



# International Journal of Home Science

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## Role of home scientists in solving the remaining constraints and hurdles in environment security practices

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### Abstract

Women play an essential role in the management of natural resources, including soil, water, forests and energy and often have a profound traditional and contemporary knowledge of the natural world around them. Whereas women were previously neglected or ignored, there was increasing attention paid to the impact of women on the natural environmental and in return, the effects the environment has on the health and well being of women. The gender environment relations have valuable ramifications in regard to the understanding of nature between men and women, the management and distribution of resources and responsibilities and the day-to-day life and well being of people.

**Keywords:** Role, constraints, hurdles, security

### Introduction

Human beings are at the centre of concern for sustainable development. They are entitled to a healthy and productive life in harmony with nature. Women have an essential role to play in the development of sustainable and ecologically sound consumption and production patterns and approaches to natural resource management.

### Types of environment security

1. Energy
2. Food security
  - (a) Grain storage
  - (b) Preservation
  - (c) Nutrition security
3. Health and hygiene security
4. Water, air and noise security
5. Livelihood security

Empowering women is the key to ensuring food and nutritional security in the developing world. There is a lack of gender-specific information due to weak dissemination and lack of real awareness of the target audience i.e. role of man and women in achieving food security, human development and contribution of women. One reason for women's work remaining largely invisible in statistics is that a great deal of it takes place outside the formal economy which is frequently considered to be a residual category that does not contribute significant output to the national economy. More women involve in the water supply and sanitation, however they have lack of knowledge and control to support the hygiene needed for health. Most men control the resources and decision making and gender differences is often missing on the consideration with regard to hygiene and sanitation initiatives. India has several initiatives on the gender and water sanitation. Several gender risks related conditions are noted for health inequity outcomes: open area for urinate and defecate that led to sexual assaulted; lack of water in the family; lack of sanitary for girls etc. Health is not health sector responsibility alone because it is investment for the family advancement. Multi-sectoral approach on women/family empowerment is needed. Women are mostly having lack of education and not getting used to have analysis on the relation of water, hygiene and sanitation conditions for health. The understanding about gender, water sanitation and health would become asset for future investment on the family advancement.

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Increasing economic activities in developing countries result in more energy and consumption demand, which generally lead to environmental degradation. There is a conventional belief that such environmental degradation would resolve as soon as these countries grow economically since that would enable them to afford environmental friendly technology as well as pro-environmental regulations and policies. However, several studies indicated that many developing countries already equipped with environmental policies, legal frameworks and economic instruments, which are regarded as highly sophisticated by international standards and yet face the worsening of environmental conditions. Major difficulties these countries confront are not only the lack of legal and economic framework for environmental protection, but also lack of participation among general public in pro-environmental behaviours.

### Objectives

1. To assess the participation level of women in activities related to the environment such as household, health and hygiene, water, air and noise.
2. Role of home scientists in solving the remaining constraints and hurdles in adopting develop practices.

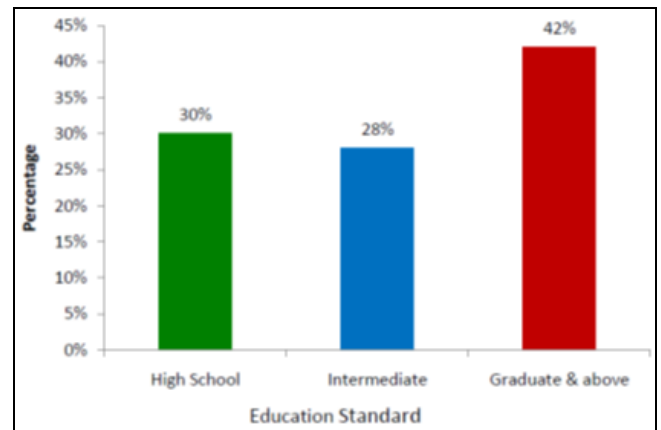
### Methodology

The study was conducted in Hamirpur district of Uttar Pradesh. Eight localities were selected in this study, 50 women were randomly selected from each locality. Thus, total 400 women were randomly selected in this study. The depended and independent variable were used such as, education, income, caste, environment security, food security, health and hygiene security water, air and noise security and livelihood security. The statistical tools were used such as mean, rank, adoption etc.

## Results

**Table 1:** Distribution of respondents according to education

Education	Frequency	Per cent
High School	120	30.0
Intermediate	112	28.0
Graduate and above	168	42.0
Total	400	100.0



Education is more important to secure environment in India, educated women are more aware about solar gadgets, food security, health and hygiene, air and noise security and livelihood security. Educated women are easily handled new energy efficient gadgets. Educated women are also known about the traditional and scientific method of food security. Now days female are known about the clean Indian campaign and Kaushal Vikas Yojana and Pradhan Mantri Mudra Yojana.

**Table 2:** Participation level of women in household technology

S. No.	Home stead technology	Level I	Level II	Level III
		(Up to 50 %)	(50 to 80 %)	(80 % & above)
1.	<b>Energy</b>			
	(a) Smokeless Chulha	-	280 (70.0)	-
	(b) Solar cooker	40 (10.0)	-	-
	(c) Solar water heater	8 (2.0)	-	-
	(d) Solar dryers	24 (6.0)	-	-
	(e) Solar lantern	-	300 (75.0)	-
2.	(f) Solar street light	160 (40.0)	-	-
	<b>Food securities</b>			
	(a) Traditional grain storage	-	-	400 (100.0)
	(b) Scientific grain storage	-	240 (60.0)	-
	(c) Method of cooking for nutritional securities	-	-	360 (90.0)
3.	(d) Use of utensils for save nutritional securities	-	240 (60.0)	-
	(e) Preservation of food	-	-	356 (89.0)
	<b>Health and hygienic securities</b>			
	(a) Personal hygiene	-	240 (60.0)	-
	(b) Food management	196 (49.0)	-	-
	(c) Steaming of utensils	160 (40.0)	-	-
	(d) Management of waste water	160 (40.0)	-	-
	(e) Management of waste product	198 (49.5)	-	-
4.	(f) Purification of waste water	158 (39.5)	-	-
	(g) Drainage facilities	120 (30.0)	-	-
	(h) Serious diseases in human being and animals	118 (29.5)	-	-
	<b>Air and noise securities</b>			
5.	(a) Plantation and kitchen vegetable production	-	244 (61.0)	-
	(b) Air filtration	164 (41.0)	-	-
	(c) Selection of home appliances	-	282 (70.5)	-
5.	<b>Livelihood securities</b>			
	(a) House work	-	-	335 (83.7)
	(b) Micro-enterprise and income generating activities	116 (29.0)	-	-
	(c) Household management	-	250 (62.5)	-

(Figures in parenthesis indicate percentage of respective values)



Smokeless Chulha



Solar Water Heater



Solar Cooker



Solar Cooker



Solar Lantern



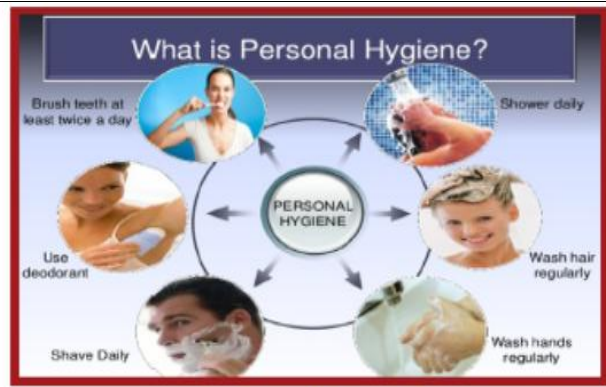
Solar Street Line



Traditional Grain Storage



Scientific Grain Storage



Personal Hygiene



Purification of water



Washing of utensils



Traditional Toilets



Portable Toilets



Purse Making

Environment is very essential in every aspect of life. All the living beings are depending upon the environment. All the components required for survival of living organisms are gained through environment. Air, water, soil, food etc. required for survival are acquired through the environment. Women are playing a more important role in protecting the environment. In this context, women and children can be very active participants in the defense of the environment and stop, or even reverse, the degradation of our natural resources. At a worldwide level, there is a growing awareness of the need and importance of making women contribute to the identification

of environmental problems, as well as in the planning of activities geared at the sustainable development of their communities. Women play an essential role in the management of natural resources, including soil, water, forests and energy and often have a profound traditional and contemporary knowledge of the natural world around them. Women were previously neglected or ignored. There was increasing attention paid to the impact of women on the natural environment and, results in positive effect of environment on the health and well-being of women.

**Table 3:** Adoption level of women in household technology

Sl. No.	Home stead technology	Full adoption > 70 %	Partial adoption < 70 %	No adoption
	<b>Energy</b>			
1.	(a) Smokeless Chulha	240 (60.0)	160 (40.0)	-
	(b) Solar cooker	80 (20.0)	120 (30.0)	200 (50.0)
	(c) Solar water heater	40 (10.0)	80 (20.0)	280 (70.0)
	(d) Solar dryers	40 (10.0)	90 (22.5)	270 (67.5)
	(e) Solar lantern	300 (75.0)	70 (17.5)	30 ( 7.5)
	(f) Solar street light	180 (45.0)	60 (15.0)	160 (40.0)
	<b>Food securities</b>			
2.	(a) Traditional grain storage	400 (100.0)	-	-
	(b) Scientific grain storage	240 (60.0)	80 (20.0)	80 (20.0)
	(c) Method of cooking for nutritional securities	400 (100.0)	-	-
	(d) Use of utensils for save nutritional securities	240 (60.0)	100 (25.0)	60 (15.0)
	(e) Preservation of food	280 (70.0)	100 (25.0)	20 ( 5.0)
	<b>Health and hygienic securities</b>			
3.	(a) Personal hygiene	280 (70.0)	80 (20.0)	40 (10.0)
	(b) Food management	200 (50.0)	100 (25.0)	100 (25.0)
	(c) Steaming of utensils	240 (60.0)	100 (25.0)	60 (15.0)
	(d) Management of waste product	280 (70.0)	90 (22.5)	30 ( 7.5)
	(e) Management of waste water	240 (60.0)	90 (22.5)	70 (17.15)
	(f) Purification of waste water	120 (30.0)	70 (17.5)	210 (52.5)
	(g) Drainage facilities	40 (10.0)	60 (15.0)	300 (75.0)
	(h) Serious diseases in human being and animals	160 (40.0)	90 (22.5)	150 (37.5)
	<b>Air and noise securities</b>			
4.	(a) Plantation and kitchen vegetable production	240 (60.0)	80 (20.0)	80 (20.0)
	(b) Air filtration	130 (32.5)	50 (12.5)	220 (55.0)
	(c) Selection of home appliances	240 (60.0)	85 (21.2)	75 (18.8)
	<b>Livelihood securities</b>			
5.	(a) House work	280 (70.0)	90 (22.5)	30 ( 7.5)
	(b) Micro-enterprise and income generating activities	240 (60.0)	100 (25.0)	60 (15.0)
	(c) Household management	120 (30.0)	100 (25.0)	180 (45.0)

(Figures in parenthesis indicate percentage of respective values)

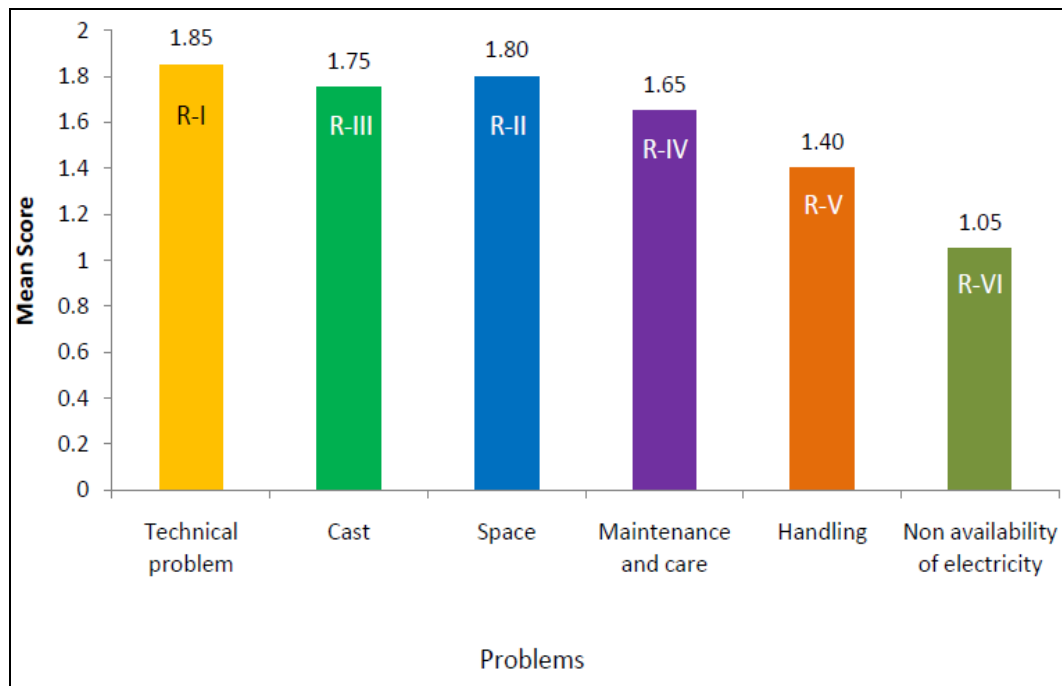
Smokeless Chulha diverse the smoke away from cooking area, multiple health benefits including prevention of injuries to eyes, minimal inhalation of carcinogenic fumes. Reduced probability of catching fire as exposure to intense heat is minimized, time saved due to cooking with two stoves, reduction in consumption of firewood because lost heat is minimized by the closed design made with local materials and skills. Good storage helps ensure household and community

food security until the next harvest and commodities for sale can be held back so that farmers can avoid being forced to sell at low prices during the drop in demand that often follows a harvest. The person cares for may be physically or mentally unable to maintain their own personal hygiene. Keeping clean is essential for good health. Poor hygiene can cause skin complaints, unpleasant smells and bacterial or parasitic infections.

**Table 4:** Problems in use of household gadgets

Sl. No.	Problems	Yes	No	Mean score	Rank
1.	Technical problem	340 (85.0)	60 (15.0)	1.85	I
2.	Cost	300 (75.0)	100 (25.0)	1.75	III
3.	Space	320 (80.0)	80 (20.0)	1.80	II
4.	Maintenance and care	260 (65.0)	140 (35.0)	1.65	IV
5.	Handling	160 (40.0)	240 (60.0)	1.40	V
6.	Non availability of electricity	22 ( 5.5)	378 (94.5)	1.05	VI

(Figures in parenthesis indicate percentage of respective values)



A stove is a very basic device used for cooking by burning wood. Most of the people living in rural areas use wood as fuel. Major problem with old stove is that it increases health problems from smoke particularly respiratory problems and eye ailments. The use of wood leads to deforestation. A major problem of both water based and thin film solar energy intermittency. The sun does not shine at night, and is diminished by overcast skin and storm. Energy from solar cells therefore cannot be counted on at all times. Storage is an important post-harvest function which involves holding and preserving of agricultural commodities from the time they are produced until they are needed for consumption. Farmers store different quantity of food grains for different durations

and in this storage period they face many problems due to various factors. An attempt has been made to document various problems faced by farmers. Generally economic conditions of marginal or landless farmer are not good and through which they faced very difficulties in grain storage at household level. Women face certain problems not as an entrepreneur but as a woman. Therefore as compared to men, the problems of women entrepreneur are more in number. Major problems faced by women micro entrepreneurs- Financial problems, Marketing problems, Socio-personal problems, Managerial Administrative problems, Production problems.

**Table 5:** Distribution of respondents according to constraints

Sl. No.	Constraints	Yes	No	Mean score	Rank
1.	Lack of education	280(70.0)	120(30.0)	1.70	VI
2.	Poverty	400(100.0)	-	2.00	I
3.	Lack of technological knowledge	200(50.0)	200(50.0)	1.50	X
4.	Lack of funding of tools	260(65.0)	140(35.0)	1.65	VII
5.	High cost of equipment	320(80.0)	80(20.0)	1.80	IV
6.	No decision power for purchasing of equipments	300(75.0)	100(25.0)	1.75	V
7.	Lack of awareness of energy household technology	340(85.0)	60(15.0)	1.85	III
8.	No power handling for scientific storage equipments	320(80.0)	80(20.0)	1.80	IV
9.	Lack of space	260(65.0)	140(35.0)	1.65	VII
10.	Lack of awareness about micro enterprise	220(55.0)	180(45.0)	1.55	IX
11.	Lack of skills	240(60.0)	160(40.0)	1.60	VIII
12.	Economic problems	380(95.0)	20(5.0)	1.95	II
13.	Psychological problems	40(10.0)	360(90.0)	1.10	XIV
14.	Availability of markets	300(75.0)	100(25.0)	1.75	V
15.	Family size	100(25.0)	300(75.0)	1.25	XIII
16.	Caring and maintenance	176(44.0)	224(56.0)	1.44	XI
17.	Serviceability	140(35.0)	260(65.0)	1.35	XII

(Figures in parenthesis indicate percentage of respective values)

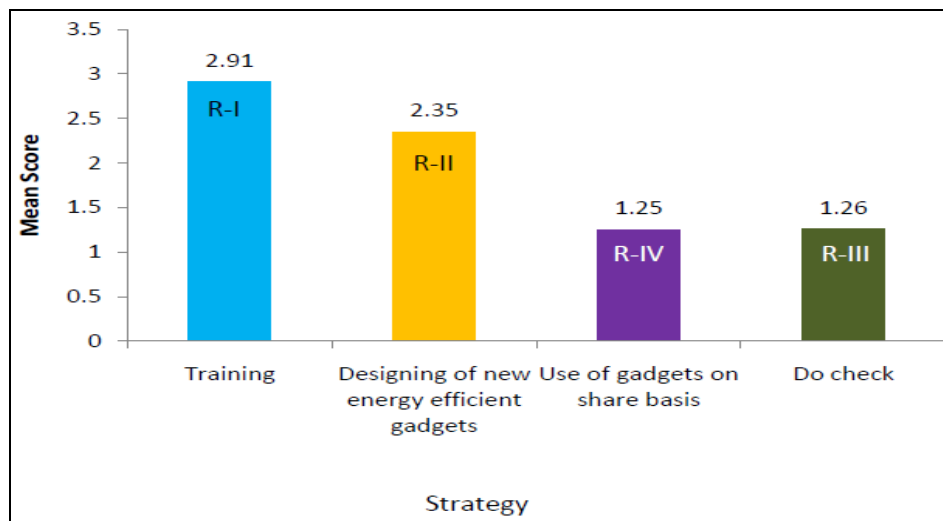
Generally women play an important role to secure environment such as energy security, food security, health and hygiene security, air and noise security and livelihood security but in this type of work the role of women is invisible at household level. It would be visible when overcome from the constraint and problems, lack of education, lack of technological knowledge, lack of skills are major problems of middle class. So that our prime minister of India launched

Kaushal Vikas Yojana for the skill development of male and female to generate enterprise. Today changing time moments feel insecure, even they are married, unmarried, widow or divorce the main reason is lack of unemployment and mental insecurity. So that female does not work same counterparts of male. They also face many psychological problems in their family.

**Table 6:** Role of home scientist in solving the remaining constraints and hurdle in adopting develop practices

Sl. No.	Strategy	Always	Sometime	Never	Mean Score	Rank
1.	Training	370 (92.5)	22 (5.5)	8 (2.0)	2.91	I
2.	Designing of new energy efficient gadgets	250 (62.5)	39 (9.8)	111 (27.7)	2.35	II
3.	Use of gadgets on share basis	35 (8.7)	30 (7.5)	335 (83.8)	1.25	IV
4.	Do check	40 (10.0)	25 (6.2)	335 (83.8)	1.26	III

(Figures in parenthesis indicate percentage of respective values)



Home Scientist play a very important role for the security of environment by women, when they are member of Government organization or any reputed private organization so that all class of female like such (lower class, middle class and upper class) was believed the home scientists, because the role of home scientist is related to home such as energy security, food security, to control air and noise pollution and security of livelihood. To maintain all type of environment security home scientist get them aware and training programme.

### Conclusion

Women and the environment and emphasizes the essential role that women play in the development of sustainable and ecologically sound consumption and production patterns and approaches to natural resource management, and stresses the need for women to participate in environmental decision-making at all levels. While the Platform for Action emphasizes that the major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production, it also points to the close interrelation between poverty and environmental degradation and the need to eradicate poverty in order to achieve sustainable development. In the last decade this kind of environmental activism by women has become more and more connected with questions of women's rights, environmental rights and environmental justice. In addition new issues have been raised the important role of women in preserving healthy food and nutrition, the preservation of women's traditional knowledge against the commercialization by biotechnological firms. The violation of human rights through sterilization campaigns and induced abortion in population programmes was for the first time officially mentioned and condemned. Women and environment have shown that women are significant actors in natural resource management and they are major contributors to environmental rehabilitation and conservation. In addressing some key environmental problems, women play a dominant role. Women, through their roles as farmers and as collectors of

water and firewood, have a close connection with their local environment and often suffer most directly from environmental problems.

### Recommendations

- Promoting the adoption of new technologies by women
- Awareness creation and training of women on technology related issues with regard to women.
- Promoting Technological upgradation of tiny, small and medium enterprises run by women entrepreneurs.

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