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Understanding Solid Waste Generation in a Sociological Perspective

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Abstract

In recent decades, there has been a discernible global trend among sociologists towards heightened scrutiny of environmental issues. Central to this endeavor is the imperative to scrutinize the social dimensions underpinning phenomena such as solid waste generation. This study is motivated by the imperative to examine the social aspects of solid waste generation, aiming to address extant research lacunae within the Anuradhapura District and the North Central Province. The specific objectives encompass elucidating social constructs about solid waste, discerning the interplay between gender dynamics and waste generation, and delineating correlations between socio-cultural values and waste generation patterns. Methodologically, the study employs a survey-based approach supplemented by observations and in-depth interviews. Findings reveal that solid waste generation is profoundly influenced by gender and socio-cultural factors, with socialization processes playing a pivotal role in shaping perceptions and behaviours regarding waste. Women are significant in waste management

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practices within the Sri Lankan context, enhancing the nexus between gender dynamics and waste generation. This enhances the contention that social education and communal knowledge significantly enrich the comprehension of solid waste phenomena beyond the purview of scientific paradigms. Consequently, it is posited that the discernment of ordinary citizens' perspectives and localized knowledge holds commensurate importance alongside theoretical constructs and scientific pedagogy.

Keywords: culture, gender, power, socialization, solid waste

Introduction

In recent decades, there has been a notable global trend among sociologists to focus on environmental concerns. This recognition enhances the vital role of social scientists in identifying and addressing environmental challenges (Mol, 2006). Environmental sociology, in particular, offers valuable insights into how social dynamics influence the perception and resolution of environmental issues. It delves into various aspects, including communities' cultural and social backgrounds, the discourse surrounding environmental problems, and their international dimensions (Lutzenhiser, 2002). This enhances the significance of environmental sociology in understanding and tackling environmental issues.

As environmental problems increasingly intersect with human activities, it becomes evident that they are not solely natural phenomena but also social constructs. Environmental sociology examines how these issues emerge and evolve within different societal frameworks, discussing the social processes that shape their perception and response (Lutzenhiser, 2002). By framing environmental challenges as social issues, sociological studies provide valuable insights into the factors influencing public understanding and the formulation of solutions.

Moreover, understanding environmental issues as social problems facilitates a more profound comprehension of their impacts on individuals and society (Lutzenhiser, 2002). Many environmental challenges originate within specific contexts but gradually manifest as broader social concerns as they evolve (Mol, 2006). This evolution is evident in contemporary discussions surrounding environmental crises such as global warming, climate change,

and solid waste generation, which have garnered significant attention worldwide.

Solid waste generation, in particular, has emerged as a pressing global issue, exacerbated by population growth and rapid urbanization, especially in developing countries (Hoornwey and Bhada-Tata, 2012). Despite efforts to manage solid waste, collection, transportation, and disposal challenges persist. Improper disposal practices, including open dumping, pose severe environmental and public health risks, enhancing the urgency of effective waste management strategies (Hoornwey and Bhada-Tata, 2012).

Recent developments, such as the Meethotamulla waste dump disaster in Colombo, Sri Lanka, have enhanced the critical need for robust solid waste management policies and practices (UDA, 2018). This incident has catalyzed heightened awareness and discourse surrounding solid waste management, particularly within sociology and environmental sociology.

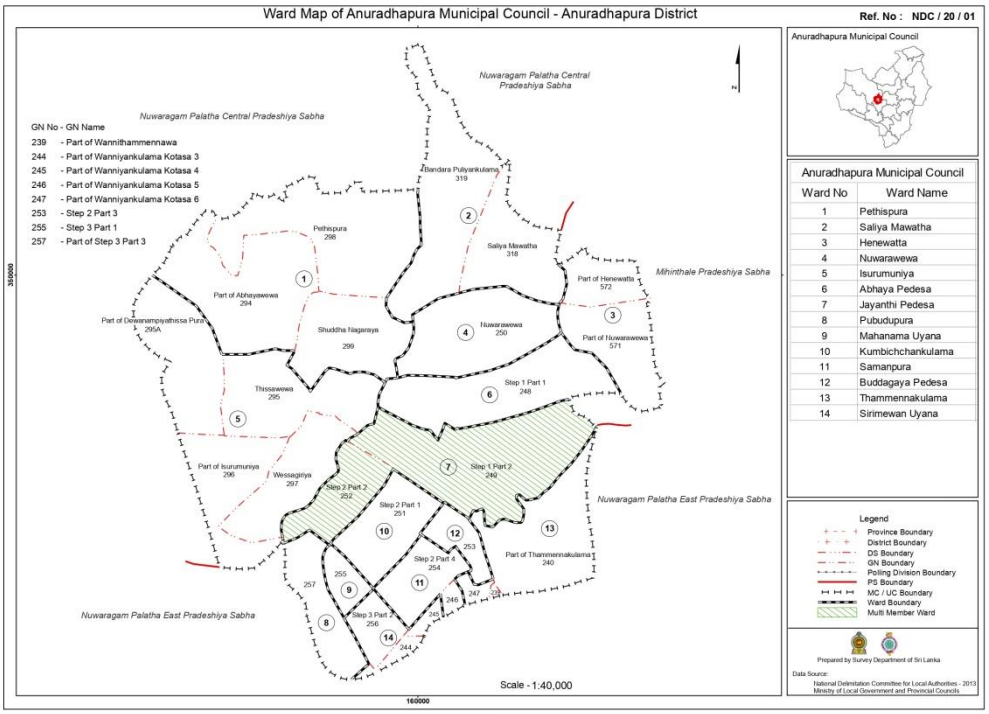
Against this backdrop, this study aims to explore the social dimensions of solid waste generation, bridging existing research gaps within the Anuradhapura District and the North Central Province. By examining social definitions of solid waste, gender dynamics in waste generation, and the influence of sociocultural factors, this research seeks to contribute to a deeper understanding of the complexities surrounding solid waste management within the local context.

Methodology

The research area was selected within the Anuradhapura District, a significant region in Sri Lanka for waste disposal, spanning approximately 15 Acres in Keerikkulama (UDA, 2018). Typically, the municipal council collects about 31 metric tons of solid waste per day (UDA, 2018). Jayathilaka et al. (2020) reported that 54% of the collected waste is short-term biodegradable waste. The municipal solid waste collection service is primarily provided by the municipal council in the city center (covering commercial entities) daily and in residential areas with varying frequency, but at least twice a week. During festival seasons, there is a surge in waste generation due to the influx of visitors, prompting the municipal council to increase waste collection frequency in those areas by up to 50%. However, some peri-urban areas do not have access to waste collection services. Nevertheless, most residents in these areas have sizable land plots, allowing them to manage waste.

The municipal council has implemented a tax system for solid waste collection on commercial and industrial units within its jurisdiction. Around 70 institutions in the city are registered under this system, with an expected increase in revenue from waste collection from 1.4 million LKR (in 2013) to 5 million LKR per year (UDA, 2018). The Anuradhapura municipal council operates a compost plant, treating approximately 26% of the waste collected (8 MT/day). Due to the mixed nature of the collected waste, only 2% (0.7 MT/day) is recovered as recyclables, while the remaining 72% (22 metric tons/day) is openly dumped. The dumping site, located adjacent to the compost plant in Keerikkulama, Nuwaragam Palatha, raises concerns regarding its suitability, given its proximity to the Nuwarawewa reservoir and its lack of engineering as a landfill. Additionally, the site was previously used for septage disposal (Jayathilaka et al., 2020).

The research focused on three wards of the Anuradhapura Municipal Council within the Anuradhapura District: Jayanthi Pedesa, Pubudupura, and Kumbichchamkulama. Observations and in-depth interviews were vital data collection methods to gather socio-economic and attitudinal information about solid waste generation and management through random sampling. The study sample consisted of forty-five households, with fifteen households selected from each ward. Sociological perspectives were utilized to review existing attitudes, perspectives, knowledge, and information on solid waste generation and management. Data analysis encompassed quantitative (demographic data) and qualitative (Thematic analysis) approaches. Additionally, Figure 1 depicts the geographic location map of the research area, which should be cited accordingly within the text.



Source: National Delimitation Committee for Local Authorities - 2013 Ministry of Local Government and Provincial Council.

Results and Discussion

The results and discussion have been themed according to four main themes defining solid waste, gender and solid waste generation, education and solid waste generation, and sociocultural value factors and solid waste generation. The sample of forty-five households can be described under some major demographic factors.

Table 01: Demographic data of the sample

Household No:	member S/N	Gender	Age (Years)	Occupation	Education Level	Ethnicity	Religion
01 JP	JP1 JP2 JP3	Male Female Female	43 41 11	Government Government -	A/L A/L Schooling	Sinhala Sinhala Sinhala	Buddhism Buddhism Buddhism

02 JP	JP4 JP5	Male Femal e	28 29	Private -	A/L A/L	Sinhala Sinhala	Buddhis m Buddhis m
03 JP	JP6 JP7 JP8 JP9 JP10	Male Femal e Male Male Femal e	55 52 22 20 16	Business - - - -	A/L A/L A/L A/L Schooling	Sinhala Sinhala Sinhala Sinhala Sinhala	Buddhis m Buddhis m Buddhis m Buddhis m Buddhis m
04 JP	JP11 JP12 JP13 JP14	Male Femal e Male Male	28 26 07 02	Business - - -	A/L A/L Schooling -	Muslim Muslim Muslim Muslim	Islam Islam Islam Islam
05 JP	JP15	Male	54	Private	Graduate d	Sinhala	Buddhis m
06 JP	JP16 JP17 JP18	Male Femal e Male	57 44 20	Private	Graduate d O/L A/L	Sinhala Sinhala Sinhala	Buddhis m Buddhis m Buddhis m
07 JP	JP19 JP20	Male Femal e	65 59	Business Governmen t	Graduate d Graduate d	Sinhala Sinhala	Buddhis m Buddhis m
08 JP	JP21 JP22	Male Femal e	26 25	Private -	A/L A/L	Sinhala Sinhala	Buddhis m Buddhis m
09 JP	JP23 JP24 JP25 JP26	Male Femal e Male Femal e	33 31 09 05	Governmen t - - -	A/L A/L Schooling -	Sinhala Sinhala Sinhala Sinhala	Buddhis m Buddhis m Buddhis m Buddhis m

10 JP	JP27 JP28	Male Male	40 29	Business -	O/L O/L	Muslim Muslim	Islam Islam
11 JP	JP29 JP30 JP31	Female Female Female	55 21 19	Government - -	A/L A/L O/L	Muslim Muslim Muslim	Islam Islam Islam
12 JP	JP32 JP33 JP34 JP35	Male Female Male Male	44 44 22 21	Private Private - -	A/L A/L A/L A/L	Sinhala Sinhala Sinhala Sinhala	Buddhism Buddhism Buddhism Buddhism
13 JP	JP36 JP37 JP38 JP39 JP40	Male Female Male Male Female	57 56 29 27 03	Private Private Private Private -	A/L Graduated Graduated Graduated -	Sinhala Sinhala Sinhala Sinhala Sinhala	Buddhism Buddhism Buddhism Buddhism Buddhism
14 JP	JP41 JP42	Male Female	31 26	Private -	O/L O/L	Sinhala Sinhala	Buddhism Buddhism
15 JP	JP43 JP44 JP45	Male Female Male	32 24 01	Private - -	A/L A/L -	Sinhala Sinhala Sinhala	Buddhism Buddhism Buddhism
01 K	K1 K2 K3 K4	Male Female Male Female	40 40 17 15	Private - - -	A/L A/L Schooling Schooling	Sinhala Sinhala Sinhala Sinhala	Buddhism Buddhism Buddhism

							Buddhism
02 K	K5 K6 K7	Male Female Male	28 22 02	Business - -	A/L A/L -	Muslim Muslim Muslim	Islam Islam Islam
03 K	K8 K9	Male Female	33 30	Private Private	A/L A/L	Sinhala Sinhala	Buddhism Buddhism
04 K	K10 K11 K12 K13	Male Female Male Male	29 26 03 01	Business - - -	A/L A/L - -	Muslim Muslim Muslim Muslim	Islam Islam Islam Islam
05 K	K14 K15 K16 K17	Male Female Female Female	49 47 17 17	Private - - -	Graduate d A/L O/L O/L	Sinhala Sinhala Sinhala Sinhala	Buddhism Buddhism Buddhism Buddhism
06 K	K18 K19	Male Female	29 54	Business Business	Graduate d Graduate d	Sinhala Sinhala	Buddhism Buddhism
07 K	K20 K21 K22 K23	Male Female Female Female	55 52 22 20	Business - - -	A/L O/L A/L A/L	Tamil Tamil Tamil Tamil	Hindu Hindu Hindu Hindu
08 K	K24 K25 K26	Male Female Male	38 35 09	Private - -	A/L A/L Schooling	Sinhala Sinhala Sinhala	Buddhism Buddhism Buddhism
09 K	K27 K28	Male Female	27 21	Private -	A/L A/L	Sinhala Sinhala	Buddhism

							Buddhism
10 K	K29	Female	57	Government	Graduated	Sinhala	Buddhism
11 K	K30 K31 K32 K33	Male Female Male Male	52 51 24 22	Business Government - -	O/L O/L A/L A/L	Sinhala Sinhala Sinhala Sinhala	Buddhism Buddhism Buddhism Buddhism
12 K	K34 K35	Male Female	30 24	Business -	O/L O/L	Muslim Muslim	Islam Islam
13 K	K36 K37 K38	Male Female Female	56 55 21	Private - -	O/L A/L A/L	Sinhala Sinhala Sinhala	Buddhism Buddhism Buddhism
14 K	K39 K40	Male Female	57 52	Government -	Graduated A/L	Sinhala Sinhala	Buddhism Buddhism
15 K	K41 K42	Male Female	44 41	Business -	Graduated A/L	Muslim Muslim	Islam Islam
01 P	P1 P2 P3 P4	Male Male Female Female	40 36 16 11	Government Government - -	Graduated Graduated Schooling Schooling	Sinhala Sinhala Sinhala Sinhala	Buddhism Buddhism Buddhism Buddhism
02 P	P5 P6	Male Female	30 25	Government Government	Graduated Graduated	Sinhala Sinhala	Buddhism Buddhism
03 P	P7 P8 P9	Male Female	31 29 04	Business Government	Graduated	Sinhala Sinhala Sinhala	Buddhism

	P10	Male Femal e	02	- -	Graduate d - -	Sinhala	Buddhis m Buddhis m Buddhis m
04 P	P11 P12	Male Femal e	61 55	Business -	- -	Sinhala Sinhala	Buddhis m Buddhis m
05 P	P13 P14	Male Femal e	56 53	Governmen t -	A/L A/L	Sinhala Sinhala	Buddhis m Buddhis m
06 P	P15 P16 P17	Male Male Male	49 22 20	Governmen t - -	Graduate d A/L A/L	Sinhala Sinhala Sinhala	Buddhis m Buddhis m Buddhis m
07 P	P18 P19 P20	Male Femal e Femal e	23 21 01	Private - -	A/L A/L -	Sinhala Sinhala Sinhala	Buddhis m Buddhis m Buddhis m
08 P	P21 P22 P23 P24 P25	Male Male Femal e Femal e Femal e	58 28 27 03 01	Business Business - - -	- - O/L - -	Sinhala Sinhala Sinhala Sinhala Sinhala	Buddhis m Buddhis m Buddhis m Buddhis m Buddhis m
09 P	P26 P27 P28	Male Femal e Male	44 42 16	Governmen t - -	Graduate d A/L Schooling	Sinhala Sinhala Sinhala	Buddhis m Buddhis m Buddhis m

10 P	P29 P30	Male Female	51 48	Government Government	A/L A/L	Muslim Muslim	Islam Islam
11 P	P31 P32	Male Female	26 26	Business -	O/L O/L	Sinhala Sinhala	Buddhism Buddhism
12 P	P33 P34	Male Female	29 25	Business Government	O/L A/L	Tamil Tamil	Christian Christian
13 P	P35 P36 P37	Male Female Female	41 38 14	Government Government -	A/L A/L Schooling	Sinhala Sinhala Sinhala	Buddhism Buddhism Buddhism
14 P	P38 P39	Female Female	51 24	Private -	Graduated A/L	Muslim Muslim	Islam Islam
15 P	P40 P41 P42 P43	Male Female Female Female	63 55 22 20	Business Government - -	A/L A/L A/L A/L	Sinhala Sinhala Sinhala Sinhala	Buddhism Buddhism Buddhism Buddhism

**JP (Jayanthi Pedesa), K (Kumbichchankulama), P (Pubudupura)*
Source: Survey data (2022)

According to the demographic data of the sample, it is clear that the majority of the sample indicates the diversity of the population of Anuradhapura district. The household sample contains Male and Female respondents whose occupation/ income has been categorized as Government, Private and Business.

According to the survey data, the solid waste generated among the sample households has been mentioned as a percentage of the households, as shown below. Most households generate food waste, plastic, polythene, and paper.

Table 02: Solid waste generated in the household

Ward	Food Waste	Plastic/ Polythene	Paper	Wood	Metal	Glass
JP	100%	100%	100%	40%	13.3%	-
K	100%	100%	100%	13.3%	26.6%	13.3%
P	100%	100%	100%	13.3%	13.3%	-

**JP (Jayanthi Pedesa), K (Kumbichchankulama), P (Pubudupura)*
Source: Survey data (2022)

As per the Survey data, the solid waste disposal and management methods among the sample households have been mentioned as a percentage of the households below. It is clear that most households sell metals and papers and burn their solid waste. A minority of the sample sells food waste and owns a compost bin as a solution.

Table 03: Solid waste disposal and management methods

Ward	Owing a Compost Bin	Reuse plastic/ Polythene	Burning	Dispose of separate bins	Sell metals and papers	Sell food waste
JP	4 HH	5 HH	8 HH	5 HH	11 HH	2 HH
K	6 HH	6 HH	9 HH	6 HH	11 HH	2 HH
P	3 HH	7 HH	7 HH	6 HH	13 HH	1 HH

**JP (Jayanthi Pedesa), K (Kumbichchankulama), P (Pubudupura), HH (House Holds)*
Source: Survey data (2022)

The data collected through the survey were analyzed using themes. Under the significant topic Understanding Solid Waste Generation in a Sociological Perspective, three main sub-topics were generated: solid waste and solid waste generation, gender and solid waste generation, and sociocultural value factors and solid waste generation.

Defining the Solid Waste and Solid Waste Generation

Waste is simply what a person throws away, thinking a product is useless. As a result, it has no value in primary consumption. That is, substances that affect the environment and human health, which are useless for disposal and everyday life, are called waste. As defined by McDougall et al. (2001), waste can be classified by mass, physical condition, and original use in solid waste by material. Also, solids can be defined by physical properties, origin,

or level of protection. Also, the Environmental Protection Agency (2001) states that the legal definition of solid waste is not based on the physical nature of the material but on the fact that it is a solid waste.

Franklin Association (1999) has defined the types of Solid waste as food, office, processing, furniture, garden, construction, public, and e-waste. The Franklin Association (1999) identified solid waste sources as a residential, commercial center, institutional, industry, and city-centred. From a sociological point of view, the definition of waste can be very subjective. According to Mahees (2018), what one person defines as waste can be valuable to another and essential in livelihood and lifestyle. There must be a permanent legal definition of waste. Accordingly, different applications and built-in definitions describe different types of waste, including controlled, domestic, industrial, commercial, unique, active and inactive. In such cases, it can be seen that the definitive definition of waste represents in order to financial and legal authorities and the government of a country (Mahees, 2018). Waste can be classified as gold and non-perishable waste. Natural waste discarded by humans is often biodegradable, while discarded synthetic plastics, such as polythene, are non-perishable wastes. According to the Western Provincial Management Authority (2016), waste is a substance people dispose of, intend to dispose of or dispose of following local law.

The study sample defined solid waste in various ways, and it seemed that the definitions came out of their understanding of culture and social experiences.

"I think solid waste is non-perishable material. Things like plastic." (Survey Data, 2022)

"Glass, plastic, iron, polythene, and foodstuffs can all be taken as solid waste, can't they? Our household bins are sorted in that order." (Survey Data, 2022)

"Any waste belongs to this category. I classify it as perishable and non-perishable." (Survey Data, 2022)

"We have a classification as solid waste, liquid waste, right?" (Survey Data, 2022)

"Household solid waste can be classified as industrial solid waste because it is completely different from solid waste." (Survey Data, 2022)

"Materials of no economic value that are discarded by humans or activities are waste" (Survey Data, 2022)

Waste is a dynamic concept. It can be interpreted in many different ways. According to Strasser (1992), a new definition of waste is being proposed. Strasser (1992) describes waste as an object-oriented modelling language. There, in defining waste, its purpose is structure. State and performance factors are essential. There is no economic value that waste can be permanently discarded. The solid waste problem results from problems of new environmental, social, cultural and political roots. The generation of solid waste causes environmental problems such as air pollution, water pollution, and soil pollution. Also, solid waste is directly linked to the individual's social life. The over-consumption pattern of modern man, the consumption of symbols, attitudes, and personal behaviours, as well as the behaviour of power politics, are the reasons for waste generation. In solving the problem of solid waste from a sociological perspective, it is essential to identify waste as a social fabric. Although waste generation is understood scientifically, paying attention to all aspects of solid waste management, from the raw level, in identifying solid waste as a social construct and a structure of power politics is essential. In explaining the sociological interpretations of solid waste, the concepts of solid waste as a social fabric are even more critical. The increase in token consumption in large societies and the growth of economic development dimensions have led to solid waste generation. Common social attitudes toward pollution are explained through cultural approaches. Mahees (2018) states that the negative attitude towards waste uses three principal dimensions. That is, the meaning of something dirties the attempt to hide the waste, and the social protests against the disposal of the waste change the social perception of the waste.

As per the findings of the survey data, solid waste is defined in various explanations, and it is clear that the definitions of solid waste come from education and culture. The fact is that all the definitions are criticizing the negative effect or harm of solid waste. Thus, it is clear that social attitudes towards waste are negative. Society has not progressed enough to look into the aftermath of trying to dispose of waste due to its reluctance to realize that waste is generated within itself.

Gender and solid waste generation

According to the survey data, most study samples remained at home as housewives. Among them were a handful of small-scale self-employed

people who could work from home. However, the husband was named the chief earner of the family by a large percentage of this family sample. Interviews with the study sample showed that women were more likely than men to control the role of women in the family and to control waste generation. It was revealed that the woman thinks it is her responsibility to determine the items consumed in the home, the nature of the items consumed, and the number of times an item is consumed. The study also found that women's domestic household power played an important role in family management in determining whether household waste was recyclable. Examples include disposable jam bottles, reusable spice packaging, disposable linens for home cleaning, and carpet use.

The traditional method of dividing responsibilities and tasks within the Sri Lankan family was similarly visible in this study sample. Fadhullah et al. (2022) describe women and power, noting that women's power varies from culture to culture. According to Fadhullah et al. (2022), a woman gains power in the home, and men gain social power. Theoretical explanations of how women associate their power with the economy and society are confirmed by the domestic behaviour of women in the study sample.

"We always tried to reduce the amount of waste in the house. We reduced our waste because we were aware of the damage caused by waste. We often try to use plastic bags instead" (Survey Data, 2022)
"The man's habit is to go to the store and bring the goods in a shopping bag. It is very difficult to control" (Survey Data, 2022)
"Children's school supplies can be procured from home. That way, a lot of the things we throw away can be reused" (Survey Data, 2022)
"Most of the time, my husband's business brings in polythene bags. My daughter and I sew reusable bags. We make much money from it. We sew about 100 bags a week" (Survey Data, 2022)
"We make compost and reuse polythene, and it controls waste a lot. Also, as a mother, I always care not to generate waste. If we can reuse something, I am not spending any extra rupee for that" (Survey Data 2022)

Women covered several essential areas such as waste segregation, control of waste accumulation, and informing officials on waste disposal issues. It was also observed when collecting the data that they had also volunteered to inform the women in the neighbourhood when the waste truck

arrived. Field observations made in connection with the study revealed a number of problems related to the accumulation of waste in the housing complex. That is, tractors from the Anuradhapura Municipal Council arrive on separate days to collect waste. The lack of a specific sharp time for the tractors to arrive was a significant problem with the waste disposal. Also, most women believed keeping waste in the house would be challenging if the tractors that collect more than one day did not arrive. The observation also revealed that people from other areas were coming and dumping waste on both sides of the road. It polluted the houses, and homemakers were significantly informed and complained about it many times, but the authorities did not care about it.

Finally, the theoretical explanation that a woman gains power in the home and men gain social power and that a woman associates her power with the economy and society is generally applicable to society. Women play a significant role in waste generation as they have the power to control waste generation and waste management. As primary earners, men are unaware of waste generation; according to the survey, most men generate waste, and women control it by reusing or reducing it.

Sociocultural value factors and solid waste generation

According to Tyler, culture or civilization is a complex set of knowledge, beliefs, arts, customs, and all the other habits and talents that a person acquires as a member (Tyler, cited O'Brien, 1999). Thus, it is clear that culture can be interpreted as the heritage of a particular society. A subculture is a group of people created using elements of the mainstream culture (O'Brien, 1999). Instead, there is a loose and informal social participation in a subculture (Scanlan, 2005). Environmental and geographical changes are significant factors in forming a subculture. In a few years, creating a landfill in an area where people live will force members to adapt to the new environmental pattern. Accordingly, a new social environment is created. The study revealed that the subcultures created in the field due to the waste heap had affected the people's lives. It proved that various forms of power functioned in it.

Salequzzaman et al. (2001) found that education can transform communities, change attitudes and develop waste management and resource management skills. Salequzzaman et al. (2001) argue that education promotes sustainable development and improves human resilience to environmental and

educational issues. The study's findings suggest that education is essential based on the knowledge, attitudes, skills, and experience needed to address solid waste issues at the individual and social levels. Skinner (2004) states that community education is essential for optimal waste management and can lead to risk reduction. Skinner (2004) also points out the need for cost-cutting programs that reduce waste and recycle recycling through aggressive community education of consumers and manufacturers.

Some key points have emerged from the study data when considering the education factor. Although family members have little scientific knowledge of waste generation or management in the field, family education plays a vital role in social knowledge and social integration, especially for women.

"We have been making compost since time immemorial. I am going through the same habit." (Survey data, 2022)
"Learn a lot and know the damage of waste. If you know you cannot live in a pile of rubbish, that's enough." (Survey data, 2022)
"I've been telling my kids since time immemorial what happens when waste is piled up. Polythene, that it's the biggest damage." (Survey data, 2022)
"Gentlemen, come in the morning and leave the waste bags. How can there be such people in the house?" (Survey data, 2022)
"I did not know it is not good to burn polythene. I got it on a Television show." (Survey data, 2022)

The formation of knowledge and attitudes through informal education contributes significantly to the prevention of waste generation. The pattern of consumption in society is determined by established economic development. In the world sphere, industrial-capitalist economic development has existed since the mid-eighteenth and early nineteenth centuries. This development is based on generating goods and services on a large scale through mechanization powered by various energy sources. Consumption of goods is promoted through advertising. One of the main reasons for the accumulation of waste is its poor management, which is due to the unsatisfactory processing of waste from industrialization and the production of goods and services into waste. Glass, for example, is a material that can be recycled many times over, and once used, it can be recycled as a raw material to produce new bottles instead of being thrown in the trash. The recycling of glass bottles is selected,

and the accumulation of waste is reduced as it becomes the raw material needed to produce new bottles. This will lead to less pollution due to the extraction of silica sand for glass production, reducing the industrial process time for glass bottle production and reducing the amount of waste due to the addition of glass bottles or containers.

The relationship between culture and waste generation is also essential. Culture refers to the generally accepted pattern of behaviour that includes all artificial material things. It applies to religion, ethnicity, language, symbols, beliefs, customs, values, norms, restrictions, skills and abilities. Forming new cultural practices and attitudes concerning social realities is another important aspect of culture. According to survey data:

"Buddhism teaches the importance of cleanliness in the home. We should not harm a single leaf of a tree. I think we learn these things from the family before school. Explain all this within a religion." (Survey data, 2022)
"There is a lot of talk in our religion about waste management, especially Buddhism. Gordon is focused on health." (Survey data, 2022)
"The church teaches us a lot. In the meantime, a waste-free house is a special lesson." (Survey data, 2022)
"Our house has the S 55 system. My kids definitely have to work under it. That's a big reason not to litter." (Survey data, 2022)

Peter Berger (1966) argues that the sociology of knowledge will have to deal not only with the empirical diversity of knowledge in human societies but also with the processes by which any such knowledge becomes a reality socially validated. He goes on to say that the reality or knowledge of a society is socially constructed. That is, the importance of social knowledge when it comes to waste generation is evident.

They often believe that nature is a creation of God and that polluting nature is tantamount to bringing disgust before God. For example, Mahees (2018) states that when it is challenging to control waste dumping on roads or public places in urban Sri Lanka, people temporarily place statues of gods or Buddha's near those waste dumps to prevent illegal dumping. Socially developed cognition of the individual or society's disposal of solid waste and its impact on various issues is important here. Ordinary people's cognition and local knowledge are as important as theoretical approaches and scientific teachings. These indigenous knowledge or culturally constructed realities

cannot be proven statistically or quantitatively. They must be understood subjectively. As culturally constructed social realities became more powerful, the formation of those attitudes through social integration became clearer in the field than the scientific and theoretical understanding of the adverse effects of solid waste generation.

Conclusion

In conclusion, this study sheds light on the intricate interplay between social factors and solid waste generation and management. By delving into the socio-cultural context of waste practices, the research enhances the multifaceted nature of waste behaviours and the pivotal role of social dynamics in shaping them. From social education to gender roles and cultural norms to community engagement, various aspects influence how solid waste is perceived, generated, and managed within societies. One of the key findings of this study is the significant impact of social education on waste practices. Socialization processes are crucial in disseminating knowledge about waste management practices among individuals and communities. Through informal channels such as family, peers, and community networks, individuals acquire attitudes, beliefs, and behaviours related to waste generation and disposal. This highlights the importance of targeted education and awareness campaigns to instil sustainable waste management practices early on.

Moreover, the study highlights the gender dimension of waste management. Women emerge as central actors in waste management efforts, often assuming primary responsibility for household waste disposal and recycling activities. This enhances the need for gender-sensitive approaches in waste management policies and programs, recognizing and leveraging the significant role of women in waste reduction and recycling initiatives. Empowering women and providing them with the necessary support and resources can enhance the effectiveness and sustainability of waste management efforts. Furthermore, cultural norms and values are crucial in shaping community waste practices. Cultural beliefs, traditions, and practices influence how waste is perceived and managed, affecting attitudes towards recycling, reuse, and disposal. By understanding and respecting cultural differences, it is possible to develop culturally sensitive waste management strategies that resonate with local communities and foster greater participation and engagement. Community engagement is another critical aspect

highlighted by the study. Strong community involvement and participation are essential for the success of waste management initiatives, as communities play a central role in generating, managing, and disposing of waste. By involving community members in decision-making processes, promoting collaborative partnerships, and fostering a sense of ownership and responsibility, it is possible to mobilize collective action towards sustainable waste management practices. The study also enhances the importance of integrating local knowledge and perspectives into waste management strategies. Indigenous knowledge and culturally constructed realities offer unique insights into waste practices that complement scientific approaches. By embracing diverse forms of knowledge and expertise, it is possible to develop more holistic and contextually relevant waste management solutions that address local communities' specific needs and challenges.

In conclusion, this study highlights the intricate relationship between social factors and solid waste generation and management. By recognizing the influence of social dynamics, cultural norms, gender roles, and community engagement, it is possible to develop more effective and sustainable waste management strategies. Moving forward, embracing a multidisciplinary approach that integrates social, cultural, and environmental considerations into waste management policies and programs is essential. By working collaboratively with communities, empowering women, and respecting cultural differences, it is possible to create a more inclusive and resilient waste management system that meets the needs of both present and future generations.

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