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DOES SOCIAL STRATIFICATION PREDICT HOUSEHOLD FOOD AND NUTRITION INSECURITY? A SOCIOLOGICAL PERSPECTIVE

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ABSTRACT

Food security is a multifaceted and manifold paradox that includes social, biological, nutritional and economic aspects. Food is not only related to dietetic sources but also plays numerous roles in social life and is closely linked to cultural differentials. Despite its multi-dimensional approach, food security has been molded in a number of ways since its dawn. However, food security was transformed from a micro to a macro level during the World Food Conference of 1974. Food security exists “when all people at all times have physical, economic and social access to sufficient, safe and nutritious food, essential for meeting their dietary needs and food preferences for an active and healthy life”. The present study was conducted in light of a sociological perspective in the district of Torghar, Northern Khyber Pukhtunkhwa, Pakistan to assess the household food security status. A sample of 379 household head was selected out of 26464 as per the proportional allocation method. Moreover, descriptive and inferential statistics was further used at descriptive and bivariate analysis. With regards to demographic profile of the respondents 37% of household heads were between the ages of 46-55, with 42% of illiterates, 70% of household heads were part of a joint family system, and 84 percent were waiting for rain to irrigate their agricultural area. In addition, the results further found that men were predominantly focused on the provision whereas with females the predominant focus is on food security. Social stratification directly affects the nature and frequency of food on sustainable grounds, various social classes exhibit distinct differences in food behavior. The division of labor does favor men as a resultant factor of cultural inclination, and food insecurity and hunger are social injustices and reciprocal in response. Therefore, an awareness programme through social media combining "walk for the hungry" and other similar fund-raising programs focused at national and local levels was the order of the day. This could change the existing scenario of food insecurity in the study area.

Key words: Food Security, Social Stratification, Social class, Division of Labor, Chi-square Statistics

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INTRODUCTION

Food and nutritional security around the globe is a great concern. To that end, the current study will examine the household food and nutritional security status in general, as well as social stratification in particular, in Khyber Pukhtunkhwa district Torghar. This study is perceptional in nature, and the results' validity and reliability were determined using statistical analysis. The following literature study summarized the fundamental principles of food and nutritional security in a chronological order.

Food security [FS] is a multifaceted and manifold paradox that includes social, biological, nutritional, and economic aspects [1]. Food is not only concerned with dietetic sources but also plays numerous roles in social life and is closely linked to culture and variation [2-5]. Despite its multi-dimensional approach, FS has been molded in a number of ways since its dawn. However, food security was transformed from macro (global and national) to micro level (household and individual) during the World Food Conference of (1974) as witnessed by Maxwell [6]. Food Security is defined in a variety of ways. The World Food Summit (1996) adopted the most widely accepted concept as the operational definition [7], defining FS as "everyone having access to sufficient food for an active and healthy life" [8]. The Food and Agriculture Organization of the United Nations and the World Health Organization defined FS in 1992 as "fair access to nutritious food at all times [9-11].

The title FS was first acknowledged in its ramification in 1948, when the right to food was associated with a standard of living. The 1972–1974 global food crisis heightened the significance of this reality. Its significance grows with the expansion of its indicators over time. It was declared as a challenge in the first half of the century as the challenges of population growth, poverty, threats to the environment and the undesirable instant climate change [12, 13], with growing instability on political fronts, which inflict irreversible damage to both human life and the environment [14, 15]. Thus, necessitating the inclusion of applications to individual, household, national, and regional levels to inculcate physical and economic access to safe and nutritious food enough to meet this dietary requirement as disclosed by [16-19].

INTERNATIONAL SCENARIO

Data regarding human survival is enriched with struggles against the different models of vulnerabilities. These include wars, epidemics, famines, and droughts

that affect almost every nation, with variations depending on time and region. World history emanates that all major powers, including the U.S, struggled with containing the issues of famine, civil wars, and food insecurity. Almost 17.5 million U.S. households were identified as food insecure [FI] in 2013 [19]. However, the ratio of U.S. household FI population was accelerated to 37.2 million in 2018 by the virtue of meals skipped, buying non-nutritious items, or feeding their children instead of themselves, evoking the agent that out of a total of six, one of the United States' children were FI [20]. Likewise, as per the United Nations Children's Fund, 14.3 million American households suffer from food insecurity. According to the preceding, 10% of Canadian households were FI [21], with over four million households, or one in every eight, experiencing food insecurity, with one point and fifteen million children, respectively [22], whereas the number increased to over four million, or eighteen percent, in 2017. However, 76% were classified as having extremely low FS in 2017, while children's difficulties accounted for 22% [23]. In the United Kingdom, 2.2 million people were extremely food insecure on average from 2015 to 2017 [24]. Similarly, the situation is worse in developing countries. Africa is first with 239 million malnourished people, followed by South and East Asia and Latin America, where the situation is serious but better than in Africa [25]. This issue could be attributable to the world's growing population. Nearly 12% of the world's population is malnourished. This figure is horrific when Asia and Africa are excluded, with Asia and Africa accounting for 92 percent of the total [25]. One in every ten households is considered food insecure. Despite this, private and public zones went above and beyond by offering all feasible assistance to make them food secure [25].

ASIAN SCENARIO

Asia has one of the highest rates of malnutrition children, at 64 percent, or 519.6 million, as stated by the FAO [26]. Additionally, this portion of the population contains half of the overall population that has not achieved the target level, as hypothesised, which is one of the limiting causes, due to its callous nature. Asia is one of the poorest regions in the world, with a 40% malnourished population, frequently as a result of persistent drought, fracturing the chain of food and nutrition security [27]. India has the world's highest prevalence of wasting (26) rate. Today, the globe is confronted with a huge number of stunted children (150.8 million), 83.6 million of them lived in Asia in 2017 and 2018[1] (See table 1).

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PAKISTAN SCENARIO

Pakistan is a food surplus country but experiences high levels of FI, mainly due to poor access. Most Pakistani households are unable to afford nutritious diets. Rates of malnutrition are alarmingly high. Close to half of Pakistani children are stunted, rates of wasting exceed emergency levels and micronutrient deficiencies are very common [1]. Water sources are under significant strain as a result of an increasing population, water-intensive agriculture and poor management [29]. Climate change is likely to create further difficulties over the next several decades. Water quality is also poor and the majority of the population does not have access to clean drinking water. As a result, water-related illnesses are one of the leading causes of disease and death [28]. Pakistan ranks 88th out of the 107 countries assessed in the Global Hunger Index 2020. According to the State of Food Security and Nutrition in the World report for 2020, the prevalence of undernourishment in Pakistan is 12.3% and an estimated 26 million people in Pakistan are undernourished or food-insecure [29].

In reference to the above stock of literature, the present study was designed to assess the household food security status in the purview of social stratification through quantitative research design such as chi-square test statistics.

MATERIALS AND METHODS

A cross-sectional based study pertaining to time horizon was conducted in the district of Torghar, northern Khyber Pukhtunkhwa, Pakistan. As per the Human Development Index (2017), Torghar had a 0.217 HDI reported in the 2017 survey. In simple words, the district comes under the domain of very low human development. Respondents in the universe of the study live their lives in rural areas and have no urban population [30]. A sample size of 379 household heads was set for the study as in the purview of Sekeran [31] criteria out of 26464 households. Furthermore, the selected sample size was proportionally allocated to each strata, that is, each tehsil, through the formula given by Bowley [32]. The American Psychological Association (APA) norms for research were followed for interviewing the household heads. A well-organized and comprehensive interview schedule was designed, encompassing all the study variables for the purpose of data collection. The survey was initiated and completed in the year 2020. The data were further coded into SPSS (26 version) for further analysis, that is, descriptive and inferential statistics through the application of indexation of the dependent variable (FS) and cross-tabulated with all the attitudinal statements of the independent variable (social stratification) in terms of chi-square test statistics.

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RESULTS AND DISCUSSION

Descriptive analysis

As indicated by (Pakistan Bureau of Statistics, 2017), all respondents were male (100%) and data on the household makeup of the de jure population are supplied for urban and rural areas in accordance with the country's census policies. These results show that male members of the society predominantly are household heads in Pakistan. It could be deduced from these findings that male household heads of the family correspond to the prevalent norms of patriarchy [1, 42]. Many (37%) of household heads were between the ages of 46 and 55, with 42 percent of illiterates. Additionally, 70% of household heads were part of a joint family system, and 84 percent were waiting for rain to irrigate their agricultural land.

Association between Social stratification and Food Security

Table 4 demonstrated a highly significant association (P=0.000) between men's preference for food provision and female FS. These findings may be linked to prevalent patriarchy, which confers secondary status on women while men enjoy hegemony as a result of masculinity, a force or value exercised by men in bringing family members together and providing food for them. While eating together is a global tradition, Asian societies make a clear distinction between males and females, with females expected to eat in the second term [34].

Additionally, a highly significant (P=0.000) association was discovered between food security and social stratification, indicating that the nature and frequency of food on sustainable land is closely related to social stratification. The most influential factors influencing food security are hunger-based inequalities caused by the division of society into classes and castes. The study area, which was rural and traditional in nature, had a strong operational social system that vividly reflected the aforementioned societal divisions. Prestige is mostly enjoyed by the wealthy and people from superior castes. The poor and destitute were found working as peasants. FAO [35] also indicated the prevalence of rigid stratification as the root cause of impediments towards achieving egalitarianism in food access. Low caste people and the socially secluded were found to be the most vulnerable segments of FI in India [36].

Similarly, a highly significant (P=0.000) link was detected between FS and food insecurity indicating that hunger is a form of social injustice that requires reciprocity. These results display the flow within the social structure, having no capacity to be misinterpreted and used in favour of a particular class to get the

benefits of the blessing from the social system. The needy and destitute are often denied access to certain amenities of life, even if they deserve them. Jedediah [37] has rightly intimated about the role of structural dynamics in a social system as the key to the provision of basic amenities to all segments of the population with no discrimination, i.e., working towards greater mainstreaming of different segments of the population.

A non-significant (P=0.577) association was found between FS and various social classes exhibiting distinct differences in food behavior. These results were not in line with Alcamo *et al.* [38] who disclosed that good and sub- standard quality of food is a cultural determinant. People from the upper class enjoy access to quality food, which are essential determinants of a quality of life. However, the lower classes regard food access as a legitimate service regardless of its form or quality [1]. As a result, the social and cultural preferences of the indigenous people towards dietary diversity are determined through food consumption behaviours. Class preferences shape food consumption patterns in a way that is highly correlated with the prevalent class/caste/creed taste for food.

Moreover, a highly significant association (P=0.000) was found between people not being able to afford and access food because of social stratification and FS. It could be deduced from these findings that affordability and accessibility to food items were strongly related to the rigid stratification that existed within the social system of the study area. These deductions pointed to the existence of highly stratified phenomena that exert a major influence on the social system. Thus, the social system lacks any model for resolving the social and economic problems that the respondents encountered in terms of food insecurity. Although there are numerous social nets such as Zakat[1] and Ehsasa[2] programmes, some are individual-based while others are institutionalised and funded by the state, they all lack the capacity to deliver while addressing hurdles to food access. Such dynamics are typically altered in extreme poverty, which has detrimental social and economic consequences [39].

Similarly, a highly significant association (P=0.000) was found between FS and women contributing more to agriculture than men in the study area. It could be deduced from these findings that women constitute a majority of the proportion in

[1] As one of the pillars of Islam, Zakat is a form of obligatory charity that has the potential to ease the suffering of millions. With the literal meaning of the word being 'to cleanse,' Muslims believe that paying Zakat purifies, increases, and blesses the remainder of their wealth.
[2] It is a governmental scheme that works for poverty reduction and ensuring food security to underprivileged people in Pakistan. This scheme is run by the government of Pakistan through ministry of poverty alleviation and social safety

agricultural production in the farming community; however, due to the prevalence of patriarchal norms, women faced FI more than male members of a society. These findings were corroborated by Phillips [40], who demonstrated that women's roles in production and other agricultural-related activities are widely accepted, which may have some beneficial effects on child malnutrition and household FS; However, in the study area due to the prevalence of patriarchal norms women involvement in agricultural practices were hindered respectively.

Additionally, there was a highly significant association (P=0.000) between men who frequently exploit division of labour and FS. It may be concluded that while males contributed to women's exploitation in the division of labour, they did it with cultural and social approval by behaving patriarchal. Ravindran et al work's [41] is similar to true findings, which stressed the importance of two techniques, namely paid and unpaid labour. In the majority of cases, domestic labour is not compensated; which jobs outside the house, such as those in factories, are compensated? It is worth noting that while males are typically compensated for their work in the majority of public institutions, it is unjust to compensate women for their work at home.

Similar to the above, a highly significant (P=0.000) relationship was found between FS and division of labor does favor men as a resultant factor of cultural inclination. These inferences were in consistence with the preceding findings [41]. Social stratification has resulted into gender-based disparities, which pursued the existence of division of labor between two sexes. Haplessly, women as a gender are mostly the disadvantaged segment due to the existing patriarchy. Such patriarchal characteristics have a strong tendency to curve the social situation in favor of men in the form of ownership over resources, power and prestige. Such like traits usually restrict women to have fair access to proper food as disclosed by Ravindran [41].

CONCLUSION

A perceptional-based study was conducted with the sole aim of assessing household food security through a social stratification perspective in District Torghar, Khyber Pukhtunkhwa, Pakistan. The study found that men are preferred for food provision in comparison to females. Social stratification directly affects the nature and frequency of food provision pertaining to security on sustainable ground. Moreover, food insecurity and hunger are social injustices and reciprocal in response. People are not able to afford and access food because of social stratification and the amalgamation of men who exploit the division of labour in the

study area. Thus, social stratification perpetuates social and economic inequality generally and food access particularly. Those who had higher social class may have access to better and nutritious food than lower class. An awareness programme by virtue of social and electronic media is the order of the day with amalgamation of "walk for the hungry" to raise funds for hunger programmes at national and local levels, to eliminate the existing scenario of food insecurity in the study area.

Competing interests

Authors declare no competing interest.

Authors' contributions

Khan Y contributed in topic selection, interpretation of the results, article writing and submission. Prof. Alsawalqa O.A funded the manuscript along with proofreading the article. Prof. Shah M, responsible for supervision of the overall process of this article. Dr. Asadullah help in data analysis. Prof. Khan N contributed in sampling design and questionnaire construction. All authors read and approved the final manuscript.

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Table 1: Prevalence of under-nutrition across different regions of Asia

Regions	Undernourished (% of population)	Stunting Rate (% under 5 year)	Wasting Rate(% under 5 year)
Central Asia	8.4	11.8	3.7
Eastern Asia	9.0	5.3	1.8
Southern Asia	14.4	33.3	15.3
South-eastern Asia	11.5	25.7	8.7
Western Asia	10.6	15.2	3.9

Source: FAO, 2018

Table 2: Proportional Allocation of sample size with respective tehsils

District Torghar		
Name of Tehsils	Household Head (N)	Sample Size (n)
Judba	14972	214
Khander	11492	165
Grand Total	26464	379

Table 3: Demographic sketch of the sampled respondents

Characteristics of respondents	Frequency (%)
Household Head	
Male	379(100.0)
Age (in years)	
25-35	14(3.7)
36-45	85(22.4)
46-55	142(37.5)
56-65	99(26.1)
Above 56	65(10.3)
Educational Status	
Illiterate	159(42.0)
Religious	154(40.6)
Primary	34(9.0)
Middle	32(8.4)
Family type	
Joint	226(70.2)
Extended	58(15.3)
Nuclear	55(14.5)
Source of irrigation	
Rain fed	231(84.7)
Canal system	58(15.3)
Total	379(100.0)

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Table 4: Association between Social stratification and Food Security

Social stratification	Dependent variable (Indexed)	Chi-square & P-value
Men are preferred over food provision in comparison to female	Food security	X^2=94.097 (P=0.000)
Social stratification directly affects the nature and frequency of food on sustainable ground	Food security	X^2=85.408 (P=0.000)
Food insecurity and hunger is social injustice and reciprocal in response	Food security	X^2=62.162 (P=0.000)
Various social classes exhibit distinct differences in food behavior.	Food security	X^2=1.101 (P=0.577)
People not being able to afford and access food because of social stratification	Food security	X^2=39.351 (P=0.000)
Women are more contributing in agriculture than male	Food security	X^2=93.597 (P=0.000)
Men often exploit in division of labor	Food security	X^2=67.150 (P=0.000)
Division of labor does favor men as a resultant factor of cultural inclination	Food security	X^2=60.914 (P=0.000)

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