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Strengthening Women's Health in the Workplace: Therapeutic and Nutritional Potential of Amla (*Emblica Officinalis*)

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Abstract

The increasing participation of women in the workforce has brought renewed attention to the unique physical, mental, and reproductive health challenges faced by working women. Long working hours, work–life imbalance, nutritional deficiencies, occupational stress, and inadequate gender-sensitive workplace policies contribute to fatigue, metabolic disorders, musculoskeletal problems, and lifestyle-related diseases. This article explores the potential role of amla (*Emblica officinalis*), a widely used medicinal plant in traditional Indian medicine, in alleviating health concerns among working women. Using a narrative review approach, the paper examines the pharmacological properties, nutritional composition, and health benefits of amla in relation to women's workplace health. Evidence suggests that amla, rich in vitamin C, antioxidants, amino acids, minerals, and bioactive compounds, supports immunity, digestion, metabolism, glucose and lipid regulation, joint health, skin and hair rejuvenation, and reproductive well-being. Its antioxidant and anti-inflammatory properties help counteract oxidative stress and inflammation associated with occupational and psychosocial stressors. The findings indicate that regular dietary incorporation of amla may serve as a cost-effective, natural, and preventive health intervention to improve the overall well-being, productivity, and quality of life of working women. Integrating traditional nutritional strategies with workplace health initiatives may offer a holistic approach to promoting women's health and empowerment.

Keywords: Amla (*Emblica Officinalis*), Working Women, Women's Health, Occupational Health, Antioxidants, Workplace Well-being, Lifestyle Disorders, Traditional Medicine.

Introduction

According to the International Labour Organization (ILO, 2021), About **48.7 %** of women aged 15+ were participating in the labour force worldwide in 2023. According to ILO-based reports referenced in **current affairs analyses**, India's female labour force participation rate is **around 24.5 %–25 % in 2024**. This increase has been accompanied by progress in gender equality and career opportunities. With

increasing participation of women in the workplace, several **health issues**—both **physical and mental**—have become more visible. These arise due to **dual work burdens**, workplace conditions, and gender-specific challenges. Working women today are often expected to balance professional responsibilities with caregiving and domestic roles, which places them at greater risk of stress, anxiety, depression, and burnout (World Health Organization [WHO], 2022). The mental health of working women is a crucial issue, not only for their personal well-being but also for organizational productivity and broader social equity.

Mental health plays an important role in human being especially in women's life. It may effects on relationship, self-esteem, work performance as well as physical health. There is need to recognize and get help for mental health concerns. Some biological and psychosocial factors also influence on mental health of women. Most of women are facing the common mental health problems such as depression and anxiety in recent days. There is lot of mental health problems arising in working place of women such as poor working environment, discrimination, inequality, excessive workload, insecurity, work related stress, workplace bullying, sexual harassments etc. The research result shows that working women performs multiple roles such as household as well as workplace duties and it makes high risk in stress related diseases.

Given this context of poor health status of women coupled with pigeonholing the understanding of women's health, it becomes important to understand the health concerns of everyday women in their everyday activities. Going ahead, the empowerment and sovereignty of women is a major concern and challenge for India. An improvement and advancement in the political, social and economic status of women can help address the major problem of gender inequality in workforce participation and decision making process at large. Furthermore, cleanliness and hygiene has also been considered as a pre-requisite for wellness in terms of a long and healthy life for women.

Although the concept of **Health, Safety and Environment (HSE)** has evolved to address modern workplace risks, many labour laws—such as the **Work Environment Act drafted nearly 50 years ago**—were designed primarily for **elder, male-dominated industrial workplaces**. As a result, these frameworks often fail to adequately address **women-specific health and safety needs** in today's diversified and service-oriented work environments. The rising **sickness absence rates among women compared to men** reflect this mismatch. Women increasingly face **dual burdens** of paid employment and unpaid domestic and care giving responsibilities, leading to higher levels of **stress, fatigue, and mental health issues**. In addition, workplaces are frequently not adapted to women's **ergonomic, reproductive, and psychosocial health requirements**, such as pregnancy-related needs, menstrual

health, or protection from harassment. Furthermore, women are overrepresented in sectors like healthcare, education, and informal work, which involve **emotional labour, repetitive tasks, and job insecurity**, increasing health risks.

Women's health has not been sufficiently explored within the context of work and working life. Women's health can be understood as encompassing *diseases and conditions unique to women, those that affect women more frequently than men, conditions that affect a large proportion of women, or illnesses that have different manifestations and consequences for women compared to men.*

Across the normal life course, women experience substantial **physiological and psychosomatic changes**, both cyclically within the menstrual cycle and progressively across different stages of ageing. While these changes are natural biological processes, they may also give rise to various **health imbalances and diseases** that can affect women's capacity to work and overall well-being.

The monthly hormonal cycle is associated with conditions such as **premenstrual syndrome (PMS)** and **dysmenorrhea**, which affect approximately **40–70% of women of reproductive age**, as well as **endometriosis**, which has a prevalence of about **10% among women**. These conditions may persist throughout the fertile years until menopause. In addition, **perimenopausal symptoms**—including hot flashes, excessive sweating, sleep disturbances, and depression—can cause significant discomfort and reduced quality of life for several years before and after the final menstruation.

Amla (Indian gooseberry) plays an important role in improving women's physical health across different stages of life. It is a rich source of **vitamin C and antioxidants**, which strengthen immunity, reduce fatigue, and protect the body from infections and oxidative stress. Amla supports **iron absorption**, helping prevent anaemia, a common problem among women, particularly during menstruation and pregnancy.

It is beneficial for **menstrual and reproductive health**, as it helps regulate hormonal balance and may reduce symptoms of premenstrual syndrome (PMS) and menstrual cramps. Amla also improves **digestive health**, enhances metabolism, and helps regulate blood sugar levels, reducing the risk of lifestyle diseases.

In addition, amla contributes to **bone strength, healthy skin, and hair** by supporting collagen production and nutrient absorption. During **perimenopause and menopause**, it may help manage symptoms such as hot flashes and inflammation. Overall, regular consumption of amla supports women's vitality and physical well-being.

Strength, Stress, and Survival: Women's Health at Work

Women's health at the workplace is an increasingly important concern as more women enter diverse sectors of employment. While participation in paid work enhances economic independence and empowerment, it also exposes women to unique health challenges shaped by biological, social, and occupational factors.

Working women often experience physical health issues such as fatigue, musculoskeletal pain, anaemia, and lifestyle diseases due to long working hours, poor ergonomics, and inadequate nutrition. Reproductive health concerns, including menstrual discomfort, pregnancy-related stress, and menopausal symptoms, are rarely accommodated in workplace policies. In addition, mental health problems—such as stress, anxiety, burnout, and depression—are common due to work–life imbalance, dual responsibilities of paid and unpaid work, and workplace discrimination or harassment.

These challenges are more severe for women in the informal sector, where job insecurity, lack of maternity benefits, and absence of health and safety protections prevail. Ensuring women's health at the workplace requires gender-sensitive health and safety policies, flexible working arrangements, access to healthcare, mental health support, and a supportive work environment that recognizes women's specific health needs.

Between Endurance and Exhaustion: Health at Work for Women

Working women commonly face **work-related stress, anxiety, and burnout** arising from long working hours, high performance expectations, and the pressure of balancing professional responsibilities with household and caregiving duties. Persistent stress often affects emotional well-being and reduces overall productivity.

Poor workplace ergonomics and prolonged sitting or repetitive tasks contribute to **musculoskeletal problems**, including back pain, neck strain, and joint discomfort. These conditions are particularly prevalent in office-based, manufacturing, and service-sector occupations. In addition, many women experience **chronic fatigue and sleep disorders**, especially those engaged in shift work, healthcare, hospitality, and other service-sector jobs. Irregular working hours disrupt natural sleep cycles, leading to exhaustion, weakened immunity, and reduced concentration. Together, these physical and mental health challenges highlight the need for healthier, more supportive, and gender-sensitive workplace environments.

Nurturing Life amid Work: Reproductive and Maternal Health at the Workplace

Reproductive and maternal health remains a critical yet often neglected dimension of women's well-being in the workplace. Many working women face a **lack of adequate maternity protection**, including insufficient paid leave, limited childcare

facilities, and inflexible work arrangements. These gaps place added physical and emotional strain on women during pregnancy and early motherhood.

Menstrual health concerns are also rarely acknowledged in workplace policies, leading to discomfort, absenteeism, and reduced productivity. The absence of supportive measures such as rest provisions or flexible scheduling further intensifies these challenges. During **pregnancy and the postnatal period**, unchanged workloads and workplace expectations can pose serious health risks, affecting both maternal and child health. Together, these issues underscore the need for **gender-sensitive workplace policies** that recognize reproductive health as integral to women's dignity, safety, and long-term participation in the workforce.

Invisible Hazards: Occupational Health and Safety Risks for Working Women

Working women are often exposed to **occupational health and safety risks** that are insufficiently addressed in traditional workplace frameworks. In sectors such as **healthcare, agriculture, and manufacturing**, women face regular exposure to **chemicals, biological agents, and environmental pollutants**, increasing the risk of both acute and long-term health problems. Women are also at a **higher risk of repetitive strain injuries** due to prolonged repetitive tasks, static postures, and inadequate rest periods. These risks are intensified when work processes are not ergonomically designed.

Moreover, much workplace **equipment, tools, and protective gear are designed based on male physiology**, making them unsafe or uncomfortable for women to use. Poorly fitted safety equipment reduces effectiveness and increases the likelihood of injury. Addressing these challenges requires **gender-responsive occupational safety standards**, inclusive equipment design, and regular risk assessments tailored to women's working conditions.

Silent Strains: Psychosocial and Social Challenges for Working Women

Beyond physical health, working women face significant **psychosocial and social pressures** that impact their well-being and productivity. **Workplace harassment and discrimination** remain pervasive, affecting mental health, confidence, and career progression. Many women experience **emotional strain** from balancing caregiving responsibilities—such as child-rearing or caring for elderly family members—alongside paid employment, leading to stress, fatigue, and burnout.

Additionally, **job insecurity**, particularly in the informal sector, adds financial stress and uncertainty, further affecting mental and emotional health. These psychosocial and social challenges highlight the need for **supportive workplace policies**, including safe work environments, flexible hours, access to counselling, and social protections, to ensure women can thrive both professionally and personally.

Unequal Burdens: Evidence of Gender Disparity in the Workplace

Despite increasing women's participation in the workforce, **gender disparities persist across health, safety, and employment outcomes**. Women often experience **higher sickness absence rates** compared to men; for instance, studies show **6.8% of women** report sickness absence versus **3.8% of men**, reflecting unequal health burdens and stress levels. Women continue to bear the brunt of workplace inequalities, being heavily concentrated in informal, low-paying, and high-risk jobs where benefits like maternity leave, social security, and proper safety measures are often missing. Even in formal employment, offices and work schedules are still largely designed around male needs, overlooking women's reproductive health, ergonomics, and mental well-being. The result is a workforce where women face higher stress, more health risks, and limited career growth, underscoring the urgent need for workplaces that truly support and accommodate women. Indian women still face discrimination at their workplaces. They are often deprived of promotions and growth opportunities at work places.

Sexual harassment remains one of the most serious and underreported challenges faced by women at work. It encompasses unwanted sexual advances, inappropriate comments, physical contact, or coercion, creating an unsafe and hostile environment. Such harassment has serious physical, mental, and professional consequences. Women often experience stress, anxiety, depression, sleep disturbances, and reduced self-confidence, which can lead to absenteeism, lower productivity, and even leaving the workforce. In India, according to the National Crime Records Bureau (NCRB, 2022) and other surveys, a significant number of women face harassment at work, yet many cases go unreported due to fear of retaliation, social stigma, or lack of awareness about legal protections.

From Traditional Medicine to Modern Science: The Benefits of Amla

Emblica officinalis (commonly known as amla) is a **medicinal and nutritional tonic** packed with essential amino acids, vitamins, and minerals. Among citrus fruits, it stands out as an **exceptionally rich source of vitamin C** and key minerals that support overall health. While all parts of the plant have medicinal uses, the **fruit is most extensively employed** to treat a wide range of **infectious and non-infectious conditions**, either alone or in combination with other traditional herbs.

Research indicates that *E. officinalis* contains **tannins, phenolic compounds, and alkaloids**, which contribute to its therapeutic properties (Bhandari & Kamdod, 2012). The fruit is particularly abundant in **vitamin C, protein, and amino acids** such as glutamic acid, proline, aspartic acid, alanine, cystine, and lysine. Its **hydrolysable tannins**, including **emblicanin A and B, punigluconin, and pedunculagin**, are concentrated in the fresh pericarp, boosting its **antioxidant and medicinal potential**. Together, the **nutritional richness and bioactive compounds** make *E. officinalis* a

highly valuable **functional food and natural therapeutic agent**, recognized in both traditional and modern medicine.

Strength, Immunity, and Vitality: How Amla Supports Working Women

With more women joining the workforce, maintaining **physical and mental well-being** has become increasingly important. *Emblica officinalis* (amla), a nutrient-dense fruit rich in **vitamin C, amino acids, minerals, and antioxidants**, offers a natural solution to many health challenges faced by working women. Amla helps **boost immunity**, reducing susceptibility to infections and fatigue, which are common among women juggling work and household responsibilities. Its high vitamin C content supports **collagen formation**, promoting healthy skin, hair, and connective tissues, while its antioxidants combat oxidative stress caused by long working hours and environmental pollutants.

For women experiencing **menstrual discomfort, hormonal fluctuations, or perimenopausal symptoms**, amla can help regulate **reproductive health and metabolic balance**, thanks to its bioactive compounds like **emblicanin A and B, punigluconin, and pedunculagin**. Additionally, its minerals and amino acids aid in **energy production, tissue repair, and overall vitality**, helping women remain alert, productive, and resilient at work.

Incorporating amla—through **fresh fruit, juice, powder, or chutneys**—into daily diets provides a **safe, natural, and effective means** to support the unique health needs of working women, empowering them to thrive both professionally and personally.

Boosting Energy and Combating Fatigue: Amla for Working Women

Amla plays a significant role in **supporting digestive health**, which is crucial for maintaining energy throughout the workday. By enhancing the **Pachak Agni (digestive fire)**, it ensures efficient breakdown and absorption of nutrients, providing the body with the fuel needed to stay alert and active. Its **Rechana (mild laxative) property** promotes smooth bowel movements, preventing digestive discomfort and bloating that can sap energy and concentration. For working women managing long hours, multitasking, and stress, regular consumption of amla can **reduce fatigue, improve overall vitality, and support sustained productivity** during demanding work schedules.

Amla helps control body weight by naturally boosting metabolism, enhancing the body's ability to convert food into energy efficiently. This supports fat reduction and energy balance, making it beneficial for women managing busy work schedules and maintaining overall fitness.

Amla may help in **controlling high cholesterol levels** by reducing LDL (bad cholesterol) and supporting healthy lipid metabolism. This contributes to **better**

cardiovascular health, which is particularly important for working women managing stress, long hours, and sedentary routines.

Amla: Nature’s Cushion for Pain-Free Joints

Amla may be beneficial in reducing pain and improving mobility in individuals with osteoarthritis by supporting the health of joints. The fruit contains potent antioxidants and anti-inflammatory compounds, such as emblicanin A and B, which help protect the cartilage—the cushion between the joints—from degeneration. By slowing down cartilage breakdown, amla can alleviate stiffness, reduce swelling, and enhance joint flexibility, allowing for better movement and daily functioning.

Regular consumption of amla, whether in the form of fresh fruit, juice, or powder, may complement other lifestyle and dietary interventions aimed at managing osteoarthritis symptoms. Its anti-inflammatory properties help mitigate chronic joint inflammation, while its rich nutritional profile—vitamin C, amino acids, and minerals—supports tissue repair and overall musculoskeletal health. For working women or individuals engaged in physically demanding tasks, incorporating amla into the diet can help maintain mobility, reduce discomfort, and improve overall quality of life, enabling them to remain active and productive.

Amla and Diabetes: Controlling Blood Sugar and Protecting the Heart

Amla plays a significant role in supporting glucose metabolism in individuals with diabetes. Regular consumption has been shown to reduce fasting and postprandial blood glucose levels, helping maintain better blood sugar control. Its antioxidant properties combat free radicals, while its anti-inflammatory effects help lower harmful inflammatory mediators in the body.

In addition, amla contributes to vascular health by improving the function of blood vessels, which reduces the risk of common diabetic complications such as cardiovascular disease, neuropathy, and kidney issues. By addressing both blood sugar regulation and oxidative stress, amla acts as a natural, multi-faceted support for people managing diabetes. Incorporating amla in the diet—through fresh fruit, juice, or powdered supplements—can therefore help improve metabolic balance, enhance overall well-being, and support long-term health outcomes.

Amla: Nature’s Skin Rejuvenator and Hair Protector

Amla is widely recognized for its **skin-enhancing properties**, thanks to its high content of **vitamin C, antioxidants, and essential nutrients**. Vitamin C supports **collagen production**, which helps maintain **skin elasticity, firmness, and youthful appearance**. Its antioxidants combat **free radicals and oxidative stress**, reducing the effects of aging, sun damage, and pollution.

Regular consumption of amla, or its topical use in traditional remedies, can help **brighten the skin, reduce pigmentation, and improve overall complexion**.

Additionally, its anti-inflammatory and antimicrobial properties may **support skin healing, prevent acne, and soothe irritation**, making it a natural ally for both internal and external skin health. For working women exposed to stress, pollution, and long hours, incorporating amla into the diet can **promote glowing, healthy skin while supporting overall wellness**.

Amla is widely celebrated for its **beneficial effects on hair health and growth**, making it a natural remedy for thinning, dull, or brittle hair. Rich in **vitamin C, antioxidants, amino acids, and essential minerals**, amla nourishes the hair follicles, strengthens the roots, and promotes healthy hair growth. Its antioxidants help **neutralize free radicals**, which can damage hair cells and contribute to premature graying or hair fall.

The fruit also has **anti-inflammatory and antimicrobial properties**, which help maintain a healthy scalp by preventing infections, dandruff, and irritation that can weaken hair. Amla is known to **stimulate blood circulation in the scalp**, ensuring that hair follicles receive essential nutrients and oxygen, supporting stronger, thicker hair over time.

Regular consumption of amla, whether as **fresh fruit, juice, or powder**, combined with topical application in the form of oils or masks, can **reduce hair breakage, prevent premature graying, and enhance overall hair vitality**. For working women, who often face stress, fatigue, and environmental pollution, incorporating amla into their routine can be an effective way to **maintain healthy, lustrous hair while supporting overall wellness**.

Conclusion

This paper highlights the significant role of amla (*Emblica officinalis*) as a natural, affordable, and effective health-supporting agent for alleviating the diverse health challenges faced by working women. With increasing participation of women in the workforce, issues such as stress, fatigue, nutritional deficiencies, reproductive health concerns, metabolic disorders, musculoskeletal problems, and lifestyle-related diseases have become more prominent. Amla, with its rich composition of vitamin C, antioxidants, amino acids, minerals, and bioactive compounds, offers holistic support to address these challenges.

The review demonstrates that amla contributes to improved immunity, better digestion, enhanced metabolism, blood sugar and cholesterol regulation, joint and bone health, skin and hair rejuvenation, and hormonal balance. Its antioxidant and anti-inflammatory properties help reduce oxidative stress and inflammation caused by long working hours, environmental exposure, and psychosocial pressure. Furthermore, amla's role in improving glucose metabolism, cardiovascular health, and joint mobility is particularly beneficial for working women managing sedentary lifestyles or physically demanding jobs.

In conclusion, integrating amla into daily diets—through fresh fruit, juice, or traditional formulations—can serve as a preventive and supportive strategy for improving the overall health, productivity, and quality of life of working women. Promoting such natural, evidence-based nutritional interventions can complement workplace health policies and contribute to sustainable women’s well-being and empowerment.

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