
A Socio-Cultural Factors Affecting Food Wastage in Pushtoon Society; A Case Study of Malakand Division

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Abstract

Food wastage has escalated to be a major global and local concern that affects the society, economy, and culture of the world. Nevertheless, an estimated one-third of the food produced globally for human consumption is discarded every year, which equals 1.3 billion tons of food wasted worldwide. The Pashtun community is accustomed to wasting food as the food habits of the people are a significant determinant of the community's socio-cultural life, mainly the principles of hospitality, pride, and bragging. The food left over at weddings, religious festivals, and community gatherings is usually thrown away as these events are the cultural milieus that revolve around the concepts of giving and wasting simultaneously. This research focusses the socio-cultural factor which are the main drivers of food wastage in the Malakand division in Khyber Pakhtunkhwa, Pakistan. The method for data collection in this research is quantitative in nature where data were collected from 295 respondents through a structured questionnaires carried out in four canteens in the nearby area. The results show that the primary reason for food wastage is the socio-economic status, cultural pressure, and class based imitation. Household belong to upper class waste more food as compared to lower class and flaunt their wealth, while the lower class or the low income people engage in such practices although they have financial problems. The research finding suggests that the food wastage in pushtun society is mostly because of the cultural heritage, rich tradition, and social disparities in the community. The paper suggests that there is a need for proper measures to reduce these wastage of food, these measures can be promotion through media, food bank system, redistribution program, and involving local religious scholar to addressed this issue in Islamic context to reduce food wastage and safeguard the pushtun tradition and customs of generosity and hospitality.

Keywords: Food Wastage, Pashtun Society, Socio-Cultural Factors, Hospitality, Malakand

Introduction

Food wastage is one of the major global and local concern in the current time. Nearly one-third of all the food produced for the consumption of human is wasted every year, which equals estimate 1.3 billion tons globally (FAO). Such wastage is found at every step of the food supply chain from production to consumption and thus, is harmful to the environment, economy, and society. If food is wasted, then naturally all the factors that are used in its production like water, land, energy, and labor are wasted as well. On the other hand, Food consumption often functions as a cultural symbol of generosity, honor, and social status rather than merely a biological necessity (Douglas, 1966; Veblen, 1899; Wilk, 2014), a greenhouse gas that has 25 times more heat-trapping potential than carbon dioxide, which in turn contributes to climate change and pollution. The losses on the

financial side are just as enormous with the worldwide food waste figured at almost one trillion dollars per year (FAO, 2019; UNEP, 2021). Besides the environmental and economic facets, food wastage is a socially oriented problem as well. It manifests the unequal access to resources, as rich households waste more food due to overbuying and cultural practices while poor ones struggle to meet their nutritional needs. It is most apparent in Pashtun society where hospitality is considered one of the core values. Providing excessive food to guests is regarded as a way of showing honor and respect and the hosts are often scared of the social disgrace if the food happens to run out during the gatherings. Consequently, enormous amounts of food are being prepared at weddings, religious festivals, funerals, and community events, of which more is left uneaten and later thrown away.

The wastage of food is further linked with socio-economic differences, where rich household may waste more food while flaunting their wealth, whereas low income household imitate these practices and behaviors although they have economic and financial constraints, such imitation creates social inequalities as low income families might have to struggle to balanced cultural expectation with their limited resources. Also there is no proper redistribution system such as food banks network to ensure that the surplus food is redirected toward those who are in need, instead food is mostly thrown away because of social stigma and worries about the cleanness of food s(Bashir et al., 2020; Wilk, 2014; FAO, 2019) Food wastage has been pronounced as a worldwide challenge that causes far-reaching consequences in social, economic, and environmental aspects. The Food and Agriculture Organization (FAO, 2019) estimates that nearly one-third of all food produced for human consumption is lost or wasted, which is about 1.3 billion tonnes annually. This wastage takes place along the supply chain, from production and storage to distribution and consumption, and hence, considerable financial losses are made which are estimated to be almost one trillion dollars annually. Apart from the costs, food waste is a major contributor to environmental degradation since the discarded food in landfills emits methane, a greenhouse gas that is 25 times more potent than carbon dioxide (UNEP, 2021).

In developing countries food losses are due to poor infrastructure, traditional farming and harvesting, and improper storage areas, in countries with higher income levels, the basic factor is the individual behavior. Extra amount of groceries shopping throwing away food based on wrongly interpreted "Expiry dates" are main driving factors of waste (Lipinski et al., 2013). The food wastage need to be studied within the context of specific cultures, such as Pashtun society, where traditional hospitality norms are combined with modern consumer practices. Furthermore, the increasing impact of consumerism and elitist lifestyles in urban areas of Malakand Division has fractured this trend, as families showcase their wealth through extravagant meals. Food waste from a sociological angle can be explained with the help of the theory of "conspicuous consumption" elaborated by Thorstein Veblen (1899) which means that the excessive consumption is a way of showing up one's wealth and status. Richer families tend to throw away more food to make a loud statement of their wealth, while poorer ones imitate these behaviors in order to save their face even at the sacrifice of their finances (Ahmed, 1980). This imitation aggravates the gap between different classes and points to the cultural pressure that pushes the individuals into committing wasteful practices.

On the other hand, psychological and behavioral research bring new insights into food wastage. Porpino et al. (2015) discovered that consumers frequently would misjudge food requirements, they are induced to purchase by their impulse and they decide to throw away the food left over while these kinds of activities are driven by emotional or social factors. In Pashtun families, the worry of being regarded as "ungenerous" triggers the practice of over-cooking while at the same time the cultural restrictions that prohibit the giving of leftover food to others hinder the solution of the problem. Russell et al. (2017) suggest that the feeling of guilt caused by food wastage hardly

results in the change of the behavior for a longer period unless education or policy support is there. From the perspective of anthropology, its emphasis is on how the definition of "waste" is dependent on human social constructs. Mary Douglas (1966) remarked that that which one culture sees as waste, another may value. In the Pashtun community, although Islam is very clear in its prohibition against waste (Qur'an 7:31), the cultural habits of overflowing food tend to hide the religious teachings. In the past, surplus food was given to neighbors and the poor but urbanization and the fading away of the extended family have resulted in the slowdown of these sharing practices (Wilk, 2014). Another important reason behind the problem is the lack of formal food redistribution plans in areas such as Malakand Division. Food banks and donation networks are available in Western countries to redirect food that is in excess but in Pashtun society, the leftover is mostly thrown away due to stigma and difficulties in logistics (Bashir et al., 2020). Fear of food not being safe and feeling socially embarrassed are some of the reasons why people are reluctant to share food. Environmentally-oriented research points to the invisible side of food wastage that is what it costs to our earth. Kummu et al. (2012) state that for the production of one kilogram of rice over 2500 liters of water is needed, thus every wasted meal is a waste of nature's resources. However, many communities are still not very aware of these effects on the environment. Educational campaigns that put food saving into the frame of cultural and religious values could be a means to change people's minds. This research is based on sociological and cultural theories that explain how customs, social norms, and class interactions influence human behavior. Food wastage in Pashtun society is not just the result of individual choices but is deeply lace with larger socio-cultural structures. Theories from different intellectual domains can be used as a basis for understanding this social phenomenon.

Conspicuous Consumption (Veblen, 1899): Thorstein Veblen's theory points to the fact that consumption can be used as a means of showing one's wealth and social status. In Pashtun society, immense meal and over-the-top food preparations at weddings, religious festivals, and community events are the examples of such behavior. Food is wasted by rich families to prove their affluence, and poor families are seen to imitate these in order to save their face from the community, even at the risk of their financial condition. Social Inequality (Marx & Engels, 1848). Marxist theory is mainly about class divisions and differences in the quality of life and access to resources. Food wastage in Pashtun culture is a case in point that issues of inequality are at the root of the problem as those in the elite households have the luxury of discarding surplus food whereas the underprivileged families are struggling to meet their basic nutritional needs. This dramatic contrast serves to show how the cultural expectations have a major role in intensifying socio-economic disparities. Cultural Norms and Rituals (Douglas, 1966) Anthropologist Mary Douglas pointed out that the classification of things as "waste" is an issue of social construction. In Pashtun society, while the rules of hospitality demand it, food excess is considered a source of honor and respect. What is regarded as "excess" in one scenario may be considered necessary in another. These cultural meanings influence the people's attitudes towards food preparation and wastage. Religious Teachings (Islamic Perspective) Islam is very clear about its prohibition of wastefulness as mentioned in the Qur'an (7:31) where it warns against the excess. However, despite that, the practice of extravagant foods often outshines the religious command. The incompatibility or the tension between religion and culture is at the very core of the issue of food wastage in Pashtun society.

Statement of the Problem

Food wastage represents a significant social issue at both global and local levels, with substantial quantities of food discarded on a daily, monthly, and annual basis. In Pashtun society, this problem is exacerbated by socio-cultural traditions that emphasize hospitality, generosity, and honor. Social

and cultural norms, particularly those associated with rituals and celebrations such as marriage ceremonies, circumcision ceremonies, Eid ul Fitr, Eid ul Adha, and Iftari, contribute to increased food waste, as hosts frequently prepare excessive amounts of food. Conversely, a considerable segment of the population experiences food insecurity and often goes to bed without adequate nourishment. By examining the socio-cultural and economic factors underlying food wastage, this study seeks to reveal the deeper issues of social inequality, cultural pressures, and resource disparity within Pashtun society. The research aims to propose culturally sensitive strategies to reduce food waste and promote more equitable food distribution.

Materials and Methods

This study was conducted for the reason of investigating the socio-cultural factors that contribute to food wastage in Pashtun society and particularly focuses on the Malakand Division of Khyber Pakhtunkhwa. The research primarily relied on fieldwork, and the data were collected directly from respondents in selected canteens in the nearby area. The researchers have to capture real-life consumption patterns beyond household contexts, for which field surveys in public food consumption settings have been widely used in sociological research to examine eating behavior and food wastage (Porpino et al., 2015; Russell et al., 2017). The methodology adopted for this study was quantitative in nature, which is appropriate for measuring the frequency, distribution, and prevalence of social behaviors across a defined population. This approach enables the researcher to examine variables such as income, education, age, and cultural expectation in a structured and comparative manner.

Study Area and Population

The study was primarily carried out in four canteens located in the nearby area of Malakand Division which are Hot meal, Almadina, Masher, and Alkhair these were the canteen where the researcher first conducts a pilot survey where the finding of pilot survey shows that about 1150 individual visit these canteens on daily basis. The data were then collected from the respondents through structured questionnaire from, these sites were selected due to the relevancy of the issue because these canteen serves a large amount of food on the daily basis to people like teacher students and common people in the surroundings.

Sample Size

The sample was selected using Sekaran's (2010) method, as examining the entire population was not feasible due to time and resource limitations. A representative sample was determined using Sekaran's (2010) sample size formula, which is frequently applied in quantitative social research. With a 5% margin of error, the calculated sample size was 295 respondents. This sample size is sufficient to produce reliable and valid results while remaining manageable for the study. This sampling technique is widely adopted in the social sciences to ensure valid and reliable outcomes.

Sampling Technique

The stratified random sampling technique has been used to obtain a proper representation of every groups within the study population. Respondents were divided into groups based on age, gender, occupation, and education level, as these variables are the primary source to influence food consumption patterns and wastage behavior among individuals, from each group, individuals were selected randomly to participate in the survey. This sampling technique is widely used in social sciences research because it reduces sampling biases and enhances the representativeness of heterogeneous populations (Sekaran, 2010). The main source of data collection was structured questionnaires created by student researchers and validated by the supervisor. The questionnaires included five sections. The first section gathered demographic information such as gender, age,

income, and education, which individuals filled out accurately. The second section focused on food consumption habits, with an emphasis on individual choices and how often they eat out. The third section dealt with cultural and social beliefs, particularly the strong tradition of hospitality, honor, and respect. The fourth section looked at attitudes toward leftovers, while the fifth section explored views on reusing food, sharing food, or donating surplus food. These types of questionnaires are commonly used in studies related to food waste and consumption behavior. All the questions in the questionnaires were designed in a simple Yes/No format. This approach ensured that respondents answered honestly, providing clarity and reducing dishonesty. The researcher personally visited the field to distribute the questionnaires and later collected them directly. This face-to-face interaction with respondents also improved the response rate.

Results and Discussion

The data collected from the respondents were analyzed by the software mostly used in the social sciences for the data analysis is Statistical Package for Social Sciences (SPSS). The data were analyzed using descriptive statistical techniques, specifically frequencies and percentages and the results of the given data are summarized in the following table. SPSS is widely used in social sciences for data analysis and most commonly employed in empirical research. Every statement from the table reflects different behavior related to food wastage and food consumption as well as disposal. Some individuals may be in favor of reuse of food and some may not be, every statement generates different responses and perceptions at a time about food.

Table 4.1: Frequencies and Percentages of Respondents' Views on Food Wastage

S.No	Statements	Yes (%)	No (%)	Total (%)
1	Do you waste food occasionally at home or outside?	180 (61%)	115 (39%)	295 (100%)
2	Do you think cultural events (weddings, Eid, funerals) lead to excessive food preparation?	240 (81%)	55 (19%)	295 (100%)
3	Is food wastage more common among upper-class families?	210 (71%)	85 (29%)	295 (100%)
4	Do you feel social pressure to serve more food than necessary during gatherings?	225 (76%)	70 (24%)	295 (100%)
5	Do you believe Islam discourages food wastage?	280 (95%)	15 (5%)	295 (100%)
6	Do you reuse leftover food at home?	190 (64%)	105 (36%)	295 (100%)
7	Is it socially acceptable to donate leftover food after events?	110 (37%)	185 (63%)	295 (100%)
8	Do you think food wastage reflects inequality between rich and poor?	250 (85%)	45 (15%)	295 (100%)
9	Do you think awareness campaigns can reduce food wastage?	270 (92%)	25 (8%)	295 (100%)
10	Should food banks or redistribution systems be introduced in Pashtun society?	265 (90%)	30 (10%)	295 (100%)

Interpretation and Discussion

The table above have generated different responses about food wastage in Pashtun society. The first finding where 61% of respondents have admitted that they waste food occasionally at home which show that food wastage is a common and normal practice in Pashtun houses or in the society, and these are the educated individuals who are aware of the consequences of food wastage A huge number 81% of respondents show that mostly the food is wasted in the cultural or religious ceremonies, where in weddings excessive amount of food is prepared to avoid social stigma, Eid celebrations, and funerals excessive food is prepared and most of the food is discarded after the event. In Pashtun culture, the hospitality is mainly linked with serving a lot of food at the same time which is considered as the symbol of respect and generosity, and it show that food wastage in Pashtun society is common practice and deeply rooted in cultural rituals.

Regarding socio-economic differences, 71% of respondents believed that food wastage is more common among upper-class families, because upper class families do big events compared to lower class people and flaunt their wealth and instead of distributing the extra food in those who are in the need they discarded the food or throw away the food, Ceremonies like wedding, circumcision ceremonies, and even in Eid and Iftari they prepared excessive amount of food to maintain their position , respect and honor in the society Another significant factor contributing to food waste is social pressure. About 76% of respondents feel compelled to serve more food than necessary at social gatherings. People from upper-class backgrounds often serves an abundance of food to their guests. Individuals from lower-class backgrounds also feel the need to keep up in this competition because they do not want to be embarrassed in front of their guests, which also lead to food wastage. Religious awareness was significantly high, as 95% of respondents believed that Islam discourages food wastage which is certainly a positive factor, and these findings show strong relation with Islamic teachings, specifically the Qur'anic injunction against extravagance (Qur'an 7:31). However, the continuous wastage of food highlights a gap between religious knowledge and social behavior. Wilk (2014) also argues that cultural rituals and tradition often overshadow ethical and religious principles, especially when social prestige is at stake. The present study show that cultural rituals are followed more in Pashtun society as compared to religious knowledge. Particularly regarding the reuse of food, 64% of respondents favor its reuse at home, while 36% are against the idea. This idea of food reuse is strongly aligned with the findings from Porpino et al. (2015), who noted that households may reuse food sometimes but will still discard edible items due to social stigma, inconvenience, or lack of preservation knowledge. The reuse of food reflects not only individual behavior or habits but also the perceptions associated with it. Due to the rich tradition of Pashtun society, it may be considered bad to reuse the food, or some people may feel embarrassed to reuse the food. The process of redistribution is not that hard part to do where only 37% agreed to the process or method of redistribution among the needy people, whereas 63% of the people are against the idea of redistribution, and these findings are align with Bashir et al. (2020), who identified social stigma, food safety concerns, and absence of formal food banks as major barriers to redistribution in Pashtun society. In developed countries they have proper system of food redistribution while in developing countries food wastage more because of no proper reuse, redistribution and food bank system. Significant number up to, 85% of the respondents believed that food wastage reflects inequality between the upper class and lower class people in the society. This perception reinforces the argument that food wastage is not because of the individual behavior but also a structural and class-based issue. While rich households waste higher amount of food mostly the surplus food, marginalized groups struggle to meet basic nutritional needs, a contradiction widely discussed in global food security literature (FAO, 2019; Gustavsson et al., 2011). The positive aspect is that, 92% of respondents supported the awareness campaigns as one of the strategy to reduce food wastage in the Pashtun society, and these are mostly aligns with

FAO (2019) recommendations that behavioral change interventions are most effective when they are culturally sensitive and oriented towards the values. Similarly, 90% of respondents are in the favored of food banks introduction and redistribution systems, highlighting public interest for structural solutions. Lipinski et al. (2013) argue that when community support institutional mechanisms it will also bridge the gap between surplus and scarcity. Overall, the findings reveal that food wastage in Pashtun society is shaped by a complex factor like cultural traditions, social pressures, economic status, and behavioral norms. Although religious and moral awareness regarding food wastage is high, where it has clearly stated in the Quran about food wastage but cultural expectations, and rich tradition of hospitality often override these values. Upper-class consumption patterns and class-based imitation further increase wastage and social inequality, where upper class people waste more food in their gatherings and lower class people imitate them despite their limited resources, but the encouraging part is that the respondents support redistribution mechanism, food bank and reuse of leftovers.

Conclusion

This study finds out that food wastage in Pashtun society is due to multiple factors and is deeply rooted in cultural traditions, social expectations, and socio-economic inequalities. The research finding suggests that food wastage mostly happened in the cultural and religious rituals and ceremonies, where in wedding, funerals, Eids, and Aftari, household prepare excessive amount of food driven by hospitality norms and the fear of social embarrassment in front of their guests. Generosity is also among the factor which contribute a lot to food wastage, where it is a highly valued in Pashtun culture. The study further reveal that another factor for food wastage is socio-economic status. The society mostly contain of two types of household, which are high income household and lower income household, where the rich household waste more food as a display of affluence or to flaunt their wealth, while the lower income household or families face social pressure to imitate these practices despite their limited resources and financial constraints, these imitation not only contribute to food wastage but also increased social inequality in the society, where the surplus food is discarded and some people in the society go to bed without having food. Islam clearly discourage food wastage also the over preparation which ultimately lead to wastage and the surplus food is discarded, most respondents acknowledge the principle of Islam regarding food wastage, but the Pashtun rich tradition of hospitality and generosity undermine the religious values and Islamic teaching While Islamic teachings clearly discourage wastefulness and most respondents acknowledged this principle, cultural expectations frequently take precedence over religious values in practice. There is a need of proper awareness program to aware people about the consequences of food wastage specially on the community level, where mostly the involvement of local religious scholar is more essential because local people followed them and respect their opinion regarding such issues. There is no formal food redistribution mechanism such is food bank where the leftovers are being distributed among those whose are in need which also reduce food wastage. The leftover food is mostly not distributed because most people think there is social stigma attached with redistribution of leftover, however the research finding suggests strong public support for awareness campaigns and introduction of food banks in the local areas because people are willing to bring change when guided properly. In last, food wastage in Pashtun society need to be understood not only as an individual behavior but also as a collective cultural practices influenced by socio-economic structures. Addressing this issue requires a balanced approach that respects cultural norms and their traditions while promoting sustainability, equity, and community responsibility.

Suggestions

Based on the findings of this study, a number of culturally acceptable and practically possible measures are being recommended to reduce food wastage in Pashtun society while safeguarding the most common value of hospitality, honor, and generosity. First, the introduction culturally sensitive awareness campaigns to educate communities about the social, economic, and environmental consequences of food wastage, where we will first involve the community leaders and local religious scholar. The first priority of these campaigns will be to educate the community first rather than directly rejecting their rich culture of hospitality and generosity. Apart from these we can run social media campaigns, community gatherings, and educational institutions can help in spreading messages that promote responsible food preparation without harming the traditions of generosity. Second, religious institutions and scholars should be actively involved in promoting sustainable food practices, the involvement of local religious scholar is the most necessary because Islam discourage wastefulness and the scholar will aware people within the Islamic teaching, Also in the Friday prayer they can present Hadith, and some Ayah from the Quran which will also contribute to reduce food wastage .Combining both religious guidance and cultural tradition can also improve consistency between belief and action .

Third, the introduction of community-based food redistribution program, specially for large social events such as weddings, funerals, and religious gatherings, where the extra food will be distributed among the needy one. Food banks establishment where the surplus food will be donated or submitted into the food and these food banks will be managed by community organizations or local administrations to avoid wastage and also will facilitate the people through safe collection of food redistribution of surplus food in the needy households, such initiatives can bring a lot of change the communities and will also create social solidarity among the community members. Fourth, event-level planning and portion management should be encouraged, now a days the introduction of Shadi halls have bring out some changes in the society where the individual tell them about the numbers of guest coming to event and they prepared accordingly where if little extra amount of food is being prepared then then they give it to the host family and they sometime reuse it redistribute it in the neighborhood which also reduce food wastage, another factor which have contributed to reduce food wastage is the live food preparation where live food is prepared for the guest accordingly, for example live BBQ.

Fifth, educating people about food wastage and practices of reusing of food should be promoted at the household level. Training sessions, arranging seminars, workshops, about the food reuse and safe method for food storage where people can store large amount of food to reuse it. Also we have to addressed the social stigma associated with the reuse of food can also reduce food wastage Finally, future research should explore food wastage in other social settings, such as households, markets, and rural communities, and they need to employ qualitative methods, because in the current study quantitative method have been adopted, while adopting qualitative method the researcher will gain deeper insights and will get rich knowledge about the issue also about the cultural meanings attached to food wastage.

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