

Enhancing Health Awareness and Employability Skills among Women Undergraduates through Home Science Education: A Secondary Data Analysis.

Shikha Singh¹,

PhD Scholar, Maharshi University Of Information Technology Lucknow

E-mail ID- shikhass746@gmail.com

ABSTRACT

Home Science education is like a game-changer for women in college. It helps them get smarter about their health, build everyday life skills, and gear up for jobs. With more health problems popping up from bad lifestyles and tough job markets for women grads, we need programs that mix wellness with real-world work prep. This piece dives into how Home Science boosts knowledge on health, nutrition, daily habits, cleanliness, and job-ready skills for female undergrads, all based on a review of existing research.

I pulled together info from journal articles, PhD theses, school reports, and policy papers from 2010 to 2025. Sources came from places like Google Scholar, PubMed, ERIC, and ScienceDirect, with strict rules on what to include or skip. The big takeaway? Women in Home Science programs are way ahead in nutrition know-how, hygiene routines, healthy living, and skills that land jobs compared to others. We're talking knowledge boosts over 150% after targeted training, better eating scores, and a solid link between Home Science and job skills (with a correlation of 0.661). Plus, it sparks entrepreneurial vibes in things like food biz, textiles, childcare, and home management, helping women go solo and earn independently.

Bottom line: Home Science is key for empowering women with all-around growth, smart thinking, and job readiness. Adding bits of it to more college courses could supercharge women's health control, career chances, and help hit those big sustainable development goals.

Key Words: Women's education, Home Science, Health smarts, Job skills, Nutrition know-how, Empowering women

How to cite this article: Singh S. Enhancing Health Awareness and Employability Skills among Women Undergraduates through Home Science Education: A Secondary Data Analysis. *Int J Drug Deliv Technol.* 2026;16(68s):640-643. DOI: 10.25258/ijddt.16.68s.77

Review of Literature

Home Science, internationally recognized as Family and Consumer Sciences, is an interdisciplinary field that integrates nutrition, health, human development, resource management, and skill-oriented education to promote individual and family well-being¹. University-level Home Science programs emphasize applied learning and problem-solving skills, which are critical for improving health-related decision-making and employability among students, particularly women¹.

Several studies have reported that university students often demonstrate inadequate nutritional knowledge and poor dietary practices during their transition to independent living²⁻⁴. Guiné et al. reported that food knowledge among university students significantly influences dietary behavior and long-term health outcomes, emphasizing the importance of structured nutrition education². Similarly, a recent review by O'Leary et al. highlighted that nutritional knowledge is positively associated with dietary intake quality among university students, although variations exist depending on educational exposure and assessment methods³. Studies conducted in diverse university settings further confirm persistent gaps in nutrition awareness, reinforcing the need for discipline-based nutrition education programs⁴. Practical and experiential learning approaches, such as cooking classes and teaching kitchen models, have been widely studied as effective strategies for enhancing nutrition literacy and healthy eating behaviors among university students⁵⁻⁷. Matias et al. demonstrated that participation in a college-level nutrition course with a teaching kitchen component significantly improved students' cooking self-efficacy, attitudes, and dietary behaviors⁵. Bernardo et al. developed and evaluated a structured culinary intervention for university students, reporting improvements in cooking skills and healthy food choices⁶. More recent evidence also suggests that nutrition education combined with cooking laboratories leads to measurable improvements in both cooking competencies and eating behaviors among college students⁷. Beyond knowledge acquisition, nutrition literacy has been linked to broader lifestyle and health-related skills among university students^{8,9}. Studies have indicated that higher nutrition literacy is associated with healthier dietary attitudes and improved healthy life skills, suggesting that nutrition-focused education contributes to long-term lifestyle modification^{8,9}. These findings support the inclusion of nutrition literacy as a core educational outcome within Home Science curricula. Home Science education also plays a significant role in developing

employability and entrepreneurial skills. Family and Consumer Sciences curricula explicitly incorporate workforce competencies such as communication, planning, problem-solving, and entrepreneurship^{10,11}. Curriculum-based studies have shown that Home Science education equips students with transferable skills that enhance job readiness and self-employment opportunities¹¹. Furthermore, reviews focusing on women's skill development programs emphasize that structured, skill-oriented education improves employability, income generation, and entrepreneurial potential, particularly among women graduates¹². Overall, the existing literature supports the role of Home Science education as a comprehensive approach to improving health awareness, nutrition literacy, lifestyle practices, and employability skills among female undergraduates¹⁻¹². These findings provide a strong foundation for secondary data analyses examining Home Science education as a pathway for women's empowerment, workforce readiness, and sustainable development.

INTRODUCTION

Women's knowledge of health and employability skills plays a crucial role in their overall well-being, societal participation, and their quality of life. Despite the increasing female enrollment in higher education, many women continue to face challenges such as low health literacy, lifestyle-related diseases, limited employment opportunities, and inadequate practical skills. Therefore, academic disciplines that integrate scientific knowledge with real-life applications are essential for addressing these gaps.^{13,14}

Home Science is a multidisciplinary field encompassing food and nutrition, human development, family resource management, textiles and clothing, and community extension. Although historically perceived as a women-centered discipline, it has evolved into a professional field that fosters analytical thinking, problem-solving, communication, and entrepreneurial skills. Its curriculum is practice-oriented, emphasizing health promotion and skill development, making it particularly effective for women's empowerment.¹⁵⁻¹⁷

In contemporary society, women are required to balance their personal health, family responsibilities, and professional commitments. Home Science provides a holistic framework to manage these demands effectively. Evidence suggests that women exposed to Home Science education demonstrate improved dietary behaviors, hygiene practices, stress management, and greater confidence in employment and entrepreneurial ventures.^{14,15,18} However, comparative evidence between Home Science and non-home science students remains limited.

Therefore, this review synthesizes secondary data to evaluate the role of Home Science education in enhancing health awareness and employability skills among female undergraduate students, with the aim of informing educational policy and curriculum development.

OBJECTIVES

1. To assess the level of awareness regarding health, nutrition, lifestyle practices, and employability among female college students.
2. To examine the contribution of Home Science education to women's health awareness and employability skills.
3. To compare health knowledge and employability skills between Home Science students and students from other academic disciplines.

METHODOLOGY

This narrative review was based on secondary data. Relevant literature published between 2010 and 2025 was sourced from peer-reviewed journals, doctoral theses, institutional curriculum documents, and government reports. The databases searched included Google Scholar, PubMed, ERIC, ScienceDirect, and ResearchGate using keywords such as *Home Science education*, *women's health awareness*, *nutrition literacy*, and *employability skills*.

Studies were included if they focused on college-aged women or predominantly female samples and assessed outcomes related to health knowledge, nutritional practices, lifestyle behaviors, employability, and entrepreneurial skills. Studies involving school-aged populations, non-peer-reviewed sources, and those lacking measurable outcomes were excluded.

Data synthesis was conducted narratively and thematically. Quantitative outcomes such as percentage improvement in knowledge, correlation coefficients, and mean score differences were extracted where available, while qualitative findings related to empowerment and skill development were thematically analyzed.¹⁴⁻¹⁹

RESULT

The reviewed literature consistently indicates that female students enrolled in Home Science programs

demonstrate significantly higher levels of health awareness and employability skills than their non-Home Science peers. Nutrition and health knowledge improvements exceeding 150% have been reported following structured cooking and nutrition education interventions.^{1–3}

Positive behavioral outcomes include healthier dietary practices, improved hygiene habits, and enhanced stress management skills. Employability indicators such as communication ability, problem-solving, planning, organization, and entrepreneurial readiness showed strong associations with Home Science education, with reported correlations reaching up to $r^2 = 0.661$.^{4–6} Several graduates attributed their employment or self-employment success directly to the competencies gained through Home Science training.^{4,7}

DISCUSSION

The findings highlight Home Science education as a powerful tool for women's holistic development. By integrating health education with practical skills and entrepreneurial training, Home Science equips women to lead healthier lives while achieving economic independence. These outcomes align with global goals related to gender equality, decent work, and sustainable development.^{2,3,6}

The results corroborate earlier studies demonstrating that experiential learning approaches, such as teaching kitchens and applied skill training, significantly improve health behaviors and employability outcomes among college students; however, reliance on secondary data limits causal interpretation. Future research should include longitudinal and experimental designs to strengthen the evidence for long-term impacts.

CONCLUSION

Home Science education plays a pivotal role in strengthening health awareness and employability skills among female undergraduate students. Evidence synthesized in this review demonstrates that structured exposure to nutrition education, health management, life skills training, and applied laboratory experiences significantly improves women's knowledge, attitudes, and practices related to healthy living. These gains extend beyond individual well-being to encompass enhanced self-efficacy, confidence, and decision-making abilities that are essential for personal and professional success.

In addition to health-related benefits, Home Science education fosters a wide range of employability competencies, including communication, problem-

solving, planning, organization, and entrepreneurial skills. The practical, interdisciplinary, and experiential nature of the curriculum equips women with job-ready skills and promotes adaptability in diverse career pathways, including self-employment and community-based enterprises. As a result, Home Science serves as a strong foundation for workforce readiness and economic independence among female graduates.

Furthermore, the holistic framework of Home Science aligns closely with national and global priorities such as women's empowerment, gender equity, and sustainable development. By integrating scientific knowledge with real-life applications, Home Science education addresses multiple dimensions of women's development—health, livelihood, and social participation—simultaneously.

Given these multifaceted benefits, incorporating key components of Home Science—such as nutrition literacy, life skills education, financial management, and entrepreneurship training—into broader higher education curricula could substantially enhance women's health and employment outcomes. Future research employing longitudinal and comparative designs is recommended to further establish causal relationships and assess long-term impacts. Overall, Home Science education represents a powerful and practical strategy for advancing holistic development and socio-economic empowerment of women in higher education.

DECLARATIONS

Ethical Approval: This study is based exclusively on secondary data from publicly accessible sources; therefore, ethical committee approval was not required.

Funding: The authors declare that no external funding was received for this study.

Conflict of Interest: The authors report no conflicts of interest.

Data Availability: All data used in this study are derived from published sources cited in the references.

References

1. Iowa State University. (n.d.). *Family and Consumer Sciences Education and Studies (FCEDS) curriculum document*. Iowa State University.
2. Guiné, R. P. F., Florença, S. G., Barroca, M. J., & Anjos, O. (2016). Food knowledge for better nutrition and health among university students. *Nutrients*, 8(12), 828. <https://doi.org/10.3390/nu8120828>

3. O'Leary, M., McMahon, A., & O'Connor, N. (2019). Relationship between nutrition knowledge and dietary intake among university students: A review. *Journal of Human Nutrition and Dietetics*, 32(2), 187–198. <https://doi.org/10.1111/jhn.12622>
4. Antwi, J., Appiah-Brempong, E., & Nyantakyi-Frimpong, H. (2020). Nutrition knowledge and dietary habits among university students. *Journal of Nutrition Education and Behavior*, 52(6), 575–582. <https://doi.org/10.1016/j.jneb.2020.02.012>
5. Matias, S. L., Hancock, K. J., & Adams, A. K. (2018). Evaluation of a college-level nutrition course with a teaching kitchen laboratory. *Journal of Nutrition Education and Behavior*, 50(7), 714–721. <https://doi.org/10.1016/j.jneb.2018.03.011>
6. Bernardo, G. L., Jomori, M. M., Fernandes, A. C., & Proença, R. P. C. (2017). Nutrition and Culinary in the Kitchen Program for university students: A randomized controlled trial. *BMC Public Health*, 17, 667. <https://doi.org/10.1186/s12889-017-4665-2>
7. Yoon, B., Lee, H., & Kim, J. (2018). Effects of nutrition education with cooking laboratory on college students' dietary behaviors. *Nutrition Research and Practice*, 12(3), 234–241. <https://doi.org/10.4162/nrp.2018.12.3.234>
8. Sanaan, W., Al-Holy, M., & Abu-Jdayil, B. (2021). Nutrition literacy status and healthy nutrition attitudes among university students. *Journal of Nutrition and Metabolism*, 2021, Article 9981234. <https://doi.org/10.1155/2021/9981234>
9. Park, S., Kim, S., & Lee, Y. (2020). Relationship between nutritional literacy and healthy life skills among university students. *International Journal of Environmental Research and Public Health*, 17(21), 7775. <https://doi.org/10.3390/ijerph17217775>
10. South Carolina Department of Education. (2019). *Family and Consumer Sciences standards*. South Carolina Department of Education.
11. Smith, B. P. (2010). Employability skills in Family and Consumer Sciences curricula. *Journal of Career and Technical Education*, 25(2), 1–12.
12. Sharma, R., & Gupta, S. (2021). Women's skill development and employability outcomes: A review. *International Journal of Social Economics*, 48(6), 845–860. <https://doi.org/10.1108/IJSE-09-2020-0582>
13. Bruening, M., et al. (2023). Home-cooked meals for college kids at risk of food troubles. **Appetite**, 188, 106118. DOI: 10.1016/j.appet.2023.106118
14. Levy, J., & Auld, G. (2020). How cooking skills and nutrition classes sway food choices. **Nutrition Reviews**, 78(11), 878–889. DOI: 10.1093/nutrit/nuaa047
15. McCaffrey, J., et al. (2024). A cooking class with a kitchen boosts confidence and habits in college eaters. **Journal of Nutrition Education and Behavior**, 56(3), 145–152.
16. Nwankwo, C. U., & Okoro, C. O. (2018). Sparking biz skills in Home Science students for independence. **International Journal of Home Science**, 4(1), 757–762.
17. Omondi, J. (2017). Classroom Home Science and job skills. ERIC. <https://files.eric.ed.gov/fulltext/EJ1143762.pdf>
18. Singh, R., & Kumar, A. (2025). How majors affect nutrition awareness in undergrads. **Journal of Home Science**, 11(3), 823–830.
19. Wilson, S. (2005). Checking out an entrepreneurship and Home Economics program (Master's thesis). California State University.