

Sustainability and Indigenous Knowledge System among Indian Mothers: Preservation of Traditional Culture- A Comparative Study of Eco-Innovative Ethos in Urban and Rural Areas in Fatehabad District, Haryana

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Abstract

Sustainable practices have become a necessary aspect in the modern lifestyle. The onus of professing an eco-friendly sustainable life lies on all of us. Among the various indigenous communities, the women folk have been the traditional incubators and transmitters of knowledge relating to seed preservation and storage, food processing, indigenous health practices, etc. Such forms of knowledge are often contextual, rooted in experience and experiments but are non-codified. These women community as Indian mothers and their role in the preservation of traditional and eco-innovative methods are worth mentioning. Therefore, it becomes essential that such knowledge sharing mechanism recognizes the value of knowledge possessed by women and provides space for value-addition and the amalgamation of women's knowledge in the global knowledge pool. The role of women in the use and preservation of traditional knowledge in the various aspects of their daily life is manifold. Indian mothers are eco-innovative due to their creativity and use various techniques to make useless resources into resourcefulness in managing the household waste by reuse and recycling. This study will examine the sustainability habits of Indian mothers, by focusing on the innovative recycling and reusing behaviour of Indian mothers and to investigate how their innovative recycling and reuse method supports sustainable development. This research, therefore, aims to highlight the various strategies used by Mothers, by adapting a comparative study between rural and urban settings, thus, identifying the differences and similarities in sustainable practise of urban and rural mothers. Also, the study will explore the myriad ways in which traditional knowledge possessed and professed by Indian mothers can be useful to modern science leading to environmental sustainability. This study employs a mixed method approach employing both quantitative and qualitative data. The online survey research method will be used to collect data from the Indian mother at Pan India level through social media platforms using google forms, online applications Instagram, WhatsApp, Gmail and LinkedIn. In addition to this, offline survey will be conducted to collect the primary data from the Indian mothers by using purposive random sampling. Primary data are collected through suitable technique such as questionnaire are prepared to collect primary responses from rural and urban mothers and Secondary data will be collected through authentic available sources. Suitable cartographic and statistical techniques will be employed to achieve the desired results. Time series analysis will be used to depict the variations in trends and for future forecasting ensuring sustainability. The obtained results will be processed using SPSS software and will be mapped using Arc GIS software. Key findings of the study indicate that the rural mothers are excellent in the recycling and reuse and heavily rely on traditional methods whereas the urban mothers are not so completely engaged in professing traditional methods due to their cosmopolitan nature in context of multifaceted tasks. Understanding the nature of Indian mothers in Sustainability practise may offer valuable insights from grassroots level however, policy makers



should start some programs to support and enhance their practise. Addressing both contexts such as urban and rural areas can provide more inclusive sustainable development strategies across India.

Keywords— Sustainable practices, eco-friendly, seed preservation, food processing, indigenous knowledge, recycling, reuse, Indian mothers, sustainability habits, traditional knowledge, rural-urban comparison, environmental sustainability.

I. INTRODUCTION

In the contemporary world, the global is more empathatic towards the sustainability due to climate change, environmental degradation and resource depletion. Sustainable development refers to the process of development via the wise use of natural resources while bearing in mind the requirements of future generations (Thakuria, 2014). and indigenous community knowledge are some of the tactics that may be used for this goal. The world bank (2003) defines "The extensive corpus of information, abilities, and experiences that people apply to preserve, enhance, and support their way of life and that have been developed outside of the official educational system." the indigenous Knowledge system plays a significant role in advancing sustainable development in the face of widening gaps in the environment, Ecology and the global community (Sahoo, 2024). Indigenous knowledge forms backbone of social, economic identity therefore it is consequently essential to the survival of a historical and cultural legacy of a particular group (Hoppers, 2001). In this context indigenous knowledge system has drawn a lot of attention for their role in promoting sustainable behaviours. among the numerous indigenous knowledge women particularly mothers play a vital role in sustainable development by transmission and preservation the knowledge. Women continue to have the most determining impact on the standard of living and general well-being of their families and communities whereas in most culture, they are the primary carers and resource manager overseeing the use of food Housing and products (Khurana, 2021). Women are working to improve the status of the environment and own lives; they involved in grassroots environmental conservation by carrying various task such as relating to seed preservation and storage, food processing, indigenous health practices, etc. (Singh, 2022). One of the main characteristics of the Indian Society was the use and reuse of all resources. Even in modern Indian society, it is still noticeable, particularly in rural areas (Mehra, 2017) whereas Indigenous knowledge constitute generations of creative notion and activity action within specific community (Magni, 2016). Indian mothers are eco-innovative due to their creativity and use various techniques to make useless resources into resourcefulness in managing the household waste by reuse and recycling. This study explores the sustainability habits of Indian mothers focus on

their innovative recycling and reuse behaviour and to understand how these practises contribute the sustainable development.

II. STATEMENT OF THE PROBLEM

The promotion of sustainable behaviour greatly aided by Indian mothers, but there is a dearth of knowledge and documentation on their contribution especially when it comes to urban and rural context. Some of the important problems addressed are; -

- a) Indigenous knowledge acquire by Indian mothers in Indian community is frequently overshadowed, not sufficiently recorded and documented.
- b) Loss of valuable indigenous knowledge system due to modern development pressure and in areas such as rural and urban have different lifestyles and respectively influenced by the Environment.
- c) Globalization, Urbanisation, Modernization, and environmental changes drastically change the lifestyle of people and consumption patterns influence the sustainable practises are not well documented.
- d) Sustainable behaviour is significantly shaped by socio-economic impact and understanding the finical forces that might encourage to the adoption of sustainable practises however limited empirical data are present on reuse and recycling practises

This research overcome this problem by focusing on the role of Indian rural and urban mothers on traditional and innovation practises however, highlight the indigenous knowledge and sustainable practise by comparative study between urban and rural settings.

III. SIGNIFICANCE OF THE STUDY

This study Provide the comprehensive documentation of sustainable methods and eco- innovative recycling and reuse practise of urban and rural mothers however provide the insight how Changing era and challenges impact the traditional indigenous knowledge and sustainable ways moreover this study provides the valuable insight on role of women in sustainable practises and household management and promoting gender sensitive approach. Thus, also identify the practises that reducing the environment

footprint of household and can inspire the new generation to adopt the innovative upon.

- 3) To analyse and compare the sustainable ways of living in rural and urban Indian mother and to find Motivation of doing these sustainable practises.

IV. OBJECTIVES OF THE STUDY

It is on this note that study assessing the sustainability and indigenous knowledge system among Indian mothers to achieve this aim, the following objective were established:

- 1) To describe the role as gender specific and pivotal role by women in maintaining sustainable ways in sustainable development.
- 2) To identify the indignity and traditional eco practises of Indian mothers which is leading towards sustainable development by reuse and recycling.

V. RESEARCH HYPOTHESIS

H₁ = Eco-innovative Practises and indigenous Knowledge significantly influence the reuse and recycling behaviours of rural mothers have more than urban mothers.

VI. MATERIALS AND METHOD

6.1 Geographical Profile of the Study Area

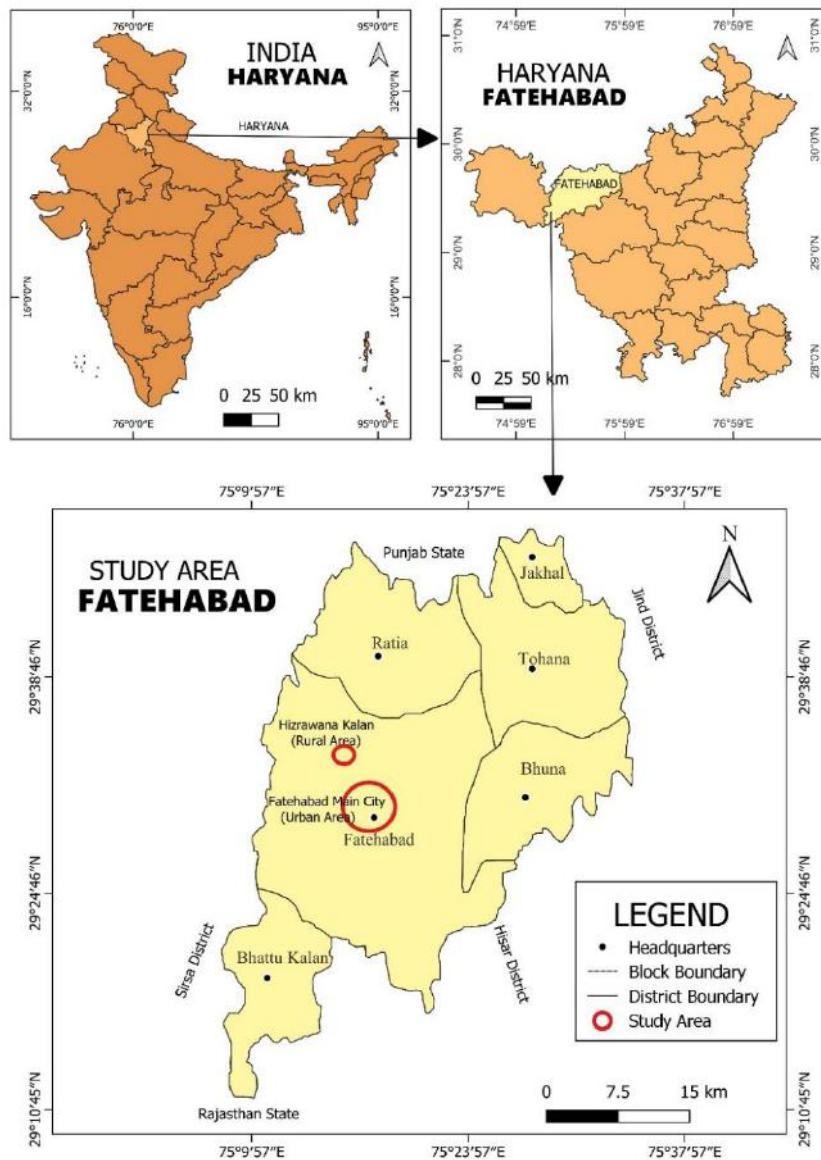


Fig.1: The Study Area

Source: Prepared by author using MapInfo GID Software (2024)

Fatehabad is the one of the twenty-two districts of the state Haryana, India. Fatehabad district, established on 15 July 1997 and was carved out from Hisar district. The district comprises 6 blocks such as Fatehabad main city, Ratia, Tohana, Bhuna, Bhattu Kalan and Jakhal. According to 2011 census Fatehabad district has a total Population around 942,011. In this paper fatehabad main city as urban area chosen for the collecting Primary data it has population of 70,777 of which 37,320 are males and 33,457 females according to 2011 census and Hizrawan Kalan is a village comprises 16178 of total population in which 8479 are males and 7699 are females, geographical area about 4795 hectares, 9 Km away from the main Fatehabad city, chosen as a rural area for the collecting primary survey.

6.2 Database and Research Methodology

The sustainability and indigenous knowledge aspects would be thoroughly examined in this research. The complete research is based on field survey.

(A) Data Collection Methods

This study employs a mixed method approach, integrating both qualitative and quantitative data. and random purposive sampling has been used to collected the data from field whereas the primary data is collected by the both close-ended and open-ended questionnaire, to know more about the sustainable practises and indigenous knowledge interview method is used. in addition, storytelling narratives from the mothers enriched the data whereas for secondary data various previous research paper, articles and journals were considered. Moreover, Canva is used to make pie chart and bar graph whereas flow chart is made with the lucid chart Software and QGIS Software used to make a study area map.

(B) Sampling

A sample size of 131 respondents has been recorded from the field survey as tabulated below.

Table 1: Rural and Urban respondents in Field Survey (2024)

Rural	Frequency	%	Urban	Frequency	%
Population Size	71	54.19	Population Size	60	45.81
Education			Education		
i) No formal education	26	36.6	i) No formal education	09	15
ii) Primary education	33	46.4	ii) Primary education	21	35
iii) Secondary education	08	11.4	iii) Secondary education	15	25
iv) Higher education	04	5.6	iv) Higher education	15	25
Employment			Employment		
i) Employment full time	03	4.5	i) Employment full time	09	15
ii) Employed part time	04	5.6	ii) Employed part time	11	18.4
iii) Self employed	20	28	iii) Self employed	10	16.6
iv) Homemaker	44	61.9	iv) Homemaker	30	50

(C) The Field Survey

A field survey has been conducted in Hizrawana Kalan as a rural area and been recorded 71 respondents whereas Fatehabad has been taken for filed survey to collect data from the Urban area and been recorded 60 responses. Moreover, the figure 2(a) shows that education level of respondents is mainly primary and non-formal education among in rural and urban mothers. Figure 2(b) depicts the working nature of respondents which is mostly dominated by the "homemaker" section both in the rural and urban areas.

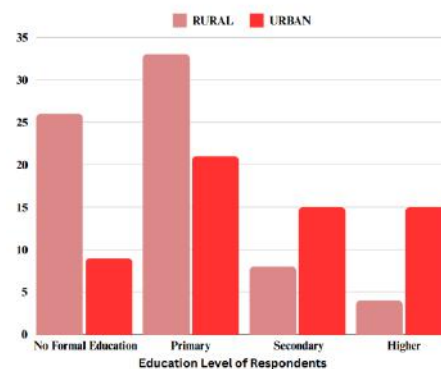


Fig 2(a): Level of Education

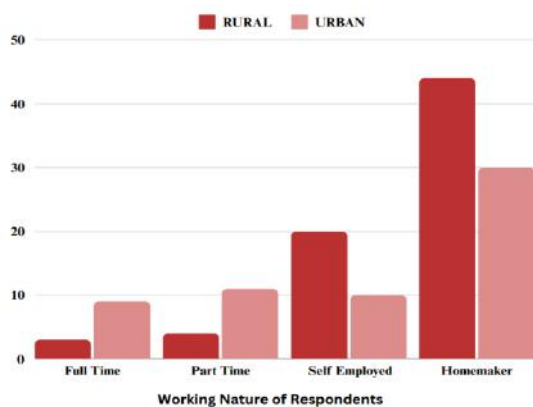


Fig 2(b): Nature of Working Status

Source: Primary Survey (2024)

VII. RESULTS AND DISCUSSION

The present research collects significant amount of qualitative data related to reuse and recycling and about indigenous knowledge and their sustainable practises from the Indian rural and urban mothers. Hence in this section of the research we know about the role of specific gender in sustainable development, will be examined about the different practises do by Indian mothers and then we will see comparative analysis between rural and urban mothers.

7.1 Role of Gender Specifications in Sustainable Development

Gender specification plays an important part in the conservation about sustainable development due to both men and women bring distinct perspectives and their contributions. The focus on gender specific roles drawn attention to how important it is for sustainable development initiative to be inclusive and equitable in order to ensure that all voices are heard and that a range of experiences are appreciated. And gender equality is the cornerstone for establishing global peace and sustainable development (Tamuli & Mishra, 2023). Women have traditionally managed homes and communities with an emphasis on long term sustainability, acting as the natural resource’s guardians. Because of their innate relationship with environment and resource management, they are in a unique position to promote sustainable practises, in addition to being necessary to attain gender equality. Women's empowerment is essential to achieving sustainable development in the areas of financial, society, and the environment to attain gender equality. Women are also essential to the management and advancement of the environment (Sharma, 2022). Women involvement in sustainable development also boosts the efficiency of environmental programmes and the examples of such programmes are tabulated below.

Table 2: Women and Environmental Efficiency Programmes through Timeline

S. No.	Women Role in Environmental Conservation and Sustainable Development
01	The 1973 Chipko Movement (Uttarakhand) in which women hugged trees to stop contractors from felling them. The significance of rural women in forest conservation was brought to light by this grassroots campaign, which also changed the policy and raised awareness of deforestation in India. (A. Mishra)
02	Movement for the farmers rights and biodiversity protections that was started by Dr. Vandana Shiva in 1982 and known as Navadanya Movement. This project has been driven by women, who have protected biodiversity and indigenous knowledge by advocating for sustainable agriculture and organic farming. (S. Sen)
03	Women from distinct areas are trained to become solar engineers at the barefoot college in Rajasthan. These women’s Install and maintaining solar lightning systems in their communities, whereas known as solar mamas. They help in to encourage sustainable energy and lessen reliance on non-renewable resources. (N. P. Shaikh)
04	In 1983 Appiko movement, which was founded in Karnataka with the intention of preventing deforestation in the western ghats, was influenced by the Chipko movement. women played a crucial role in this campaign by supporting tress to stop logging and spreading the word about how crucial forest protection is to maintaining ecological balance. (A. Bhowmik)
05	The noble prize winner Wangari Maathi who started the green belt movement, aim to restoration of environment this movement empower the many rural women and this movement is also known as the biggest among women and in environment history. (T. K. Khurana)

Source: Compiled by author (2024)

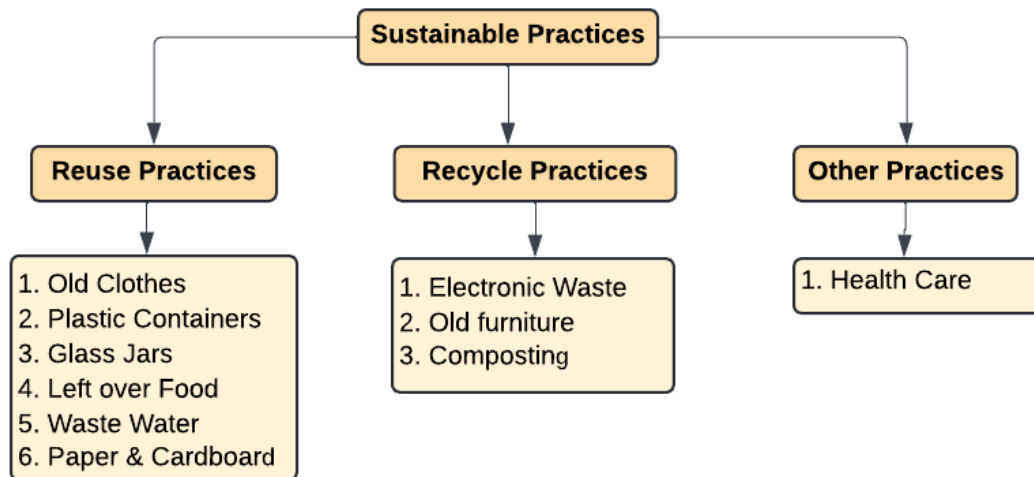
These are some examples which shows the women role in environmental conservation and to promote sustainable development. Their active involvement guarantees the preservation of natural resources and a balanced approach to environmental management. However, women are frequently at the forefront of resource management with a wealth of information about regional ecosystem and sustainable methods, since they are usually the main

administrators of the household resources such as food, energy, and water, they play a crucial role in putting sustainable solutions into practises at the local level.

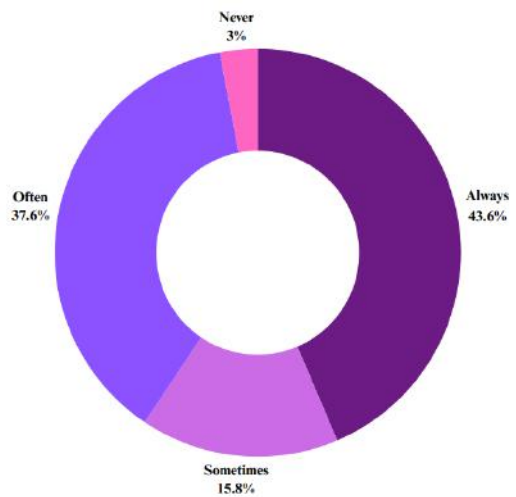
7.2 Identification of Indigenous and Traditional Practices among Indian Rural and Urban Mothers

Indian moms in both rural and urban places recognize for their indigenous and traditional customs, which

demonstrates a rich tapestry of ingenuity and sustainability. These traditions, which have been passed down through the ages, are a reflection of the deep cultural wisdom. Indian women skilfully combine tradition and modernity, guaranteeing little waste and encouraging to reuse and recycle in their everyday lives. Examples of their inventive reuse of household products and effective recycling procedures are many.

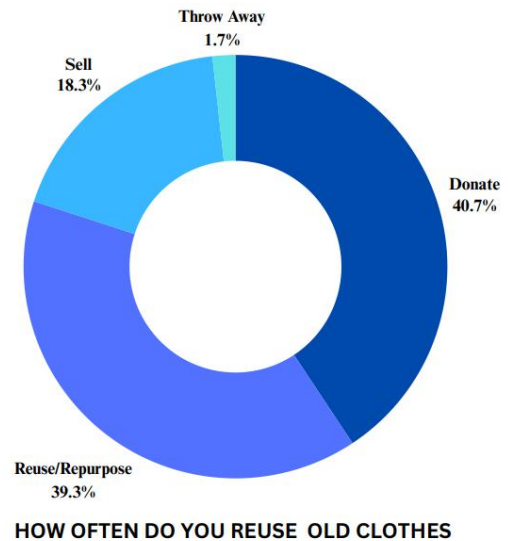


7.2.1 Old Clothes



How frequently you passed down children clothes to younger siblings and Relatives

Fig.3: Reuse of Old Clothes



HOW OFTEN DO YOU REUSE OLD CLOTHES

Fig.4: Passed down Old Clothes between Siblings

Both in urban and rural areas Indian mother have traditionally shown an amazing talent for sustainability by creatively reusing old clothing. Their reuse and recycling culture promote sustainable development, however use of old clothes for daily task not only provide affordable solution but also reduce the waste.

Figure 3 depicts that 40.7% of the respondents donate their old clothes to the needy person and 39.3 % of the respondent’s states that they always try to reuse their old clothes in such ways, Indian mothers frequently make bags (see fig. 5.1 and 5.2), pretty pillow coverings by stitching the old clothes (fig. 5.3) and used for cleaning such as for dusting, mop for the floor and clean rags. Some of the urban mother states that they make aprain with their old saree. Additionally, Indigenous knowledgeable people have extensive local knowledge of resource reuse and environmental sustainability, which serves as a source of innovations that frequently propel economic progress as some of mothers make handbags with old clothes and sell into the market which provides a source of income (Kusumastuti.et.al.). Reusing old clothing is more common and essential to everyday living in rural communities. Some rural mothers’ states that they also used their old cotton clothes as a diaper for their babies. This technique stands out because it reduces the need for disposable diapers. These reusable and machine-washable cloth diapers provide an economical and environmentally friendly substitute. In certain areas, moms also make protective coverings for home appliances like television sets, fridge out of used clothing (fig. 5.4) and usually make doormats with old clothes (fig. 5.5). Some of the respondents’ states that they used their old clothes to make baan (Rope) for the charpai (fig. 5.6). However, Figure 2 shows that mothers are also try to pass old clothes between siblings. Some of the respondents’ states that they use their baby clothes for the next baby instead of throwing them.



5.3: Pillow with Old Clothes



5.4: Fridge cover made up with Old Cushoon Cover



5.5: Mat made up with Different Old Clothes



5.1:: Bags with Old Clothes



5.2: shopping Bags with Old Clothes



5.6: Charpai baan made up with Old Clothes

Fig.5: Synoptic View of Sustainable Use of Old Clothe
 ource: Primary Survey (2024)

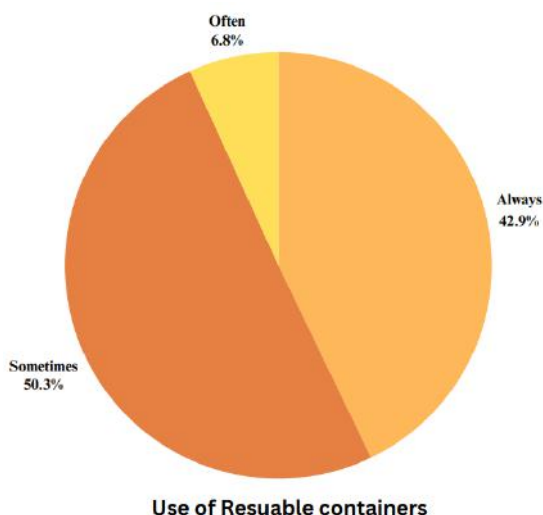


Fig.6: Reuse of Containers

7.2.2 Plastic Containers

Figure 6 has shown Indian mothers, who reside in both rural and urban areas, are creative and environmentally responsible by finding new uses of reusable containers. Many of respondent states that they are cutting down these bottles to create plant pots is one common activity. And use of these plastic pots to grow their herbs, grow their own organic vegetables (fig. 7.1), small plants for house decoration (fig. 7.2), transforming balconies into vivacious green areas. In rural area most of the family used Plastic cold drink bottles frequently for purpose in homes as refrigerator water storage containers (fig. 7.3). A very good example of reuse and promote sustainable development by keeping the water cold and minimizing the need to buy more water bottles, this useful reuse helps to reduce the amount of plastic trash produced. These adaptable bottles are also frequently used to keep spices, vegetable oil and homemade pickles organized and fresh. Some mothers turn them into bird feeders by making tiny cuts and adding grain to draw in birds. Plastic bottles are occasionally used as improvised funnels in rural areas to pour liquids or as storage containers for grains and pulses. Some of respondent states that in their house they have plastic cables wires instead of throwing they use as repurposed into ropes to dry wet garments.



Fig.7: Sustainable Use of Plastic Containers

Source: Primary Survey (2024)

7.2.3. Glass Jars

Glass jars also used as reusable containers often Indian mothers both in urban areas and in rural areas originally used to store pickle (fig. 8.1), sauces, and other goods, these jars used as to filling spices, different kitchen ingredients (fig. 8.2), dry fruits and dals. This behaviour is more than just a charming habit. And glass is a great material to preserve the flavour and freshness of spices and dals since it is impermeable and non-reactive. Also, some of respondent's states that they also add dry neem leaves in dals to preserve from insects. mothers carefully clean and reuse these jars, usefulness by limiting trash, this technique

not only lowers the household's carbon footprint but also saves money by reducing the need to buy new storage containers. These multipurpose jars or glass bottle transform into charming flower vases (fig. 8.3) outside of the kitchen, bringing a touch of rustic beauty to interior design. A basic jar may be decorated with ribbons, paints, or anything else creative.



8.1: Use to Store Pickle



8.2: Use to fill different Ingredients of Kitchen



8.3: Use of plastic bottles for Interior Decorations

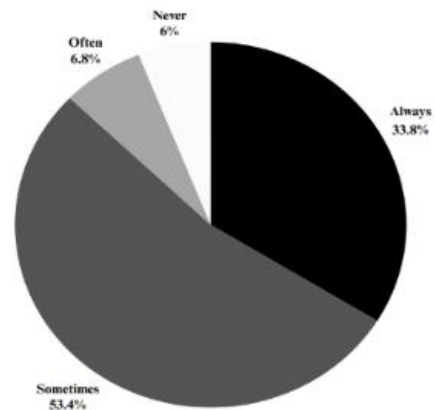
Fig.8: Sustainable Use Glass Jars

Source: Primary Survey (2024)

7.2.4 Left-over Food

Figure 9 shows that majority of the Indian moms are instead of wasting and throwing with the leftover food they try to make new recipes. Food generated during a meal that later becomes surplus or left and then prepared meal from left food is referred to as leftovers (Andrews et al., 2018).

Leftover food is overlooked as the primary area of concern to reduce food waste (Katajajuuri et al., 2014). Every meal is a joyful surprise because of their inventiveness in the kitchen, which makes sure that nothing is wasted. The Indian household have emotions and attitudes towards waste food they feel like wasting a food feel them they like to committing a sin and emotionally distress (Samant Shant Priya et. al.) and food wastage in India is less as compared to the developed nations (Srinivas et. al.) Meanwhile, instead of wasting or throwing away food, Indian mothers prepare new dishes from leftover food. There are some examples to create new dish from leftover food. Additionally, there are some methods to store leftover food such as arranging leftovers in the refrigerator, storing food in the appropriate containers, regularly cleaning up storage areas (Aloysius et. al.) These creative ways elaborately explained by the respondents from urban and rural areas are depicted below:



DO YOU USE LEFTOVER FOOD TO CREATE NEW MEALS INSTEAD OF THROWING IT AWAY

Fig 9: Reuse of Leftover Food

Table 3: Line of Narratives from the Respondents

S. No.	Narratives
1	Sangeeta Sharma states that “we usually make wraps with leftover roti by making fresh stuffing such as paneer, salad or in case left over dry sabzi we also used in to make wraps”
2	Ravina Rani states that “I have been often making Churma with the leftover day night roti, these rotis are made into tiny crumbs by my hands, combined with desi ghee and jaggery”
3	Rano states that “often in morning I am make parathas by using leftover dry sabzi such as aloo, gobi, or mixed veggie sabzi etc, its simply to make

	just kneaded into dough and rolled out to produce parathas”
4	Sumitra Bai states that “I often try to make recipes with leftover rice, these are fried rice, biryani and one more thing my children love to eat the rice cutlets. I am making these rice cutlets by combined the leftover rice and bread crumbs, spices and occasionally cooked potatoes and then fry these”
5	Meenakshi states that “In my kitchen usually we make cabbage sabzi if it left overnight then definitely next day, I am use this sabzi as a sandwich stuff and also I am combined with cheese and mayo”
6	Santosh Goswami states that “I am frequently turned leftover samosa into chaat by crushing them and topping them with Yogurt, Tamarind Chutney, Mint Chutney, Sev, and Chopped Onion”
7	Daya Kumar states that “I am making kheer with leftover plain rice by adding milk, sugar, and spices including cardamom, almonds, and saffron”
8	Rekha Rani states that “Often I am making Dal because my sons goes gym daily and usually it left most of time and then In next morning I make dal parathas with leftover dal is combined with whole wheat flour and produce a dough for the parathas

7.2.5 Waste Water

A number of moms have revealed their creative ways to improve home sustainability and conserve water. Many of them have coolers in their houses in addition to air conditioners (AC). Rather of throwing away the water gathered from the air conditioner, they use it in coolers for colder air. This method maximizes cooling during hot weather while also conserving water and Indian mother have also come up with the use of leftover waste water from their purifiers (ARO systems). So that this leftover waste water used in to irrigate their plants rather than letting it go to waste Another fascinating method while wash the vegetables such as onions and garlic. They gather this water in a spray container and use it as a plant spray rather than throwing it out. As per mothers these organic spray helps to prevent from insects and plant illnesses. Its shows they lessen waste, believe in to preserve resources and improve the ecology by reusing water in inventive ways.

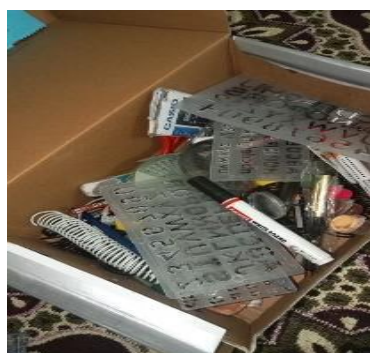
7.2.6 Paper and Cardboard

Using old newspapers in different ways around the house is one typical technique. Several moms said that, they use newspaper to keep things clean and absorb spills and grime, often use lay down on the kitchen rags and in almeries rags

this is easy technique make it easy to maintain this area clean. In addition, instead of wrapping food into the foil sheets most of the mothers prefer wrap meals in newspaper and however mothers in rural areas prefer the newspaper to covering the notebook whereas often using newspapers during meals. Many moms said that their families placed newspapers on the bed before eating any meals. This procedure provides shields from food spills and any oil stains. However, many houses also give new life to shoeboxes. Some rural mother states that they are frequently used shoebox to store cosmetics and other little personal goods. In addition, Shoeboxes and other similar containers are used as temporary storage for clothes (fig. 10.1) and accessories (fig. 10.2) in houses where moms do not have their own wardrobes or almirahs. Many homes turn sweet boxes into the first aid kits (fig. 10.3). These boxes' robust structure and small size make them perfect for keeping medical equipment.



10.1: Cardboard use to Store Clothes



10.2: Shoe Box use to Store Students Accessories



10.3: Plastic Chocolate box use as First Aid Box

Fig.10: Sustainable Use of Cardboard and Paper

Source: Primary Survey (2024)

7.3 Recycle Practices

7.3.1 Electronic Waste

Indian moms have mastered the art of organizing their technological trash. Figure 11 shows that both in rural and urban most of the mothers 76.7% sell their electronic waste. Whereas 12% of mother recycle the electronic waste, in case the device is still operational but has some minor damage, instead of discarding them they might change certain parts and by modifying the damage they use it again. In addition lack of knowledge in peoples regarding the E-waste recycle they prefer to sell their E waste to the local Kabadiwalas (Sengupta et, al., 2023).

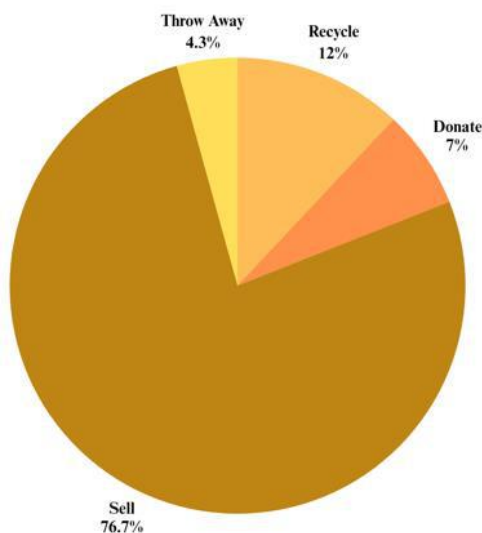


Fig.11: Disposing way of Electronic Waste

7.3.2 Old Furniture

Figure 12 shows that majority of the respondents 65.2% Giving new life to the old furniture by Refinishing and repainting is a common activity among Indian households who find it both practical and firmly ingrained in tradition.

This approach not only gives beloved things new life, but it also demonstrates resourcefulness and sustainability. This furniture renewal usually takes place during the festivals time like Holi and Diwali. These festivals provide the ideal chance to remodel and refurbish their living areas. And also 22.7% of respondent’s states that they cleaned their furniture twice in week to save from dust and if repairing needs to the furniture they provide on time to time.

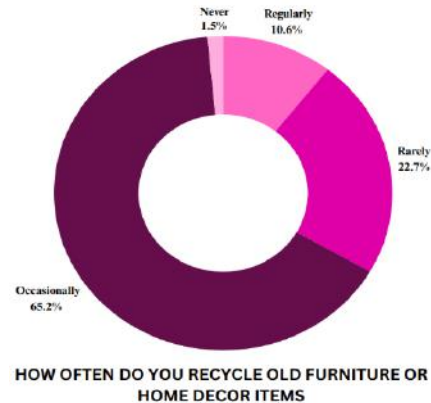


Fig.12: Recycling of old Furniture

7.3.3 Composting

Indian moms frequently utilizing eggshells and fruit peels, such banana peels, as well as tea leaves (chai patti) as an organic compost to promote plant health and growth. They gather and recycle these culinary wastes to make compost instead of throwing them away. Potassium, which is abundant in banana peels (A. Aboul-Enein), helps plants grow robust roots. Calcium from eggshells (NCBI) strengthens cell walls. Used of tea leaves (chai patti) provide the soil with nitrogen, which promotes plant health. In addition to lowering household trash, this environmentally friendly method improves the soil, provide nutrition to the fruitful vegetation. Its shows the Indian moms made a stronger bond with nature by using this indigenous knowledge.

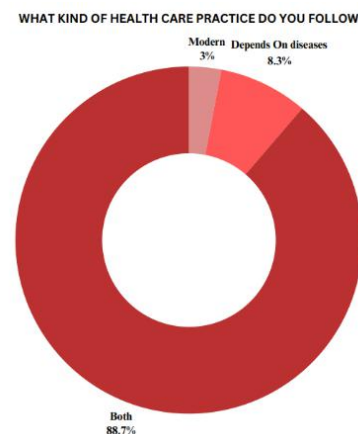


Fig.13: Health care Practises

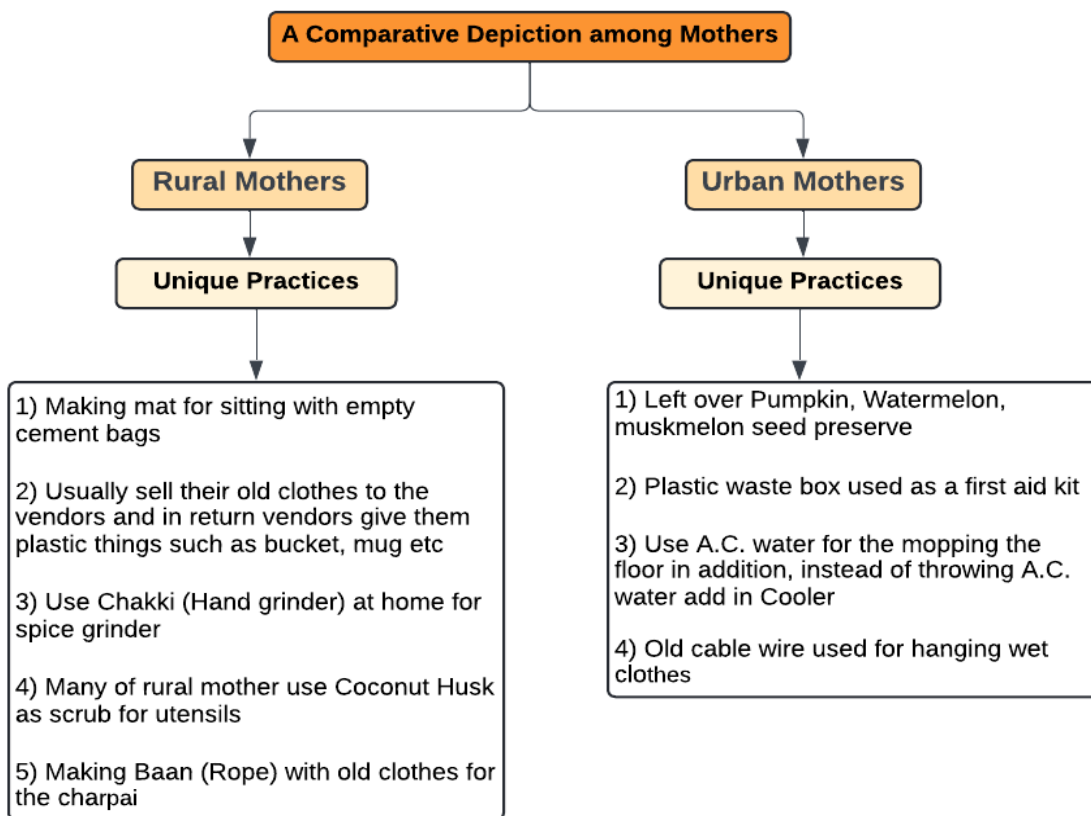
7.4 Other Practices

7.4.1 Health Care

Figure 13 shows that majority 88.9% of the respondents follow both traditional and modern health care facilities and when it comes to skincare, our respondents’ states that they frequently in Favor of use natural solutions over chemical products. They use waste materials like lemon peels apply on the face use as a scrub and these peels are usually used to relieve from acne and irritation. Often, mothers of rural areas and some from urban areas prefer the homemade

ubtan from a combination of besan (gram flour), honey, and turmeric powder. this ubtan is well-known for anti-inflammatory and antibacterial qualities, Honey hydrates the skin, besan remove the dead skin cells and while turmeric decreases the inflamed skin and reduce the acne. By reusing kitchen trash, this conventional skincare routine not only exemplifies a sustainable approach but also taps into the healing power of natural components.

7.5 Rural Vs Urban and Motivation Factors



7.5.1 Common Practises between Rural and Urban Mothers

1.	Indian mothers believe in the thrifting shopping its means always opting durable items and focus on repairing rather than replacing wherever possible its directly leads to reduce consumption and waste generation. Such as mostly mothers make their own pickle at home rather than to buy from market same time it reduces plastic and glass container waste.
2.	The Rural and urban mothers mostly have food preservations techniques such as use of neem

	leaves add in dals, spices and wheat to preserve from insects and can use long time.
3.	use homemade skin care products such as lemon peel to reduce acne of face.
4.	Every Indian Household repaint and refurbish their furniture instead of buying new
5.	Mothers in both areas prefer public transport rather than private transport
6.	Mostly Rural Mother engaged in clean up drives with the help of MNERGA while Urban mother engaged in clean up drives when its organised by their community centres.

7.	Earthen pots prefer to store drinking water because without use of any electricity the water in it feels like cold.
8.	In Rural areas mothers grow their own vegetables, fruits whereas urban mothers also grow their own vegetables, herbs but with the concept of terrace farming with the help of waste material for example use of waste thermacol to grow cabbage.
9.	Prefer making new recipes from the leftover food such as fried rice from leftover night rice
10.	Both Areas moms prefer to prepare food at home rather than buy from market in addition Occasionally mothers prefer to buy prepared food from market
11.	In urban and rural areas mothers both have working nature some of rural mothers are engaged in the agriculture activity and stitching clothes at home whereas Urban mother also have working nature and engaged in various work such as joining in bank, own beauty Parlor shop and work in other services.

7.5.2 Motivation Factors

In this contemporary dynamic world, the shift towards sustainable living is increasingly but Indian mothers play a significant role across generations, preserving indigenous knowledge and doing sustainable practices. There are some motivation factors which to adopt sustainable practices such are:

1. India is renowned for its vast middle class group population, which is characterized by having modest income that often find it challenging to sustain a comfortable lifestyle so that's why Indian moms prefer thrifting shopping's such as opting durable items and second-hand items.
2. Mothers always think about the long-term in everything for example refurnish furniture by paints.
3. Upbringing can be a main reason for adopting these identified sustainable ways and many of mother states that they have learnt this transformation of discard material into a resource from their mothers and it shows how the indigenous knowledge passing through generation to generation.
4. Traditional culture of India, strongly emphasis towards the respecting resources. This also encourage them to do these sustainable practices.
5. Mothers try to find substitute of every high-cost thing and focus on functionality over asthenies.

VIII. CHALLENGES AND LIMITATION OF THE STUDY

1. The main limitation of the study is the not collecting and capture the diversity of culture practises in different areas in India.
2. Both in urban and rural area we faced challenge such as communication barrier and transportation availability. In addition, rural area mothers went to the field for the cultivation of rice as a labour and its make more difficult to collect data from rural area.
3. To Quantifying these traditional practises can be difficult and the temporal aspect can be affecting the study due to practises of reuse and recycling are dynamic in nature not in statics and may change over space and time due to the various factors and reasons.

IX. CONCLUSIONS

The study scrutinizes the sustainability practice of Indian mothers and mainly focusing on their reuse and recycle behaviour and innovation in both Urban and rural areas, to promote sustainability through their daily life activity. Moreover, research emphasis how mothers are critically contributing in the recycle and reuse of household wastes and to minimise the waste too. The study highlighted that not only traditional knowledge but also cultural values prioritize resources conservation.

The comparative analysis in the study revealed that urban mothers are less profoundly engaged in sustainability Reuse and Recycling practises compared to their rural counterpart. There are various practises which have been passed down through generations which include reuse of old clothes, Health care items with domestic materials, making new recipes with leftover food and reuse and recycle of plastic and glass bottles. It was also notices that women use kitchen composting and resource conservation using old techniques. Moreover, the resource scarcity in rural area often pushes them towards the innovative way to reuse and recycle and in urban areas modernity and urbanization influenced the indigenous knowledge and reuse and recycle practises.

The study underscores how it becomes critical to conserve the indigenous knowledge because of the modernity and urbanization leading to unsustainable lifestyles. The study highlights the need of documentation of the sustainable practices to make sure that contemporary progress does not eclipse these traditional sustainable practices and are preserved to enhance the sustainability in our day-to-day life.

Therefore, by integrating conventional methods with contemporary sustainability efforts, enhancing awareness through education and encouraging community-based

projects these efforts can leverage indigenous knowledge to promote sustainable development.

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