**Menstrual Health Management**

**A South Korean Case Study**

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1. **Introduction**

Menstrual hygiene management finally became a focus in development in the past decade. Girls are beginning to learn the basic of menstruation. Many development programmes now provide assistance in infrastructure improvement (such as new designs of sanitation facilities and material provision to support girls in managing their hygiene in school), educating students, teachers, and parents about menstrual hygiene management, and addressing cultural taboos that prevent girls and women from participating in community activities during menstruation. Examples of these organisations include Save the Children, United Nations agencies, as well as governments (such as India, Indonesia, and the Philippines).

However, this provision tends to stop at school gates. Where do girls learn more about menstruation after they leave school and mature into women? Where do they obtain more information about other aspects of menstruation such as hygiene management options, pain management strategies, the linkage between menstruation and reproduction, or the impact of their menstrual hygiene practice on their living environment? Without comprehensive consideration, adverse consequence can result, such as the case in India where menstrual product waste has become a public problem.

So where do we look for lessons in menstrual health management? For developing countries that are still learning, perhaps looking to a more developed neighbour might yield some lessons.

South Korea appears a potential source of lessons for several reasons: advanced economy, advanced healthcare, and advanced education. South Korea is also one of the few countries with a history of menstrual leave policy as part of its Labour Standards Act. In this paper, South Korea experience will be looked at in terms of the policy and practice of menstrual education, menstrual health management, and the public discourse of menstruation.

The scope of this paper is limited to compiling experiences of South Korea, and stops short at analysing what this experience could mean for developing countries. Nevertheless, Korea’s experience in this paper will be compared, where possible, to international or other countries with similar experiences, in areas where English literature permits. Since taboo has been a dominant focus in menstrual discussion elsewhere, for practical application of lessons learned from Korean, taboos or traditional practices will not be covered here. Rather, the paper discusses practical and current social aspects of menstrual health management.

The paper begins with providing some background context on menstrual discussions from both development and feminist perspectives. The rationale for presenting the two perspectives is that development discourse on the one hand appears to focus primarily on material improvement for menstrual hygiene management for girls and women, while feminist discourse, on the other, tackles the social construct of menstruation that shapes women’s decision or the ability to exercise own decisions on the management of their health, and menstruation.

Then the paper presents Korea country context, before discussing menstrual education in Korea, comparing it to the standards recommended by UNESCO. This is followed by an extensive discussion on menstrual health management, covering hygiene and comfort management, health knowledge in relation to pain management, as well as environmental and waste consideration. The last section discusses the public discourse on menstruation in Korea, particularly on menstrual leave and societal perception on women’s experience in menstruation.

The paper concludes with drawing lessons from South Korea, and providing recommendation for further studies.

1. **Literature Review**

Development programmatic focus on menstruation has been that of hygiene, with attention given primarily to providing infrastructure, material, and basic education to support girls to complete school, and to addressing cultural taboos that prevent women and girls from participating in community activities. However, menstruation encompasses more than just hygiene and taboos, and changes over the course of a girl’s life.

While the development sector takes a narrow focus on menstruation (hygiene, rather than health), feminism has taken a wider engagement, including hygiene product and safety, menstruation and reproduction, waste and the environment, and relationships between individual, industry and state.

In looking at South Korea as a case study, this paper will investigate within the framework of both development and feminist discourses.

* 1. **Development Discourse**

In development discourse, menstrual hygiene has just become a focus in the past decade, mostly from the education perspective to assist girls to stay in school and improve their educational outcomes, and from a narrow public health perspective that educated girls contribute to healthier population outcomes [1].

The progression of focus on menstruation in development sector began around half way through the Education for All (EFA) initiative set by the United Nations, where gender equity in education was the focus. In reviewing the progress of the initiative, it was found that girls fared worse than boys, dropping out of schools before they completed primary education. In the past, the reasons for girls leaving schools were associated mostly with parental and cultural norms of taking girls out of school to assist in household labour needs. Later, institutions were identified as also being responsible for supporting girls to remain in school. Education quality including curriculum and teaching became the focus, as well as other school facilities especially hygiene. Consequently, the water, sanitation, and hygiene (WASH) sector took menstrual hygiene as a focus of work in school, identifying girls’ needs to be different from boys.

Eventually, the private sector also became involved in raising awareness about menstrual hygiene management. A prominent example is Proctor & Gamble (P&G) in their involvement in Africa to advocate for the removal of value-added tax on imported sanitary products, and in trainings for schoolgirls albeit with the aim of expanding their markets, building their brand, and covering their corporate social responsibility. Industry involvement in menstrual education has not been a target of much criticism in the development sector, though feminist discourse has engaged in this debate from the beginning. As highlighted by Sommer et al. (2015), there are lessons to be learned about the limits of market-based solutions and how they can undermine public-sector responsibility, as well as a focus on infrastructure rather than on beliefs [1].

In developing countries, menstrual hygiene was initially perceived as a personal issue for individual and family of the girl or woman to deal with. Sommer et al. (2016) argued that this perception partly reflected the gender-based biases of health, hygiene, and education researchers and practitioners [2]. When efforts began to shift the structural responsibility for menstrual hygiene management from individuals to institutions, it was confined primarily to the water, sanitation and hygiene sector working in education in developing countries. This was evident in UNICEF’s work as a globally recognised authority of policy on children and adolescence. For example, the Joint Monitoring Program of UNICEF and World Health Organisation (launched in 1990 to monitor water, sanitation and hygiene progress) [3] added menstrual hygiene management in schools and health facilities as a global advocacy issue, focusing mainly on the physical and infrastructure as frame in their definition (Box 01).

***Box 01. Definition of Menstrual Hygiene Management***

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| Women and adolescent girls are using a clean menstrual management material to absorb or collect blood, that can be changed in privacy as often as necessary for the duration of the menstruation period, using soap and water for washing the body as required, and having access to facilities to dispose of used menstrual management materials. |

*Source: UNICEF and WHO. 2012. Report of the Second Consultation on Post-2015 Monitoring of Drinking-Water, Sanitation and Hygiene. The Hague, 3-5 December 2013.*

Meanwhile, sexual and reproductive health professionals are largely absent from menstrual hygiene management programming [1]. It is mostly community health practitioners at peripheral health posts who are called for to facilitate knowledge and practices of menstrual hygiene management.

* 1. **Feminist Discourse**

Feminism, on the other hand, has dealt with menstruation more widely, in relation to women’s experience with their bodies and the bleeding process itself, drawing attention to the need for women’s autonomy over the management of their experience, and freedom from the influence of the industry or the public system. Their broad focus covers the control of the bleeding, management of pain, the choice of product use and the relating environmental impact, as well as public debates in an attempt to advance women’s ownership of the issue.

This is not surprising because feminist engagement in menstruation started long before the development sector. Bobel (2008) gave an account of this process called menstrual consciousness, taking place mostly in the USA and to a lesser degree in the UK from the 1970s to early 1990s, much of which can be seen in South Korea today. The movement in three phases is presented in Box 02 [4].

According to Bobel and Kissling (2011), a “focus on menstruation is part of a complex and enduring feminist project of loosening the social control of women’s bodies, of working to move women’s bodies from object to subject status.” [5] The focus is also on drawing women’s attention on the search for good quality information about how the body works and how to keep it healthy and strong, rather than being distracted by industry messages.

The feminist discourse has one weakness, however, in that it tends to revolve only around white women’s experience, except where discussions were around taboos or traditional experiences [4], probably the reason the discourse has limited influence in the development sector today.

***Box 02. Three Phases of Menstrual Consciousness***

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| **Phase I: From Convenience to Concern**  1970 – In the book *Women & Their Bodies*, menstruation was briefly addressed in a list of cultural taboos surrounding women’s bodies, with no evidence yet of resistance to commercial products or to menstrual taboos, at a time when most women were using commercial menstrual products (pads became available since 1896 and tampons since 1934).  1973 – In the book *Our Bodies, Ourselves*, the new title of the former definitive feminist health resource *Women & Their Bodies,* menstruation was given increased attention under the anatomy and physiology of reproduction and sexuality; but discussion focused mainly on product use. Here, Bobel emphasised that tampons, without qualification, were positioned as the most obvious and sensible choice of menstrual product, while disposable menstrual cup (made of absorbent polymer) was being introduced. The politics of menstruation were not addressed at this time.  1974 – feminist Emily Culpepper produced a 10’ film titled *Period Piece* which included images and narratives associated with menstruation such as a woman interrupting her work to change her tampon.  1976 – publication of *The Curse: A Cultural History of Menstruation* by Delaney, Lupton, and Toth.  1975 – Procter & Gamble (P&G) in New York launched Rely, a super absorbent tampon, and almost immediately complaints began to surface, from women who reported vomiting and diarrhoea after using a free sample of the product.  1976 – Medical Device Amendments were passed to ensure the safety and effectiveness of medical devices, requiring manufacturers to register their products (such as tampons) with the US Food and Drug Administration (FDA) and follow quality control procedures; but priority was not given at this time.  1977 – (1) Esther Rome and Emily Culpepper produced Menstruation brochure, conceived as a feminist challenge to the wretched inserts which came in tampon packages, and to challenge standard medical views at the time. (2) Society for Menstrual Cycle Research held its first conference, legitimising the menstrual cycle as a worthy subject of scholarly research, and a viable activist stage.  1978 – *Hygieia: A Woman’s Herbal* a classic book by Jeannine Parvati provided a pattern for homemade reusable cloth menstrual pads, representing a paradigm shift marked by a questioning of conventional attitudes and practices.  **Phase II: Toxic Shock Syndrome Turns the Tide**  1980 – toxic shock syndrome (TSS) epidemic reached its peak with a total of 813 cases, including 38 deaths. The US Centres for Disease Control scientists Shands, Schmid, and Dan established a link between superabsorbent synthetic tampons and TSS. FDA finally began to honour its mandate to regulate “femcare” safety, upgrading tampons to a Class II medical device, to require more than “general controls” and might require “special controls” such as performance standards and post-market surveillance.  1983 – more than 2,200 cases were reported to CDC. FDA pressured P&G to withdraw Rely from the market.  1981 – journalist Nancy Friedman published *Everything You Must Know About Tampons*, discussing the tampon-TSS link and alternative products.  1982 – FDA, unwilling to legally mandate safety and performance standards, issued a regulation requiring tampon boxes to advise consumers to use the lowest absorbency tampons to meet their needs, although there was no uniform labelling across the industry.  1984 – consumer health group Woman Health International petitioned the FDA to develop a safety standard for tampons.  1985 – publication of *Lifting the Curse of Menstruation: A Feminist Appraisal of the Influence of Menstruation on Women’s Lives* (Golub, S.) included an article discussing “menstrual problems relating to hygiene practices” and repeated the plea for “a standardised absorbency test against which all brands can be comparatively evaluated.”  1987 – entrepreneur Lou Crawford began manufacturing the Keeper, a reusable menstrual cup made from natural gum rubber, to collect rather than absorb the menses, leading to a preoccupation with alternative products rather than reforming the industry.  **Phase II: A Success, a Failure, and the Shift to Alternatives**  1989 – research published on dangers of superabsorbent tampons, legitimising fear of tampons and helping to create and maintain a market for alternative products in the US. The Women’s Environmental Network (WEN) in the UK published *Sanitary Protection Scandal* and worked with BBC to air a segment on hazards of chlorine-bleached paper products, used in the manufacture of pads and tampons. British consumers were roused by the campaign, and made more than 50,000 calls to manufacturers and members of the British parliament demanding changes to be made in the disposable paper products industry, leading to all major British sanitary protection producers to pledge to eliminate the use of the chlorine-bleaching process.  1990 – FDA implemented two criteria for tampon manufacturers: they must (1) advise consumers to use the lowest possible effective absorbency, and (2) standardise their ranges of absorbency; but around the same time also released a study that showed no cancer risk from dioxin in tampons, with data supplied by the “femcare” industry, confirming for activists that the government agency was not genuinely committed to pursuing tampon safety. As a result, menstrual activists expressed distrust of the “femcare” industry, and inadequate government regulation, and waged campaigns of Do It Yourself (DIY) menstrual care. After this point, menstrual activist activity decreased in the US. |

*Source: Chris Bobel (2008) From convenience to hazard, a short history of the emergence of the menstrual activism movement, 1971-1992, Health Care for Women International, 29:7, 738-754.*

1. **South Korean Context**

Given that menstrual health appears to relate closely to women’s place in society at large. To learn about menstrual health management in South Korea, therefore, it is essential to understand some contextual and historical background of women’s positions in the country.

In 2016, South Korea had a population of about 51 million, of which about 25 million were women. The reproductive age of women is considered to be 15-49 (also menstruating age). Women in this age group make up about 51% of the total female population, or about 26% of the total population (Table 01), and constitute the major part of female labour force.

***Table 01. Korean context at a glance (from Statistics Korea)***

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| Total population (2016) | 51,270,000 |
| Reproductive age females, from total population (2015) | 25.74% |
| Total female population (2016) | 25,570,000 |
| Reproductive age females, from total female population (2015) | 51.41% |
| Birth rate per woman (2015) | 1.24 |
| Female employment-population ratio (2015) | 49.9% |
| Female irregular workers, from total female workers (2016) | 40.3% |
| Female part-time workers, from total female workers (2016) | 47.7% |
| Female wage from that of male (2014) | 68.1% |

*Source:* [*http://kostat.go.kr/portal/eng/index.action*](http://kostat.go.kr/portal/eng/index.action)

Women have always played a key role in South Korean economic development, but mostly as unskilled labour, temporary help, or support staff. Patterson and Walcutt (2014), Lee (2015), and Cooke (2010) gave historical accounts of women’s economic participation and their employment status as followed [6].

From the mid 1970s to mid 1980s, female factory workers drove the industrial labour activism against exploitative working conditions. Their suffering and struggles shaped the feminist movement in the 1980s. By the end of 1980s, however, economic growth fuelled by neoliberal economic policy resulted in labour economic suppression and political exclusion.

The late 1980s and 1990s saw political democratisation in South Korea, which allowed workers a brief period of political influence through union formation and representation. Perhaps as a result of this, the Labour Standards Act was modified in 1989 to change the provision for menstrual leave to grant one day to every female worker without request (Article 59, Menstrual Leave) whereas the previous version of the act required that female workers request for the leave. Later in the 1990s, however, labour unions’ interest in their own political rights and power allowed industries and the government to negotiate for a deregulation of labour market for the benefit of employers. The 1997 Asian Financial Crisis further weakened workers’ power to negotiate for better protection.

Labour market deregulation created two additional groups of workers: low-income self-employed, and irregular workers (characterised by job insecurity, inferior working conditions, and poor financial reward), most of whom appeared to be women. When labour deregulation allowed massive layoffs, women were most severely affected, as they were seen as temporary fixtures and providing less values for companies. Adding to this, labour unions’ political interest meant that only regular workers were welcomed as members, as reflected in the 2012 figure of union membership ratio of 92% regular and 7.8% irregular workers. This means that women workers are disadvantaged in the labour market as well as deprived of basic organisational representation to raise their concerns.

Women not only make up the majority of irregular workers (61.9% of total irregular workforce, 2011), they also tend to be found in low paying employment, such as services, agriculture, construction, and manufacturing. This is despite improved educational attainment by women in recent years (74.5% of all female high school graduates went on to tertiary education in 2014, Statistics Korea). Female wages also recorded only at 68.1% that of males in 2014.

Furthermore, traditional gender roles continue to put pressure on women to succeed at the home front. According to Cho, Kim, Lee, Lim, Han, and Park (2015), workingwomen continue to be pulled between professional demands and traditional expectations in their daily lives [7]. Raising children well is considered the most important responsibility of South Korean mothers. A major factor that affects career-interruption of working mothers is the raising of children. According to Statistics Korea in 2014, 20.7% of married females had career breaks due to pregnancy, childbirth, and parenting. Working mothers are also expected to work outside the home as many hours as their husbands while they must also do most of the duties in the home.

1. **Menstrual Health Management in South Korea**
   1. **Education**

On average, girls in South Korea have their first period (menarche) at 12.7 years of age [8]. Throughout the course of their menstruating (and reproductive) lives, these girls and women will experience multiple changes in their physiology, including the nature, frequency, timing, and comfort of their bleeding. Therefore, it is essential that they are educated about this process, the same way they are educated about other physiological development.

Menstrual health education is included as part of the formal curriculum in South Korea. The Ministry of Education (2015) set the Sex Education Standards, specifically listing menstruation education for primary school grades 5-6. Since 2013, schools had to follow the Ministry’s guidelines and provide at least 15 hours of sex education per year [9].

However, menstrual education was specified only once (Table 02), around the time most girls reach menarche. For the 15 hours required to cover multiple topics under sexual health, it is a question as to how much girls actually learn from this teaching.

***Table 02. Sex Education Standards curriculum (2015)***

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| Primary school 1st-2nd grades   * Body structure and differences between the sexes * Different lifestyle between men and women * Preciousness of life * Family and friends * Marriage and future households * Attitudes towards same sex or the opposite sex * Methods for cleaning reproductive organs * Understanding sexual violence * Gender equality and domestic division of labour * Understanding pornography   Primary school 3rd-4th grades   * Emotional differences between * Physical development of men and women * Friendship and etiquette between friends of the opposite sex * Sex culture in mass media * Precaution against sexual abuse   Primary school 5th-6th grades   * Understanding and characteristics of puberty * Process of embryo development * Delivery process * Secondary sexual characteristics and hormones * **Understanding and management of menstruation** * Understanding of AIDS * Sexual discrimination * Internet pornography | Middle school   * Sexual characteristics of adolescents * Structure and function of genitals * Meaning of gender identity * Desirable conditions of relationship * Meaning and value of love * Reasonable decision about sex * Sanitation of genitals * Ways to control sexual impulse and desire * Pregnancy and prenatal care * Postnatal care * Stages and symptoms of pregnancy * Ways mother’s conditions affect embryo * Necessity of contraception * Precaution of AIDS * Problems of adolescent pregnancy * Single mother issues * Examples and meaning of prostitution   High school   * Concept of sexuality * Meaning of sex in life * Preparation for being parents (pregnancy, nutrition, prenatal care, delivery) * Standards for choosing spouse * Risk management for sexual problems * Responsibility of sex and pregnancy * Understanding of sexual desire * Characteristics of sexually transmitted infections * Need and meaning of induced abortion * Freedom of sex and expression * Reality of prostitution and commercialisation sex |

*Translated by Yoorim Bang, graduate student at Department of International Studies, Ewha Womans University*

As a point of reference, UNESCO, the United Nation’s agency tasked with providing standards for education, produced the Good Policy and Practice in Health Education (Booklet 9, 2014) outlining the basics of menstrual education, to be offered to learners from ages 5-8 and continued until 15-18 years old (UNESCO, 2014). The Booklet outlined the content that should be included in a good puberty education, specifically covering menstruation in detail (Box 03).

***Box 03. UNESCO puberty education guideline, Booklet 9***

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| **Puberty education should cover a number of different topics including:**   * What puberty is * When puberty starts, when it ends * What changes take place in female and male bodies, body image * Hormonal and psychological changes and how to manage them * Male and female reproductive systems, sexual and reproductive anatomy and physiology, maturation process * What emotional changes will be experienced * Ejaculation, erections, wet dreams, male hygiene * **Menstruation, premenstrual syndrome (PMS), menstrual pain and management, menstrual management, menstrual hygiene materials, hygiene during menstruation and disposal of menstrual materials, menstrual calendar for tracking flow, identification of signs menstrual arrival (breast sensitivity, changes in vaginal discharge)** * **Cultural and religious beliefs, social norms and myths surrounding menstruation and puberty** * Gender roles * Privacy and bodily integrity * Adult perceptions – changing expectations and roles, the way girls and boys are viewed as a result of reaching puberty * How puberty affects young person’s role and relationship with family and friends |

*Source: Booklet 9, Good Policy and Practice in Health Education, UNESCO (2014).*

It is logical to view continued menstrual education in line with physical growth and maturation of girls and women. As will be demonstrated below, menstruation has multiple dimensions. If girls are only educated once formally in school, it warrants a concern as to where they obtain additional correct information throughout the course of their lives, assuming that their mothers did not have the correct knowledge either, especially given that menstrual education had only recently been included in the formal curriculum.

* 1. **Pain Management**

Menstrual pain or discomfort, commonly termed premenstrual syndrome (PMS), is a tricky subject of public discussion. Those who do not experience any symptom are hard convince of its existence, or the extent of the pain.

In South Korea, about 82% of menstruating women experience dysmenorrhea (or painful menstruation), with the main symptoms being abdominal (53.2%) and lower back pain (34.2%). About 15% of girls who experienced such symptoms required medication. Almost 59% of these women also had symptoms of premenstrual syndrome, with most (87.6%) tolerated the symptoms without using medication, while about 11% took medicines including painkillers, but only 0.1% visited a doctor [10].

As a demonstration of the many facets of menstruation, Box 04 offers basic explanations of some of the most common terms. For the scope of this paper, only dysmenorrhea and premenstrual syndrome (PMS) will be discussed further, as they appear to be the main conditions experienced by women in South Korea.

***Box 04. Definitions of selected menstrual conditions***

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| * Abnormal uterine bleeding – any type of bleeding that was irregular in amount, duration or frequency. * Amenorrhea – a lack of menstruation, classified into primary and secondary. Primary amenorrhea is defined as not having menstruation until 14 years of age with the absence of secondary sexual characteristics, or no menarche until 16 years of age. Secondary amenorrhea is defined as not having menstruation for more than 3 cycles, or 6 months after menarche. * **Dysmenorrhea – painful muscle contraction during menstruation, classified into primary and secondary by clinical characteristics.** * Endometriosis – development of uterine-lining tissue outside the uterus. Symptoms may include abdominal pain, heavy periods, and infertility. * Oligomenorrhea – having infrequent menstrual cycles, and each cycle longer than 35 days. * Premenstrual dysphoric disorder (PMDD) – severe form of PMS, with symptoms disrupting daily activities. * **Premenstrual syndrome (PMS) – distinguished by the timing of symptoms, and characterised by symptoms (or clusters of symptoms) associated with the premenstrual (luteal) phase of the menstrual cycle. To be classified as premenstrual syndrome, symptoms must be recurrent, and severe enough to cause impairment and distress, but alleviated shortly following menses and not merely an exacerbation of other underlying conditions.** |

*Sources: Shin, S., Lee, Y., Yang, S., Yoon, B., Bae, D., & Choi D. (2005). Characteristics of menstruation-related problems for adolescents and premarital women in Korea. European Journal of Obstetrics & Gynecology and Reproductive Biology 121 (2005) 236-242.*

*Halbreich, U., Backstrom, T., Eriksson, E., O’Brien, S., Calil, H., Ceskova, E., Dennerstein, L., Douki, S., Freeman, E., Genazzani, A., Heuser, I., Kadri, N., Rapkin, A., Steiner, M., Wittchen, H., & Yonkers, K. (2007). Clinical diagnostic criteria for premenstrual syndrome and guidelines for their quantification for research studies. Gynecological Endocrinology, March 2007; 23(3): 123-130.*

**Dysmenorrhea**

Dysmenorrhoea is a condition where painful muscle contraction is experienced during menstruation. Between 16 and 91% of menstruating women worldwide experience dysmenorrhoea, with between 2 to 29% experience severe pain (Ju, Jones & Misha, 2014). The pain, fortunately, is relatively simple to alleviate. According to Harel (2012) non-steroidal anti-inflammatory drugs (NSAIDs) are sufficient as initial treatment in non-sexually active adolescents/young adults [11]. For persistent symptoms, hormonal treatment is recommended for 3 menstrual cycles. If dysmenorrhea does not improve within 6 months of non-steroidal anti-inflammatory and oral contraceptive pills, it is further recommended to look for endometriosis, which is the most common reason for secondary dysmenorrhea.

In South Korea, this class of pain treatment appears to be readily available. In 2005, Shin et al. studied the effectiveness of non-steroidal anti-inflammatory drugs on patients aged between 10-20, and 21-30 who visited Samsung Medical Centre for dysmenorrhea [12]. At this centre, several non-steroidal anti-inflammatory drugs such as aceclofenac, mefenamic acid, zaltoprofen, and naproxen were used to treat primary dysmenorrhea in both adolescent and adult female age groups. All of the patients having primary dysmenorrhea that interfered with their daily activities were recommended to use the drugs at the onset of menstruation, and to continue the medication for 1-3 days according to the pain duration. This treatment worked on almost 90% of this South Korean patient population, who experienced pain relief within 3 months.

So effective treatment options for dysmenorrhea exist in SK, which is not a surprise given the advanced medical system, and so dysmenorrhea should not be a concern for women here.

But why do women then put up with pain as supposed to seeking help? And for those who reported no relief of pain after painkillers, do they use the right types of painkillers, i.e. is it NSAIDs? Acetamenophen is another class of painkiller but not the recommended treatment. Perhaps women didn’t know and bought the wrong type of medication? As indicated by health literacy rate.

**Premenstrual Syndromes**

Premenstrual syndrome remains a debated issue. According to Halbreich (2007) the concept of premenstrual syndrome and the boundaries of its domain are still not universally agreed upon [13]. Much of the debate has been around the credibility and certainty of the existence of these symptoms. Controversies in evaluating the impact or burden of premenstrual symptoms may be due to the differences in the measurement of the impact [14].

Presently, there are different systems to classify premenstrual syndrome, or the more severe condition, premenstrual dysphoric disorder. The criteria used within these classification systems differ, with the International Classification of Disease being the least severe, and gradually getting stricter with the Diagnostic and Statistical Manual of Mental Disorders (Table 03).

With these medical assessment tools available, it is a wonder why debates remain around whether women really experience symptoms, or that menstruation really causes impairment to some women.

***Table 03. Diagnostic systems to identify premenstrual syndromes***

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| **Diagnostic Classification Systems** | **Criteria** |
| ICD-10  International Classification of Disease | * Requires only one bothersome symptom to be present premenstrually   *(The least strict)* |
| ACOG  American College of Obstetrics and Gynaecology | * Requires at least one mood and one physical symptom to be present in the premenstrual week for at least 3 menstrual cycles and for symptoms to interfere with occupation, social, or interpersonal activities * Requires that symptoms are present in the week(s) prior to menses and that they remit within a few days of onset of the menses * Requires confirmation of symptoms by prospective daily ratings for at least 2 menstrual cycles |
| DSM-IV  Diagnostic and Statistical Manual of Mental Disorders | * Requires at least 5 premenstrual symptoms from the 11 classes listed, one of which must be a mood symptom, and that symptoms should be present in most cycles in the last 12 months and interfere with work, school, usual activities, or relationships and are not an exacerbation of another disorder * Requires that symptoms are present in the week(s) prior to menses and that they remit within a few days of onset of the menses * Requires confirmation of symptoms by prospective daily ratings for at least 2 menstrual cycles   *(The strictest)* |

*Source: Choi, D., Lee, D., Lehert, P., Lee, I. S., Kim, S. H., & Dennerstein L. (2010) The impact of premenstrual symptoms on activities of daily life in Korean women. Journal of Psychosomatic Obstetrics & Gynecology, March 2010; 31(1): 10-15.*

Given that over 80% of women experience pain, but only a small number seek help, it is a wonder how women cope with menstrual discomfort. Cha & Num (2016) looked at different coping strategies among a sample of 349 Korean women. They classified 3 levels premenstrual symptoms: general discomfort, negative affect (mild), and turmoil (severe), and found few variations in the coping strategies used to alleviate these symptoms (Table 04). Their study participants reported that most coping strategies were of little or no help at all [15].

***Table 04. Coping strategies used to alleviate PMS/PMDD***

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| Menstrual cycle specific   * Taking vitamin B * Taking rest or sleeping * **Taking painkiller** * Placing hot pack on painful spot * Taking warm shower * Listening to relaxing music * Drinking water frequently * Keeping feelings to self | Active behavioural coping   * Exercising * Changing posture * Getting busy with other things to keep mind off the problem * Massaging painful area * Trying to distract self from the situation | Active cognitive coping   * Comforting self with thought that one can endure * Talking with friends about the situation * Getting support from friends * Trying to disregard symptoms as temporary | Avoidance   * Trying to reduce tension by smoking more * Drinking alcohol * Consuming caffeinated drinks * Trying to reduce tension by eating less * Staying alone * Trying to reduce tension by eating more * Taking it out on other people when feeling angry |

*Source: Chiyoung Cha & Su Jin Nam (2016): Premenstrual symptom clusters and women’s coping style in Korea: happy healthy 20s application study, Journal of Psychosomatic Obstetrics & Gynecology.*

For medication strategy (taking painkiller), it is important to note that there are different classes of analgesics. As the recommended NSAIDs above are part of an umbrella term commonly called painkillers, it may be easy to overlook the specific recommendation for NSAIDs, and just take any over-the-counter pain relief such as acetaminophen (or paracetamol). Non-steroidal anti-inflammatory drugs, as the name suggests, is used to relief inflammation related to uterine muscle contraction (period pain), while the later is typically prescribed for pain and fever relief. In places where health literacy is low, a minor confusion may lead to ineffective treatment for period pain, resulting in a coping strategy that is of little or no help, which appeared to be the case in Korea [15].

The level of health literacy in Korea is relatively low compared to the advancement in the country’s medical system. The concept of health literacy evolved from a history of defining, redefining, and quantifying the functional literacy needs of the adult population. Berkman (2010) discussed the origins and conceptualisation of health literacy, and suggested the need to review existing definitions of the term “health literacy” [16]. As a relatively new construct, the definition of health literacy is evolving and has not been consistently applied. According to Berkman, individuals or groups should take the responsibility to understand and act on the health information provided. But educational level has been recognised as an inconsistent indicator of skill level. The focus of being health literate is on “the capacity to obtain, process, and understand” health information. Berkman proposed a modified definition of health literacy (from that of the Institute of Medicine, 2004): the degree to which individuals can obtain, process, understand, and communicate about health-related information needed to make informed health decisions.

Kang (2014) developed and validated the Korean Health Literacy Instrument, which measures the capacity to understand and use health-related information and make informed health decisions in Korean adults. Little data exist regarding the prevalence of low health literacy in Korea; but the National Institute of the Korean Language (2008) showed that 32.7% of adults were unable to understand health information, including drug directions [17].

Despite well-documented links between low health literacy and poor health outcomes, there has been almost no research on the relationship between health literacy level and self-reported access to care. Levy and Janke (2016) analysed a large, nationally representative sample of community-dwelling adults ages 50 and older to estimate the relationship between low health literacy and self-reported difficulty obtaining care. They found that individuals with low level of health literacy were significantly more likely than individuals with adequate level to delay or forgo needed care or to report difficulty finding a provider, even after other possible limiting factors such as health insurance coverage, employment, race/ethnicity, poverty, and general cognitive function were removed. The results showed that in addition to any obstacles that low health literacy created within the context of the clinical encounter, a low level also reduced the probability that people get in the door of the health care system in a timely manner [18].

How this can be translated to menstrual health literacy level and access to care, or choices of treatment in Korea would be a worthwhile research to deepen the understanding of how women cope with menstrual pain that impact their daily life.

* 1. **Menstruation and Reproduction**

Products available to assist people who menstruate in maintaining hygiene include external or insert-able categories (Table 05). This section discusses the practicality of these options, with the intention to promote the reusable options.

***Table 05. FDA approved menstrual hygiene products***

|  |  |
| --- | --- |
| Pads/towels/napkins | * For external absorption, pads are multi-layer sheets used to absorb liquid by adhering to the inside of an under wear. * Disposable pads are made up of cellulose, fabric, and plastic. * Reusable pads are made up of fabric. |
| Tampons | * For insertion and absorption, tampons are made up mostly of cotton. It is used to absorb liquid by inserting into the vagina. * Tampons only exist in disposable form. |
| Menstrual cups | * For insertion and collection, menstrual cups are oval or U shape, inserted and positioned between the posterior fornix and the notch behind the pubic bone, covering the cervix. * Disposable cups are made up of plastic. * Reusable cups are made up of medical grade non-toxic non-allergic silicon. |

Tampons are not commonly used in Korea, but are more popular in Western societies. Tampons and pads incur similar costs, as well as waste. A woman uses approximately 12,000-15,000 disposable absorbent items in her lifetime, amounting to 100-150 kilograms of waste per woman [20].

Disposable pads appear to be the preferred product among Korean, likely because of the external usage. A survey by Korea’s Ministry of Food and Drug Safety in May 2017 found that about 81% of Korean women use sanitary napkins, while 11% use tampons. In terms of cost, a pack of 10 pads costs on average USD 2.50. Therefore, an average menstrual cycle can cost a woman USD 5.00 [23]. The issues of cost and product safety has been in public debates in Korea lately, particularly since the release of a report by the Korean Women’s Environmental Network showing harmful substances contained in some commercial brands [24]. Since then menstrual cups have been waiting the government investigation to allow domestic sale [25]. In the mean time, there are reusable pads. However, there are yet to be studies conducted on the ease of use of these products as modern day women might have limited time to wash and dry their reusable items.

While the Korean government is investigating the safety of menstrual cups, the product has been sold and used elsewhere already, including North America, Europe, and even in traditionally conservative region as Asia, such as India. A study by Kakani (2017) conducted at a medical college and hospital in India with 158 participants ages 20-50 with regular menstrual cycle found that menstrual cup was preferred for comfort, dryness, and less odour. More than 80% of participants found menstrual cup insertion easy with increasing comfort in second and third cycle. Removal was easy in 90% of participants. Problem of leakage was encountered in 3-6%, and was rated as equivalent to leakage with other methods (pads, tampons). Most participants did not find any problem in cleaning the cup in all of the 3 cycles as teaching for cleaning with soap and water was part of counselling. Those who found difficulty were due to non-availability of sanitation facilities and privacy. Problems of rashes, dryness, infection and allergy were minimal and managed appropriately. The study concluded that menstrual cups were acceptable to most users in relation to comfort, ease of use, and effectiveness in menstrual collection. Cited advantages include overall convenience, portability and easy storage, extended wear time, and greater freedom of movement. Reusable menstrual cups also have an economic advantage. This study found higher acceptance compared to previous studies due to detailed counselling before enrolment. Moreover, women enrolled in the study were those who were ready and consented voluntarily to participate. During the study at every follow up visit, attempts were made to resolve any problems related to use of menstrual cup by counselling again. As a major barrier to menstrual cup acceptance is the requirement that the cup be manipulated into and out of the vaginal vault, necessitating contact with genital tissues and with menstrual fluid, women who are uncomfortable with the cup are mostly so with this aspect of usage. This issue can be overcome by proper counselling on the usage. Otherwise, there is no other device to collect the menstrual blood for a quantitative analysis of blood loss during menstruation, which remains a big gap in learning. Menstrual cups can be the best way to make a quantitative assessment of the menstrual blood loss [26].

Finally, multiple arguments against disposable products have been put forward by menstrual product activists. These concerns include:

* The environmental and personal health impacts associated with the production process
* The safety of materials used to make the products
* The environmental impact from the use of non-biodegradable, disposable products
* The cost, and in more abstract terms
* The use of commercially produced disposables designed to obscure the reality of menstruation [27].
  1. **Environmental Consideration**

Disposable products contribute a significant volume of waste to landfill. In Korea, reproductive age women could be contributing over 13,000 tones of waste every year only from disposable menstrual pads. This is just sheer volume. In terms of environmental impact, pads, tampons, and menstrual cups produce the most to the least damage respectively.

A group of students at the Royal Institute of Technology Stockholm in 2006 conducted a comparative assessment of 2 main menstrual hygiene products: pads and tampons. Their aim was to establish the products’ environmental impact by comparing the lifecycles of the 2 products from start to end. The assessment included all stages of products’ lifecycle: from raw material extraction to transportation, to production process, to usage, and finally waste utilisation. The assessment focused on 3 categories of environmental impacts: human health, ecosystem quality, and resources, and found that pads have larger input into almost all types of environmental impacts: respiratory organics, climate change, ozone layer, eco-toxicity, acidification, minerals and fossil fuels use; pads assembly exceeds tampons assembly more than twice. The main impact from pads life cycle is fossil fuels use, while for tampons it is cotton, with input from agricultural processes of cultivation, pesticide use, fertilisation, washing process, and so on [19].

Additionally, Weir (2015) analysed explicit cost differences between disposable and reusable menstrual products. Her study aimed at (1) assessing the private economic costs of 5 selected insert-able menstrual products, both reusable and disposable for 1, 5, and 10 years of menstruation, and (2) assessing the qualitative lifecycle of each product and their associated un-priced resource, environmental, and health implications. The products included in the assessment were a regular tampon, a tampon with plastic applicator, a disposable menstrual cup made of polyurethane and polymer plastic, a reusable menstrual cup made from medical grade silicone, and a sea sponge. Her analysis found that for a temporal scale of 1 year, the private cost of purchasing reusable menstrual products remains the same, while the disposable product cost increases. The environmental impacts from raw material showed that the reusable menstrual cup has the least amount of environmental effect [20].

What this means for Korea is that reproductive women could play a major role in both waste reduction and environmental protection. According to Ryu (2010), South Korea currently landfills 26% of its household waste and incinerates 17%, mainly for heat production. From the perspective of sustainable waste management, the priority should be given to the reduction of waste generation, followed by material recycling, both of which are highly beneficial in terms of greenhouse gas emissions reduction by saving resources otherwise required for manufacturing new products [21].

According to Karak (2012), the projected amount of solid waste generation in Korea for the year 2030 will raise up to 18 million tons from the conservative estimate of the population of 49.2 million. Municipal solid waste in South Korea consists of 25% biodegradable, 26% paper, 7% plastics, 4% glass, 9% metal, and 29% textile and leather. South Korea, like Japan, Taiwan, and Singapore, has been aggressively improving its municipal solid waste management system with the ultimate aim of eliminating landfills from its system [22]. Reproductive women can definitely be encouraged to contribute to this policy by having accessed to reusable products and counselling on their use.

* 1. **Individual, Industry, and State**

From an outside perspective, menstrual leave is seen as a progressive policy. Korea is one of the few countries with existing legal provision for menstrual leave. However, this provision appears to have been modified several times since the conception in 1953. Initially, it was stated that employers shall grant leave to any female workers who request for it. Then in 1989 the provision was changed to grant one day of menstrual leave to every female worker with or without request (Article 59, Menstruation Leave). According to Shin (1994), this was aimed at protecting maternal health and maintaining fertility [28]. However, in 2014 the provision was changed again to the original provision, reflecting societal view on menstruation and women’s experience (Labour Standards Act, 2014, Article 73, Monthly Menstrual Leave).

Limited information in the English literature exists to explain the debate in Korea. A look at other countries with similar experience may provide an insight. First, Japanese experience is presented, followed by Soviet Union’s brief experience, though seemingly the first to institute menstrual leave, with what appeared to be an advanced thinking around maternity protection. Korea case is then discussed to make a comparison.

**Japan**

In 1986, Dan presented the history, rationale, and use of menstruation leave in Japan, as well as the controversy about abolishing it, already in the 1980s. Menstruation leave first emerged as an issue in the 1920s and 1930s when employed women were mostly young, and working conditions for them were difficult. The lack of adequate sanitary facilities and materials made management of menstruation especially difficult for factory and transportation workers. Even before menstrual leave became part of the legal allowance was already a symbol for women’s emancipation. Menstrual leave represented women’s ability to speak openly about their bodies, and to gain social recognition for their role as workers. At the same time, the struggle for menstruation leave dramatized the need for better working conditions for women workers. Medical involvement was lacking in developing the law. It was an issue of concern mainly for women labour union organisers. Following the passage of the Labour Standards Law in 1947, menstruation leave became a focus of struggle between labour unions and employers. The women’s divisions of many labour unions argued that menstruation is a “barometer” for reproductive ability, and that even women without symptoms ought to take leave to protect their future motherhood.

Dan presented a counter argument by Herold (1976, 1980) who argued that, in addition to the lack of medical justification, menstruation leave is difficult for women to take, and benefits only a few women; those who need time off because of pain or other menstrual difficulties should take sick leave; and menstruation leave contributed to discrimination against women. Even back then the debate was about protection versus equality in discussing the question of abolishing menstruation leave. Japanese employers took the position that “if women demand to be treated equally, they should work under the same conditions as men”.

Dan’s study highlighted social factors, such as working conditions, labour union strength, and company attitudes as the primary determinants for the use of menstruation leave. She pointed out that debates around menstruation leave represented the lack of fit between social institutions of work and women’s experience. Her point is still relevant in today’s debate in that it is difficult for women in a conservative society to engage in an explicit and public debate about such a private matter as menstruation [29].

**Soviet Union**

Ilic (1994) documented a unique reference of the Soviet Union’s legal provision allowing women workers a specified number of days release from paid labour during menstruation, back in 1922 (Labour Protection Department of the Trade Union Organisation, or VTsSPS). Such protective labour legislations were designed to meet the specific requirements of women, arising from their biological distinction, in conditions of paid employment. This was regarded as an essential element in preserving women’s health. The potentially damaging effects on the menstrual cycle of the industrial employment of women were the concerns back then. Debates emphasised the need to protect the health of women workers in order for them to fulfil their reproductive and maternal functions.

Like Dan (1986), Ilic presented 2 different attitudes toward the role and application of protective labour legislation with specific reference to women workers:

1. Women’s different biological constitution and function should be recognised and accommodated in the law (Gordon, 1990).
2. Women can never expect to be regarded as equal with men if they are offered special treatment in view of their biological distinction (Korber, 1941).

By the later 1920s, like Japan, there were retractions of menstrual provisions. In 1926, the regulation was modified to allow time off during menstruation only to those who suffered menstrual pains, confirmed by a medical doctor, and time off work during menstruation was to be treated as any other form of sick leave. However, the initiative to allow women paid leave during menstruation was given legislative backing again in the early 1930s; but no evidence was found of the lived experience of such provision in the old Soviet Union [30].

Nevertheless, the Soviet Union provided the first recorded example of enacting this practice and in incorporating the initiative in protective labour legislation.

**South Korea**

As illustrated above, South Korea appears to also have gone through similar courses as Japan and the former Soviet Union in relation to menstrual leave provision.

The argument put forward against menstruation leave in Shin’s analysis (1994), might have stemmed from the general perspectives around gender discrimination in the workplace in South Korea.

Patterson and Walcutt (2014) investigated potential explanation for the continued gender discrimination in South Korean workplaces despite decades of gender policy reforms and improved education for women. While Korea had seen vast improvement in women’s rights, female labour participation rate still remains at 42.87% (Korea National Statistical Office, 2017). In Patterson’s analysis, this could be attributed to a lack of legal enforcement, a weak punishment system, a tacit acceptance of the status quo by women, organisational cultural issues stemming from the traditional Korean mind-set that allow gender discrimination, and a general lack of knowledge about equal opportunity regulations by many companies.

In 2011, the Korean Ministry of Employment and Labour polled 1,000 male and female workers from the public sector, large corporate organisations, and foreign-related firms about their opinions on the seriousness of gender equality issues in the workplace. It was found that 48.7% believed the issues to be serious (Public Opinion Survey on Gender Equality in Labour Market 2011). However, it is important to note that even this high number was found in the sectors of the economy in which the fewest problems occurred. Another study in 2011 by the same ministry found that less than 15% of total gender discrimination violations arise in the sectors that were polled for their opinions [31].

Meanwhile, Heinemann (2012) undertook a multinational study exploring the impact of premenstrual disorders on absenteeism and productivity in women from 19 countries including Korea. The study found that in other parts of the world women with menstrual symptoms had increased absenteeism from work, and greater impairment in productivity and private life. In Asia, including Korea, however, the study found no difference in work absenteeism and productivity impairment between women with or without menstrual symptoms. This, Heinemann explained, may be due to cultural differences, including the differing roles of women in the workplace, or perceptions that women should ensure pain from menstruation [32].

1. **Lessons from South Korea**

South Korea has valuable lessons to share with the rest of the region with regards to menstrual health management. Many of the lessons might be applicable to the more traditional/conservative/patriarchal cultures that are commonly found in Asia, for example, in the case of Laos.

In drawing lessons from South Korea, this paper will also attempted to compare South Korean practice to other OECD countries, and identify practical aspects of menstrual health management. Some recommendation and lessons from the discussion follows:

* Korea includes menstrual education as part of the national formal education curriculum starting at grades 5-6. This is very positive, although it would be better to have menstrual education spread throughout the sex education curriculum all the way to high school level. This is important because young people are likely to have questions as they learn to manage their menstruation through the course of their education.
* Most women in Korea experience pain during their periods, but only a small number require medical intervention to deal with this pain. It was also reported that a number of women endure the pain rather than seeking help with it. In a country with an advanced medical system like Korea, it is surprising that such a simple condition prevents women from seeking care. On the other hand, the low health literacy level might explain the reason women do not think they should see a gynaecologist (a relatively new profession in the medical field in Korea), or why treatment from over-the-counter medication (pain relief) does not work for women. Studies are needed to identify women’s health literacy level in general, and particularly when it comes to period pain management, and the understanding of different classes of analgesics as an effective treatment of menstrual pain.
* In managing menstrual hygiene, the majority of women in Korea use pads/ towels/napkins, much like women in other conservative societies such as India and Laos. However, this product has the highest environmental impact, both in terms of waste generated, resource used, and chemical release to the environment. In an advanced economy, with advanced education and technology, it should be possible to encourage and educate women to switch to reusable products. Unfortunately, no country has yet demonstrated an example of female population using mostly reusable menstrual products. Korea has a potential to become the first.
* As South Korea is trying to reduce its municipal waste, reproductive women have an important role to play in their choice of menstrual hygiene product use. At the time of writing, menstrual cups are awaiting government approval for domestic sale. Once this happens, and to ensure wide adoption of the product, access to counselling on product use should be made publically available.
* Menstrual leave remains a contentious issue, not only in Korea, but also in Japan and the other few countries that institute the policy. In at least both Korea and Japan, even with a long history of having menstrual leave policy, it has been reported that women do not take advantage of the policy, due to various reasons such as not having physical impact enough to need it, or being considerate of job demand, workplace pressure to not take the leave, or negative societal attitudes towards women who need rest during menstruation. Menstrual leave today needs a well-moderated public discussion, backed with scientific research data in order to educate people on the importance of this policy. If the original rationale for instituting the policy was to protect the maternal role that women play in ensuring future generations of the country, it is even more important that women today feel entitled to a menstrual support policy. Countries with very low birth rates such as Korea and Japan, should be seen as making the most of menstrual leave policies.

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