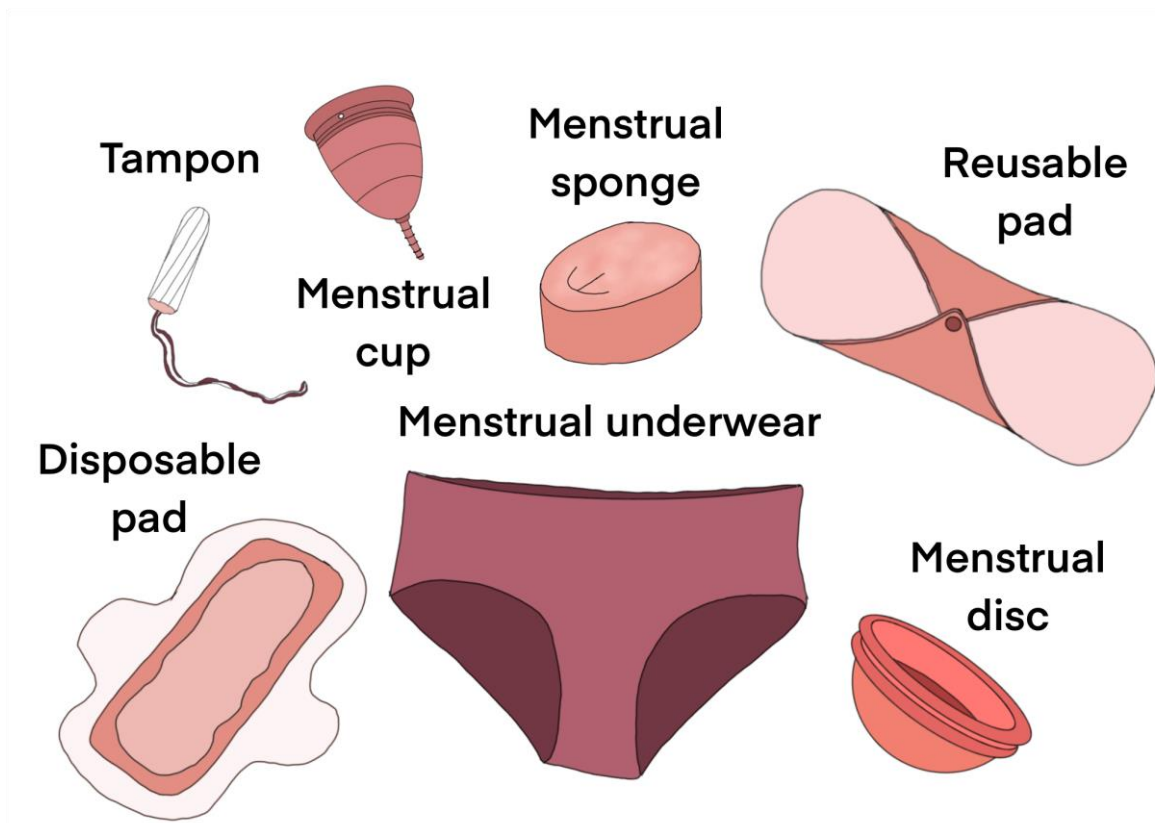
This thesis will therefore study adolescents, specifically high school students in Malmö and Lund, Sweden, within the age of 15-19 years old, in order to gain an understanding of how they might experience stigmas, and which role their parents as well as their sociocultural context play in their product choice. Additionally, the most popular period products amongst 16–21-year-olds in Sweden are tampons and disposable pads, with few using menstrual cups (Kantar Sifo, 2021). This large usage of disposables is problematic considering the above stated environmental impacts.

Furthermore, the stigma of menstrual blood and the concurrent products have been shown to be an influential part in the use of disposable pads and the menstrual cup amongst some Swedish menstruators (Persdotter, 2022). However, the possible influence of religion and cultural background is still neglected. Despite Sweden being secularised (Nordin, 2018), given the growing multi-cultural population in Malmö and Lund (Malmö stad, n/d), it cannot be assumed that product usage in Sweden is dependent on the same factors for everyone. Especially not for menstruators whose socio-cultural context might have changed throughout their life due to immigration (Hawkey et al., 2017).

### **Research questions:**

The purpose of this study is to examine which factors influence the choice and use of menstrual products among high school students in Lund and Malmö, with particular focus on sustainable menstrual products such as reusable underwear and the menstrual cup.

- Which menstrual products do high school students in Lund and Malmö use?
- Why do these high school students prefer these products over others?



**Illustration 1:** different menstrual products. Illustration by Nicola Parfitt.

## 2. Background

### 2.1 Understanding menstrual health management.

Menstrual health management (MHM) is an important social issue, as improper access to sanitation facilities and period poverty often add to an already existing gender inequality and is important to consider as part of the global sustainability goals (Sommer et al., 2021). Lack of access to period products and proper water, sanitation, and hygiene (WASH) facilities is associated with adverse physical and mental health impacts leaving menstruators at a disadvantage from an early age (Anand et al., 2022b; Cardoso et al., 2021; Kaur et al., 2018), which is especially studied within the context of low- and middle-income countries (e.g.: Alda-Vidal & Browne, 2022; Chandra-Mouli & Patel, 2017; Coker-Bolt et al., 2017; Hennegan et al., 2019; Kaur et al., 2018; Kuhlmann et al., 2017; Rakhshanda et al., 2021; Shannon et al., 2021; Sommer et al., 2021; Tembo et al., 2020; Thapa & Aro, 2021). The socio-cultural dimension of menstruation has further been studied in the context of low-income countries, showing how menstrual stigma is perpetuated and influence the MHM of young menstruators (e.g.: Chandra-Mouli & Patel, 2017; M. Crawford et al., 2014; MacLean et al., 2020; Sommer et al., 2015). This menstrual stigma is further widely studied in the Global North and high-income countries, showing

how stigma is grounded in religion and culture, and can affect the experience of menarche, and attitudes towards menstruation in general (Beausang, 2000; Burrows & Johnson, 2005; Jackson & Falmagne, 2013; Koff et al., 1982; Lee, 2009; Marván & Alcalá-Herrera, 2019).

On a cross-cultural scale, stigma is associated with the idea of menstruation being a way for the body to cleanse impurities, wherefore the menstrual blood is believed to be toxic and pollutive ('A Cross-Cultural Study of Menstruation', 1981; Chrisler, 2011; Gottlieb, 2020; Newton, 2016a, 2016c). This stigma has been capitalised by the period product industry; by marketing products as clean, quiet, discreet, and safe from leakage the industry "convinces women to conceal their periods, and then provide their own products to enable that concealment, reinforcing cultural attitudes that menstruation is embarrassing and should be kept secret" (Wood, 2020, 322).

This concealment imperative, as Wood (2020) calls it, has especially been reinforced by the disposable period product industry, pushing for the easily discardable product that quickly removes the dirty menstrual blood out of sight, with little contact (Borunda, 2019; Karzai, 2010; Wood, 2020). This stigma of menstrual blood as dirty was studied by Josefin Persdotter from Gothenburg University in her PhD "Menstrual Dirt" (2022). Her study centres on the use of disposable pads and menstrual cups linking their usage to theories of dirt and pollution. Her research is useful in gaining an understanding of how menstrual stigma affect Swedish menstruators.

## **2.2 Environmental aspects**

Persdotter (2022) further links the taboo to improper waste management, as she found that in cases where menstruators did not have access to a sanitary waste bag in the bathroom, they would flush their used disposable pads instead of bringing them to a trashcan in for example the kitchen due to the embarrassment of others seeing their used products (Persdotter, 2022). This can clog the sewage systems and lead to water pollution (Blair et al., 2022).

Sanitary towels are one of the main sources of marine littering and pollution of waterways in Europe; a problem which is projected to increase in the next 10 years if no measures are taken (European Commission, 2018). Menstrual products can have high adverse environmental impacts throughout their lifecycles (Fourcassier et al., 2022; Hait & Powers, 2019a; van Eijk et al., 2019). An average disposable pad contains plastic equivalent to four plastic bags, taking centuries to degrade (Fourcassier et al., 2022). The cotton in disposable and reusable pads, tampons, and menstrual underwear is resource and energy heavy to produce, wherefore the production of these products causes high levels of CO<sup>2</sup> emissions (Hait & Powers, 2019).

However, reusable menstrual products like the menstrual cup, reusable pads, and menstrual underwear are still more environmentally friendly alternatives to disposables. The menstrual cup has the lowest environmental impact as it is made from medical grade silicone and can be used for up to 10 years (Fourcassier et al., 2022; Hait & Powers, 2019). In comparison, although reusable pads and menstrual underwear are made of cotton, they can be used over several years, resulting in an overall small environmental impact throughout their lifecycle (Fourcassier et al., 2022). The above stated environmental impacts are not only local issues, but air and water pollution can have global effects and contribute to the pressure on the already struggling planetary health (Fourcassier et al., 2022; Hait & Powers, 2019).

Considering the adverse environmental impacts of pads and tampons, it is necessary to understand why young people prefer one product over another while considering the influence of socio-economic and cultural factors on these choices. Indeed, as argued by Tarzibachi (2020) in her article on modern ways to menstruate: “the issue of sustainability is a double-edged sword: it can be used to individually blame menstruators for harming the planet, without challenging the cultural norms that require them to conceal their menstruation” (Tarzibachi, 2020, p. 829)

In a Swedish context, there is little research on the sociocultural context of high school students and the cultural norms that might influence period product preferences, a research gap that the present study seeks to fill. This places the current research within the field of sustainability science by bridging the gap between social and natural science (Jerneck et al., 2011). This study not only questions the social context of product use, but further outlines how the production of the products poses a threat to the natural environment.

### **3. Theory**

#### **3.1 Studying menstrual preferences with an intersectional lens.**

The current thesis will investigate the reasons and factors that might influence the product choices of high school students in Lund and Malmö. The initial research process was guided by a hypothesis that cultural and social factors would impact product usage, as outlined above. Consequently, this study employed an intersectional lens to guide the qualitative data collection (see chapter 4.3.1.). Intersectionality as a concept is often credited to Crenshaw (1989) for her critique of white, middle-class feminism (Crenshaw, 1989; Kaijser & Kronsell, 2014) and has since entered several fields of study including that of sustainability science (Jerneck et al., 2011; Kaijser & Kronsell, 2014). Applying intersectionality as a concept in this study allows the researcher to gain an understanding of how



different social categories, here specifically age, gender, nationality, and religion, may intersect and impact a person's experienced reality (Crenshaw, 1989; Elmhirst, 2015).

Multiple studies on the experience of menarche show that young menstruators are more susceptible to their social environment and associated beliefs around menstruation (e.g. Marván & Alcalá-Herrera, (2019); Moore (1995), wherefore it is important to consider the young age of the study participants and how it might relate to their product use or socio-cultural context. For example, there might be differences in the types of products people use depending on their cultural background, paired with their economic means and their age etc. Therefore, this is important to consider if investigating practices that might benefit the environment, as it cannot be assumed everyone can use the same products. Additionally, intersectional analysis is not just a question of including different identity categories, but additionally to question the institutions and norms that uphold certain injustices and intersectional categorisations (Kaijser & Kronsell, 2014).

Such norms could be connected to a person's religion and/or cultural background which can have an influence on a person's menstrual practices (Cohen, 2020; Farage et al., 2011; Johnston-Robledo & Chrisler, 2013; Maharaj & Winkler, 2020; Middleman & Varughese, 2012; Montgomery, 1974; Newton, 2016a). Cohen's (2020) literature review illustrates how menstruation in Hinduism and Judaism is seen as dirty, hence a menstruating woman cannot participate in religious practices during her period. As Cohen writes:

“The relationships between menstruation and religion, and religion and culture suggest that menstruation is a cultural phenomenon just as much as it is a physiological one”  
(Cohen, 2020, p. 116)

Accordingly, menstrual practices cannot be boiled down to a matter of only “dealing” with a bodily function, it is shaped by the cultural and religious context that a person lives in.

Maharaj and Winkler's (2020) interview-based study show perspectives from Hinduism, Judaism, Orthodox Christianity, and Korean culture. The women in most religions and cultures face restrictions during their menses, from not being able to enter temples to being solitarily confined to sheds, so as to not come in contact with anyone.

In their cross-cultural study, Middleman & Varughese show that African American and Mexican American mothers are more likely than European Americans to think that tampons are unfit for girls pre-marriage, due to their perceived impact on a girl's virginity and purity (Middleman & Varughese, 2012). In a Jewish context, the idea of menstruation as unclean and polluting can be traced back to the Old Testament and the Book of Leviticus (Newton, 2016a).

“The communal and institutional elements of menstruation within religion are important to include in menstruation and religion discourse, especially those concerned with policy issues and

behaviour modifications” (Cohen, 2020, p. 126). This speaks to the relevance of including religion and culture in the analysis of menstrual practices, as we need to understand the influence religion and associated culture has, in order to spur change against stigma.

### **3.2 The Integrated Behavioural Model for Water, Sanitation, and Hygiene.**

The integrated behavioural model for water, sanitation, and hygiene (IBM-WASH) (Dreibelbis et al., 2013) is used in this thesis to contextualise the participants’ menstrual practices and product choices. As such, the thesis sought to frame the experience of menstruators themselves and how they view their period product preferences and practices.

The IBM-WASH framework was developed by Dreibelbis et al. (2013) based on a literature review of different research papers on behavioural models and framework. Figure 1 shows the different dimensions of the model. The framework is centred on the theory that WASH behaviour and associated interventions, such as in this case the use of reusable menstrual products, can be related to three dimensions of factors: contextual, psychosocial, and technology. These three dimensions are then divided into five levels from societal/structural to habitual (figure 1).

The following paragraph describes the framework as presented in Dreibelbis et al. (2013) with references from examples within MHM. The **contextual dimension** relates to the factors that lay outside the bounds of the intervention in question. For example, on a *structural level*, the built infrastructure of sanitation facilities can influence how easy it is to implement certain menstrual practices (Sommer et al., 2021), or the age of the people on an *individual level* can impact how they perform certain actions and their ability to uptake certain behaviours ((e.g. Marván & Alcalá-Herrera, 2019). The **psychosocial dimension** includes the “behavioural, social, or psychological determinants that influence behavioural outcomes and technology adoption” (Dreibelbis et al., 2013, p. 6). For example, the stigma that exists regarding sanitation behaviours on a *communal level* (e.g. Johnston-Robledo & Chrisler, 2013), which often associates with feelings of disgust on an *individual level* (Persdotter, 2022). Lastly, the **technological dimension** refers to the WASH technology in question, its promotion on a *societal level* which might hinder or support its implementation, demonstration of how to use the product on a *communal level*, or how convenient they are to use on the *individual level*, which relates to their ease of using routinely on the *habitual level* (e.g. Ramsay et al., 2023; Tembo et al., 2020) (Dreibelbis et al., 2013).

Specifically, in a study by Kabir et al. (2021) the IBM-WASH model was applied to explain the existence of poor hygiene behaviour among university students in Bangladesh. The study concluded that a lack of proper hygiene facilities at the university, on the *structural level*, hindered proper habit formation, *habitual level*, and individual behaviours, whereby female students opted to not use the

bathrooms at all, due to feelings of disgust (*psychosocial dimension, individual level*) and the male students engaged in peeing outdoors (Kabir et al., 2021).

**Figure 1:** The Integrated Behavioural Model for Water, Sanitation, and Hygiene (IBM-WASH). Source : Dreibelbis et al., 2013

Levels	Contextual factors	Psychosocial factors	Technology factors
<b>Societal/Structural</b>	Policy and regulations, climate and geography	Leadership/advocacy, cultural identity	Manufacturing, financing, and distribution of the product; current and past national policies and promotion of products
<b>Community</b>	Access to markets, access to resources, built and physical environment	Shared values, collective efficacy, social integration, stigma	Location, access, availability, individual vs. collective ownership/access, and maintenance of the product
<b>Interpersonal/Household</b>	Roles and responsibilities, household structure, division of labour, available space	Injunctive norms, descriptive norms, aspirations, shame, nurture	Sharing of access to product, modelling/demonstration of use of product
<b>Individual</b>	Wealth, age, education, gender, livelihoods/employment	Self-efficacy, knowledge, disgust, perceived threat	Perceived cost, value, convenience, and other strengths and weaknesses of the product
<b>Habitual</b>	Favourable environment for habit formation, opportunity for and barriers to repetition of behaviour	Existing water and sanitation habits, outcome expectations	Ease/Effectiveness of routine use of product

## 4. Methodology

### 4.1 Epistemology and Ontology

My main epistemological approach is constructivist (Bryman, 2012) as the main assumption is that certain social categories are constructed and not naturally given (Bryman, 2012). As such, one concept used to structure the data collection for this study is intersectionality. As explained, the concept of intersectionality is related to queer theory and post-structuralist understandings of the world, where the different intersectional categories are believed to influence each other, and the lived reality of a given person (McCall, 2005).

As argued by Bryman (2012), studies with a constructivist ontology which are epistemologically interpretivist often take on a qualitative nature (Bryman, 2012) as qualitative data often will show how the respondent understand and interpret their social reality (Bryman, 2012). As Creswell argues, the constructivist researcher is interested in the lived reality of the research participant, how historical, social, and cultural contexts influence the participants (Creswell, 2014). As such, this thesis will research how menstrual practices and period product preferences relate to the culture that the participants live in, how they interact within their community, and how this influences their view on their own and other's period practices and product preferences.

### 4.2 Research Design

This study was conducted following a cross-sectional, mixed methods research design meaning that the focus was on multiple units of analysis (Bryman, 2012) namely different high school students in both Malmö and Lund, using both quantitative and qualitative data collection methods. Quantitative data was gathered with a self-completion questionnaire and qualitative data through semi-structured

interviews. Combining these two types of data “provides a greater understanding of the problem than either type of data alone” (Creswell, 2022, p. 2). Using a quantitative method allows me to analyze the correlation between different factors and concepts (Bryman, 2012), such as how the concept of intersectionality might link to questions of sustainability and consumption patterns. This quantitative data was then supplemented by qualitative data gathered through semi-structured interviews of four of the survey respondents. The qualitative data offers a personal recounting (Creswell, 2014), such as that of menstrual practices and product preferences.

## **4.3 Methods**

### ***4.3.1 Self-completion questionnaire***

The first method for gathering data was quantitative using self-completion questionnaires distributed online to respondents (Bryman, 2012). The purpose of the questionnaire was to gather an understanding of which products high school students use, including the factors that influence their product choices. Doing the survey before the interview was a way to firstly see which products students use and thus which types of questions would be relevant to ask in a prospective interview. Furthermore, all interview respondents had answered the survey and provided their email at the end of the survey. Thus, the survey was also a means for the researcher to gather interview respondents. As such, it was considered how intersectional categories could be represented in the survey, how sustainability concerns could be accounted for, and further, how willing high school students might be to answer a survey. Intersectional categories, such as age, gender, income levels, religion, ethnicity, and disability were included directly in the questionnaire (see appendix 1). The intention behind asking for respondent’s nationality at birth was to understand if this could be related to how culture might affect the choice of menstrual product.

### ***4.3.2 Semi-Structured Interview***

In addition to collecting data through the survey, four semi-structured interviews were performed. The interviews were guided by approximately 20 questions focused on their habits regarding menstrual products (see appendix 2, table 1). These questions were both open- and close-ended, allowing me to enquire further depending on each individual answer (Adams, 2015). Hence, each interviewee was asked only 10 questions, resulting in interviews of 20-30 minutes. All interviews took place via Zoom. Firstly, the interviewee was asked which product they prefer to use and why. I asked the participants to recount their experience of menarche and first time using a menstrual product, including who introduced them to their first menstrual product. They were then asked questions related to their specific menstrual practices, knowledge of products, challenges they have faced, and concerns they

might have for using other products than the preferred. Lastly, I enquired about the menstrual practices and habits they have observed amongst their friends and in society.

The purpose of the interviews was to gain a greater understanding of why the respondents use certain products, and which challenges there might be to the use of certain products, especially reusable products. This allowed them to share their personal stories, which the self-completion questionnaire did not allow for. Thus, the interview data offered a deeper understanding of menstrual practices and reasons for product preferences beyond the scope of the self-completion questionnaire, a strength associated with mixed methods (Creswell, 2022).

## **4.4 Sampling**

### ***4.4.1. Sampling for self-completion questionnaire***

The sampling of respondents was purposeful and largely quota based (Bryman, 2012), in order to ensure a sample that is representative of the different considered intersectional categories, as well as demographic landscape of high school students in Lund and Malmö. The criteria used for selection were high school student population, income, and international background. Using data from Skolverket.se (see appendix 1, table 2) I first selected the biggest high schools with student populations of over 800 students. I then selected two from Malmö and two from Lund based on my selection criteria: the percentage of students with a foreign background and parents with a higher education. These criteria were chosen based on the assumption that students with a foreign background would provide diverse data related to cultural and religious beliefs. Parents with a higher education were linked to income level, assuming the higher the educational level, the higher the income (Stryzhak, 2020).

To begin data collection, I visited the high schools seen on table 2 personally and explained my survey and purpose of research. Of all schools initially contacted, only Pauliskolan accepted participation in the study. The remaining schools explained they are asked to participate in studies too frequently and therefore decline all offers. Upon realizing that this was a common denominator, I began contacting more schools by phone and email. The aim was simply to gather respondents. This approach proved successful, as some schools agreed to participate, while still more declined on the same grounds of being asked by too many researchers to participate in studies and distribute surveys.

I further realized that acceptance from the principal was necessary to share the survey link wherefore I directly contacted the principals rather than communicating with the school secretary. Consequently, I received responses more rapidly. As several schools refused to participate or never answered, I decided to expand my contacts. I strived to still adhere to the criteria of low income versus high income parents, and percentage of international students. However, I had little control of whether

high schools would agree to participate. Therefore, if only high schools with a low international student following agreed to participate, it impacted my overall sampling. Ultimately, the schools in table 1 were the final schools who agreed to participate.

**Table 1: High schools for sampling, including student population. Own table made with data collected from Skolverket.se**

High School	Population	Female students (%)	Foreign background (%)	Parents w/ higher secondary education (%)	Total possible respondents
<b>Malmö</b>					
Universitetsholmens gymnasium	551	40	59	33	220
Pauliskolan	1057	41	60	50	128
Malmö Borgarskola Ro 1	1387	52	53	66	721
ProCivitas Privata Gymnasium Malmö	718	60	19	81	430
<b>Total</b>					<b>1501</b>
<b>Lund</b>					
Hedda Anderssongymnasiet	511	31	32	65	158
Consensum Gymnasium Lund	273	74	59	47	202
<b>Total</b>					<b>360</b>
<b>Total all high schools</b>					<b>1861</b>

#### **4.4.2. Sampling for interviews**

At the end of the survey, I added the option for the respondent to enter their email if they wanted to participate in an interview. This was a way for me to easily gather possible respondents for semi-structured interviews that I would conduct after completion of the survey.

12 respondents entered their email, one email was non-existent, leaving 11. An email was sent to all asking when they could participate in interviews. Four participants respondents, resulting in four interviews being held within the span of two weeks.

#### **4.5 Data analysis**

Artologik's Survey and Report tool offers an option to make a rapport from the survey results. Using this tool, I then created a rapport to get an overview of the results. Using the tool, it was moreover possible to make cross-tabulations with the data. Accordingly, the findings were subjected to descriptive analysis. For example, the demographic data of age, nationality, and gender was cross tabulated with the types of products respondents used and the reasons for preferred product (see appendix 2 for examples). The survey data was further collected into Microsoft Excel in order to visualise the descriptive analysis through graphs and figures.

Different cross-tabulations were done to see if there was a possible correlation between the survey results. For example, if there would be a connection between the country within which the respondent was born and the product they use, or the embarrassment they feel when talking about menstruation (see chapter 5 for more examples).

A limitation of the data analysis is that it is solely descriptive rather than also performing a regression and statistical analysis. It was decided that the small sample size was not fit for performing a regression or statistical analysis. Rather the data was described and cross-tabulated and then compared and supported by the interview data in order to discuss and present it. This is in line with the mixed methods design where interview data is used to complement and support survey data (Creswell, 2022).

The semi-structured interviews were transcribed using Microsoft Word's transcription tool. This raw transcription was subsequently edited manually by the researcher. Using Microsoft Excel for organisation, the transcripts were subjected to thematic analysis based on the overarching themes that occurred in the interviews. The survey and interview findings were thereafter analysed and discussed in relation to the IBM-WASH framework (see chapter 3.2).

#### **4.5.1 Data limitations**

The research was challenged in terms of sampling. The preliminary selection of high schools, chosen based on the above-explained criteria, were Malmö Latinskola, Pauliskolan, Gymnasieskolan Vipan, and Katedralskolan. Both Pauliskolan and Gymnasieskolan Vipan have the highest percentage of students with a foreign background (60% and 33% respectively, see appendix 2, table 2), and the lowest percentage of students of parents with a higher education (50% and 41% respectively, see appendix 2, table 2).

**Table 2: List of schools for initial sample.**

<b>Lund</b>	<b>Malmö</b>
Gymnasieskolan Vipan	Latinskolan
Katedralskolan	Pauliskolan

The final sample (table 1) varied from this initial selection. There is an overrepresentation of high schools from Malmö, resulting in a total of 1501 possible respondents from Malmö (assuming that

mostly female students answer<sup>2</sup>) and only 360 from Lund (table 1). Another limitation is that I do not have a clear idea if the survey was sent out to all students at the high school, or only selected classes or levels. For example, at Pauliskolan, the link to the survey was only sent out to 3<sup>rd</sup> year students, which would be around 128 possible respondents, which is notably lower than the total 433 female students at the school (table 1). Thus, the potential respondent number might be much lower than what is calculated based on the above assumptions.

Out of the total of 1861 potential respondents, only 54 people responded to my survey, whereof three were prank responses, leaving 51 useful responses in total. This number is much lower than the potential number of respondents, which means there are certain limitations to the data in terms of representation of the overall student population (Bryman, 2012).

Apart from the above explanation of the link to the survey not reaching all students at the schools, another possible explanation for this low response rate is the formulation of one of the questions and its answers. The question asked respondents to rank different factors they might consider when buying a product, from most to least important (see appendix 1). However, when going to Hedda Andersson Gymnasium in person and being able to interact with the students, I realized that this question was confusing to answer, as only one number on the ranking could be chosen for each factor. Some of the respondents came to me and asked how they were supposed to fill it out, and after my explanation they understood it. However, I realized this question should not have been mandatory to answer allowing respondents who found it confusing to skip it. Respondents not being able to ask for clarification in the process of answering a questionnaire is a limitation highlighted by Bryman (2012). These limitations might have been avoided if I had been able to test the survey first (Bryman, 2012) and subsequently could have eliminated or changed the options. However, due to time limitations during the data collection phase this was not possible.

Apart from the relatively low response rate on the survey, the number of interviews completed was also limited, with only 4 out of possible 11 responding to my follow-up email. However, as the interview and survey data supplement each other in a mixed methods fashion the limitations from lack of response is lessened (Creswell, 2014)

#### **4.6 Ethical considerations**

As my study participants are all high school students, there was a risk that some survey respondents might be under 15 years of age. People under 15 years old must get parental consent to participate in

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<sup>2</sup> The genders of the high school students gathered from Skolverket.se are divided into male and female. Based on the assumption that most menstruators are biologically women, it is assumed that mostly female students would answer my survey which leaves a certain margin of error in the assumed respondent count.



studies, which would hinder my study. Therefore, the survey was provided with a filtering option, where people who answered they are under 15 were presented with a pop-up message asking them to close the survey (see appendix 1).

The survey was made anonymous and the email that the participants provided was kept safely stored and only I, the researcher, had access to them. The interview recordings and transcripts were likewise stored in a safe manner and coded to secure anonymity.

Before starting the interview, the interview participants were provided with a consent form that clearly stated the purposes of the study, promising anonymity, and that they could choose to opt out and withdraw their consent at any time. Due to the sensitive nature of the questions, the interviewees were also reassured throughout the interviews that they did not have to answer if they found it uncomfortable.

#### **4.6.1 Positionality**

As a white, female researcher in sustainability from a Danish and Swedish background with little religious affiliation or exposure to other cultures throughout my life (until the previous two years of my life studying in an international setting), I was continuously aware of my own positionality within my research and towards my research participants. For example, when interviewing the participants, I had to consider how my position as a Danish researcher, who is older than the participants and speaks a limited amount of Swedish (wherefore the interviews were in English) might impact the participants (Neely & Nguse, 2015). Moreover, as a researcher in sustainability, I have a bias towards the reusable practices that the participants perform leading me to probe more into these practices than for people using disposable products.

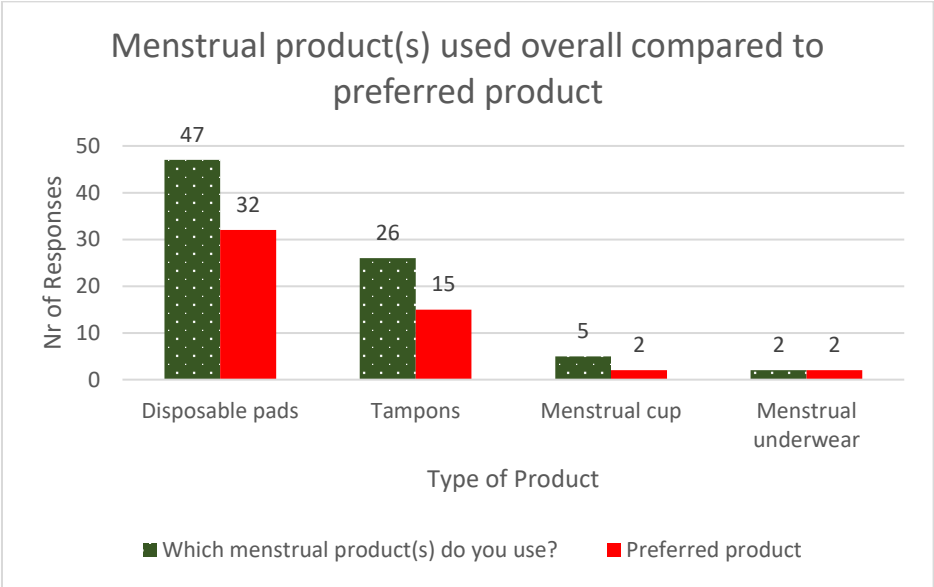
Furthermore, I was aware that my study participants should not feel guilty or judged by using products that I, for my study, had deemed unsustainable. However, as presenting myself as a researcher of sustainability science to the participants I might have inadvertently created a feeling that the use of reusable products was the “appropriate” practice, leading them to talk about this or highlight their own sustainable behavior. Therefore, I cannot deny that I might have subconscious bias based on my background that can affect the study, however, I have made a conscious effort to reflect on the data collection and analysis process to identify instances when such a bias could have affected the research findings.

# 5. Results and Discussion

## 5.1 Period product preferences of participants.

The survey findings show that preferred products are disposable pads followed by tampons (figure 2). The interviewees all used reusable pads. Interviewee #3 also used menstrual underwear and interviewee #4 used both disposable pads and tampons together. Of the survey respondents, only two said their preferred product was the menstrual cup, although five answered they used the cup (figure 2). Thus, they most likely supplement their preferred product with a cup. For example, interviewee #4 said she uses both pads and tampons, but when asked she said her preferred product is the tampon.

These results are different from the findings by Kantar Sifo (2021), where 46% Swedish, young menstruators preferred the tampon, and 44% preferred disposable pads, followed by 7% using the menstrual cup. The findings of the current study are more similar to product usage in Victoria, Australia, where the disposable pads are most used, followed by tampons, menstrual underwear and menstrual cups. Here, there was a higher proportion of menstrual cup usage (37%); however, their sample was larger and had a wider scope in age, where the respondents of 16 of 19 years old were less likely to use reusable products (Ramsay et al., 2023), comparable to respondent demographics of this study (see chapter 5.2.1). Considering the adverse environmental impact of disposable pads and tampons (Hait & Powers, 2019), it is important to understand why the high school students prefer these products in order to address possible points of departure for change in habits.



**Figure 2:** All menstrual product(s) that respondents use (green dotted) compared to preferred product (red solid). Y-axis shows number of respondents that use the type of product on the x-axis.

## 5. 2. Factors influencing period practices and product preferences.

To understand the possible reasons for why the respondents, prefer the products seen in figure 2, and in extension the barriers to the uptake of reusable period products, the IBM-WASH will be utilised to analyse and discuss the survey and interview findings. Table 3 shows the main themes that emerged from the findings for each individual dimension and level of the IBM-WASH which are discussed below.

**Table 3:** The Integrated Behavioural Model for Water, Sanitation, and Hygiene connected to the menstrual practices and preferences of high school students in Lund and Malmö (own table made with inspiration from Dreibelbis et al. (2013))

Levels	Contextual factors	Psychosocial factors	Technology factors
<b>Societal/structural</b>	Access to proper sanitation facilities	Cultural identity; nationality; religion and impact on menstrual practices	Promotion of reusables online & from friends; promotion of disposables enforcing stigma
<b>Community</b>	Access to resource at menarche; bathroom layout	Menstrual stigma; social integration (and exclusion) by upholding shared values	Purchasing location of reusables; access to desired product; ease of availability of disposables vs. reusables.
<b>Interpersonal /household</b>	---	Norms and aspirations of menstrual practices; shame of talking about periods	Demonstration of use of reusable products lacking; sharing access to disposable products
<b>Individual</b>	Age, gender, nationality, income influence on product use	Knowledge about products and menstruation; feelings of disgust towards periods and products; perceived threat from product.	High perceived cost of reusables; convenience of changing and cleaning product; discreetness of product
<b>Habitual</b>	Changing reusable product throughout the day barrier to habit formation	Existing menstrual practice habits; comfortability	Ease of routinely using reusable throughout period

### 5.2.1. The contextual dimension of period practices of high school students in Sweden.

#### **Access to sanitation facilities**

For MHM, a common problem on the *contextual, structural level* is a lack of water, and further on the *community level* is a lack of sanitation infrastructure such as bathrooms which hinders the implementation of certain menstrual products (Hennegan et al., 2019). The survey findings show that 47% of respondents have experienced not being able to find proper sanitation facilities to handle their period and products (appendix 3, table 4). Similarly, interviewee #3 mentioned that she would have no problem using the cup, given that there would be access to a sink in the bathroom. The physical layout of the bathroom can pose challenges to menstrual cup cleaning. Persdotter (2022) provides the example of several menstruators having to waddle from the toilet to the sink with their pants between their legs, menstrual blood dripping on the floor, in order to rinse their cup, because the layout of bathrooms on the *communal level* does not accommodate for certain menstrual practices (Persdotter, 2022).

### ***Individual level factors – menstrual practices influenced by age and gender.***

On the *individual level*, age, gender, education, and livelihood might impact the behaviour people exhibit in relation to their sanitation practices (Dreibelbis et al., 2013). All study participants were high school students, with an age range between 15-19 years old with 17 being the mean age. When asked how they identify, 47 of the participants answered female, two answered male, and two non-binary or other (appendix 3, table 1). Kabir et al.'s study clearly shows the importance of gender in how boys and girls needed different sanitation facilities, with girls needing cleaner bathrooms to manage their periods (Kabir et al., 2021). The topic of this master thesis is inherently gendered as, for the vast majority, menstruators are women (Chrisler, 2011).

The gendered nature of the subject was seemingly important in terms of how open the participants were towards talking with their male friends about periods and period products, as interviewee #4 said that she mainly has male friends who she does not talk to about menstruation. Burrows & Johnson (2005) have shown that young girls experience being ridiculed by boys who view the girls as weird due to their menstruating bodies (Burrows & Johnson, 2005). The menstrual product becomes the physical representation of this ridicule, as the boys would toss around the period products and make fun of them (Burrows & Johnson, 2005). This embarrassment links to stigma surrounding periods on the *communal level* of the *psychosocial dimensions* (see chapter 5.2.1).

Additionally, the interviewees said they had received their first menstrual product, a disposable pad, from either their mother or female friend. Additionally, 25% of the survey respondents answered they consider "influence from my parents" when purchasing a menstrual product (appendix 3, table 12). In comparison, 59% of the respondents of the Kantar Sifo (2021) study say they received menstrual knowledge and products from their parents. Here, age and gender intersect, as mothers often are main providers of knowledge and first period products (Britton, 1996; Brooks-Gunn & Ruble, 1982; Newton, 2016b). There is thus an intergenerational knowledge (*psychosocial dimension, interpersonal level*) and resource sharing (*technological dimension, interpersonal level*) happening, which was also seen amongst the interviewees influencing their menstrual practices, by interviewee #2, #3, and #4 all having been presented with the pad and thereafter continuing to use it.

### ***Contextual barriers to habit formation***

The *contextual* environment a person finds themselves in can either hinder or support habit formation (Dreibelbis et al., 2013). In relation to Kabir et al.'s study, improper sanitation facilities at school interrupted and hindered girls from upholding the habit of changing their period products, resulting in them staying home from school during their period (Kabir et al., 2021). Interviewee #3 said that she could not use menstrual underwear throughout the entire day, as she would have to change it, which

is impractical “because then you would need to wash it as well and carry it around” (interviewee #3). A habit formation barrier is thus that Interviewee #3 changes physical settings throughout the day, and therefore cannot easily change her underwear. Furthermore, being able to clean the product would also depend on proper washing/sanitation facilities on the *structural level*. Convenience of use further relates the *technology* itself on the *individual level* (Dreibelbis et al., 2013).

### **5.2.2 The key psychosocial dimensions of menstruating high school students in Sweden.**

#### ***Stigma, silence, and sharing – community level factors.***

As mentioned above, social stigma around menstruation on the *psychosocial, communal level* (Dreibelbis et al., 2013) correlates to feelings of embarrassment when discussing the topic (Kisling, 1996). Survey respondents agreed to feeling embarrassed talking with their friends (n=13) or their parents (n=19) about menstruation. In contrast, n=21 said they had found it *helpful* talking to others about menstruation, and n=32 said they felt *comfortable* talking with others about menstruation (appendix 3, table 15). An excellent example of this dichotomy in the openness of discussing menstruation was stated by interviewee #1. Telling the story of reaching menarche in her home country of Sierra Leone, she expressed how moving to Sweden had made it easier for her to talk openly about her period:

“...in school a lot of girls talk about it every time, oh I have my period I have this I have that like, I think I’m more [...] comfortable now than before. [However,] sometimes I feel shy talking about that with my parents. [...] Like sitting, talking about I have this or that. I feel shy or uncomfortable” - Interviewee #1

It seemed to be easier to talk to friends in school, as she put it “I don't want to talk to them all the time, I mean if they start talking, just jump over, talk a bit and then leave” (interviewee #4). There seemed to be an openness in her Swedish school on the *community level* that she did not experience in Sierra Leone, or on the *household level* in terms of shame when talking to her parents. A study by Sommer et al. (2015) showed in West-Africa, silence around menstruation was common for adolescents. This influenced how openly they talked to their parents (Sommer et al., 2015). Interviewee #1’s experience seems to mimic this feeling of shyness and silence. Additionally, talking about her period seemed to be part of her social integration in Sweden on the *community level*.

Similarly, talking about menstruation amongst friends seemed to be a shared value on the *psychosocial community level* for interviewees #1, #2, and #3 who all said they felt quite open engaging in conversation with friends about their periods. Multiple studies have shown that communication amongst friends about menstruation is highly valued for adolescent menstruators (Brantelid et al., 2014; Burrows & Johnson, 2005; Kisling, 1996).

When discussing the topic of communication between friends, interviewees #1 and #2 mention a stigma related to menstrual products requiring vaginal insertion, for example, tampons and menstrual cups; namely, that they break your hymen, subsequently taking your virginity (Maharaj & Winkler, 2020; Newton, 2016c). Interviewee #1 expressed that

“Some girls say the tampon is painful if you're a virgin. Because if you're a virgin [the vagina] is closed, and if you're not your vagina is open, [and therefore] it's much easier to put a tampon in” – interviewee #1

Interviewee #2 shared a similar notion. When asked if she would use a menstrual cup, if presented to her at menarche, she said:

“I mean, I don't think it could be so easy like to put a cup inside you as a child. Like, that's what I personally think and still I am a child” - interviewee #2

Both interviewees avoid using tampons and the cup due to the previously explained stigma. Not only does the stigma deter users from choosing such products, but in choosing against them the desire for social integration on a *community level* is upheld (Dreibelbis et al., 2013) because you then choose a product that instils the aspiration of maintaining one's virginity before marriage (Middleman & Varughese, 2012). Although this belief is not true, as tampons and the menstrual cup can be used for people at any age after menarche (Middleman & Varughese, 2012; Owen, 2022) the stigma around sex and injunctive norms of not using any products that require vaginal insertion perseveres (Maharaj & Winkler, 2020; Middleman & Varughese, 2012). In a pilot study by Tembo et al. (2020) of introducing reusables to women in Zimbabwe, the uptake of the menstrual cup amongst the program participants was the lowest amongst the 16- to 19-year-olds, especially due to beliefs that it would “take their virginity” (Tembo et al., 2020, p. 7) and expand their vagina.

### ***Individual feelings of disgust, fear, and comfortability***

The survey and interview findings show that a central *psychosocial* factor impacting the use of menstrual products, both disposable and reusable, were the factors on the *individual level* and how the individual respondents themselves perceive menstruation, menstrual blood, and use of product. Dreibelbis et al. (2013) highlights that much research in hygiene management study how feelings of disgust and fear of dirt and pollution influence behaviour (Dreibelbis et al., 2013). Interviewee #4 expressed quite strongly that she finds reusable pads disgusting and therefore she would never use them: it “just sounds really gross. It's [...] like using reusable toilet paper”. When asked what specifically is gross about menstrual blood she said:

“I think it's just like any other body fluid, it's sort of gross to look at. I mean you don't want to look at snot, you don't want to look at pee or poop. And it is the same. [And] it's chunky blood and that's not appealing so I don't think it's anything societal. I think it's just sort of ingrained that it is sort of unhygienic and gross.” – interviewee #4

Her feelings of disgust on the *individual level* clearly drive a certain behaviour where she steers clear of products.

In contrast, she would not mind using a cup, however, she would not boil the cup in a pot in which she also cooks food. This correlates to the perceived threat, on *the individual level*, of mixing bodily fluids with items you will ingest (Persdotter, 2022). Multiple of Persdotter's study participants expressed how boiling the cup in a pot used for cooking caused strong feelings of disgust, uneasiness, and worries of pollution (Persdotter, 2022). Additionally, interviewee #2 was opposed to the cup as she did not believe boiling sufficiently cleans it, a sentiment shared by some of the participants in Persdotter's study (2022). The belief stems from the idea of the menstrual cup being polluted by the blood, which no level of cleaning can remove. This links not only to disgust, but further a lack of knowledge of how the product “works” (associated with the *technological dimension* as well), as boiling the menstrual cup *is* sufficient for cleaning (Persdotter, 2022).

Apart from the fear of pollution and disgust on the *individual level*, interviewee #2 expressed a perceived threat with a fear of leakage from the menstrual cup saying “what if it explodes or something? What if it overfills?”. Interviewee #4 also expressed a fear of leakage as a reason why she uses tampons and pads together. This fear was shared by the survey participants, where n=19 said that a factor in why they prefer a certain product is “no leakage” (Appendix 3, table 9). A leak is dangerous as menstrual blood on clothing stigmatises the menstruator as unclean (Chrisler, 2011). Thus, by protecting themselves from leakage, the menstruator aspires to achieve social integration on the *community level* (Dreibelbis et al., 2013), upholding the perceived norm on the *interpersonal level* that menstrual blood should be invisible (Wood, 2020). Through marketing, the disposable period product industry upholds this concealment imperative (Wood, 2020) and, therefore, as an institution upholds certain norms and injustices (Kaijser & Kronsell, 2014).

### ***Habitual expectation of comfortability***

Feeling comfortable seemed to be an important expectation of product usage on the *habitual level* of the *psychosocial dimension*. Comfortability was the antithesis to the feelings of disgust, fear, and embarrassment that were shown to steer the participants' behaviours on the *individual level*. All interviewees mentioned comfortability in one way or another, for most as the reason why they prefer the product. As interviewee #2 said: “I think I've always used pads since I first got periods and I'm more comfortable with it”, hence it is clear that the habit is upheld due to comfort.

Additionally, interviewees #1 and #2 shared a fear of pain from inserting a tampon and related discomfort. The survey findings show that “it’s comfortable to use” and “it doesn’t hurt to use” as top reasons for why respondents preferred a tampon or pad, and one user of the menstrual cup agreed that they preferred it because it is comfortable (figure 3 below). Tembo et al. (2020) state that the younger participants in their study felt most comfortable using a reusable product comparable to the one they had always used, such as going from a disposable to a reusable pad. Therefore, the importance of comfortability cannot be overlooked in presenting reusable products to high school students.

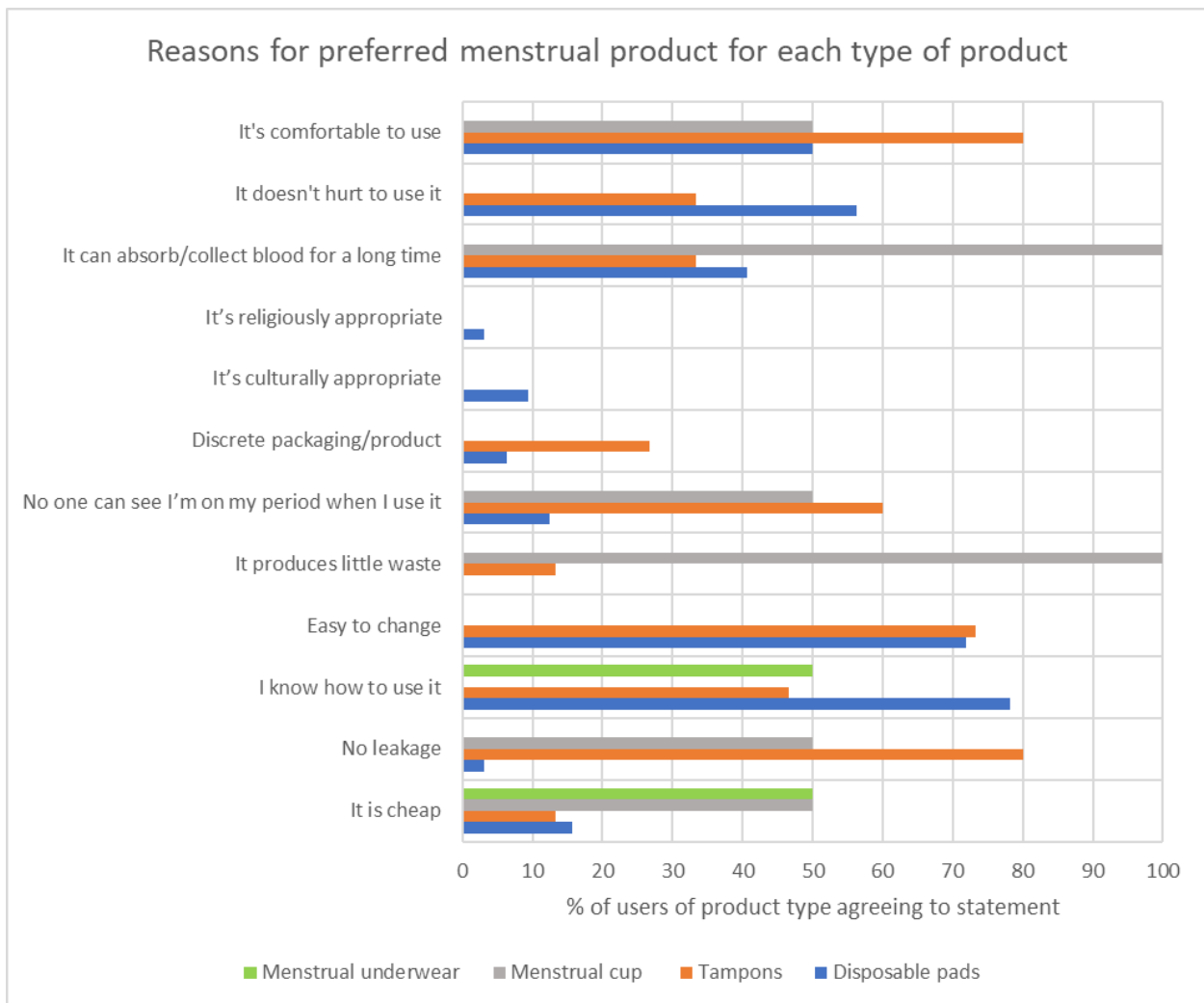
### ***Influence of cultural identity and norms on menstrual practices***

On the *societal level* of the *psychosocial dimension*, cultural identity and related institutions can impact people’s sanitation behaviour (Dreibelbis et al., 2013). For menstrual practices, cultural identity, connected to, e.g., religion, can correlate to stigma and perceived norms on the *community* and *interpersonal level* (Maharaj & Winkler, 2020). Such a correlation was found in the survey findings, with eight participants saying they had experienced being advised against the use of certain menstrual products due to cultural norms/values (appendix 3, table 7). All eight respondents had one or more immigrant parent, and six had ties to Islam (appendix 3, table 7 and 5). Hence, there is a correlation between having immigrant parents and adherence to Islam in experiencing being advised against product use due to cultural norms. The advice being based on culture rather than religion, might be because, for most religious people, religion is a culture and way of life (Beyers, 2017).

### ***5.2.3. Technological dimension influences on product usage.***

The *technological dimension* relates to the specific features and characteristics of the hygiene management product in question and how this might impact behaviour (Dreibelbis et al., 2013). As such, while the previous chapter focused on the *psychosocial* reasonings for why the research participants have chosen to use (or not use) a certain product, this chapter will rather analyse and discuss how the *technological dimension* of reusable products might hinder and support the usage of them amongst high school students.





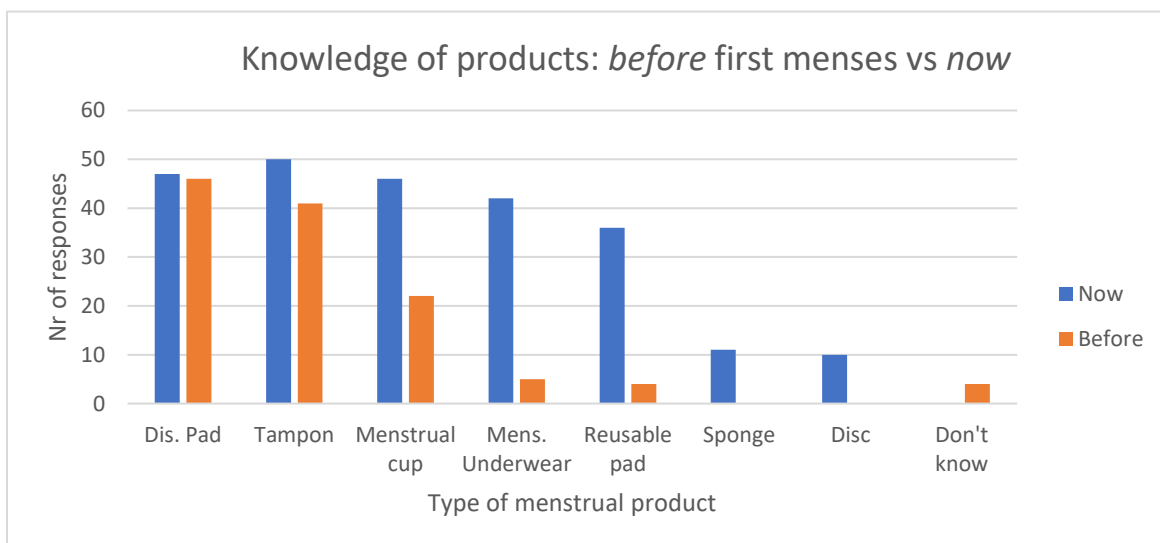
**Figure 3:** Reason for preferred product cross-tabulated with the type of product. X-axis show the percentage of the users of each individual product agreeing to the reasons for preferred product stated on the y-axis.

**Promotion, location, and access to menstrual products.**

On the *structural level*, the promotion of a given sanitation product is important for its implementation (Tembo et al., 2020). As such, disposable products have historically been promoted by the period product industry as ‘clean’, providing protection from the ‘dirty’ menstrual blood, whereby reinforcing associated menstrual stigmas (Chrisler, 2011; Wood, 2020). In contrast, the use of a menstrual cup has shown to break this stigma, as the tangible and quite visual experience of handling one’s blood creates a feeling of empowerment (Owen, 2022; Shannon et al., 2021) and lessens the feeling of disgust (Ramsay et al., 2023). Hence, promoting reusable menstrual products to high school students might not only benefit the natural environment, but moreover reduce the menstrual stigma that the study participants have shown to experience.

Linked to promotion, is the overall awareness and knowledge of products on the market. The survey thus asked which products the respondents knew *now* (at the time of the survey) and *before* their first period. These results were compared and visualised in figure 4 (below). The survey findings

show that there was an overall increase in the variety of products respondents know, especially knowledge of reusable products had increased (figure 4). For example, no knowledge was visible for the menstrual disc and sponge *before* compared to n=11 and n=10 *now* (figure 4). Knowledge of menstrual cups more than doubled (from n=22 to n=46). The knowledge of reusable pads and menstrual underwear also increased, both with an approximately 800% increase (from 4 and 5, to 36 and 42 respectively) (figure 2). Moore (1995) states that menstruators often have little knowledge of menstruation and period products before reaching menarche, rather this knowledge increases during their lifetime post-menarche.



**Figure 4:** knowledge of products before first menses compared to now (time of the survey). Y-axis shows number of respondents who said they had knowledge of the product stated on the X-axis ; from left to right disposable pads, tampon, menstrual cup, menstrual underwear, reusable pad, sponge, menstrual disc.

Sources of product knowledge are often friends and parents. 30% of the survey respondents said that they had learnt about new products from friends (appendix 3, table 15). Interviewee #3 said that her mother had bought her menstrual underwear, because the mother had an aspiration (*interpersonal, psychosocial*) for her child to use sustainable products. Brantelid et al. (2014) and Kissling (1996) show that adolescent girls receive knowledge of products and related usage from their mothers, but also from friends.

Interviewees #2, #3, and #4 said that knowledge of reusable products come from the internet, such as social media. However, the promotion of reusable products is lacking according to interviewee #4. In outlining the story of buying a menstrual cup, interviewee #4 criticised the overflow of information and necessity for self-research:

“I don’t think I’ve ever walked into a store [...] and seen a sustainable product. [...] Maybe information about it should be more [...] collected and put somewhere more official rather

than the manufacturer's website or some random YouTube channel [where] you only get one brand" – Interviewee #4

The promotion of the product is here linked to the location of reusables on the *community level*. Interviewee #4 expressed not seeing reusable products when going to the store in the same way as disposable products. She found the plethora of websites and brands too overwhelming to be willing to look for another menstrual cup, after the first she bought did not fit and most brands are international, resulting in product information being scattered on different websites (interviewee #4). This finding echo what Ramsay et al. (2023) found on the uptake of reusables in Victoria, Australia: the respondents lacked information about the products, and could only find purchasing options online and not in physical stores, which hindered respondents from buying them (Ramsay et al., 2023).

Here, availability of the product on a *community level* is important. The survey findings show that 57% of respondents consider the easy availability of a product in buying it (appendix 3, table 12). They further show that 17% have experienced not being able to access the product they prefer (appendix 3, table 4). The direct availability and accessibility of products can either hinder or support their uptake (Dreibelbis et al., 2013). As interviewee #4 answered when asked for the reason people use disposable products, she said: "I think it's just the most easily accessible kind".

### ***Sharing menstrual products and demonstrating the use of reusable products***

In line with accessibility of products, sharing of access to products between friends on the *technological interpersonal level* was something 75% of the survey respondents had experienced (appendix 3, table 4). Interviewee #3 spoke to this, saying that a factor in people using disposable products, is that they are easy to carry with you and to borrow from other people, which is not the case for disposable products. However, in some settings, often low-income countries, reusable products have been distributed (*societal level*) by organisations in order to support easier MHM, for example in Zimbabwe (Tembo et al., 2020). Interviewee #3 expressed that providing reusable products for free, the same way that some disposable products are in school, could make accessibility and uptake of reusables easier.

However, access is not everything. On the *interpersonal level*, the demonstration of the use of technology in question is important for its uptake. For example, as part of the program in Zimbabwe, the use of the menstrual cup or reusable pads was demonstrated by the organisation (Tembo et al., 2020). In the context of the present study, the survey findings show that n=39 of the respondents (76%) have had classes in school on menstruation and menstrual products (appendix 3, table 21). Interviewee #1 said she had a class in school where they told them about the use of disposable pads, tampons, and the menstrual cup and had shown them how to fold and use the cup.

However, she later expressed that she did not know how to use the product, indicating that this demonstration had not been useful. Interviewee #4 expressed a desire to be able to go into a pharmacy and receive guidance of menstrual cup use, instead of having to watch Youtube videos. The respondents, especially high school students, in Ramsay et al.'s (2023) study expressed a similar lack of knowledge about reusable products and how to use them, and a desire to learn more (Ramsay et al. 2023). The survey findings for the present research shows that n=33 (66%) of the respondents prefer a product because they know how to use it (appendix 3, table 9), indicating that knowledge of use is an important factor for menstrual practices. Providing demonstrations of how to use reusable period product could therefore be important for the uptake of reusables amongst the Swedish high school students.

The fear that interviewee #2 expressed of the menstrual cup exploding, that both her and interviewee #1 expressed of insertable products impacting virginity, and the disgust that interviewee #4 expressed against scrubbing a reusable pad, is related to the (lack) of knowledge they have of the products, their usage, and their effect on the body. Interviewee #2 expressed the perceived threat on a *psychosocial, individual level* of infertility from tampons due to Toxic Shock Syndrome (TSS) as one reason she would not use the product:

“what scared me was that I read on the Internet that if you leave a tampon in for too long, it can cause like, problems and [...] you can be infertilized” - interviewee #2

TSS is a staph infection caused by a build-up of bacteria often due to having a tampon inserted for too long (Reame, 2020). TSS can be life-threatening, but it cannot cause infertility (Reame, 2020) contrary to what interviewee #2 said. These misconceptions might be associated with a lack of proper demonstration and knowledge sharing of the use and impacts of the products on the *interpersonal level* that addresses the *psychosocial dimension* cultural beliefs and stigma of menstruation and menstrual products.

### ***Perceived price, convenience, and value of reusable products***

In addition to demonstration and knowledge, the *individual level* factor on the *technological dimension* of price of reusable products stands out as a barrier for its usage to interviewee #4.

“I read that you're supposed to try a couple before you find the one that fits and then I think 'sure, but they're not cheap' so I don't want to buy five that don't fit to then find the one that fits” - Interviewee #4

The one-time purchase price of the menstrual cup is considerably higher than the cheapest disposable products, however, as a cup can be used for 10 years, the relative price is much lower than for disposable products (van Eijk et al., 2019). Interviewee #4 is aware that a reusable product is cheaper

in the long run, but still the perceived price of the menstrual cup was higher than that for disposable products.

Low price seemed to be important for interviewee #4 as she said she mainly buys the cheapest tampons and pads. Nine of the survey respondents answered “it is cheap” as a factor they consider when buying a product. Half of the respondents who prefer using the menstrual cup and menstrual underwear answered “it is cheap” as a reason why they preferred the product, indicating they might be aware that the accumulative cost of reusables is lower than for disposables. Ramsay et al. (2023) show that pricing of products was most important for menstruators who had never used reusable products as they were least likely to view reusables as low cost, compared to people who use reusable products (Ramsay et al., 2023).

Their findings further show that the up-front cost of reusables was too steep for some, especially if they did not know if the product would be usable for them (Ramsay et al., 2023). This correlates to the affordability of products. The survey findings of the current study show that nine respondents had experienced not being able to afford the product they prefer (appendix 3, table 4). When cross tabulating the results with the different demographic data, eight respondents with an immigrant parent answered they have experienced not being able to afford the product they prefer, whereas only one with a Swedish parent said they had experienced not being able to afford the product they prefer (appendix 3, table 15). This might be due to immigrants in Sweden often having lower earnings, linked to lower education levels (Friedrich et al., 2022), which was also reflected in the sampling of survey respondents (see chapter 4.4.1). Additionally, the survey by Kantar Sifo (2021) showed that 1-2% had experienced not being able to afford a period product, highlighting that period poverty is an issue for some adolescents and young adults in Sweden.

Apart from the perceived cost of the product, is also the convenience of the use of the product on the *individual level*. Interviewees #1, #2, and #3 all expressed no issues with paying for products, rather it was the quality and convenience of the product that mattered the most to them. Convenience, especially in ease of changing the product, was a top factor for why the survey respondents preferred a product (~75% for both disposable pads and tampons, see figure 4). Of note, is that both menstrual cup and menstrual underwear users did not agree to the statement, indicating that this is not a top factor for why they prefer the product. Interviewee #3 mentioned that menstrual underwear was inconvenient because she could not change it during the day and then carry it with her:

“if I'm out for a long time, it doesn't feel convenient to just switch my entire underwear. Maybe that's a habit that you can start, but I feel like it does make it less convenient because then you would need to wash it as well and carry it around” – interviewee #3

Similarly, Ramsay et al. (2023) show that users of reusable products found it difficult to change them throughout the day. However, all menstrual cup users did agree to the statement that it can collect/absorb blood for a long time, which must certainly pertain to convenience of the product. One survey respondent even wrote “You can wear it for longer so it’s good for sleeping and has a decreased risk for infection”. The risk of infection concerns the perceived threat on the *individual level* of the *psychosocial dimension* from tampons, namely TSS.

The convenience factors overlap with the ease of routine use of the product on the *habitual level*. Ease of routine use is important for how possible it will be to maintain the habit of using the product (Dreibelbis et al., 2013). As expressed above, having to change menstrual underwear during the day and subsequently carry it around made the product inconvenient for interviewee #3, which makes it difficult to maintain the habit of using it all day. In contrast, interviewee #4 explained the ease of routine use of a disposable product: “it’s just very easy to just like put it on and throw it away when you’re done with it [...] you don’t have to, like, deal with it ever again and that’s nice”. Thus, the ease of routine use and ease of changing seems to be less of a barrier to disposables than reusable products. These findings align with the study by Ramsay et al. (2023) whose respondents also expressed that convenience and ease of changing the products were important.

Lastly, the *individual* and *habitual level* factors of the *technological dimension*, relate to the *psychosocial* stigma of disposable products as clean as they require little contact with the menstrual blood, and are easily disposed of (Persdotter, 2022). This was even a factor which made a difference between two reusable products (cup and reusable pad) for interviewee #4 who thought that the cup is the more convenient and desirable option of the two, as it “simply” requires emptying, rinsing, “and it’s clean” (interviewee #4). In contrast, the reusable pad absorbed the blood which would later have to be “scrubbed out” (Interviewee #4’s words). Here the technological requirements for cleaning the pad were met with feelings of disgust, relating to the *psychosocial, individual level*.

### **5.3 An integrated understanding of factors influencing menstrual product habits amongst Swedish high school students.**

In summary, the products used by high school students sampled for this study in Lund and Malmö, Sweden were disposable pads, tampons, menstrual cups, and menstrual underwear. The main factors influencing the use of said products were the convenience and ease of use, cultural stigma, perceived norms, feelings of disgust versus comfort, and lack of knowledge about products and product use. These factors intersect on multiple levels and dimensions of the IBM-WASH framework. The findings show that it is important to address the taboos and stigma that the high school students expressed, to expand their knowledge of the use of reusables.

As expressed by adolescent menstruators in the studies by Koff & Rierdan (1995) and Rubinsky et al. (2020), there is a need, and desire, for education on menstruation that addresses cultural stigma and highlights menstruation is not dirty or gross. Furthermore, as demonstration of products is valuable to the uptake of reusables (Tembo et al., 2020), this would be beneficial for the respondents in the current study as well. This could take place within a school context, or with a centralized information system that additionally promotes reusable products and their environmental benefits. In other words, there is a need for “an approach that focuses primarily on women’s experiences and concerns [which] may substantially reduce the amount of technical information being given and focus on issues raised by women themselves” (Britton, 1996). Additionally, for reusable menstrual products the high upfront cost can be a barrier (Hait & Powers, 2019) and therefore providing sufficient information and visibility can make high school students more confident that a purchased reusable menstrual product will suit them (Ramsay et al., 2023).

Furthermore, the stigma was shown to be related to cultural and religious beliefs of menstruation on a *community level*. Majority of participants who agreed to the statement that they had experience being advised against the use of a certain product both in general and based on cultural norms, and accordingly had abstained from using the product, had immigrant parents and most adhered to a religion, majority were Muslim. These findings highlight the importance of addressing cultural differences in education that demonstrates the usage of reusables. They further speak to the importance of considering intersectionality in studying menstrual product preferences and practices in Sweden. As intersectionality questions the institutions and norms that uphold certain injustices and intersectional categorisations (Kaijser & Kronsell, 2014), this research questions the role of the religious institutions present within a secularised Sweden (Nordin, 2018). They show that for high school students with an immigrant background, the religious institutions they and/or their parents are part of, uphold menstrual injustices as they reinforce the idea that menstrual blood is dirty and that products that require vaginal insertion are inadequate for virgins to use. This stigma had influenced how open the participants felt in talking about their periods with parents and friends.

Lastly, as this study has drawn on research from both the Global North and South, some differences in MHM between the two contexts need to be discussed. The findings of the surveys and interviews found that the main challenges for the uptake of reusable products were stigma, disgust, parental influence, pricing, and an overflow of scattered information about the products. While these factors have also been shown to be important in low-income countries (Hennegan et al., 2019; Shannon et al., 2021), there is a important difference in the *contextual dimension*, especially when comparing the *structural* and *community level* that the Swedish high school students live in, compared to participants of studies in for example Tanzania, Zimbabwe or Kenya (MacLean et al., 2020; Mason

et al., 2013; Sommer et al., 2015; Tembo et al., 2020). Here, MHM must address the physical and natural environment, such as high heat or droughts on a *structural level*, and the built environment and access to sanitation resources such as clean, running water on the *community level* (Hennegan et al., 2019). The experience that some Swedish menstruators have of waddling from the toilet to the sink in order to rinse their menstrual cup (Persdotter, 2022), is vastly different from having to walk long distances to even reach a toilet with running water, being put at risk of being assaulted, even sometimes raped, especially when going out after dark (Alda-Vidal & Browne, 2022; Kabir et al., 2021). However, this is not to say that the challenge of using reusable products in a Swedish context should be undermined, especially considering the high usage and adverse environmental impact of disposable products.

Interviewee #3 addressed these challenges at the end of her interview when speaking on what is needed to incentivise high school students to use reusable menstrual products:

”[Firstly], there’s some type of self-insight required, but if [the products were] maybe marketed it in a different way, for example sometimes there are free pads or tampons that you can have. I think if there was any sort of similar concept for menstrual cups, if bathrooms were made so that you can clean them out and feel safe in the bathrooms because I think that’s a very huge part of it. And also, just raising awareness in general because I think sustainability is definitely an issue when it comes to single use products because it does produce a lot of waste and not sure if it’s disposed of correctly because it’s a weird mixture of plastic and cotton” – Interviewee #3

## 6. Conclusion

In conclusion, high school students in Lund and Malmö prefer to use disposable pads and tampons, with few users of the menstrual cup and menstrual underwear. Multiple factors were shown to influence product preferences and period practices. These factors were contextualised in accordance with the Integrated Behavioural Model for Water, Sanitation and Hygiene. The main reasons for product preferences were linked to stigma, associated with different cultural beliefs and norms such as not using internal products to secure social integration. Product preference was further connected to a lack of knowledge and promotion of reusable products on multiple levels, as well as the convenience and ease of daily using reusable products. The high school students’ behaviours and habits were further steered by feelings of disgust towards menstrual blood and fears of leakage, factors that were both reinforced by the disposable period product industry which capitalises on the imperative for concealment and thereby upholds social injustices and norms. Considering the adverse environmental impact of disposable products, such as ocean pollution, future research should study how the above-stated factors could be addressed within the Swedish context, in order to promote the



uptake of reusable period products such as the menstrual cup, menstrual underwear, and reusable pads. Furthermore, information of the benefits of reusable period products would be helpful to include in school education. However, this must be done in a way that acknowledges and addresses the multi-cultural social reality of each menstruator and their individual needs and desires.

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## Appendix 1: Survey

**Note 1:** The yellow boxes show the filtering actions.

**Note 2:** these are only some of the questions in the survey. Questions can also be seen in the tables in appendix 3.

**Note 3:** The questions would not have been presented as in the view below but were fit for view on a computer or phone. The pictures below rather show all questions and answer options (except full list of countries), condensed for ease of reading. As such, for some questions (e.g. list of countries) the answers were presented in a dropdown menu rather than boxes to tick. Therefore, the list of countries shown here is not the complete list.

**Menstruator or not**  
If this question is **exactly**  
› No  
THEN PERFORM THE FOLLOWING ACTION  
Show pop-up: Oops! This survey only concerns menstruating people, and therefore if you do not menstruate, never have, and never will, this does not concern you. You may therefore close this survey again. Thank you, and have a nice day!

**Q25**  
Have you, will you, and/or do you ever menstruate(d)?  
 Yes  
 No

**Age**  
If this question is **either**  
› 12  
› 13  
› 14  
THEN PERFORM THE FOLLOWING ACTION  
Show message: I'm sorry, you can only participate in this survey if you're 15 or older. Please end the survey. Thank you for your time!

**Q3**  
How old are you?

**Q4**  
What is your gender?  
 Female  
 Male  
 Trans-gender  
 Non-binary  
 Other  
 Prefer not to answer

**Q28**  
Do you consider yourself to be a disabled person?  
 Yes  
 No  
 Prefer not to say

**Q5**  
Where were you born?

**Q6**  
Where is your mom from? (In case of single/same-gender parents please put country of your dad/parent)

Q14

**If you use more than one product please select your *most preferred* product from the list below.**

- Disposable pads ('bindar' - one-time use only, disposable)
- Tampons
- Menstrual cup ('menskopp')
- Menstrual underwear ('menstrosor')
- Reusable pad ('tygbinda' / 'återanvändbar binda')
- Menstrual sponge ('Naturtampong' / 'svamptampong')
- Menstrual disc ('Mensskiva')
- If other, please specify

Q15

**Why do you prefer this product?**

Please pick one or more

- It is cheap
- No leakage
- I know how to use it
- Easy to change
- It produces little waste
- No one can see I'm on my period when I use it
- Discrete packaging/product
- It's culturally appropriate
- It's religiously appropriate
- It can absorb/collect blood for a long time
- It doesn't hurt to use it
- It's comfortable to use
- If other, please specify

3

**When buying a menstrual product, which of the following factors do you consider?**

Please pick one or more

- It's easily available
- How easy the product is to use
- It's the product I've always used
- I know how to use it
- Influence from my parent(s)
- Price
- Recommendations from friends
- Reputation of product
- Sustainability
- If other, please specify

7

**Which of the following do you find most important when buying a product?**

Please rank the following from *most (1) to least (9)* important.

**NB:** the answers to this question are best seen in desktop view

	1	2	3	4	5	6	7	8	9
It's easily available	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How easy the product is to use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It's the product I've always used	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know how to use it	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Influence from parent(s)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Price	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recommendations from friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reputation of product	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sustainability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Answer options for drop-down menu answers** (countries are the same for all three questions of nationality)

**How old are you?**

- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25

**Where were you born?**

- Afghanistan
- Akrotiri and Dhekelia
- Albania
- Algeria
- American Samoa
- Andorra
- Angola
- Anguilla
- Antarctica
- Antigua and Barbuda
- Argentina
- Armenia
- Artsakh
- Aruba
- Ashmore and Cartier Islands
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh
- Barbados
- Belarus
- Belgium
- Belize
- Benin
- Bermuda
- Bhutan
- Bir Tawil (terra nullius)
- Bolivia
- Bonaire
- Bosnia and Herzegovina
- Botswana
- Bouvet Island
- Brazil
- British Indian Ocean Territory
- British Virgin Islands
- 

**For how long have you lived in Sweden?**

- All my life
- Less than a year
- 1-4 years
- 5-8 years
- 9-12 years
- 13-16 years
- 17-20 years
- 21-24 years

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**Choose your gymnasieprogram**

- Barn- och fritidsprogrammet
- Bygg- och anläggningsprogrammet
- El- och energiprogrammet
- Fordons- och transportprogrammet
- Handels- och administrationsprogrammet
- Hantverksprogrammet
- Hotell- och turismprogrammet
- Naturbruksprogrammet
- Restaurang- och livsmedelsprogrammet
- VVS- och fastighetsprogrammet
- Vård- och omsorgsprogrammet
- Ekonomiprogrammet
- Estetiska programmet
- Humanistiska programmet
- Naturvetenskapsprogrammet
- Samhällsvetenskapsprogrammet
- Teknikprogrammet
- Introduktionsprogram, Programinriktat val
- Introduktionsprogram, Individuellt alternativ
- Introduktionsprogram, Språkintröduktion
- Introduktionsprogram, Yrkesintröduktion
- If other, please specify

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## Appendix 2

**Table 1:** Interview guide. Not all questions were asked in the interview, some questions were omitted based on the response of the interviewee.

<b>Opening questions:</b>
<ul style="list-style-type: none"> <li>• What is your preferred product and why?</li> <li>• Is there anything about the product that you use that sets it apart from others?</li> </ul>
<b>First period:</b>
<ul style="list-style-type: none"> <li>• When you got your first period, what was the experience like in getting access to a product? <ul style="list-style-type: none"> <li>○ do you remember why you chose to use a certain product?</li> </ul> </li> <li>• Did you feel prepared for your first period in terms of products?</li> </ul>
<b>On product practices and preferences</b>
<ul style="list-style-type: none"> <li>• What was the reason for choosing this product?</li> <li>• did you use it from the beginning of your period?</li> <li>• How did you learn about it?</li> <li>• Have you experienced any difficulties/problems in using it?</li> <li>• Is there anything about the product that appeals to your personal values?</li> <li>• How do you choose your menstrual product?</li> <li>• Do you remember your initial thoughts when you used the product for the first time?</li> <li>• Did you find the product disgusting at first?</li> </ul>
<b>Possible sustainable product use?</b>
<ul style="list-style-type: none"> <li>• Have you ever considered using a reusable product like a reusable pad, period underwear or menstrual cup?</li> <li>• Why/why not?</li> <li>• Have you talked to your friends about it?</li> <li>• What would it take for you to switch to one do you think?</li> </ul>
<b>Parental influence</b>
<ul style="list-style-type: none"> <li>• If you've talked to your parents about menstruation, do you know what their view on it is? And have they told you anything about the products you should use?</li> </ul>
<b>If they use disposable product:</b>
<ul style="list-style-type: none"> <li>• why do you think other people use pads or tampons?</li> <li>• Do you have an idea of what your friends use? Do you know why they use the products they do?</li> </ul>
<b>If they use a reusable product:</b>
<ul style="list-style-type: none"> <li>• Do you consider sustainability in general in your life?</li> <li>• Do you actively choose products because they are sustainable?</li> <li>• why do you think other people do/do not use sustainable product? What would it take? - reflection question.</li> </ul>

**Table 2: List of High Schools in Malmö and Lund with data on percentage of female students, students with another national background than Swedish, and students of parents with higher education. Own table made with data from Skolverket.se (Skolverket.se, n.d.). Sorted by student population (lowest to highest).**

High School	Students total	Female students (%)	w/ foreign background (%)	Parents w/ higher secondary education (%)
<b>MALMÖ</b>				
Bladins International School of Malmö	26	62	73	62
Drottning Blankas Gymnasieskola Malmö City 2	42	50	71	33
Designgymnasiet Malmö	52	69	38	46
Realgymnasiet Malmö	103	80	15	56
Peabskolan Malmö	112	..	48	27
TAU Hantverksskola Gymnasium	115	32	77	24
Drottning Blankas Gymnasieskola Malmö City	120	61	53	38
Gymnasieskolan Gripen	124	61	77	35
Bellevue gymnasium	141	52	65	26
Thoren Innovation School Malmö 2	164	20	68	50
LBS Kreativa Gymnasiet Malmö	166	25	41	62
Malmö Restaurangskola	167	38	44	39
Bryggeriets Gymnasium	178	51	35	60
Rytmus Malmö	180	50	18	69
Bladins gymnasium	196	48	36	71
Malmö lärlingscenter	201	54	52	28
Agnesfrids gymnasium	225	7	70	24
KLARA Teoretiska Gymnasium Malmö	225	65	81	41
Einar Hansengymnasiet	228	68	86	56
Praktiska Gymnasiet Malmö Limhamn	242	32	54	29
Praktiska Gymnasiet Malmö City	262	50	82	24
Framtidsgymnasiet Malmö	267	4	81	23
Yrkesgymnasiet Malmö	281	36	53	33
NTI Gymnasiet Malmö	287	5	47	56
Drottning Blankas Gymnasieskola Malmö Söderport	337	82	50	39
JENSEN Gymnasium Malmö	340	57	71	52
Kunskapsgymnasiet Malmö	349	61	98	44
Cybergymnasiet Malmö	350	51	61	43
Heleneholms gymnasium	363	48	97	15
Thoren Business School Malmö	372	46	85	44
Fria Läroverken Malmö	381	42	56	40
Malmö Idrottsgymnasium Ro1	448	44	17	69

<b>Universitetsholmens gymnasium</b>	551	40	59	33
<b>ProCivitas Privata Gymnasium Malmö</b>	718	60	19	81
<b>S:t Petri skola</b>	842	64	23	84
<b>Pauliskolan</b>	1057	41	60	50
<b>Malmö Latinskola Ro 1</b>	1179	70	18	82
<b>Malmö Borgarskola Ro 1</b>	1387	52	53	66
<b>LUND</b>				
<b>Flyinge Hästsportgymnasium</b>	31	94	..	61
<b>NTI Vetenskapsgymnasiet Lund</b>	35	..	31	83
<b>Lunds Fordonstekniska Gymn.</b>	53	..	40	38
<b>Sveriges Ridgymnasium Flyinge</b>	78	95	..	64
<b>NTI Gymnasiet Lund</b>	168	..	27	63
<b>Lunds Dans- o Musikalgymnasium</b>	178	89	13	79
<b>Lars-Erik Larssongymnasiet</b>	184	64	9	92
<b>Thoren Innovation School Lund</b>	185	19	48	54
<b>Hvilan Gymnasium Lund</b>	203	49	30	66
<b>JENSEN Gymnasium Lund</b>	245	57	24	65
<b>Consensum Gymnasium Lund</b>	273	74	59	47
<b>Realgymnasiet i Lund</b>	309	73	16	55
<b>ProCivitas Privata Gymnasium Lund</b>	333	65	17	72
<b>Drottning Blankas Gymnasieskola Lund</b>	376	60	16	61
<b>LBS Kreativa Gymnasiet Lund</b>	407	30	16	73
<b>Hedda Anderssongymnasiet</b>	511	31	32	65
<b>Gymnasieskolan Vipan</b>	1091	33	33	41
<b>Gymnasieskolan Spyken</b>	1225	68	14	91
<b>Katedralskolan</b>	1527	55	23	88
<b>Polhemskolan</b>	2600	49	15	84

## Appendix 3

**Table 1. Age, gender, disability**

Age	Nr of responses (% of total)	Gender	Nr of responses (% of total)	Do you consider yourself disabled	Nr of responses (% of total)
15	1 (2.0%)	Female	47 (92.2%)	Yes	5 (9.8%)
16	13 (25.5%)	Male	2 (3.9%)	No	44 (86.3%)
17	11 (21.6%)	Non-binary	1 (2.0%)	Prefer not to say	2 (3.9%)
18	17 (33.3%)	Other	1 (2.0%)		
19	9 (17.6%)				

**Table 2: nationality of participants and participants' parents.**

Country of birth	Nr of responses (% of total)	Mom/Primary parent country	Nr of responses (% of total)	Dad/secondary parent country	Nr of responses (% of total)
Argentina	1 (2.0%)	Afghanistan	1 (2.0%)	Afghanistan	1 (2.0%)
Bosnia and Herzegovina	1 (2.0%)	American Samoa	1 (2.0%)	Antigua and Barbuda	1 (2.0%)
Denmark	4 (7.8%)	Bosnia and Herzegovina	3 (5.9%)	Bosnia and Herzegovina	3 (6.0%)
Egypt	1 (2.0%)	China	1 (2.0%)	Chile	2 (4.0%)
Germany	3 (5.9%)	Congo, DR	1 (2.0%)	China	1 (2.0%)
India	2 (3.9%)	Croatia	1 (2.0%)	Congo, DR	1 (2.0%)
Iraq	2 (3.9%)	Denmark	2 (3.9%)	Denmark	3 (6.0%)
Pakistan	1 (2.0%)	Egypt	1 (2.0%)	Egypt	1 (2.0%)
Palestine	1 (2.0%)	Germany	1 (2.0%)	Germany	1 (2.0%)
Sierra Leone	1 (2.0%)	India	2 (3.9%)	India	2 (4.0%)
South Korea	1 (2.0%)	Iran	1 (2.0%)	Iran	2 (4.0%)
Sweden	32 (62.7%)	Iraq	4 (7.8%)	Iraq	4 (8.0%)
United States	1 (2.0%)	Kenya	1 (2.0%)	Kosovo	2 (4.0%)
		Kosovo	2 (3.9%)	Lebanon	1 (2.0%)
		Lebanon	1 (2.0%)	Pakistan	2 (4.0%)
		Morocco	1 (2.0%)	Palestine	1 (2.0%)
		Pakistan	2 (3.9%)	Poland	2 (4.0%)
		Palestine	1 (2.0%)	Sierra Leone	1 (2.0%)
		Peru	1 (2.0%)	Somalia	1 (2.0%)
		Poland	2 (3.9%)	Sweden	15 (30.0%)
		Sierra Leone	1 (2.0%)	Turkey	1 (2.0%)
		Somalia	1 (2.0%)	United Kingdom	1 (2.0%)
		South Korea	2 (3.9%)	United States	1 (2.0%)
		Spain	1 (2.0%)		
		Sweden	16 (31.4%)		

**Table 3: Religious affiliation. The columns across signify if the respondents themselves or rather their parents adhere to a religion. “-“ means no response.**

Do you or your parent(s) adhere to any religion?	Buddhism	Christianity	Hinduism	Islam	Judaism	Prefer not to say	Other, please specify
Yes, both me and my parent(s)	-	3	-	14	-	1	3
Yes, but just me	1	1	1	-	1	-	-
Yes, but just one of my parent(s)	-	2	1	1	-	-	1
Yes, but just my parent(s)	-	2	1	-	-	-	1
No, none of the above	-	-	-	-	-	1	1
Total	1	8	3	15	1	2	6

**Table 4: Experience of product access and purchase scenarios.**

Which of the following scenarios have you experienced at least once?	Number of responses
Having to ask others for menstrual products	38 (74.5%)
Having used a product for so long that I bled through because I didn't have a chance to change it	33 (64.7%)
Having used a product for so long that I got worried for any health implications	20 (39.2%)
Not being able to access the product I prefer	9 (17.6%)
Not being able to afford the product I prefer	9 (17.6%)
Not being able to find proper sanitation facilities (toilets, bathrooms, sinks) to take care of my menstruation and products	24 (47.1%)
Choosing to buy a menstrual product because it's sustainable	10 (19.6%)
Choosing to buy a product (any product) because it's sustainable	13 (25.5%)
None of the above	5 (9.8%)
Total	161 (315.7%)

**Table 5: Experience of advisory scenarios cross-tabulated with adherence to religion**

Which of the following scenarios have you experienced at least once?	Recoded - Do you or your parent(s) adhere to any religion?	
	Yes	No
	Number of responses	Number of responses

My parents advising against the use of certain menstrual product(s)	13 (33,3%)	3 (13,6%)
My parents not buying the product(s) that I want	1 (2,6%)	1 (4,5%)
Being advised against the use of certain menstrual products due to religious beliefs	1 (2,6%)	-
Being advised against the use of certain menstrual products due to cultural norms/values	7 (17,9%)	1 (4,5%)
Using products that others (for example parents) have advised against due to cultural norms/values	3 (7,7%)	-
Not using a product due to own cultural norms/values	1 (2,6%)	-
None of the above	13 (33,3%)	17 (77,3%)
Total	39 (100,0%)	22 (100,0%)

**Table 6: Most preferred product cross-tabulated with country of birth**

	If you use more than one product please select your <b>most preferred</b> product from the list below.				
	Disposable pads	Tampons	Menstrual cup	Menstrual underwear	Pads
Where were you born?	Number of responses	Number of responses	Number of responses	Number of responses	Number of responses
Argentina	-	-	-	1 (50,0%)	-
Bosnia and Herzegovina	1 (3,8%)	-	-	-	-
Denmark	3 (11,5%)	-	1 (50,0%)	-	-
Egypt	1 (3,8%)	-	-	-	-
Germany	2 (7,7%)	-	-	-	1 (16,7%)
India	2 (7,7%)	-	-	-	-
Iraq	-	1 (6,7%)	-	1 (50,0%)	-
Pakistan	-	-	-	-	1 (16,7%)
Palestine	1 (3,8%)	-	-	-	-
Sierra Leone	1 (3,8%)	-	-	-	-
South Korea	-	-	-	-	1 (16,7%)
Sweden	14 (53,8%)	14 (93,3%)	1 (50,0%)	-	3 (50,0%)
United States	1 (3,8%)	-	-	-	-
Total	26 (100,0%)	15 (100,0%)	2 (100,0%)	2 (100,0%)	6 (100,0%)

**Table 7: experience of advisory scenarios cross-tabulated with national background of participant and participants' parent(s)**

	Recoded - Where is your mom/primary parent from?		Recoded - Where were you born?		Recoded - Where is your dad/secondary parent from?	
	Inter-national mom	Swedish mom	Inter-national born	Swedish born	Inter-national dad	Swedish dad
Which of the following scenarios have you experienced at least once?	Number of responses	Number of responses	Number of responses	Number of responses	Number of responses	Number of responses
My parents advising against the use of certain menstrual product(s)	14 (31,1%)	2 (12,5%)	6 (23,1%)	10 (28,6%)	12 (26,7%)	3 (20,0%)
My parents not buying the product(s) that I want	2 (4,4%)	-	1 (3,8%)	1 (2,9%)	2 (4,4%)	-
Being advised against the use of certain menstrual products due to religious beliefs	1 (2,2%)	-	-	1 (2,9%)	1 (2,2%)	-
Being advised against the use of certain menstrual products due to cultural norms/values	7 (15,6%)	1 (6,2%)	5 (19,2%)	3 (8,6%)	8 (17,8%)	-
Using products that others (for example parents) have advised against due to cultural norms/values	3 (6,7%)	-	2 (7,7%)	1 (2,9%)	3 (6,7%)	-
Not using a product due to own cultural norms/values	1 (2,2%)	-	-	1 (2,9%)	1 (2,2%)	-
None of the above	17 (37,8%)	13 (81,2%)	12 (46,2%)	18 (51,4%)	18 (40,0%)	12 (80,0%)
Total	45 (100,0%)	16 (100,0%)	26 (100,0%)	35 (100,0%)	45 (100,0%)	15 (100,0%)

**Table 8: Menstrual products used cross-tabulated with adherence religion and each individual religion**

	Do you or your parent(s) adhere to any religion?
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	No, none	Buddhism	Christianity	Hinduism	Islam	Judaism	Prefer not to say	Other
Which of the following menstrual product(s) do you use?	Nr of responses	Nr of responses	Nr of responses	Ne of responses	Nr of responses	Nr of responses	Nr of responses	Nr of responses
Disposable pads	19 (90,5%)	-	7 (87,5%)	2 (66,7%)	15 (100,0%)	-	2 (100,0%)	4 (66,7%)
Tampons	10 (47,6%)	1 (100,0%)	7 (87,5%)	2 (66,7%)	5 (33,3%)	1 (100,0%)	1 (50,0%)	2 (33,3%)
Menstrual cup	3 (14,3%)	-	1 (12,5%)	1 (33,3%)	-	-	-	2 (33,3%)
Menstrual underwear	1 (4,8%)	-	-	-	1 (6,7%)	-	-	-
If other, please specify	-	-	-	-	-	-	-	1 (16,7%)
Total	33 (157,1%)	1 (100,0%)	15 (187,5%)	5 (166,7%)	21 (140,0%)	1 (100,0%)	3 (150,0%)	9 (150,0%)

**Table 9: reasons for preferred product cross-tabulated with each most preferred type of product.**

	If you use more than one product please select your <b>most preferred</b> product from the list below.				
	Disposable pads	Tampons	Menstrual cup	Menstrual underwear	Total
Why do you prefer this product?	Number of responses	Number of responses	Number of responses	Number of responses	Number of responses
It is cheap	5 (9,8%)	2 (3,9%)	1 (2,0%)	1 (2,0%)	9 (17,6%)
No leakage	5 (9,8%)	12 (23,5%)	1 (2,0%)	-	18 (35,3%)
I know how to use it	25 (49%)	7 (13,7%)	-	1 (2,0%)	33 (64,7%)
Easy to change	23 (45,1%)	11 (21,6%)	-	-	34 (66,7%)
It produces little waste	-	2 (3,9%)	2 (3,9%)	-	4 (7,8%)
No one can see I'm on my period when I use it	4 (7,8%)	9 (17,6%)	1 (2,0%)	-	14 (27,5%)
Discrete packaging/p-product	2 (3,9%)	4 (7,8%)	-	-	6 (11,8%)
It's culturally appropriate	3 (5,9%)	-	-	-	3 (5,9%)
It's religiously appropriate	1 (2,0%)	-	-	-	1 (2,0%)
It can absorb/collect blood for a long time	13 (25,4%)	5 (9,8%)	2 (3,9%)	-	20 (39,2%)
It doesn't hurt to use it	18 (35,3%)	5 (9,8%)	-	-	23 (45,1%)



It's comfortable to use	16 (31,4%)	12 (23,5%)	1 (2,0%)	-	29 (56,9%)
If other, please specify	-	-	1 (2,0%)	-	1 (2,0%)
Total	99 (194,1%)	69 (135,3%)	9 (17,6%)	2 (3,9%)	195 (382,4%)

**Table 10: reasons for preferred product cross-tabulated with each individual religion.**

	If yes, please choose which one(s)							
	Buddhism	Christianity	Hinduism	Islam	Judaism	Prefer not to say	Other, please specify	Total
Why do you prefer this product?	Number of responses	Number of responses	Number of responses	Number of responses	Number of responses	Number of responses	Number of responses	Number of responses
It is cheap	1	3	1	-	1	-	2	8
No leakage	-	3	1	5	-	-	2	11
I know how to use it	-	4	2	12	-	1	3	22
Easy to change	-	3	2	13	-	1	4	23
It produces little waste	-	1	-	-	-	-	1	2
No one can see I'm on my period when I use it	-	3	-	3	-	-	1	7
Discrete packaging/product	-	2	-	-	-	-	-	2
It's culturally appropriate	-	1	-	2	-	-	-	3
It's religiously appropriate	-	1	-	-	-	-	-	1
It can absorb/collect blood for a long time	-	1	1	3	-	-	1	6
It doesn't hurt to use it	-	1	1	10	-	1	2	15
It's comfortable to use	-	5	-	9	-	1	2	17
Total	1	28	8	57	1	4	18	117

**Table 11: Factors considered at purchase cross-tabulated with the type of product used**

	Which of the following menstrual product(s) do you use?
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	Disposable pads	Tampons	Menstrual cup	Menstrual underwear	Other
When buying a menstrual product, which of the following factors do you consider?	Number of responses	Number of responses	Number of responses	Number of responses	Number of responses
It's easily available	28 (59,6%)	16 (61,5%)	2 (40,0%)	2 (100,0%)	-
How easy the product is to use	28 (59,6%)	15 (57,7%)	1 (20,0%)	1 (50,0%)	1 (100,0%)
It's the product I've always used	34 (72,3%)	19 (73,1%)	1 (20,0%)	2 (100,0%)	-
I know how to use it	31 (66,0%)	16 (61,5%)	4 (80,0%)	2 (100,0%)	1 (100,0%)
Influence from my parent(s)	13 (27,7%)	8 (30,8%)	1 (20,0%)	1 (50,0%)	-
Price	22 (46,8%)	10 (38,5%)	1 (20,0%)	2 (100,0%)	-
Recommendations from friends	6 (12,8%)	4 (15,4%)	2 (40,0%)	-	-
Reputation of product	10 (21,3%)	6 (23,1%)	2 (40,0%)	-	-
Sustainability	7 (14,9%)	3 (11,5%)	1 (20,0%)	1 (50,0%)	-
If other, please specify	1 (2,1%)	1 (3,8%)	-	-	-
Total	180 (383,0%)	98 (376,9%)	15 (300,0%)	11 (550,0%)	2 (200,0%)

**Table 12: Factors considered at purchase cross-tabulated with adherence to religion**

	Do you or your parent(s) adhere to any religion?		Total (% of total survey respondent count)
	Yes	No	
When buying a menstrual product, which of the following factors do you consider?	Number of responses	Number of responses	
It's easily available	17 (15,3%)	12 (15,4%)	29 (56,9%)
How easy the product is to use	17 (15,3%)	13 (16,7%)	30 (58,8%)
It's the product I've always used	20 (18,0%)	15 (19,2%)	35 (68,6%)
I know how to use it	19 (17,1%)	15 (19,2%)	34 (66,7%)
Influence from my parent(s)	11 (9,9%)	2 (2,6%)	13 (25,5%)
Price	13 (11,7%)	10 (12,8%)	23 (45,1%)
Recommendations from friends	2 (1,8%)	5 (6,4%)	7 (13,7%)
Reputation of product	6 (5,4%)	4 (5,1%)	10 (19,6%)
Sustainability	5 (4,5%)	2 (2,6%)	7 (13,7%)
If other, please specify	1 (0,9%)	-	1 (2%)

**Table 13: reasons for preferred product cross-tabulated with adherence to religion**

	Do you or your parent(s) adhere to any religion?	
	Yes	No
Why do you prefer this product?	Number of responses	Number of responses
It is cheap	4 (3,9%)	5 (5,4%)
No leakage	9 (8,7%)	9 (9,8%)
I know how to use it	21 (20,4%)	12 (13,0%)
Easy to change	21 (20,4%)	13 (14,1%)
It produces little waste	1 (1,0%)	3 (3,3%)
No one can see I'm on my period when I use it	6 (5,8%)	8 (8,7%)
Discrete packaging/product	2 (1,9%)	4 (4,3%)
It's culturally appropriate	3 (2,9%)	-
It's religiously appropriate	1 (1,0%)	-
It can absorb/collect blood for a long time	6 (5,8%)	14 (15,2%)
It doesn't hurt to use it	14 (13,6%)	9 (9,8%)
It's comfortable to use	15 (14,6%)	14 (15,2%)
If other, please specify	-	1 (1,1%)
Total	103 (100,0%)	92 (100,0%)

**Table 14: Experience of embarrassment scenarios cross-tabulated with national background of respondents and respondents' parent(s).**

	Where were you born?		Where is your mom from?		Where is your dad from?	
	Inter-national	Sweden	Inter-national	Sweden	Inter-national	Sweden
Which of the following scenarios have you experienced at least once?	Number of responses	Number of responses	Number of responses	Number of responses	Number of responses	Number of responses
Being embarrassed talking with my friends about menstruation	4 (9,3%)	8 (12,1%)	9 (12,0%)	3 (8,8%)	9 (12,3%)	3 (8,6%)
Being embarrassed talking with my parent(s) about menstruation	8 (18,6%)	11 (16,7%)	13 (17,3%)	6 (17,6%)	12 (16,4%)	6 (17,1%)
Feeling it's helpful to talk with others about menstruation	8 (18,6%)	13 (19,7%)	14 (18,7%)	7 (20,6%)	13 (17,8%)	8 (22,9%)

Feeling comfortable talking with others about menstruation	13 (30,2%)	19 (28,8%)	22 (29,3%)	10 (29,4%)	21 (28,8%)	11 (31,4%)
Learning about a new menstrual product from friends	8 (18,6%)	9 (13,6%)	13 (17,3%)	4 (11,8%)	13 (17,8%)	4 (11,4%)
None of the above	2 (4,7%)	6 (9,1%)	4 (5,3%)	4 (11,8%)	5 (6,8%)	3 (8,6%)
Total	43 (100,0%)	66 (100,0%)	75 (100,0%)	34 (100,0%)	73 (100,0%)	35 (100,0%)

**Table 15: experience of scenarios related to product usage, accessibility, and sustainability cross-tabulated with national background of respondents and respondents 'parent(s)**

	Where is your mom from?		Where were you born?		Where is your dad from?	
	Inter-national	Sweden	Inter-national	Sweden	Inter-national	Sweden
Which of the following scenarios have you experienced at least once?	Number of responses	Number of responses	Number of responses	Number of responses	Number of responses	Number of responses
Having to ask others for menstrual products	27 (24,1%)	11 (22,4%)	13 (24,5%)	25 (23,1%)	25 (22,7%)	12 (25,0%)
Having used a product for so long that I bled through because I didn't have a chance to change it	22 (19,6%)	11 (22,4%)	10 (18,9%)	23 (21,3%)	21 (19,1%)	11 (22,9%)
Having used a product for so long that I got worried for any health implications	12 (10,7%)	8 (16,3%)	7 (13,2%)	13 (12,0%)	12 (10,9%)	8 (16,7%)
Not being able to access the product I prefer	8 (7,1%)	1 (2,0%)	4 (7,5%)	5 (4,6%)	7 (6,4%)	2 (4,2%)
Not being able to afford the product I prefer	8 (7,1%)	1 (2,0%)	5 (9,4%)	4 (3,7%)	8 (7,3%)	1 (2,1%)
Not being able to find proper sanitation facilities (toilets, bathrooms, sinks) to take care of my menstruation and products	15 (13,4%)	9 (18,4%)	5 (9,4%)	19 (17,6%)	14 (12,7%)	9 (18,8%)
Choosing to buy a menstrual product because it's sustainable	8 (7,1%)	2 (4,1%)	3 (5,7%)	7 (6,5%)	8 (7,3%)	2 (4,2%)

Choosing to buy a product (any product) because it's sustainable	9 (8,0%)	4 (8,2%)	4 (7,5%)	9 (8,3%)	11 (10,0%)	2 (4,2%)
None of the above	3 (2,7%)	2 (4,1%)	2 (3,8%)	3 (2,8%)	4 (3,6%)	1 (2,1%)
Total	112 (100,0%)	49 (100,0%)	53 (100,0%)	108 (100,0%)	110 (100,0%)	48 (100,0%)

**Table 16: experience of scenarios related to product usage, accessibility, and sustainability cross-tabulated with living situation and type of menstrual product used**

	Do you live with your parent(s)/guardian(s)?		Which of the following menstrual product(s) do you use?				
	Yes	Other	Disposable pads	Tampons	Menstrual cup	Menstrual underwear (	Other
Which of the following scenarios have you experienced at least once?	Number of responses	Number of responses	Number of responses	Number of responses	Number of responses	Number of responses	Number of responses
Having to ask others for menstrual products	36 (23,2%)	2 (33,3%)	36 (24,2%)	21 (23,3%)	4 (18,2%)	2 (25,0%)	-
Having used a product for so long that I bled through because I didn't have a chance to change it	32 (20,6%)	1 (16,7%)	31 (20,8%)	21 (23,3%)	4 (18,2%)	2 (25,0%)	-
Having used a product for so long that I got worried for any health implications	19 (12,3%)	1 (16,7%)	19 (12,8%)	13 (14,4%)	3 (13,6%)	1 (12,5%)	1 (100,0%)
Not being able to access the product I prefer	9 (5,8%)	-	8 (5,4%)	4 (4,4%)	1 (4,5%)	-	-
Not being able to afford the product I prefer	8 (5,2%)	1 (16,7%)	8 (5,4%)	5 (5,6%)	-	-	-
Not being able to find proper sanitation facilities (toilets, bathrooms, sinks) to	23 (14,8%)	1 (16,7%)	22 (14,8%)	13 (14,4%)	3 (13,6%)	1 (12,5%)	-

take care of my menstruation and products							
Choosing to buy a menstrual product because it's sustainable	10 (6,5%)	-	8 (5,4%)	4 (4,4%)	4 (18,2%)	1 (12,5%)	-
Choosing to buy a product (any product) because it's sustainable	13 (8,4%)	-	12 (8,1%)	8 (8,9%)	3 (13,6%)	1 (12,5%)	-
None of the above	5 (3,2%)	-	5 (3,4%)	1 (1,1%)	-	-	-
Total	155 (100,0%)	6 (100,0%)	149 (100,0%)	90 (100,0%)	22 (100,0%)	8 (100,0%)	1 (100,0%)

**Table 17: Adherence to religion cross-tabulated with national background of respondents and respondents' parent(s)**

	Where is your mom from?		Where were you born?		Where is your dad from?	
	International	Sweden	International	Sweden	International	Sweden
Do you or your parent(s) adhere to any religion?	Number of responses	Number of responses	Number of responses	Number of responses	Number of responses	Number of responses
Yes, both me and my parent(s)	19 (54,3%)	2 (12,5%)	10 (52,6%)	11 (34,4%)	19 (54,3%)	1 (6,7%)
Yes, but just me	1 (2,9%)	-	1 (5,3%)	-	1 (2,9%)	-
Yes, but just one of my parent(s)	5 (14,3%)	-	1 (5,3%)	4 (12,5%)	4 (11,4%)	1 (6,7%)
Yes, but just my parent(s)	2 (5,7%)	1 (6,2%)	1 (5,3%)	2 (6,2%)	2 (5,7%)	1 (6,7%)
No, none of the above	8 (22,9%)	13 (81,2%)	6 (31,6%)	15 (46,9%)	9 (25,7%)	12 (80,0%)
Total	35 (100,0%)	16 (100,0%)	19 (100,0%)	32 (100,0%)	35 (100,0%)	15 (100,0%)

**Table 18: Country of mom/primary parents cross-tabulated with experience of advisory scenarios**

	Which of the following scenarios have you experienced at least once?						
	My parents advising against the use of certain mens-	My parents not buying the product(s) that I want	Being advised against the use of certain mens-	Being advised against the use of certain menstrual	Using products that others (for example parents)	Not using a product due to own cultural	None of the above

	trual product(s)		trual products due to religious beliefs	products due to cultural norms/values	have advised against due to cultural norms/values	norm-s/values	
Where is your mom from?	Number of responses	Number of responses	Number of responses	Number of responses	Number of responses	Number of responses	Number of responses
Afghanistan	1 (6,2%)	-	-	-	-	-	-
American Samoa	1 (6,2%)	-	-	1 (12,5%)	1 (33,3%)	-	-
Bosnia and Herzegovina	1 (6,2%)	-	-	2 (25,0%)	1 (33,3%)	-	1 (3,3%)
China	-	-	-	-	-	-	1 (3,3%)
Congo, DR	-	-	-	-	-	1 (100,0%)	-
Croatia	1 (6,2%)	-	-	-	-	-	-
Denmark	-	-	-	-	-	-	2 (6,7%)
Egypt	1 (6,2%)	-	-	1 (12,5%)	-	-	-
Germany	-	-	-	-	-	-	1 (3,3%)
India	-	-	-	-	-	-	2 (6,7%)
Iran	-	-	-	-	-	-	1 (3,3%)
Iraq	1 (6,2%)	1 (50,0%)	1 (100,0%)	1 (12,5%)	1 (33,3%)	-	2 (6,7%)
Kenya	1 (6,2%)	-	-	-	-	-	-
Kosovo	2 (12,5%)	-	-	-	-	-	-
Lebanon	-	-	-	-	-	-	1 (3,3%)
Morocco	-	-	-	-	-	-	1 (3,3%)
Pakistan	-	-	-	1 (12,5%)	-	-	1 (3,3%)
Palestine	1 (6,2%)	-	-	1 (12,5%)	-	-	-
Peru	-	-	-	-	-	-	1 (3,3%)
Poland	2 (12,5%)	1 (50,0%)	-	-	-	-	-
Sierra Leone	-	-	-	-	-	-	1 (3,3%)
Somalia	1 (6,2%)	-	-	-	-	-	-
South Korea	1 (6,2%)	-	-	-	-	-	1 (3,3%)
Spain	-	-	-	-	-	-	1 (3,3%)
Sweden	2 (12,5%)	-	-	1 (12,5%)	-	-	13 (43,3%)

Total	16 (100,0%)	2 (100,0%)	1 (100,0%)	8 (100,0%)	3 (100,0%)	1 (100,0%)	30 (100,0%)
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**Table 19: Country of dad/secondary parents cross-tabulated with experience of advisory scenarios**

	Which of the following scenarios have you experienced at least once?						
	My parents advising against the use of certain menstrual product(s)	My parents not buying the product(s) that I want	Being advised against the use of certain menstrual products due to religious beliefs	Being advised against the use of certain menstrual products due to cultural norms/values	Using products that others (for example parents) have advised against due to cultural norms/values	Not using a product due to own cultural norms/values	None of the above
Where is your dad from?	Number of responses	Number of responses	Number of responses	Number of responses	Number of responses	Number of responses	Number of responses
Afghanistan	1 (6,7%)	-	-	-	-	-	-
Antigua and Barbuda	1 (6,7%)	-	-	1 (12,5%)	1 (33,3%)	-	-
Bosnia and Herzegovina	1 (6,7%)	-	-	2 (25,0%)	1 (33,3%)	-	1 (3,3%)
Chile	-	-	-	-	-	-	2 (6,7%)
China	-	-	-	-	-	-	1 (3,3%)
Congo, DR	-	-	-	-	-	1 (100,0%)	-
Denmark	-	-	-	-	-	-	3 (10,0%)
Egypt	1 (6,7%)	-	-	1 (12,5%)	-	-	-
Germany	-	-	-	-	-	-	1 (3,3%)
India	-	-	-	-	-	-	2 (6,7%)
Iran	-	-	-	1 (12,5%)	-	-	1 (3,3%)
Iraq	1 (6,7%)	1 (50,0%)	1 (100,0%)	1 (12,5%)	1 (33,3%)	-	2 (6,7%)
Kosovo	2 (13,3%)	-	-	-	-	-	-
Lebanon	-	-	-	-	-	-	1 (3,3%)
Pakistan	-	-	-	1 (12,5%)	-	-	1 (3,3%)
Palestine	1 (6,7%)	-	-	1 (12,5%)	-	-	-



Poland	2 (13,3%)	1 (50,0%)	-	-	-	-	-
Sierra Leone	-	-	-	-	-	-	1 (3,3%)
Somalia	1 (6,7%)	-	-	-	-	-	-
Sweden	3 (20,0%)	-	-	-	-	-	12 (40,0%)
Turkey	-	-	-	-	-	-	1 (3,3%)
United Kingdom	1 (6,7%)	-	-	-	-	-	-
United States	-	-	-	-	-	-	1 (3,3%)
Total	15 (100,0%)	2 (100,0%)	1 (100,0%)	8 (100,0%)	3 (100,0%)	1 (100,0%)	30 (100,0%)

**Table 20: Receiving lessons in school**

Have you received lesson(s)/lecture(s) in school about menstruation and menstrual products?	Number of responses
Yes	39 (76.5%)
No	5 (9.8%)
Don't know	7 (13.7%)
Total	51 (100.0%)