



Original Research Article

Effectiveness of Panchagavya on Menstrual Disorders in Women of Childbearing Age-Group

Article History:

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Abstract: Background: Menstrual disorders such as dysmenorrhea, menorrhagia, and irregular cycles are frequent among women of reproductive age, and may cause physical, behavioral, and emotional abnormalities during menstruation. The purpose of this study is to determine the efficacy of Panchagavya treatment in menstrual diseases, specifically in terms of controlling menstrual cycle and flow and lowering pain and suffering during menstruation. **Methodology:** A pre-experimental study was carried out in five villages and town of the Gadag district among reproductive-age women aged 15 to 45 who were experiencing menstruation issues. Ayurveda and Panchagavya professionals agreed to recruit 50 participants using a purposive sample strategy. Data were collected during specialized health camps using a semi-structured, pre-tested, and validated questionnaire. The resulting data were assembled in Microsoft Excel, and the final analysis was expressed as frequencies and percentages, with appropriate tests used. **Results:** Among the 50 people enrolled, the 5 who had a menstrual period lasting longer than 7 days after the intervention cycle returned to normalcy, which was 3 to 7 days. Almost majority of the participants achieved normal cycle length following the intervention. 13 patients with severe dysmenorrhea were moved to the mild category. Half of the trial participants reported reduced premenstrual symptoms. The Panchagavya treatment reduced pain during menstruation to the greatest extent possible. **Conclusion:** Panchagavya products are easily available in the villages and came out as an effective remedy for menstrual problems in terms of reduction in pain during menstruation, normalizing cycle duration and betterment of general health.

Keywords: Effectiveness; Ayurveda; Women Problems; Menstruation, Panchagavya; Traditional Medicine; IKS.

INTRODUCTION

Menstrual pathologies affect 75% of adolescents, causing significant physical and emotional impairment (1&2). While clinical cycles typically

range from 21 to 45 days, issues like dysmenorrhea and PMS remain the most prevalent (3&4). Addressing these barriers is a global priority for human rights and the Sustainable Development Goals

(5&6). Socioeconomic status, lifestyle habits, and regional factors further influence the prevalence of these irregularities (7, 8, 9&10). Treatment for menstrual irregularities is tailored to pathology and reproductive goals.

Options range from contraceptives and nutritional therapy for anovulatory cycles to hormonal devices or surgery for ovulatory bleeding and fibroids. Dysmenorrhea is managed with thermotherapy or NSAIDs, though refractory cases may require surgical intervention (11).

In Ayurveda, the 28-day *Rituchakra* (menstrual cycle) comprises three distinct phases. Regularity indicates a functional HPO axis, while deviations like *Aartavadushti* signify diseased states often linked to infertility. Identifying specific *Dosha* involvement is therefore vital for effective gynecological diagnosis

and management (12). Ayurvedically, these disorders stem from *Vata* vitiation and channel obstruction, treatable through detoxification and balancing *doshas* (13). **Panchagavya**—a Vedic therapy—offers an eco-friendly immunomodulatory alternative that addresses inflammation and anemia with minimal side effects (14&15). SVAROP (Scientific Validation and Research on Panchagavya), launched by India's Ministry of Science and Technology, aims to scientifically validate the therapeutic efficacy and safety of Panchagavya-based products through rigorous research. Despite its potential, scientific evidence remains limited; thus, this study aims to evaluate the effectiveness of Panchagavya in regulating menstrual cycles and flow while reducing associated pain and discomfort.

MATERIALS AND METHODS:

Study design: A pre-experimental, one group pre-test and post-test study.

Setting: Study conducted in the Sankalpa Rural Development Society (NGO) Kutumachagi, Gadag adopted villages in and Gadag and Mundaragi taluk (Peta Alur, Harti, Lakkundi, Kelur and Gadag town). Baseline data collected in the month of November 2022 and participants selected for intervention and followed up done for three months.

Table 1: Camp conducted places and number participants

Camp Place	No. of participants
Harthi	8
Peta alur	26
Kelur	1
Harogeri	1
Lakkundi	1
Gadag Town	13
Total Samples	50

Participants— Women who met menarche.

Inclusion criteria:

- 15-45 age group women who attend medical camps conducted by the KSRDPR university, Gadag, to be part of the study and have the following symptoms:
 - Periods that occur less than 21 days apart (polymenorrhea) or more than 35 days apart (oligomenorrhea).
 - Menstrual flow that is much heavier or lighter than usual
 - Periods that last longer than seven days (menorrhagia) and less than 2 days (hypomenorrhea).
 - Periods that are accompanied by pain in legs, cramping, nausea or vomiting, irritability, anger, anxiety, low backache, lack of interest in work and play, tiredness, difficulty in concentrating, low/depressed mood (premenstrual syndrome)

Exclusion criteria:

- Those who were critically ill, with any other systemic and metabolic disorder that may interfere with the course of intervention.
- Those who are not willing to participate in the study

Source of data: Primary data was collected using pre-tested semi structured questionnaire.

Sampling design: Purposive sampling technique was adopted for this research.

Sampling size: Sample size 50, according to Ayurvedic and Panchagavya experts'

Opinion depending on the selected intervention and available time duration and resource availability. Total patients attended the camp-903

Patients with menstrual problems 62

Patients gave consent to participate in the study 52

Drop out patients 2 Total patients taken 50

Interventions:

1) Panchagavya Gritha 1tsp (5ml) in the morning empty stomach with warm water for 3 months

Ingredients: (References-Charaka chikitsa sttana 10th chapter, Ashtanga hridayam chikitsa stana 12/19-23)

1. Gomaya swarasa (The water extract prepared from cow dung)
2. Ksheera (cow milk)
3. Dhadi (Curd)
4. Mutra (Cow urine)
5. Gritha (Cow ghee)

Drug source: Panchagavya gritha by Gou Ganga (Ma Gou products Pvt. Ltd. Gangapura-563130)

Data source and measurement:

➤ **Assessment criteria-**Pain during menstruation, Menstrual flow, Menstrual cycle length, Menstrual cycle duration, Premenstrual symptoms.

➤ **Severity of dysmenorrhea scale:**

Alicia M. Weissman et al 2004 Menstrual cramps as experienced when not taking medications to prevent discomfort were rated on a **four-point severity of Dysmenorrhoea scale (26).**

- 0 – No Dysmenorrhea
 - 1 – Minimal Dysmenorrhea (can work, somewhat uncomfortable)
 - 2 – Moderate Dysmenorrhea (can work, but quite (or) uncomfortable)
 - 3 – Severe Dysmenorrhea (miss work, have to be in bed)
- Assessment of menstrual blood loss by pictograms with blood loss equivalents.
- Adopted from Wyatt KM, Dimmock PW, Walker TJ, et al. Determination of total menstrual blood loss(27).
 - In case where participant not able to tell menstrual flow using above mentioned pictogram, subjective parameter taken as normal, light, medium and heavy menstrual flow.

Investigations: Blood Investigation – Haemoglobin % , Complete Blood Count, Thyroid profile.

Ethical clearance: Ethical clearance obtained from the Ethical committee of KSRDPRU, Gadag(Ref.No: RDPRU /SEP /IEC /4 /2021/17).

Observational period:

- Observation was done at baseline.
- Regular follow up done 7th, 14th, 28th, 45th, 60th, 75th, 90th Day. And pain during menses assessed using severity of dysmenorrhea scale, cycle length, cycle duration, menses flow and other associated symptoms.
- Patients informed to do follow up call when they attain menstrual cycle to assess related symptoms.

Method of collection of data:

A pre-experimental one-group pretest-posttest study assessed Panchagavya's efficacy for menstrual disorders among women at medical camps by MGRDPRU, Gadag, and Sankalpa NGO (Gadag district sites). Following KSRDPRU ethics approval and informed consent were obtained from all participants.

Data Analysis: Data from pretested questionnaires were analysed via frequency percentages and appropriate statistical tests in Microsoft Excel and SPSS v20.

RESULTS:

Table 2: Socio-demographic details of patients. (n=50)

Characteristics	Variables	Frequency	Percentage
Age group (in years)	15-19	35	70
	20-24	3	
	25-29	3	6
	30-34	1	2
	35-39	4	8
	40-45	4	8
Marital status	Married	11	22
	Unmarried	39	78
Educational Level	Illiterate	1	2
	Literate	49	98
Occupation	Student	37	74
	Homemaker	6	12
	Working women	7	14

In a study cohort of 50 participants, the demographic profile was predominantly composed of late adolescents and young adults, with 70% of individuals aged 15–19 years. The sample was characterized by a high literacy rate (98%) and a majority of unmarried participants (78%). Occupationally, students represented the largest subgroup at 74%, while homemakers and working women accounted for 12% and 14%, respectively, indicating a population primarily engaged in academic pursuits (Table 2).

Table 3. Distribution of cases according to age of menarche

Age of menarche(years)	Frequency	Percentage
<13	12	24
13-15	27	54
>15	11	22

An analysis of the menarcheal age distribution (n=50) indicates that a majority of participants (54%) experienced the onset of menstruation between 13 and 15 years. Early menarche (below 13 years) was recorded in 24% of the cohort, while 22% reported attainment after the age of 15. These findings reflect a standard physiological timeline for menarche within the sample, with over three-quarters of the participants reaching this developmental milestone by age 15 (Table 3).

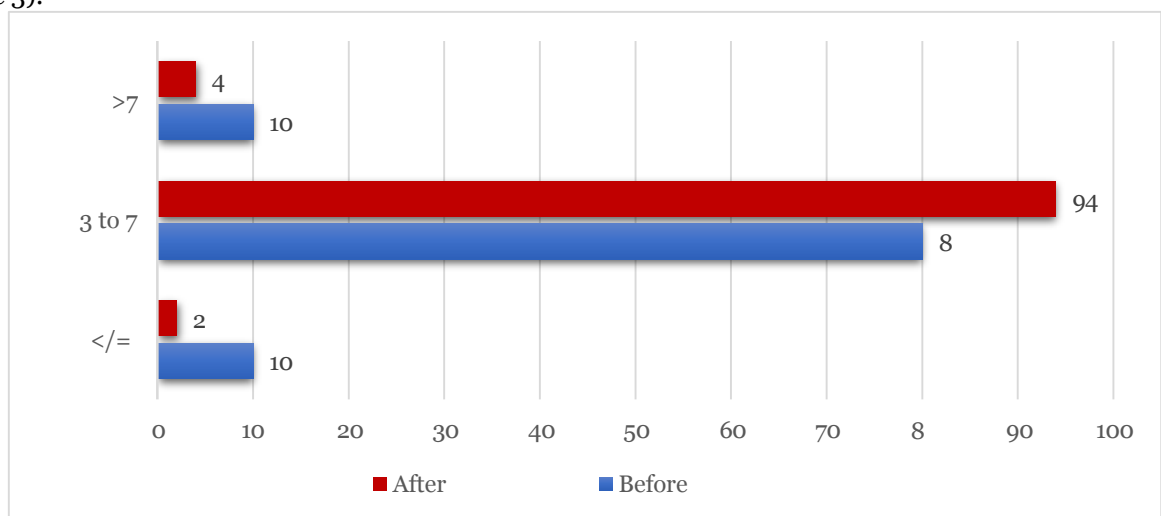
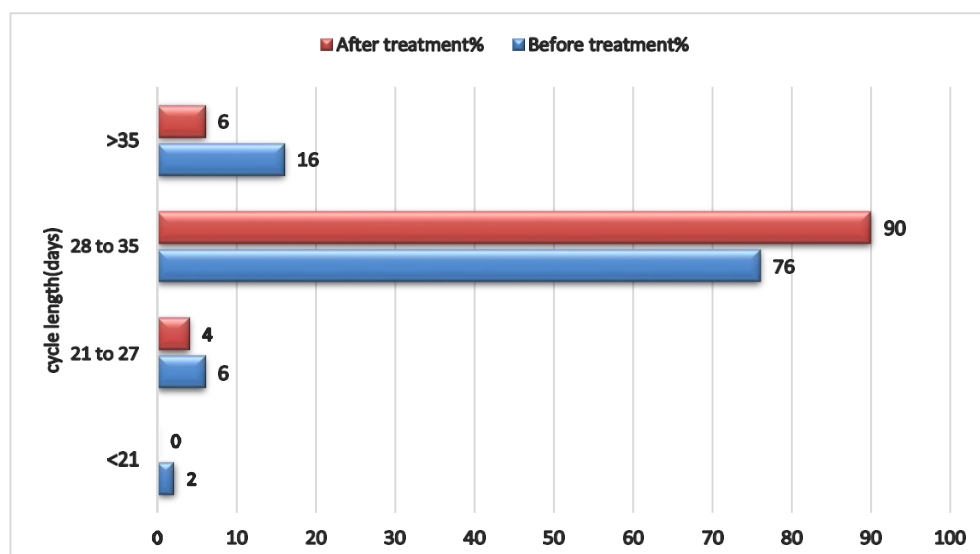


Figure 1: Distribution of cases according to duration of menstrual cycle (days), before and after intervention

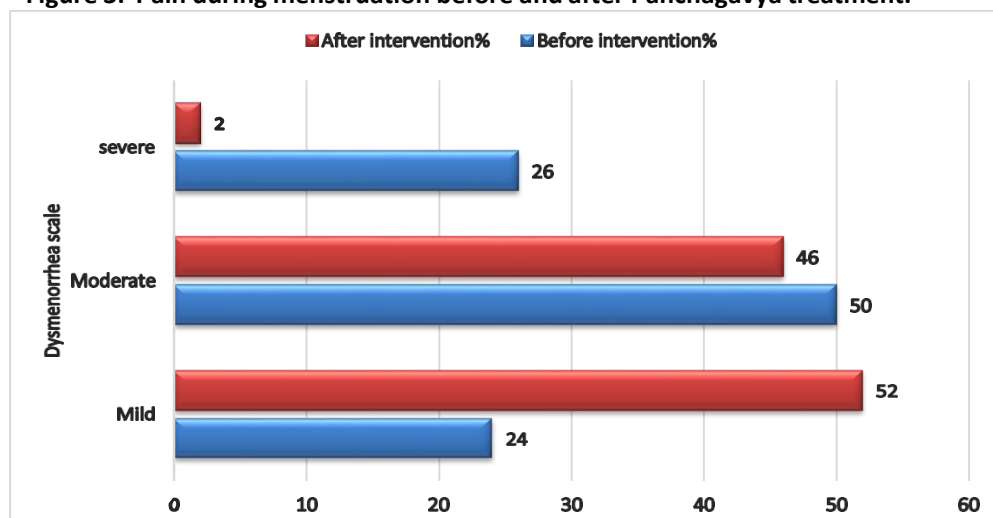
The intervention effectively normalized menstrual bleeding, restoring a typical 3-7 day duration for nearly all participants. It showed particular success in addressing very short cycles (<2 days), reducing their prevalence from 10% to 2%, likely by targeting hormonal or endometrial factors. These findings highlight a promising public health approach to menstrual dysfunctions (Fig.1).

Figure 2: Distribution of cases according to length of menstrual cycle.



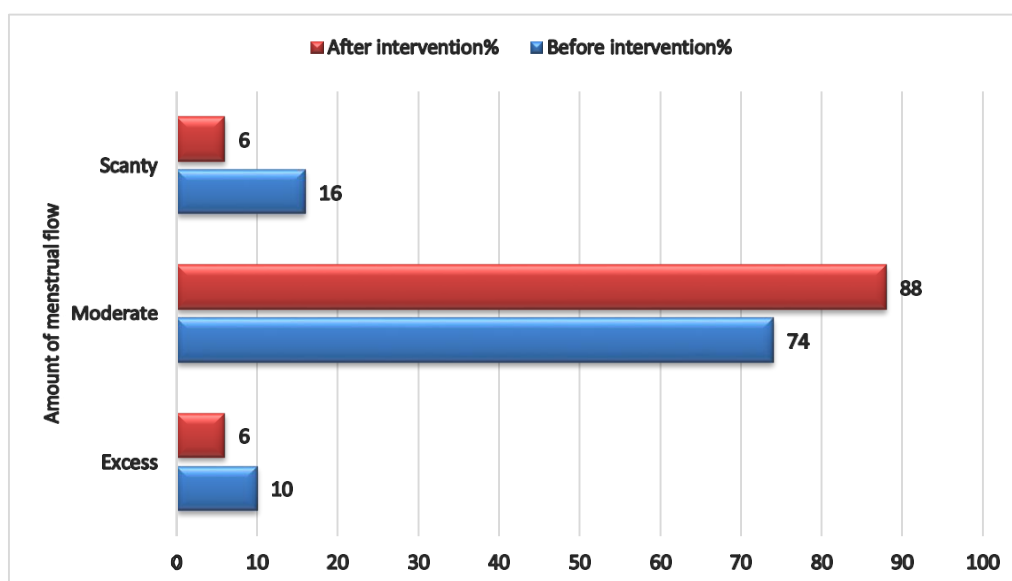
These findings highlights the intervention is a highly effective public health tool for correcting menstrual cycle irregularities. Normalizing cycle length is crucial for reproductive autonomy, mental well-being, and reducing morbidity associated with chronic conditions. The data supports the integration of this treatment protocol into primary healthcare initiatives, particularly in resource-constrained settings, to manage menstrual health disorders effectively and improve the overall quality of life for women of reproductive age (Fig. 2).

Figure 3: Pain during menstruation before and after Panchagavya treatment.



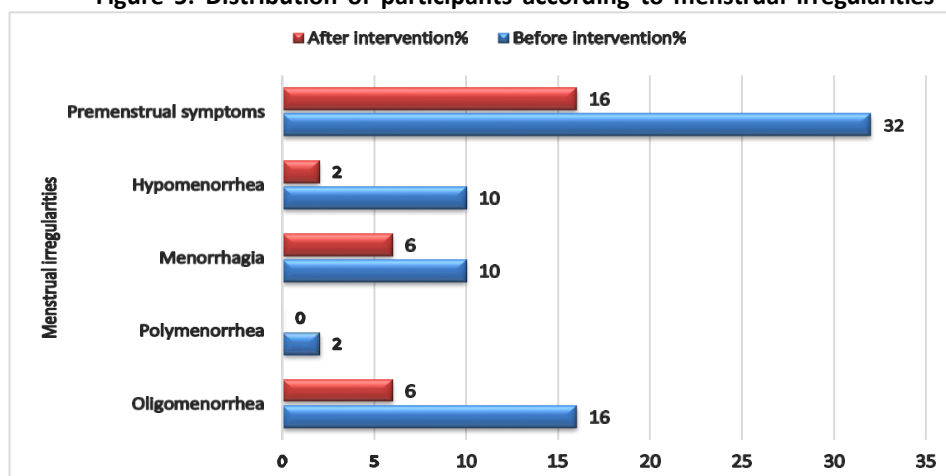
These findings demonstrate that the intervention is highly effective at alleviating significant menstrual pain, a primary cause of physical, behavioral, and social disruption in women of reproductive age. The shift from severe to mild dysmenorrhea among the majority of participants highlights the potential for this treatment to substantially improve the quality of life and functional capacity of the affected population, supporting the attainment of global health and well-being goals(Fig.3).

Figure 4: Amount of menstrual flow before and after panchagavya intervention



The intervention effectively normalized menstrual blood flow, addressing both oligomenorrhea/hypomenorrhea (scanty flow) and menorrhagia (excess flow) by shifting 88% of participants to a moderate, healthy range—up from 74% at baseline, with scanty flow dropping from 16% to 6% and excess flow from 10% to 6%. From a public health standpoint, this reduces risks of iron-deficiency anemia—a major concern for reproductive-age women in South Asia—while correcting hormonal imbalances that may impair fertility, ultimately mitigating menstrual morbidity, enhancing physical well-being, and supporting reproductive autonomy at the population level(Fig.4).

Figure 5: Distribution of participants according to menstrual irregularities



The Panchagavya intervention demonstrated potent, multi-target efficacy against common menstrual morbidities, halving premenstrual symptom prevalence from 32% to 16%, substantially reducing oligomenorrhea from 16% to 6%, nearly eliminating polymenorrhea (2% to 0%), and normalizing flow extremes—dropping hypomenorrhea from 10% to 2% and menorrhagia from 10% to 6%. These comprehensive shifts across symptomatic relief, cycle regularity, and flow volume underscore its potential for broad public health application, alleviating the reproductive health burden on female populations, enhancing quality of life and functional capacity, and addressing inequity in menstrual health management(Fig.5).

Table 4: Comparative Analysis of Menstrual Health Parameters - Wilcoxon Signed Ranks tests (Pre- vs. Post- Treatment)

Menstrual Parameter (Post - Pre)	Test Statistic (Z)	p-value (2-tailed)
Menstrual Cycle Duration	-0.430	.667
Menstrual Cycle Length	-2.045	.041*
Pain during Menstruation	-4.735	.000***
Amount of Menstrual Flow	-0.905	.366
Associated Symptoms	-2.828	.005**

The Wilcoxon Signed Ranks test results from Table 4 reveal statistically significant improvements in key menstrual health parameters post-Panchagavya intervention, underscoring its public health potential for managing reproductive morbidity. Pain during menstruation showed the strongest effect ($Z = -4.735$, $p < 0.001$), with associated symptoms also improving markedly ($Z = -2.828$, $p = 0.005$), indicating robust symptomatic relief that could enhance quality of life and functional capacity among reproductive-age women. Menstrual cycle length trended toward normalization ($Z = -2.045$, $p = 0.041$), while cycle duration and flow amount changes were non-significant ($p > 0.05$), suggesting targeted efficacy on pain and irregularity—critical factors in reducing the population-level burden of menstrual disorders, particularly in resource-limited settings like rural India.

DISCUSSION:

Prior to Ayurvedic treatment, shodhana (purification therapy) is typically required. However, in this study, we utilized cow urine—known for its ability to penetrate the body's microchannels—thus bypassing the conventional shodhana procedure.

Menstrual Symptoms and Traditional Medicine Use This study demonstrated substantial improvement in menstrual disorder symptoms. Due to the absence of comparable studies using Panchagavya, direct comparisons are limited. However, ethnomedicinal research by S. Balamurugan et al. in Vedaranyam taluk, South India (January 2014–January 2015), documented traditional practitioners using

crushed plant parts combined with ghee, cow milk, salt, or honey to treat conditions including low breast milk, delivery pain, menstrual cycle regulation, excessive/prolonged bleeding, and scanty menstruation (16). A systematic review by Arezoo Moini Jazani et al. (2018) identified 87 medicinal plants commonly used in Iran for oligomenorrhea and amenorrhea (17). Similarly, Majing Jiao et al.'s review (2000–2021) cataloged 571 ethnic medicines across Asia, Europe, Africa, and beyond, highlighting their established efficacy and long-term use for menstrual disorders (18). These studies affirm the global prevalence and effectiveness of herbal and traditional medicines for menstrual health.

Participant Age and Socio-demographic Profile

Of the 50 participants, the majority (74%) were aged 15–19 years, with 6% each in the 20–24 and 25–29 age groups, 2% in 30–34 years, and 8% across 35–39 and 40–45 years. Occupationally, 74% were students, 12% homemakers, and 14% working women. Reproductive-age women were included regardless of marital status—a limitation affecting result generalizability. In contrast, S. A. Dayani Siriwardene and L. P. A. Karunathilaka's clinical trial on Ayurvedic treatment for PCOS-related subfertility specifically enrolled married women aged 25–40 years (19).

Age of Menarche

In this study, 24% of participants attained menarche before age 13 years, 54% between 13–15 years, and 22% after 15 years. In comparison, an interventional study by Jyothi Jacob *et al.* in Trivandrum, Kerala, India (2020) evaluated Shatapushpa powder with tila taila among 30 women aged 18–35 years diagnosed with oligomenorrhea (≥ 3 consecutive cycles) meeting Rotterdam PCOS criteria, where nearly all reported menarche between 13–16 years. The intervention yielded no significant changes in menstrual duration or bleeding volume but demonstrated a significant reduction in cycle interval after three months of treatment(20).

Duration of Menstrual Flow

Pre-intervention, 10% of participants reported menstrual durations < 2 days, 80% fell within the normal 3–7 day range, and 10% exceeded 7 days. Post-intervention, these shifted to 2% (< 2 days), 94% (3–7 days), and 4% (> 7 days), with 6% of participants achieving normalization. In comparison, Nirma Narjary and Dipak Kumar Goswami's clinical evaluation of Vasadi Yoga for Raktapradar found baseline durations of 50% (8–10 days), 46.67% (6–7 days), and 3.33% (4–5 days), with no cases > 10 days(21).

Menstrual Cycle Length

Pre-intervention, 2% of participants had cycle lengths < 21 days (all normalized post-intervention), 6% had 21–27 days (reduced to 4%), 38% had 28–35 days (increased to 90%), and 16% had > 35 days (reduced to 6%), with 10% of the prolonged category achieving normalization.(10) Comparatively, Krupa D. Patel *et al.*'s 2012 clinical trial in Karnataka treated 32 PCOD patients for 2 months across three groups: Group A (Pathadi kwatha + Shatapushpa taila

matra basti) showed 62.50% improvement in menstrual irregularities, Group B (basti only) achieved 100% relief from menstrual pain, and Group C (wheat flour capsules) yielded insignificant results(10). Additionally, Namitha S N *et al.*'s 2021 case report from Karnataka on Kashtartava treated with lekhaana basti and Gomutra Haritaki noted no significant fibroid size reduction but complete resolution of PCOD changes on 3-month follow-up scan(22).

Menstrual Flow

Pre-intervention, 10% of participants reported excess menstrual flow, 74% moderate flow, and 16% scanty flow; post-intervention, these shifted to 6% excess, 88% moderate, and 6% scanty, reflecting a 4% reduction in excess flow and overall normalization in 14% more participants. A case study by Shriniwas Jadhav *et al.* from Vadodara (2019) on Arthavakshaya management using Matrabasti with Tilataila and Saindhava lavan, alongside Rajah Pravartini vati and Aloes compound, successfully resolved 2 months of amenorrhea unresponsive to prior oral treatments, demonstrating intervention efficacy(23). No prior studies evaluate Panchagavya for menstrual disorders, limiting direct comparisons; these preliminary findings warrant large-scale replication across age groups for robust prevalence data and generalizability.

Menstrual Pain

The study employed Panchagavya gritha monotherapy, yielding marked benefits across assessed menstrual parameters, particularly pain reduction. Pre-intervention pain distribution was 2% mild, 50% moderate, and 26% severe; post-intervention, it improved to 52% mild, 46% moderate, and 2% severe, with 24% of participants transitioning from severe to moderate pain. Comparatively, Athulya K *et al.*'s 2021 case report from Thiruvananthapuram, Kerala, documented Ayurvedic management of primary dysmenorrhea using Abhayatrivrudadi kashayam, reducing severe baseline symptoms (lower abdominal pain VAS 10/10, low backache VAS 5/10, nausea/vomiting Grade I) to mild post-treatment (abdominal pain VAS 4/10, backache VAS 1/10, resolved nausea/vomiting), with sustained mild relief at follow-up (VAS 5/10 abdominal, 2/10 backache)(24). Patil S (2023) highlights Panchagavya Ghrita's established role in treating infertility—a key reproductive disorder often tied to menstrual irregularities—while also demonstrating broader therapeutic benefits including antidepressant, antiepileptic, anxiolytic, hepatoprotective, memory-enhancing, and anticancer effects,

thus affirming Panchagavya formulations' relevance in holistic Ayurvedic management of menstrual and gynecological health(25).

CONCLUSION:

High prevalence of menstrual disorders exists with suboptimal medical care access; Panchagavya products—readily available in villages—effectively reduced menstrual pain, normalized cycle duration, and improved general health, suggesting potential for public health strategies in underserved areas.

Limitations:

- The study period is limited, resulting in the exclusion of cases of amenorrhea.
- Cases that require abdominal and pelvic ultrasound and hormonal investigations for differential diagnosis are also excluded due to limited resource availability.

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Clinical Trial No.: Not Applicable.

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