

EFFICACY OF HERBAL SANITARY NAPKINS IN MENSTRUAL HYGIENE MANAGEMENT: INTEGRATING HOMOEOPATHIC VALIDATION WITH COMMUNITY HEALTH PERSPECTIVES

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ABSTRACT

Background: Conventional sanitary napkins contain synthetic chemicals such as BPA, BPS, and dioxins, which are linked to hormonal disruption, infections, infertility, and long-term toxic effects. They also contribute to ecological hazards and increase risks such as toxic shock syndrome. **Aim:** This review evaluates the efficacy of herbal sanitary napkins as eco-friendly, therapeutic alternatives, supported by Homoeopathic Materia Medica, Organon of Medicine, and Community Medicine perspectives. **Methods:** Literature from Homoeopathy, menstrual hygiene studies, and public health research was synthesized to assess herbal extracts including *Calendula officinalis*, *Aloe socotrina*, and *Hamamelis virginiana*. **Results:** Herbal napkins demonstrated anti-inflammatory, healing, and venotonic properties, offering relief from irritation, pelvic congestion, and menorrhagia-related discomfort. They are biodegradable, reduce ecological burden, and promote safer menstrual hygiene. **Conclusion:** Herbal sanitary napkins provide a holistic, sustainable solution to

menstrual hygiene, combining symptom relief with public health benefits and aligning with gender equity and SDGs.

KEYWORDS: Menstrual Hygiene, Herbal Sanitary Napkins, Homoeopathy, Community Medicine, Phytotherapy, Women's Health, Eco-friendly Menstrual Care.

INTRODUCTION

Nowadays everybody is concerned with creating the eco-friendly environment by reducing the environmental problems and nature pollution. Besides, health and hygiene is also very much important for human beings. The utmost pollutions are from textile industry, dye industry and healthcare industry. Among these, healthcare wastes are the major pollution that will create deliberate complications to the humans. One major problem is the manufacturing and clearance of sanitary napkins. The napkins produced by the companies which are not degradable and unsafe for women's. Sanitary napkins should provide comfort and safety, and also improve every woman's health and lifestyle. Women place these napkins next to the most delicate and absorbent tissue in our body. Women spend at least 20% of their life with these sanitary napkins. India being a developing country, having 1.34 billion populations, in those 323.6 million peoples is female between the age group of 15-49. In previous years, papyrus, Moss, grass, Bandages were used during menstrual time and these materials can causes Irritation, Itchiness Skin rashes, allergy and lead to very serious health problems due to the presence of microorganisms. Manufacturers also add chemicals in the scented napkins that can cause complications not only the women who is wearing it and also to the babies during embryonic development. In order to overcome these problems, here we are proposing sustainable sanitary napkins by choosing alternative natural material for the production. In the present study, an attempt has been made to produce sanitary napkins from banana fiber, a natural absorbent fiber. It is expected that incorporation of banana fibers grant antibacterial property and improve the retentiveness. Other important properties like antioxidant, bio degradable, UV protection, weather protection. It has no negative effect on environment and it is considered as eco-friendly fiber.

Menstrual hygiene is a critical determinant of women's reproductive health, dignity, and social participation. Conventional sanitary napkins, though widely available, are manufactured with synthetic substances such as Bisphenol A (BPA), Bisphenol S (BPS), polyethylene, polypropylene, polyurethane, artificial fragrances, and dioxins generated during bleaching processes. These constituents are associated with multiple health risks, including hormonal imbalance, infertility, cervical cancer, polycystic ovarian syndrome (PCOS), urinary tract infections, rashes, allergies, and in rare cases, Toxic Shock Syndrome (TSS).

Furthermore, dioxins are recognized by the **World Health Organization (WHO)** as persistent organic pollutants with cumulative toxic effects lasting decades in the body. The

environmental implications are equally severe, as plastic-based napkins contribute to non-biodegradable waste and ecological hazards.

In contrast, **herbal sanitary napkins** offer eco-friendly, biodegradable, and symptom-relieving alternatives. By incorporating extracts such as *Calendula officinalis*, *Aloe socotrina*, and *Hamamelis virginiana*, they integrate natural healing properties with hygienic protection. Importantly, these very herbs are recognized within the **Homoeopathic Materia Medica** and resonate with the principles of the **Organon of Medicine**, thereby strengthening their relevance as both preventive and curative agents.

Literature Review

Herbal Sanitary Napkins and Menstrual Hygiene

Herbal sanitary napkins have been developed as an eco-friendly and health-conscious alternative to conventional pads. Their key benefits are attributed to natural extracts with antimicrobial and soothing properties. Neem (*Azadirachta indica*) and Tulsi (*Ocimum sanctum*) exhibit broad-spectrum antimicrobial activity, reducing itching, rashes, and unpleasant odor. *Aloe vera* provides cooling and anti-inflammatory effects, offering relief from local irritation. Clinical observations report a decreased incidence of contact dermatitis among herbal pad users compared to users of synthetic napkins. From an ecological standpoint, herbal napkins show approximately 95% biodegradability within 3–6 months, in contrast to plastic-based napkins that persist for decades, contributing significantly to non-biodegradable waste.

Problems Associated with Menstrual Hygiene and Socio-Economic Dimensions

In underdeveloped nations, inadequate menstrual hygiene practices profoundly affect the **dignity, health, and educational outcomes of adolescent girls**. School-going girls often face restrictions and absenteeism due to menstrual stigma, inadequate sanitation facilities, and lack of access to safe menstrual products. Poor menstrual hygiene not only jeopardizes physical health but also undermines psychological well-being, leading to anxiety, social withdrawal, and, in severe cases, school dropouts.

Despite the far-reaching consequences, **educational programs often fail to address menstrual hygiene comprehensively**. Many initiatives provide limited or no guidance on proper hygiene practices, perpetuating misinformation and neglecting the needs of adolescent females. Given that poor menstrual hygiene can lead to **reproductive morbidities such as**

reproductive tract infections (RTIs), urinary tract infections (UTIs), polycystic ovarian syndrome (PCOS), and even increased susceptibility to cervical cancer, the lack of structured menstrual health education remains a critical gap in public health strategies.

A key determinant of menstrual hygiene is the **availability and affordability of sanitary products**. In resource-constrained settings, adolescent girls often rely on unhygienic alternatives (cloth, ash, or paper), which exacerbate infection risks. Even where disposable sanitary napkins are available, issues such as **privacy, disposal, toxic chemical exposure, and cultural stigma** persist. Menstrual education programs have shown positive outcomes, including improved communication, peer support, and reduced absenteeism; however, their reach and impact remain uneven.

Socio-Economic Relations with Menstruation

Menstrual hygiene is deeply intertwined with **socio-economic status, educational attainment, and environmental sustainability**. Access to safe and hygienic menstrual products is often restricted by **financial constraints**, disproportionately affecting girls and women from disadvantaged communities. This disparity, commonly referred to as “**period poverty**”, not only limits access to products but also reinforces gender inequalities by impeding educational opportunities and workforce participation.

Disposable pads, while widely adopted, consist of **polyethylene back layers, super-absorbent polymers, and bleaching byproducts such as dioxins**, raising concerns about toxic exposure and ecological damage. Conversely, sustainable alternatives such as **biodegradable or herbal sanitary napkins** remain underutilized due to limited awareness, affordability issues, and lack of integration into public health programs.

Globally, women adopt diverse coping mechanisms to manage menstruation, influenced by **personal preferences, cultural traditions, economic capacity, and educational background**. However, unsafe practices in low-resource settings increase the prevalence of RTIs, contributing significantly to the **global burden of reproductive morbidity**. The lack of standardized methodologies and culturally sensitive interventions has also contributed to insufficient data on menstrual health, particularly in low-income regions.

Role of Herbal Sanitary Napkins: A Homoeopathic and Community Medicine Integration

Herbal sanitary napkins directly address the **health, socio-economic, and environmental concerns** associated with conventional products. Infused with medicinal plants such as **Calendula officinalis**, **Aloe socotrina**, **Hamamelis virginiana**, **Neem (Azadirachta indica)**, and **Tulsi (Ocimum sanctum)**, these products combine **therapeutic benefits with eco-friendliness**. Their antimicrobial, anti-inflammatory, and wound-healing properties not only **reduce rashes, itching, and infection risks** but also support reproductive health in alignment with principles of the **Homoeopathic Materia Medica**.

From an **Organon of Medicine perspective**, their use reflects Hahnemann's principle of addressing "maintaining causes" (§5) and focusing on individualized symptom relief (§153). For example

- *Calendula officinalis* promotes local healing and prevents infection,
- *Aloe socotrina* alleviates pelvic congestion and irritation,
- *Hamamelis virginiana* reduces venous congestion and menorrhagia-related discomfort.

In the lens of **Community Medicine**, herbal sanitary napkins offer dual benefits

1. **Public Health Impact** – reducing reproductive tract infections, improving school attendance, and enhancing dignity for adolescent girls.
2. **Environmental Sustainability** – being biodegradable within 3–6 months, they help mitigate the biomedical waste burden of conventional pads.
3. **Socio-economic Empowerment** – their local production through **Self-Help Groups (SHGs)**, **NGOs**, and **women-led enterprises** can generate income while simultaneously addressing period poverty.

Thus, herbal sanitary napkins, validated through **Homoeopathy and Community Medicine**, represent a **holistic innovation in menstrual hygiene management**. They bridge the gap between **individual therapeutic care** and **population-level interventions**, aligning with the Sustainable Development Goals (SDGs) of **gender equity, health promotion, and environmental protection**.

Homoeopathic Medicines Perspective

Many of the herbal extracts infused in these sanitary napkins correspond directly to well-established remedies in the Homoeopathic Materia Medica, thereby offering both preventive and therapeutic relevance.

Herbal Extract	Homoeopathic Medicine	Key Indications in Materia Medica	Relevance in Menstrual Hygiene
<i>Aloe vera</i>	<i>Aloe socotrina</i>	Congestive pelvic states, irritation, diarrhoea	Relief from pelvic discomfort and soothing of local tissues
<i>Calendula</i>	<i>Calendula officinalis</i>	Antiseptic, promotes wound healing	Prevents local infections, accelerates healing of skin irritation
<i>Neem</i>	<i>Azadirachta indica</i>	Antimicrobial, blood purifier	Reduces microbial growth, prevents odor
<i>Tulsi</i>	<i>Ocimum sanctum</i>	Antibacterial, antifungal	Controls vaginal infections
<i>Hamamelis</i>	<i>Hamamelis virginiana</i>	Venous congestion, menorrhagia	Relieves heaviness, improves comfort

These correlations demonstrate how Homoeopathic principles validate the efficacy of herbal sanitary napkins, particularly in addressing localized symptoms while supporting systemic well-being.

Materia Medica Perspective

The **Homoeopathic Materia Medica** provides detailed descriptions of medicinal substances and their therapeutic actions on the human body. Several herbs commonly infused in **herbal sanitary napkins** hold a recognized place in the Materia Medica, with properties that align with the requirements of menstrual hygiene and local comfort.

- **Calendula officinalis** (*Calendula*)

Known as a remarkable vulnerary remedy, *Calendula* is valued for its antiseptic, anti-inflammatory, and wound-healing properties. Boericke's Materia Medica highlights its ability to promote healthy granulation and reduce local irritation. In the context of sanitary napkins, *Calendula* supports the prevention of rashes, itching, and minor abrasions caused by prolonged pad use, fostering local healing and comfort.

- **Aloe socotrina** (*Aloes*)

Described in Materia Medica as a remedy for pelvic congestion, heaviness, and irritation, *Aloe* acts directly on the pelvic circulation. Its characteristic modalities include relief of

discomfort associated with fullness and irritation in the pelvic region. Within sanitary napkins, *Aloe* correlates with soothing properties, reducing burning, congestion, and discomfort that may accompany menstruation.

- ***Hamamelis virginiana* (*Hamamelis*)**

Hamamelis is recognized for its action on the venous system, improving venous tonicity and relieving passive hemorrhage or menorrhagia. It is particularly noted for reducing soreness and bruised sensations. Infused in sanitary napkins, *Hamamelis* contributes to easing discomfort related to excessive menstrual flow, venous engorgement, and associated local soreness.

Taken together, these remedies demonstrate that the **Materia Medica validates the therapeutic relevance of the herbal constituents** used in sanitary napkins. Their symptom-specific actions provide local relief, enhance comfort, and prevent complications, offering a scientific and classical Homoeopathic rationale for their use in menstrual hygiene management.

Organon of Medicine Perspective

The *Organon of Medicine*, authored by Samuel Hahnemann, provides a foundational framework for understanding health, disease, prevention, and cure in Homoeopathy. Its aphorisms emphasize the duty of the physician not only to treat but also to prevent disease by addressing external causes and promoting hygienic measures. In the context of menstrual hygiene and the use of sanitary napkins, these principles can be directly applied to evaluate the hazards of conventional products and the advantages of herbal sanitary napkins.

1. Knowledge of What is Curative and What is Morbific (§3, §4)

Hahnemann highlights that the physician must know “what is to be cured in disease” and “what is curative in medicines.” In menstrual hygiene, this translates into recognizing the morbid influences of conventional sanitary napkins—such as synthetic polymers, dioxins, and fragrances—which produce local and systemic disorders like rashes, allergies, hormonal imbalances, and even carcinogenic effects. Conversely, herbal extracts such as *Calendula officinalis* (anti-inflammatory, healing), *Aloe socotrina* (relief of pelvic congestion), and *Hamamelis virginiana* (venous tonicity) represent curative agents that directly address symptoms commonly encountered during menstruation. Thus, the physician’s role extends to

recommending hygienic alternatives that eliminate morbid factors while introducing curative influences.

2. Maintaining Causes (Causa Occasionalis) (§5, §7, §73)

Hahnemann explains that physicians must identify and remove “exciting and maintaining causes” of disease. Poor menstrual hygiene and the use of chemically-laden sanitary napkins act as maintaining causes by perpetuating infections, toxic exposure, and reproductive morbidity. Unless these factors are removed, true health cannot be restored. Herbal sanitary napkins, being biodegradable, chemical-free, and antimicrobial, directly eliminate this maintaining cause and allow the vital force to function without obstruction.

3. Characteristic Symptoms and Individualization (§153)

In aphorism §153, Hahnemann stresses the importance of peculiar and characteristic symptoms in guiding treatment. Conventional napkins frequently cause striking, peculiar symptoms such as itching, burning, rashes, excoriation, and foul odor. The herbal extracts used in natural sanitary napkins correspond to these very symptom domains in the Homoeopathic Materia Medica

- *Calendula officinalis* → antiseptic, promotes healing of excoriated tissues.
- *Aloe socotrina* → relieves pelvic fullness and irritation.
- *Hamamelis virginiana* → supports relief of venous congestion and bleeding.

Thus, the symptom-specific response of herbal sanitary napkins reflects the Organon principle of attending to the most characteristic signs of distress.

4. Preventive Role of Hygiene and Lifestyle (§4, §77)

Hahnemann emphasizes the importance of preventive measures: “He is likewise a preserver of health if he knows the things that derange health, that cause and sustain disease, and how to remove them.” Poor menstrual hygiene is a well-recognized contributor to reproductive tract infections and long-term morbidity. By promoting herbal sanitary napkins that are free from harmful chemicals and supportive to local tissue health, physicians fulfill their preventive duty, reducing both individual suffering and public health burden.

5. Vital Force and Harmony (§9, §11, §12)

Hahnemann defines health as the state in which the vital force governs harmoniously, ensuring normal sensations and functions. Repeated exposure to toxins from conventional

sanitary napkins disrupts this harmony, leading to systemic disturbances such as endocrine disruption, PCOS, and immune impairment. Herbal napkins, being natural and minimally invasive, reduce these interferences, allowing the vital force to maintain balance and restore order within the organism.

6. Wider Public Health Implications (§3, §4)

Although the Organon primarily addresses individual treatment, its philosophy implicitly supports public health measures. By understanding “what is harmful to health,” physicians also carry a responsibility to advocate against unsafe practices at the community level. Synthetic sanitary napkins not only endanger women’s health but also contribute to environmental pollution through non-biodegradable waste. Herbal sanitary napkins, being eco-friendly, align with Hahnemann’s emphasis on removing injurious influences, benefitting both individual women and the larger society.

Community Medicine Perspective with Homoeopathy

Menstrual hygiene is not only a personal health issue but a **public health concern**, influencing the physical, psychological, social, and economic well-being of women. From a community medicine standpoint, unsafe menstrual hygiene practices contribute to **reproductive tract infections (RTIs), urinary tract infections (UTIs), school/work absenteeism, reduced productivity, and gender inequality**. At the same time, the widespread use of **plastic-based sanitary napkins** adds to **environmental pollution**, contributing significantly to non-biodegradable biomedical waste. Thus, promoting **safe, eco-friendly, and accessible alternatives** aligns with the goals of community medicine, which emphasize prevention, health promotion, and sustainability.

Homoeopathy and Public Health Integration

Homoeopathy, with its preventive and holistic orientation, offers additional relevance in community-level interventions. While herbal sanitary napkins act as a **primary preventive measure**, their infusion with herbs validated in the **Homoeopathic Materia Medica** and guided by the **Organon of Medicine** strengthens both individual and community benefits:

- **Calendula officinalis** (antiseptic, wound-healing): Prevents local infections, reduces rashes and skin irritation—minimizing morbidity at population level.
- **Aloe socotrina** (relieves pelvic congestion, irritation): Reduces discomfort during menstruation, improving school/work participation.

- **Hamamelis virginiana** (venous tonic, relieves menorrhagia): Provides comfort, indirectly preventing anemia-related public health issues.

Through this lens, **herbal napkins act as both a hygienic tool and a therapeutic intervention**, aligning with homoeopathy's focus on addressing exciting and maintaining causes (§5, Organon of Medicine).

Public Health Implications

1. **Reproductive Health:** By reducing infections, rashes, and exposure to toxins, herbal napkins lower the burden of RTIs, UTIs, and menstrual morbidities.
2. **Health Equity:** Affordable herbal napkins, promoted through **Self-Help Groups (SHGs), NGOs, and government health schemes**, can bridge menstrual health gaps in underserved rural and urban communities.
3. **School & Workplace Productivity:** Improved comfort and hygiene reduces absenteeism, enhancing educational and economic outcomes, especially for adolescent girls and working women.
4. **Environmental Sustainability:** Being biodegradable (95% within 3–6 months), herbal napkins reduce biomedical waste burden, supporting WHO's call for sustainable health practices.
5. **Preventive Orientation:** Homoeopathy validates their use as addressing maintaining causes of disease, thus shifting focus from curative to **preventive health**—a core principle in community medicine.

II. MATERIALS AND METHODOLOGY

A. Materials

Sanitary napkins are designed as multilayered absorbent products, with each layer performing a specific function. For this study, the following biodegradable and eco-friendly raw materials were utilized

- **Banana fiber:** Extracted from the pseudostem of banana plants, banana fiber is naturally occurring, biodegradable, and safe for humans and the environment. It serves as the primary absorbent core due to its high liquid retention capacity and biodegradability.
- **Organic cotton:** Used as the top layer, organic cotton is non-irritant, tissue-friendly, breathable, and provides superior fluid retention. It prevents moisture accumulation, keeping the skin dry and comfortable.

- **Muslin cloth:** Functions as an intermediate wrapping layer, maintaining the integrity of the structure while adding softness and absorbency.
- **Canvas cloth:** Used as an outer layer for support and shape. The cloth undergoes softening to increase pore size, thereby enhancing breathability and comfort.
- **Homoeopathic Infusions:** *Calendula officinalis* (wound healing, antiseptic), *Aloe socotrina* (soothing, anti-inflammatory), and *Hamamelis virginiana* (relieves venous congestion, reduces irritation) were selected for their proven therapeutic properties in the Homoeopathic Materia Medica.

B. Methodology

1. Preparation of Banana Fiber Sheet

- Banana fibers were manually extracted from the pseudostem of banana plants.
- Fibers were chopped into small pieces and boiled in 150 mL distilled water with 5 g sodium hydroxide for 1 hour to soften and partially degum the fibers.
- The mixture was cooled for 1.5 hours, filtered through filter paper, and poured into a mold of required shape.
- The mold was sun-dried for 24 hours to obtain thin absorbent banana fiber sheets.

2. Softening of Canvas Cloth

- Canvas cloth, generally used in garments for stiffness, was treated to remove starch and improve flexibility.
- The cloth was scrubbed with a brush to increase pore size and permeability, making it more breathable and comfortable for use as an outer protective layer.

3. Layering of Sanitary Napkin

The napkin was designed with a multilayered structure, each layer serving a distinct function:

- **Core layer:** Banana fiber sheet for maximum absorption.
- **Top layer:** Organic cotton to provide skin comfort and dryness.
- **Intermediate layer:** Muslin cloth for structural stability and added absorption.
- **Outer layer:** Softened canvas cloth for strength and shape.

The corners of the canvas were sealed using heat or stitched to ensure durability.

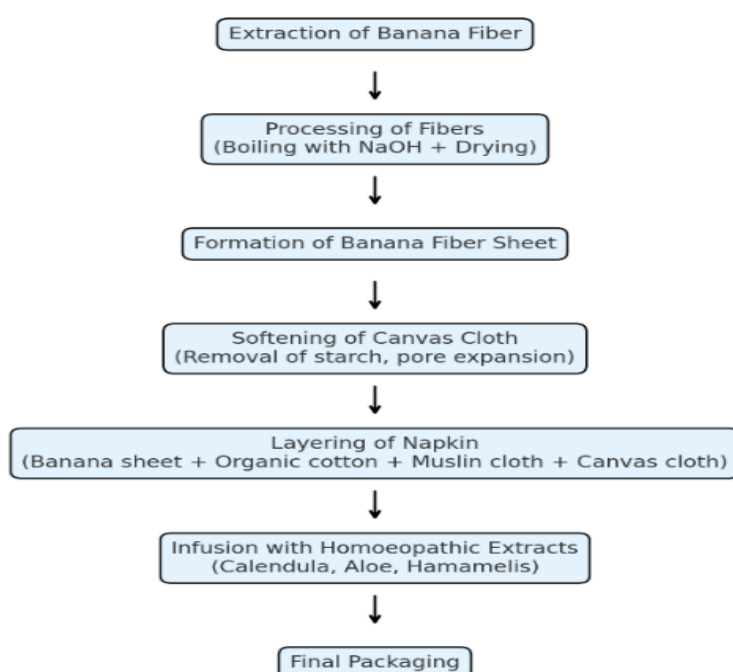
4. Infusion with Homoeopathic/Herbal Extracts

- The absorbent core (banana fiber sheet and cotton layer) was lightly infused with diluted tinctures of *Calendula officinalis*, *Aloe socotrina*, and *Hamamelis virginiana*.

- These herbal extracts were selected based on their antimicrobial, anti-inflammatory, soothing, and healing properties documented in Homoeopathic Materia Medica.
- The infusion process was standardized to avoid excess moisture while ensuring therapeutic benefits.

5. Packaging of Napkin

- The prepared herbal sanitary napkins were air-dried under sterile conditions.
- Each napkin was packaged individually in biodegradable wrapping material to ensure hygiene, prevent contamination, and maintain eco-friendliness.



Herbal sanitary napkins

To avoid the above said disorders, the sanitary napkins need to be manufactured with the help of natural resources that results in herbal sanitary napkins. The key criteria for selection of Herbal sanitary pads are:

Hygiene

Sanitary waste disposal has become an increasing problem in India, thus biodegradable napkins should be made.

Performance

Women generally prefer sanitary napkins based on their absorptive capacity.

Disease free

Napkins should have less side effects and should not cause wide range of diseases.

Comfort

Napkins should be comfort and not produce any unpleasant odour as they are used throughout the day during menstruation.

Cost

Sanitary napkins should be available at an affordable cost that every women can buy. Based on the above criteria herbal sanitary napkins should be made. This will promote hygienic menstruation around the world and there is avoidance of several diseases caused due to the harmful synthetic sanitary napkins.

Herbal resources

Organic cotton as top sheet is one the commonly advised raw material for sanitary napkin because of its non-irritant, skin friendly and superior liquid retention properties. It is soft and breathable which gives comfort and dryness. Cotton wicks away moisture and keeps skin dry. Organic cotton are cultivated from non-treated Genetically Modified (GMO) seeds and is grown using method and materials having low impact on environment that is without any use of synthetic agricultural chemicals such as fertilizer and pesticides. The cotton should be biodegradable in nature. The ideal moisture management of this cellulosic fiber is responsible for the reduced bacteria growth. The primary requirement of sanitary pad is absorbency of menstrual fluid. Therefore, selection of core material totally depends on the absorbency and retention property of fibre.

Bamboo fibre (*Bambusa vulgaris*) is a novel alternative raw material for absorbent core. Bamboo absorbs and wicks water 3 to 4 times better than cotton and reduces odour as the fiber is filled with multiple micro holes and micro gaps. Bamboo is soft to feel as the fibre is naturally round in shape and it does not require any chemical treatment to smoothen it. An additional significant property of bamboo is the antimicrobial agent, bamboo kun naturally present in it.

Sanitary pads can also be developed from banana (*Musa paradisiaca*) fibre to make affordable, quality, eco-friendly sanitary napkins and available in recent years to girls and women in developing country. Banana is a natural absorbent fibre; the key reason is its

natural porosity. Banana fibre is an eco-friendly fibre like jute fibre (*Corchorus olitorius*). It is biodegradable and has no negative effect on environment. Rather than these jute fibres can also be used.

An alternative for synthetic back sheet is the PLA (Poly Lactic Acid) fibre, which is derived from corn starch using latest biotechnology. It is most promising thermoplastic biodegradable polymer material. Apart from all these, natural antibacterial agents such as extracts of neem (*Azardirachta indica*), turmeric (*Curcuma longa*), Aloes (*Aloe barbadensis*) and other natural antibacterial agents and natural fragrances are also used in manufacture of sanitary napkins.



Fig no.1 Cotton



Fig no.2 Bamboo fibre



Fig no.3 Jute fibre



Fig no.4 Banana fibre



Fig no.5 Aloes



Fig no.6 Neem



Fig no.7 Turmeric

Wicking experiments

Tests can be done according to BS3424 Method 21 (1973) which specifies "determination of resistance to wicking." The experiment is meant to test the ability to take up fluid. One end of the pad is immersed to about 10mm in the synthetic blood and the fluid absorption along the pad is measured in mm after 30 minutes. Wicking is a desired characteristic of a sanitary pad as it allows fluid to spread along the entire absorbent structure.

Leakage proof experiment

The test is carried out according to EAS 96:2008-Annex B standard. It determines the efficiency of barrier layer. A specimen size of 6.5cm X 6.5cm barrier sheet is cut and folded into a cone and placed in a funnel. The funnel filled with test fluid is kept for 48hrs, and then checked for any leakage.

Antimicrobial screening

Antimicrobial test carried out using Agar Diffusion test against gram positive bacteria (*Staphylococcus aureus*, *Streptococcus sp*) and gram negative (*Pseudomonas aeruginos*) bacteria. The treated samples are to be placed on the incubated agar plate Development of Herbal finished Sanitary Napkin with test bacteria for 24hrs at 37°C. After incubation the samples assessed visually the area of inhibition measured for antimicrobial efficiency.

FUTURE PERSPECTIVE

Herbal Sanitary Napkins made up of herbal materials, passing all the evaluation tests such as absorbency, antibacterial, softness will definitely promote healthy and hygienic menstruation in women and will also drop down the several drastic diseases that are caused due to harmful synthetic sanitary napkins and unhygienic menstrual activities.

CONCLUSION

From a **Community Medicine–Homoeopathy perspective**, herbal sanitary napkins are more than menstrual hygiene products; they represent a **synergy of therapeutic, preventive, and ecological health benefits**. By promoting safe menstruation practices, reducing disease burden, and encouraging sustainability, they embody the principles of both **public health and Homoeopathy**. Their integration into **national menstrual hygiene programs** could serve as a model for holistic, women-centered, and eco-conscious healthcare delivery. Menstrual hygiene should be promoted by implementing the herbal sanitary napkins at the time of menstruation and menstrual hygiene management. These napkins might satisfy the needs i.e. affordable, hygienic, biodegradable and sustainable alternative solution to manage menstrual days and make every women hale and healthy who crosses the period of menstruation in her life time. Herbal sanitary napkins demonstrate efficacy in improving menstrual hygiene and reducing dermatological complaints. Their therapeutic properties resonate with **Homoeopathic medicines** such as *Calendula officinalis*, *Aloe socotrina*, and *Hamamelis virginiana*, reinforcing their clinical relevance. From a Community Medicine perspective, herbal napkins offer health, environmental, and social benefits. Adoption and promotion of these products could transform menstrual health management into a more sustainable, eco-friendly, and women-centered practice.

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