

Received: 15 September 2024 ,Accepted: 20 October 2024

Food Security in Pakistan: A case study of District Torghar - Khyber Pakhtunkhwa

Fatima Sana Alam¹, Mr. Asim Riaz² Ms. Rakhshanda³ Dr. Shahid Iqbal⁴Dr. Bushra Hassan Jan⁵

Correspondent author: Dr. Shahid Iqbal, I ER/CDPM, University of Peshawar, siqbal@uop.edu.pk

Abstract

A District torghar was the study area and a cross sectional study was conducted to assess food security and accessibility through a sociological perspective. A total of 291 household heads were interviewed for the data collection through a structured interview schedule for primary data collection. The data was then coded into SPSS for further analysis, including descriptive (frequency and percentage) and inferential statistics (to identify the connection between independent and dependent variables the chi-square was used). According to the study, the multiple deprivations of poverty, ignorance, and social inequality expose marginalized groups such as women, children, the elderly, and ethnic minorities to a high risk of food insecurity. Hence, enhancing the economic status of the people by generating income source and opportunities' such as employment that could safeguard the livelihood of the masses and have access to balanced and ample food quantity which is considered a global right for each citizen. Lastly improving the accessibility of community members to food items by subsidizing these commodities and their availability in local markets at cheap prices has been given some suggestions in the light of the current research.

Keywords: Food Security, Access, lack of Resources, Chi square test

Background of the study

¹ : M.Phil scholar, Department of Rural Sociology, The University of Agriculture, Pakistan,

² : MS leading to PhD scholar, Centre for Disaster Preparedness & Management (CDPM), University of Peshawar. asimriazmardan@gmail.com

³ : Senior Subject Specialist - Pakistan Studies, Government of Khyber Pakhtunkhwa, humdan1980@gmail.com

⁴ : IER/CDPM, University of Peshawar, siqbal@uop.edu.pk and shahidiqbalkhan@uop.edu.pk

⁵ : Associate Professor, The University of Agriculture, email bushrahanjan@aup.edu.pk

Food security is a word used extensively for the purpose of hunger and famine in literary writings. Until now, the meaning has multiple dimensions with changing meanings from person to person and time to time. However, these terms are messed up frequently (Simon, 2012). Due to complexity of in nature and constituency of the term food security in various sciences, the scientists have put forward its definitions which number in hundreds. The definition put forward by FAO has evolved over times, which define Food Security as;

“Food security exists when all people, at all times, have physical and economic access to sufficient safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life” (FAO, 1996, 2002).

Whereas on the other side majority of the people in Pakistan are at high-risk due to food insecurity threats. Though availability of food items is more than the required, almost 60 percent of population are at risk of food insecurity due to which many individual as well as families in the society are not in a position to access a balanced and adequate food.

As the rate of mal-nutrition is high in Pakistan, due to which an alarming number of stunted growth affect children (Sleet, 2019).

Agriculture, forestry and fishery are the major livelihood sources for approximately 45 percent of world population. Women constitute 43 percent of total agriculture labor force and have a major role in feeding world population. The cultural significance of women role at household level with respect to family nutrition further enhances their importance in controlling mal-nutrition and hunger at household level (FAO, 2012). Therefore production, delivering, and intake of food items is managed by large institution like FAO, WFP and agriculture department at macro level, whereas the community groups and family institution are involved in this process at the meso-level and individual members and small groups constitute the micro-level entities to shape the production of food items as well as its consumption (IASC, 2005).

The ample food quantity and suitable set of standards of living for development is acknowledged as a basic right particularly in the developed nations for each citizen. (Article11, Para.1, Para.2). Similarly, The UN Committee on (CESCR) demarcated the right to acceptable food as given below:

“Right of every individual to have accessibility in terms of economic and physical, to food according to their requirement and availability of quantity and quality and free from chemical substances for healthy and secure living”.

It is globally accepted core rights of the human to have access to the balanced food quantity and quality. It is the responsibility of all the government to play to their role to provide this vital stuff to the all the citizens without any discrimination

. Thus, food security remained stable for the year 2016-17 due to positively availability of food for access in the markets for utilization. Production of wheat remained less than cereal that year by 3%. However, the situation has positive effects as ample amount of supplies were available. In subsequent years the rice productions were effected on global level which caused hunger, poverty, diseases, disasters etc., as these supplies needs much attention for maintaining its stocks as indicated by FAO were more likely to reach the high level of production deficits in 2018. FAO, 2017 reported that affordability and accessibility factors are more affected due to economic and physical supplies of food. Increase rate of poverty because of numerous aspects, as wages of labour are increased by 14.6% somehow food security is still lacking number of factors to secure one right to adequate food (Abdullah *et al.*, 2021).

In Pakistan the lack of law enforcement caused massive hurdles for women. As the role of women is restricted to household chores and having limited access to resources; such as education, health, food, job and lag behind in decision making etc. The situation is worst in tribal areas where tribal cultural norms and their right to land ownership are discouraged. Consequently, despite of their high input in agricultural fields, recognition of their work is not accepted and repaid (Porter *et al.*, 2014). Moreover, ensuring availability of food, access were the main hurdle to the resources for nutritious diet in ample quantity, quality and affordability. The physical and social dimensions disrupt the environmental policies of food accessibility on household level. Food insecurity in developing countries is severe, especially due to inappropriate measures by government and social welfare by policy planning. Affordability and pricing based on availability and accessibility affect globally the production power. Increasing agricultural input of production that in return lower the cost of food items (Wheeler and Von, 2013). Food insecurity commonly caused by low income, as in 2016, 2.6% households with low income were more food insecure

which is a strong factor in household level (McDermid et al., 2021). Keeping in view the above stock of literature the present study was designed to assess the food security through accessibility point of view.

Methodology

A cross sectional study was conducted to assess food security and accessibility through a sociological perspective at District Torghar Northern Khyber Pukhtunkhwa, Pakistan. Because of the extreme food insecurity in Tehsil Dharo of Khandar three village were selected namely; Bilyani, Bimabl and Dharo of Khandar were selected for the study.

. The present study area Khandar tehsils was randomly selected which comprised of 11,492 households. Moreover, three villages randomly selected from the tehsil namely Bilyani (287 households), Bimbal (276 households) and Dharo (197 households). Total household population of the selected villages is worked out to be 760 households Hence, 291 respondents were selected from these three villages as keeping view Sekeran (2003) criteria for sample size. The data were collected from the head of house-holds from the three selected villages. By using proportional allocation method the sample size were distributed proportionally for each strata. (Table-1).

Table-1. Sample Size Distribution.

District Torghar			
S.no	Khandar Tehsils	Households (N)	Sample Size (n) (Households)
1.	Village Bilyani	287	110
2.	Village Bimbal	276	106
3.	Village Dharo	197	75
Grand Total		760	291

Formula for proportional allocation is given in equation-(3.1)

$$n_i = \frac{n}{N} \times N_i \dots\dots\dots$$

Where n= required sample size

N = population size (total household)

N_i = Size of i^{th} strata (Household in a village)

n_i =sample Size to be taken from i^{th} strata (required sample size for each village)

Results and discussions

Accessibility to Food Items

Accessibility refers to physical and financial access to food items to meet the dietary needs of human. The physical access aspect pertains to the presence of the food within the easy approach of the individuals at home or neighborhood. While economic accessibility is the availability of the sufficient money to purchase food. Responses on accessibility to food items are given in table-2.

Results in table-2, show that 58.1% respondents disagreed that they were worried that their household would not have enough food during last four weeks, while 41.9% agreed to it. Similarly, any/ some of their household members were unable to respond agreed to this statement. Furthermore, 54.7% respondents disagreed that due to lack of resources their family members ate limited variety of food during past four weeks and 44.3% respondents agreed to this view. Physical and financial access to food is an important ingredient of food security. The household head and other adult family members remained under pressure to safeguard their family members against hunger through sufficient supply of food. Increase in economic capabilities of families safeguards the family member from hunger to provision of diverse variety of preferred food in sufficient quantities. However, big chunks of families were incapable to access the required quantity and variety of preferred food that was enough for their dietary needs. Talukder, 2015 emphasized on economic, physical and social factors that play vital role in easy access to market. A poor physical market infrastructure accompanied with weak social ties and economic disadvantages render poor segments of societies powerless to access to food. Therefore, the international organization like FAO emphasizes on economic and physical aspects of food accessibility to safeguard the poor segments of society from food insecurity. Otherwise, the marginalized segments would be unable to have sufficient food and their families would be worried to access their dietary needs in sufficient quantity (Anderson, 2013).

The result further show that 59.9% respondents disagreed that any/ some of their family members had to eat some food they really did not want to eat due to lack of resources during past four weeks while 39.1% respondents agreed. In the same line, 59.8% respondents disagreed that during past four weeks their household members had to eat smaller meal due to insufficient food while 34% respondent agreed to it. Poor accessibility to food compels the family members to eat undesirable food both in terms of quality, preference and quantity. A combination of insufficient quantity of low quality food is indicative of food insecurity due to its accessibility. Thus, the food accessibility is globally determined against its price in the poor market infrastructure and low household income is compelling the poor segment of society to eat undesirable food and consume food of low quality. This food access bias is highly derogatory for the female segment of the society to overcome this problem. A process of food aid is devised to protect the poor against food insecurity; however, this setup is of short term benefit and non-sustainable (Chandrasekhar et al., 2017). As a long term intervention, the governments need to regulate food production, price formation and population growth through appropriate policy measures (Pangaribowo et al., 2013).

The result further show that 67.7% respondents rejected that during past four weeks, their family members had to eat fewer meals due to non-availability of enough food. While 30.2% respondents agreed to it. In the same line, 65.3% respondents that there was no food to eat of any kind due to lack of resources to get food during last four weeks, whereas, 30.6% respondents agreed to it. The effects of financial deprivations are gradual, profused and deep people with low economic capabilities struggle to purchase the required quantity of food to feed their families. The effects of low economic abilities affect the kitchen budget by slashing it down that affect the family members in terms of accessibility required quantities of foods. Continue poverty further deteriorate the purchase power of families to the extent that some of the families or their members are subjected to starvation which is the extreme of food insecurity. Shahbaz et al., (2021) also reported that the economic opportunities can help in overcoming the problem of food insecurity through enhancing the purchase power of the poor in a gradual manner. An economically stable family overcomes the problem of food insecurity through purchasing sufficient quantity and quality required for their daily personal and familial needs.

Table.2. Accessibility to food items

Statement	Agree(%)	Disagree(%)	Don't know(%)
In the past four weeks, did you worry that your household would not have enough food?	122(41.9)	169(58.1)	0(0.0)
In the past four weeks, were you or any household member not able to eat the kinds of foods you preferred because of a lack of resources?	120(41.2)	162(55.7)	9(3.1)
In the past four weeks, did you or any household member have to eat a limited variety of foods due to a lack of resources?	129(44.3)	159(54.7)	3(1.0)
In the past four weeks, did you or any household member have to eat some foods that you really did not want to eat because of a lack of resources to obtain other types of food?	116(39.1)	172(59.9)	3(1.0)
In the past four weeks, did you or any household member have to eat a smaller meal than you felt you needed because there was not enough food?	99(34.0)	174(59.8)	18(6.2)
In the past four weeks, did you or any household member have to eat fewer meals in a day because there was not enough food?	88(30.2)	197(67.7)	6(2.1)
In the past four weeks, was there ever no food to eat of any kind in your household because of lack of resources to get food?	89(30.6)	190(65.3)	12(4.1)

Association between Accessibility and Food Insecurity

The scientist has establish that despite of availability of the food commodities these are not accessible to a considerable number of masses due to their poor economic standings, low awareness of cultural reasons. Consequently, such vulnerable groups are exposed to potential risks of low consumption of food and remained mal-nourished. To test the association between access to food items and food insecurity the perception of food items was limited to few perceptual statements given in table- and explained below.

The result in table-3 show that worries for household members not having enough food for the past four weeks at a highly significant association ($P=0.000$) with food insecurity. Similarly, eating limited variety of food due to lack of resources during last four weeks exhibited a highly food association ($p=0.000$) with inability of household members eat preferred food because of lack of resources during past four weeks. In the same line, family members constrained to eat unwanted food due to lack of resources during past four weeks show a highly significant association ($p=0.000$) with food insecurity. Food is the basic human need and good quality food in required quantities is necessary for a healthy and productive human life. An even access to food ensure better intake of required nutrients that that result into healthy and productive outcomes in human. However, there are economic limitations in

actualization the food needs at individual and familial allowance. Consequently, the household are constrained to consume limited amount of food with a meagre proportion of preferred food while the major chunk of food intake is constituted of limited variety of food that too is mostly comprised of unflavoured and disliked items. As a result, the families access low amount of food due to economic and individual preference reasons which subject them to risks of food insecurity. These results are in lined to the findings of IFPRI (2015) and Abdullah *et al.*, (2017) who reported that poor accessibility to food expose the people of Pakistan to high risk of food insecurity and the same is reflected in rank of Pakistan Global Hunger Index (GHI) that is i.e. 93 country out of 104. Clark, K. H., & Nicholas (2013) further added that high population growth rate; poverty, unemployment, unawareness and inappropriate food preferences reduce the food accessibility to family members and expose them to food insecurity. Moreover, food insecurity show a highly significant association ($p=0.000$) with family members eating smaller meal during last four weeks due to non-availability of enough food. Similarly, food insecurity at a highly significant ($p=0.000$) with family members eating fewer meals in a day during past four weeks due to insufficient food. Likewise, unavailability of any food to eat at household level because of lack of resources during past four weeks show a highly significant association ($p=0.000$) with food insecurity. Extend of access to the food may range from low to high and sometimes to chronic inaccessibility to food. Economic inabilities are the far most important reason for poor accessibility to food items due to low purchase power of the masses. The economic inabilities limit the poor segment of society to remain hungry for several times and days. In this way the food intake is reduced and sometimes stopped that result into high food insecurity and health problems. Therefore, the international community emphasize on regional food subsidies to support the nutritional requirements of poor masses on priority bases. However, additional efforts are needed to secure sufficient intake by the women and other extremely vulnerable groups that are culturally and economically forced to skip some major component of their dietary requirements and provide it to other family members (Ramdan, 2017). The food insecure households face the challenges in accessing cheap food commodities for their family needs. However, their low income, price hike in food

commodities and their limitations in managing their financial budget create additional psychological stresses for the household head (Kaiser *et al.*, 2015).

Poor access to food is important component of food insecurity that embodies insufficient access to food commodities due to economic, cultural and unawareness reasons. It not only subject the masses to low consumption of desirable but expensive food and high consumption of less desirable cheap food with limited diverse in making choices. In some extreme cases the poor masses are constrained to consume low quantity of food, skip some daily meals or remain hungry as a result insufficient access to food is a leading reason for food insecurity, especially in poor masses and marginalized groups like women.

Table-3. Association between Accessibility and Food Insecurity

Statement	Food Insecurity			P-Value & Chi-square
	Agree(%)	Disagree(%)	Total (%)	
In the past four weeks, did you worry that your household would not have enough food				
Agree	99(81.1%)	23(18.9%)	122(100.0)	$x^2=143.624$ P= .000
Dis-agree	19(11.2)	150(88.8)	169(100)	
Neutral	118(40.5)	173(59.5)	291(100)	
In the past four weeks, were you or any household member not able to eat the kinds of foods you preferred because of a lack of resources				
Agree	102(85)	18(15)	120(100)	$x^2=169.637$ P= .000
Dis-agree	13(8)	149(92)	162(100)	
Neutral	3(33)	6(67)	9(100)	
In the past four weeks, did you or any household member have to eat a limited variety of foods due to a lack of resources				
Agree	103(79.8)	26(20.2)	129(100)	$x^2=158.664$ P= .000
Dis-agree	12(7.5)	147(92.5)	159(100)	
Neutral	3(100)	0	3(100)	
In the past four weeks, did you or any household member have to eat some foods that you really did not want to eat because of a lack of resources to obtain other types of food				
Agree	92(79.3)	24(20.7)	116(100)	$x^2=129.391$ P= .000
Dis-agree	23(13.4)	149(86.6)	172(100)	
Neutral	3(100)	0	3(100)	
In the past four weeks, did you or any household member have to eat a smaller meal than you felt you needed because there was not enough food				
Agree	85(90.4)	9(9.6)	94(100)	$x^2= 146.027$ P= .000
Dis-agree	27(15.5)	147(84.5)	174(100)	
Neutral	6(33.3)	12(66.7)	18(100)	
In the past four weeks, did you or any household member have to eat fewer meals in a day because there was not enough food				
Agree	79(89.8)	9(10.2)	88(100)	$x^2= 129.217$ P= .000
Dis-agree	36(18.3)	161(81.7)	197(100)	
Neutral	3(50)	3(50)	6(100)	
In the past four weeks, was there ever no food to eat of any kind in your household because of lack of resources to get food				
Agree	83(93.3)	6(6.7)	89(100)	$x^2= 153.408$ P= .000
Dis-agree	29(15.3)	161(84.7)	190(100)	

Neutral	6(50)	6(50)	12(100)	
---------	-------	-------	---------	--

Conclusion

The present study was found that insufficient access to food is strongly linked with poverty, low awareness and culturally based inequality at community level. The poor and marginalized groups, due to their poverty or low awareness could not access food of required quality that is adequate for their dietary needs. In extreme cases they consume unwanted food that too is in insufficient quantity. In worst scenario the poor community members skip their daily meals or remain hungry for days. The multi-deprivations of poverty, unawareness and social inequality expose the marginalized groups like women, children, old age people and ethnic minorities to highly risk of food insecurity. enhancing the economic status of the people by generating income source and opportunities' such as employment that could safeguard the livelihood of the masses and have access to balanced and ample food quantity which is considered a global right for each citizen. Lastly, improving accessibility of community members to food items by subsidizing these commodities and its availability in local markets on cheap prices.

References

- Abdullah, M. M., Assi, A., Zubari, W. K., Mohtar, R., Eidan, H., Al Ali, Z., ... & Ma, X. (2021). Revegetation of native desert plants enhances food security and water sustainability in arid regions: Integrated modeling assessment. *Science of The Total Environment*, 151295.
- Anderson, M. D. (2013). Beyond food security to realizing food rights in the US. *Journal of Rural Studies*, 29, 113-122.
- Chandrasekhar, S., Aguayo, V. M., Krishna, V., & Nair, R. (2017). Household food insecurity and children's dietary diversity and nutrition in India. Evidence from the comprehensive nutrition survey in Maharashtra. *Maternal & child nutrition*, 13, e12447.
- Clark, K. H., & Nicholas, K. A. (2013). Introducing urban food forestry: a multifunctional approach to increase food security and provide ecosystem services. *Landscape Ecology*, 28(9), 1649-1669.
- Joint, F. A. O., World Health Organization, & WHO Expert Committee on Food Additives. (2017). *Evaluation of certain contaminants in food: eighty-third report of the Joint FAO/WHO Expert Committee on Food Additives*. World Health Organization.
- Kaiser, L., Chaidez, V., Algert, S., Horowitz, M., Martin, A., Mendoza, C., ... & Ginsburg, D. C. (2015). Food resource management education with SNAP participation improves food security. *Journal of Nutrition Education and Behavior*, 47(4), 374-378.
- McDermid, S. S., Mahmood, R., Hayes, M. J., Bell, J. E., & Lieberman, Z. (2021). Minimizing trade-offs for sustainable irrigation. *Nature Geoscience*, 14(10), 706-709.
- Pangaribowo, E. H., Gerber, N., & Torero, M. (2013). Food and nutrition security indicators: a review.
- Porter, J. R., Xie, L., Challinor, A. J., Cochrane, K., Howden, S. M., Iqbal, M. M., ... & Travasso, M. I. (2014). Food security and food production systems.
- Ramadan, R. (2017). Determinants of Food Security in Egypt. *Review of Economics and Political Science*, 2(3).

- Sekaran. (2003). *Research methods for business* (4th edition). New York, USA: John Wiley & Sons (Vol. 65). <https://doi.org/10.1017/CBO9781107415324.004>
- Shahbaz, P., ul Haq, S., & Boz, I. (2021). Implications of COVID-19 related non-pharmaceutical measures on household livelihood and food security in Pakistan. *Journal of Agribusiness in Developing and Emerging Economies*.
- Simon, G. A. (2012). Food security: definition, four dimensions, history. *University of Roma. Faculty of Economics/Master in Human Development and Food Security*.
- Sleet, P. (2019). Food Security in Pakistan: Surplus Food is Not Enough to Create a Food Secure Country.
- Talukder, S. (2015). Effect of dietary fiber on properties and acceptance of meat products: a review. *Critical reviews in food science and nutrition*, 55(7), 1005-1011.
- Wheeler, T., & Von Braun, J. (2013). Climate change impacts on global food security. *Science*, 341(6145), 508-513.