

“WOMEN ENTREPRENEURSHIP THROUGH HOME SCIENCE: INNOVATION AND SELF-RELIANCE”

Dr. Chhaya Bhimdeo Bhakare

Abstract

Women's entrepreneurship is increasingly recognized as an important pathway for economic empowerment, employment generation, household resilience, and sustainable development. Home Science, traditionally associated with household and family management, has developed into a multidisciplinary field encompassing food and nutrition, textiles and apparel, human development, resource management, consumer studies, health, communication, and community development. These areas provide women with practical and scientific skills that can be transformed into innovative products and services. This paper examines the potential of Home Science as a foundation for women entrepreneurship, with particular emphasis on innovation, self-reliance, skill development, digital technology, food processing, textiles, sustainability, and institutional support. A narrative review of literature published through 2025 indicates that women entrepreneurs continue to face barriers involving access to finance, markets, technology, digital skills, networks, and social expectations. At the same time, evidence suggests that skill development, self-help groups, digital platforms, financial inclusion, and entrepreneurship education can strengthen women's economic participation. Home Science has particular potential because it combines technical knowledge with practical applications that can often be initiated at household or community level. Food processing, nutrition-related services, tailoring, sustainable textiles, handicrafts, childcare, wellness products, and digital businesses are examples of possible enterprises. The paper argues that Home Science education should increasingly integrate entrepreneurship, financial literacy, branding, digital marketing, business planning, food safety, quality control, and innovation. Such integration can transform practical knowledge into sustainable enterprises and contribute to women's self-reliance. However, entrepreneurship should not be viewed as an individual responsibility alone; supportive financial, institutional, technological, and social environments are necessary for sustainable enterprise development.

Keywords: women entrepreneurship, Home Science, innovation, self-reliance, women empowerment, skill development, food processing, textiles, digital entrepreneurship, rural entrepreneurship

*This is an open access article under the creative commons license
<https://creativecommons.org/licenses/by-nc-nd/4.0/>*



1. Introduction

Women constitute an important source of human capital, creativity, and economic potential. Their participation in entrepreneurship can contribute to household income, employment creation, community development, poverty reduction, and broader economic growth. Entrepreneurship can also provide women with greater control over financial resources and opportunities to participate in economic decision-making.

Despite this potential, women entrepreneurs continue to face significant structural barriers. These include limited access to finance, inadequate business networks, lack of market information, restricted access to technology, insufficient digital skills, social expectations, mobility constraints, and the unequal distribution of household and caregiving responsibilities. A recent systematic review of women entrepreneurship and gender inequality in India confirms that disparities remain within the entrepreneurial ecosystem despite increasing policy attention to women's economic participation (Nafees et al., 2025).

Within this context, Home Science offers an important but underexplored foundation for women's entrepreneurship. Home Science is no longer limited to domestic activities. Contemporary Home

Science encompasses food and nutrition, textiles and clothing, human development, resource management, consumer education, health, communication, and community extension. These areas contain knowledge and skills that can be converted into marketable products and services.

For example, knowledge of food and nutrition can support food processing, healthy snack production, catering, nutrition education, and value-added agricultural products. Textile and apparel knowledge can lead to tailoring, boutique enterprises, embroidery, handicrafts, sustainable fashion, and home furnishing businesses. Human development knowledge can support childcare, educational materials, and developmental services. Resource-management knowledge can be applied to event management, household services, hospitality, and sustainable products.

The relationship between Home Science and entrepreneurship is therefore potentially significant. The discipline can provide technical competencies, while entrepreneurship education can provide the knowledge necessary to convert those competencies into sustainable businesses.

Arora and Mehta (2023) emphasized the importance of connecting skill development, entrepreneurship, and policy within Home Science pedagogy. Their work suggests that Home Science education can become more entrepreneurship-oriented by providing practical skills alongside business knowledge.

The present paper examines how Home Science can contribute to women's entrepreneurship, innovation, and self-reliance. It focuses particularly on the role of skill development, digital technology, food and nutrition, textiles, self-help groups, financial inclusion, sustainability, and institutional support.

2. Objectives of the Study

The objectives of this paper are:

1. To examine the relationship between Home Science education and women entrepreneurship.
2. To identify major entrepreneurial opportunities emerging from Home Science skills.
3. To examine the role of innovation and value addition in women-led enterprises.
4. To explore how digital technology can expand market opportunities.
5. To examine the contribution of entrepreneurship to women's self-reliance and empowerment.
6. To identify major barriers affecting women entrepreneurs.
7. To suggest strategies for strengthening entrepreneurship-oriented Home Science education.

3. Methodology

This paper adopts a narrative literature-review approach. Academic literature published primarily between 2020 and December 2025 was examined, with additional landmark studies included where necessary to establish the conceptual background. The literature search focused on women entrepreneurship, Home Science education, skill development, rural entrepreneurship, food processing, textiles, digital entrepreneurship, self-help groups, financial inclusion, innovation, and women's empowerment.

Recent systematic reviews and research studies were prioritized to identify major trends and challenges. The literature was synthesized thematically around six major areas: Home Science and skill development, women entrepreneurship, innovation, digitalization, self-reliance, and institutional support.

The paper is conceptual and literature-based; it does not present original survey data. Therefore, its conclusions should be understood as a synthesis of existing evidence rather than causal findings from primary research.

4. Review of Literature

4.1 Women Entrepreneurship and Economic Empowerment

Research increasingly recognizes entrepreneurship as an important mechanism through which women can participate in economic activity and strengthen their autonomy. Entrepreneurship may provide

women with income, decision-making opportunities, professional identity, and greater participation in local markets.

However, entrepreneurship does not occur in an equal environment. Nafees et al. (2025), through a systematic review of gender disparities in entrepreneurship in India, identified continuing differences in access to entrepreneurial resources and opportunities. Financial constraints, social expectations, networking limitations, and changing digital requirements can affect women's ability to establish and expand enterprises.

Therefore, women's entrepreneurship should be understood not only as an individual activity but also as an outcome influenced by institutions, social norms, education, technology, and access to resources.

4.2 Home Science Education and Entrepreneurship

Home Science has a strong practical orientation that can provide a foundation for entrepreneurship. Arora and Mehta (2023) examined skill development and entrepreneurship within Home Science pedagogy and highlighted opportunities to integrate entrepreneurial competencies with existing technical education.

Food and nutrition, textiles, human development, resource management, and related areas can all generate entrepreneurial opportunities. However, technical competence alone is insufficient. Women also need business planning, financial literacy, marketing, branding, digital skills, customer management, and knowledge of relevant regulations.

Thus, entrepreneurship-oriented Home Science should follow the model:

Technical knowledge + entrepreneurial knowledge + market access = enterprise development.

4.3 Rural Women Entrepreneurship

Rural women possess considerable local knowledge and practical skills, but these resources are not always converted into market-oriented enterprises.

Research on rural women entrepreneurship emphasizes the importance of training, financial access, social networks, markets, and institutional support. Rural enterprises commonly emerge in food processing, textiles, handicrafts, agriculture-related products, catering, and household services.

This is particularly relevant to Home Science because many of its skills can be applied using locally available resources. A rural woman may begin with a home-based food or textile activity and gradually develop it into a formal enterprise through training, branding, finance, and market connections.

4.4 Home-Based Entrepreneurship

Home-based entrepreneurship can be particularly suitable for women who face mobility constraints or need flexibility because of household and caregiving responsibilities.

Sarfraz, Laila, and Raja (2025), in a review of home-based entrepreneurship, identified its potential contribution to socioeconomic participation while also highlighting barriers related to finance, markets, business growth, and recognition.

Home Science skills can be especially compatible with home-based businesses because many activities require relatively limited initial infrastructure. Examples include food products, tailoring, embroidery, handicrafts, nutrition-oriented products, and childcare-related services.

However, home-based entrepreneurship should not be equated with informal or low-growth entrepreneurship. With appropriate support, a home-based enterprise can develop into a larger business employing other women.

4.5 Food and Nutrition Entrepreneurship

Food and nutrition provide some of the strongest entrepreneurial opportunities within Home Science.

Women can develop businesses involving:

- nutritious snacks;
- millet products;

- bakery products;
- pickles and preserves;
- dehydrated foods;
- spice mixtures;
- ready-to-cook products;
- catering;
- healthy food services;
- nutrition education.

The growing demand for convenient and health-oriented foods creates opportunities for value-added products.

However, food entrepreneurship requires knowledge of hygiene, food safety, standardization, packaging, labeling, shelf life, costing, and applicable regulatory requirements. Therefore, Home Science institutions should connect technical food knowledge with commercial training.

4.6 Textile and Apparel Entrepreneurship

Textiles and apparel are another major entrepreneurial field associated with Home Science.

Women with skills in garment construction, embroidery, textile design, fashion, and handicrafts can establish:

- tailoring units;
- boutiques;
- customized clothing businesses;
- embroidery enterprises;
- children's clothing businesses;
- home furnishing businesses;
- handloom enterprises;
- sustainable-fashion brands.

Suryanarayanan et al. (2022) demonstrated the importance of skill education and entrepreneurship development in the handloom sector. More recent research has also highlighted financial and digital factors affecting women artisans in the handicraft sector (Yadav et al., 2025).

Digital marketing can further enable small textile enterprises to reach customers beyond their immediate geographical areas.

4.7 Digital Entrepreneurship

Digital technology has changed the entrepreneurial environment considerably.

Smartphones, social-media platforms, digital payments, online marketplaces, and messaging applications allow small enterprises to communicate with customers without establishing expensive physical stores.

Shukla et al. (2021) examined ICT and digital entrepreneurship among women and emphasized the potential of information and communication technologies to expand women's entrepreneurial participation.

Recent literature similarly identifies digital platforms as an increasingly important element of women's entrepreneurship (Abdullah et al., 2025).

For Home Science entrepreneurs, digital tools can be used for:

- product promotion;
- online catalogues;
- customer communication;
- digital payments;
- online ordering;
- social-media branding;
- virtual classes;

- direct-to-consumer sales.

However, digitalization can also create exclusion if women lack devices, connectivity, digital literacy, or confidence.

4.8 Self-Help Groups and Collective Entrepreneurship

Self-help groups can strengthen women's entrepreneurship by enabling women to pool resources, share knowledge, access finance, and collectively reach markets.

Collective models are particularly suitable for Home Science enterprises. Groups can jointly undertake food processing, catering, textile production, handicrafts, packaging, and other activities.

Agrawal, Gandhi, and Khare (2023) highlighted the role of social entrepreneurship and institutional intervention in rural women's empowerment.

Self-help groups can also create economies of scale. Equipment, storage, processing facilities, transportation, and marketing resources can be shared among members.

4.9 Financial Inclusion

Finance remains one of the most important factors affecting enterprise formation and expansion.

Women may encounter difficulties accessing formal credit because of limited collateral, lack of financial records, inadequate knowledge of credit products, or restricted access to financial institutions.

For Home Science entrepreneurs, even small investments can be important. Equipment such as sewing machines, food processors, packaging machinery, storage units, computers, and digital devices may increase production capacity.

Financial literacy is therefore as important as access to finance. Women need to understand costing, profit margins, savings, credit, cash flow, taxation, and reinvestment.

4.10 Innovation and Value Addition

Innovation does not necessarily require advanced technology. It can involve improving an existing product, modifying packaging, reducing waste, improving nutritional quality, creating customized products, or using local resources more effectively.

Home Science provides numerous opportunities for such innovation.

Traditional foods can be redesigned for modern consumers. Textile waste can be converted into new products. Local ingredients can become branded food products. Traditional crafts can be marketed through contemporary designs.

Innovation therefore provides a bridge between traditional knowledge and modern markets.

4.11 Sustainability and Green Entrepreneurship

Sustainability is increasingly relevant to women-led enterprises.

Home Science-based businesses can incorporate:

- natural fibers;
- textile upcycling;
- recycled materials;
- low-waste food processing;
- reusable products;
- environmentally responsible packaging;
- local sourcing.

Sustainable entrepreneurship can provide economic value while reducing environmental impacts.

For example, textile entrepreneurs can convert discarded fabric into bags, accessories, toys, or home furnishings. Food entrepreneurs can develop products that use locally available agricultural resources and reduce wastage.

4.12 Work-Life Balance and the Double Burden

Entrepreneurship can provide flexibility, but flexibility does not automatically mean freedom from household responsibilities.

Women entrepreneurs may continue to perform a large share of unpaid domestic work while managing their businesses. This creates a potential double burden.

Therefore, entrepreneurship programs should include family support, childcare, flexible training schedules, and social awareness.

Self-reliance should not mean that women are expected to manage both business and household responsibilities without support.

5. Entrepreneurial Opportunities Through Home Science

Home Science can provide opportunities across several sectors.

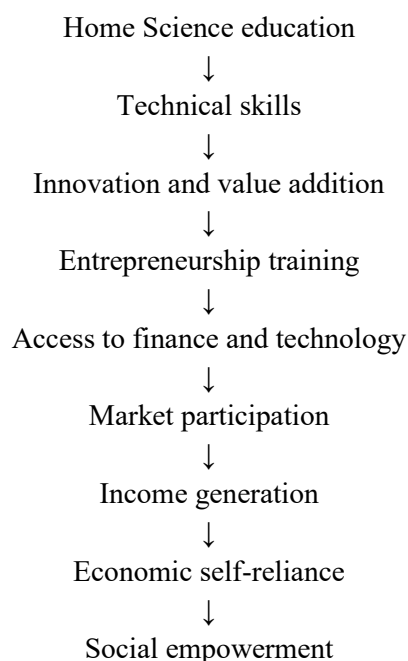
Home Science area	Potential enterprise
Food and nutrition	Food processing, catering, nutritious foods, nutrition education
Textiles	Tailoring, boutique, embroidery, sustainable fashion
Human development	Childcare, educational materials, developmental services
Resource management	Event management, hospitality, home organization
Consumer studies	Product development, consumer education
Health and wellness	Wellness education, healthy products
Community development	Self-help groups, community enterprises
Digital skills	Online stores, social-media businesses, online classes

This demonstrates that Home Science can serve as an entrepreneurial platform rather than simply a subject concerned with household activities.

6. Home Science as a Pathway to Self-Reliance

Self-reliance involves more than earning an income. It includes the ability to make economic decisions, manage resources, identify opportunities, solve problems, and participate confidently in society.

The pathway can be represented as:



The model illustrates that education alone is insufficient. Skills must be connected with resources and markets.

A woman may possess excellent tailoring skills but remain unable to establish a business if she lacks capital, customers, digital knowledge, or confidence. Similarly, a woman may produce a high-quality food product but struggle if she does not understand packaging, branding, pricing, and food regulations.

Therefore, the objective should be to create an integrated entrepreneurial ecosystem.

7. Major Challenges

Despite its potential, Home Science-based entrepreneurship faces several challenges.

7.1 Limited access to finance

Small entrepreneurs may struggle to obtain loans or working capital.

7.2 Lack of market knowledge

Technical skills do not automatically provide knowledge about consumer demand, pricing, competition, and branding.

7.3 Digital inequality

Some women lack access to smartphones, internet connectivity, digital payments, or digital marketing skills.

7.4 Social expectations

Traditional gender roles can restrict mobility, time, and decision-making.

7.5 Lack of professional networks

Women may have fewer opportunities to connect with suppliers, customers, mentors, investors, and other entrepreneurs.

7.6 Inadequate business training

Many skill programs focus on production but provide insufficient training in accounting, marketing, legal compliance, and enterprise growth.

7.7 Work-life responsibilities

Household and caregiving responsibilities can reduce the time available for business expansion.

7.8 Quality and regulatory requirements

Food, textiles, cosmetics, childcare, and wellness enterprises may require specific standards and regulatory compliance.

8. Strategies for Strengthening Women Entrepreneurship Through Home Science

Several measures can strengthen this model.

8.1 Entrepreneurship-oriented Home Science curriculum

Educational institutions should integrate:

- entrepreneurship development;
- business-plan preparation;
- financial literacy;
- costing;
- digital marketing;
- branding;
- e-commerce;
- intellectual-property awareness;
- food safety;
- quality control.

8.2 Incubation and mentoring

Home Science colleges and universities can establish entrepreneurship cells and incubation centers where students can develop products, test markets, and receive mentoring.

8.3 Industry linkages

Institutions should establish partnerships with food companies, textile businesses, NGOs, self-help groups, online platforms, and financial institutions.

8.4 Digital training

Women should receive practical training in social-media marketing, digital payments, online marketplaces, photography, content creation, and customer management.

8.5 Financial support

Credit, savings programs, microfinance, and appropriate government-supported financing mechanisms can help women establish and expand enterprises.

8.6 Self-help group networks

Home Science institutions can work with self-help groups to support collective food processing, textiles, handicrafts, nutrition programs, and other enterprises.

8.7 Local-resource-based innovation

Training should encourage women to identify resources available in their communities and develop value-added products from them.

8.8 Sustainable entrepreneurship

Environmental considerations should be incorporated into product design, packaging, sourcing, production, and waste management.

9. Discussion

The literature demonstrates that women entrepreneurship is influenced by a combination of individual capabilities and external conditions. Home Science can contribute significantly because it already provides practical knowledge in several sectors with entrepreneurial potential.

The most important opportunity is therefore not simply to teach women more skills. It is to create a transition from skill acquisition to enterprise development.

The relationship can be expressed as:

Skill → Innovation → Product/Service → Market → Income → Self-reliance

Each stage requires different forms of support.

Technical education supports skill.

Entrepreneurship education supports innovation.

Incubation supports product development.

Digital technology supports marketing.

Finance supports production.

Institutional networks support business growth.

This integrated approach is more effective than isolated vocational training.

The literature also suggests that digital technology is becoming increasingly important. Digital platforms can reduce geographical barriers and allow women to operate enterprises from their homes. However, digital access alone is insufficient. Women require digital literacy, business knowledge, reliable connectivity, and market-oriented skills.

Similarly, finance is necessary but not sufficient. Credit without training and market access can increase financial risk. Therefore, financial support should be combined with mentoring and enterprise development.

Self-help groups provide another promising model because they allow women to pool resources and develop collective businesses. Such models may be particularly appropriate in rural areas where individual entrepreneurs have limited capital.

An important issue is also the definition of self-reliance. Women's entrepreneurship should not be considered successful merely because women begin earning money. Sustainable self-reliance requires stable income, control over resources, business decision-making, confidence, market access, and the ability to manage economic risks.

10. Research Gap and Future Directions

Although research on women entrepreneurship is extensive, comparatively less research directly examines Home Science as an integrated entrepreneurship platform.

Future research should investigate:

1. How Home Science curricula influence entrepreneurial intention.
2. Whether entrepreneurship education increases enterprise creation among Home Science graduates.

3. Which Home Science sectors provide the greatest income opportunities.
4. How digital marketing affects the performance of home-based women enterprises.
5. How self-help groups influence enterprise sustainability.
6. The relationship between financial literacy and business survival.
7. The role of family support in entrepreneurial success.
8. The contribution of Home Science enterprises to household income.
9. The environmental impact of sustainable Home Science enterprises.
10. Long-term outcomes of women who receive entrepreneurship-oriented Home Science training.

Longitudinal studies would be particularly valuable because many existing studies examine entrepreneurship at a single point in time.

11. Conclusion

Women entrepreneurship through Home Science represents a promising pathway toward innovation, economic participation, and self-reliance. The contemporary field of Home Science provides knowledge in food and nutrition, textiles and apparel, human development, resource management, health, consumer studies, and community development. These areas can be transformed into products and services that respond to changing consumer needs.

The literature indicates that women entrepreneurs continue to face barriers involving finance, technology, market access, social expectations, business networks, and digital skills. However, skill development, entrepreneurship education, self-help groups, financial inclusion, digital platforms, and institutional support can strengthen women's entrepreneurial capacity.

The greatest potential of Home Science lies in its ability to connect technical knowledge with everyday needs and local resources. Food products, nutritious foods, textiles, sustainable fashion, handicrafts, childcare, wellness services, and digital enterprises can all provide opportunities for women to move from household-level skills toward market-oriented businesses.

However, entrepreneurship should not be presented as a solution that places responsibility entirely on women. Sustainable entrepreneurship requires an enabling ecosystem involving education, finance, technology, market access, mentoring, family support, and supportive policies.

Home Science education should therefore evolve from a primarily skill-based model toward an integrated model of skill, innovation, enterprise, and social impact. When technical knowledge is combined with entrepreneurship education, digital literacy, financial capability, and market access, women can transform practical skills into sustainable businesses.

The central pathway can be summarized as:

Home Science knowledge → Skill development → Innovation → Enterprise creation → Market participation → Income generation → Economic self-reliance → Social empowerment.

In this way, Home Science can contribute not only to household and community well-being but also to women's economic independence, employment generation, sustainable local development, and inclusive entrepreneurship.

References

- Abdullah, N., Jaaffar, N. T., Mokhtar, N., et al. (2025). Breaking barriers: Women's ventures in the digital realm—A systematic literature review. *Journal of Entrepreneurship and Innovation in Emerging Economies*. <https://openurl.ebsco.com/contentitem/gcd:186305414>
- Agrawal, A., Gandhi, P., & Khare, P. (2023). The role of social entrepreneurial leadership and benchmarking in women empowerment. *International Journal of Organizational Analysis*. <https://www.emerald.com/ijoa/abstract/doi/10.1108/IJOA-08-2022-3374/114139>
- Arora, C., & Mehta, R. (2023). Exploring skill development, entrepreneurship & policy perspective in Home Science pedagogy. *Mukt Shabd Journal*. <https://www.researchgate.net/publication/372720658>

- Aggarwal, M., & Johal, R. K. (2021). Rural women entrepreneurship: A systematic literature review and beyond. *World Journal of Science, Technology and Sustainable Development*, 18(4), 373–390. <https://www.emerald.com/wjtsd/article/18/4/373/302>
- Nafees, S., Siddiqui, S., & Hamid, S. (2025). Unveiling gender disparities in entrepreneurship: A systematic review on women entrepreneurs and inequality in India. *Journal of Enterprising Communities: People and Places in the Global Economy*. <https://www.emerald.com/jec/article/doi/10.1108/JEC-02-2024-0036/1308260>
- Sarfraz, F., Laila, U., & Raja, S. S. (2025). Home-based entrepreneurship: An extensive review of literature. *Pakistan Social Sciences Review*. <https://ojs.pssr.org.pk/journal/article/view/1081>
- Shukla, A., Kushwah, P., Jain, E., et al. (2021). Role of ICT in emancipation of digital entrepreneurship among new generation women. *Journal of Enterprising Communities*. <https://www.emerald.com/jec/article/15/1/137/434966>
- Suryanarayanan, M., et al. (2022). Women's empowerment through skill education and entrepreneurship development in the handloom sector. [Relevant scholarly literature on women, handloom and entrepreneurship.]
- Yadav, U. S., Tripathi, R., Kumar, A., & Shastri, R. K. (2025). Evaluation of factors affecting women artisans as entrepreneurs in the handicraft sector: A study on financial, digital technology factors and developmental strategies about ODOP. *Journal of the Knowledge Economy*. <https://link.springer.com/article/10.1007/s13132-024-01837-9>
- Raheja, S., & Syan, A. S. (2025). Women's entrepreneurship in South Asia: Paving the path to gender equality. In *Women, Tech, and Enterprise*. <https://doi.org/10.1201/9781003564669-4>
- Rathi, P., Rathi, A., Sidana, S., Tailor, R. K., & Hariharasudan, A. (2025). Atmanirbhar Nari (self-reliant women): A roadmap for empowering women-led MSMEs through ICT, financial access, and skill development. [Scholarly literature on women-led MSMEs and self-reliance.]
- Musaigwa, M., & Nojiyeza, I. S. (2025). Gender, digital entrepreneurship, and economic empowerment: A systematic review of opportunities and barriers for women. *Gender and Behaviour*, 23(4). <https://journals.co.za/doi/abs/10.4314/gab.v23i4.35>
- Nayak, M., & Nayak, P. M. (2025). Empowering women in rural India: Characteristics and intentions for sustainable entrepreneurship. *Cogent Business & Management*. <https://doi.org/10.1080/23311975.2025.2461234>
- Strietska-Ilina, O., & Chun, H. K. (2021). *Changing demand for skills in digital economies and societies: Literature review and case studies from low- and middle-income countries*. International Labour Organization. <https://researchrepository.ilo.org/esploro/outputs/book/Changing-demand-for-skills-in-digital/995219272702676>