



The Factors Affecting Food Security in the Eastern Region of Afghanistan

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ABSTRACT

Household food insecurity has become a significant problem in recent years in Afghanistan particularly in the eastern region which is caused by numerous factors. Hence, the purpose of this paper was to examine and analyze the factors that affect food security at the household level in the eastern region of Afghanistan. Government and international organizations have jointly conducted the household survey in the Eastern Region of Afghanistan containing 9774 households over 99310 individuals in 49 districts. The result showed that the critical factors of food insecurity were caused by insecurity, poverty; unsustainable livelihoods, lack of job opportunities; low wage and income, landlessness in rural areas, and a huge influx of refugee and internally displaced people (IDP) migration. The study found that 46.9% of households were food insecure while 49.6% faced hunger in the last one month and 48% of households had poor and borderline food consumption score. Furthermore, 46.2% of households had moderate to extremely reduced copy strategy index.

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Afganistan'ın Doğu Bölgesinde Gıda Güvenliğini Etkileyen Faktörler

ÖZET

Hanehalkı gıda güvensizliği son yıllarda Afganistan'da özellikle doğu bölgesinde çok sayıda faktörün neden olduğu önemli bir sorun haline gelmiştir. Bu çalışmanın amacı, Afganistan'ın doğu bölgesindeki hanehalkı düzeyinde gıda güvenliğini etkileyen faktörleri incelemek ve analiz etmektir. Bu çalışmada, Afganistan hükümeti ve uluslararası kuruluşların ortaklaşa yürüttükleri ve Afganistan'ın Doğu Bölgesinde 49 ilçede 99310'dan fazla kişiden oluşan 9774 hanehalklarıyla gerçekleştirilen anketler kullanılmıştır. Analiz sonuçları, gıda güvensizliğinin kritik faktörlerinin güvensizlik, yoksulluk; sürdürülemez geçim kaynakları, iş imkanı eksikliği; düşük ücret ve gelir, kırsal alanlarda topraksızlık ve büyük mülteci ve yaşadığı bölgeyi terk ettirilen insanlar göçü olduğunu göstermektedir. Araştırmada, hanehalklarının %46.9'unun gıda güvensizliği olduğunu, % 49.6'sının son bir ayda açlıkla karşı karşıya kaldığını ve hanelerin %48'inin kötü ve sınırda yiyecek tüketim skoru yaşadığını saptamıştır. Ayrıca, hanehalklarının %46.2'sinde azaltılmış kopya stratejisi endeksi orta, yüksek veya çok yüksek düzeyde bulunmuştur.

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INTRODUCTION

Household food security can be defined as "access by all people at all times to enough food for an active, healthy life (World bank, 1986; Maxwell et al., 1999). Food security is a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life (FAO, 2003; Uzma and Mohammad, 2004;

Zalilah Mohd and Khor, 2008; FAO, 2009; Lemba, 2009; Crush and Frayne, 2011; Hamad and Khashroum, 2016). Food insecurity, which is the absence of one or more of these conditions, is a major cause of malnutrition that can affect health condition and damage mental and physical development (FAO, 2009; Hala et al., 2015).

The determinants of food security vary at different levels from global to regional and national to household

and individual levels because food security is known as a multidimensional phenomenon about climate change, natural disasters, civil conflicts, and social norms (Abdullah et al., 2017). All of these definitions consist of four dimensions: availability, access, utilization, and stability (Gittlesohn et al., 1998; Weismann, et al., 2009; Anna and Joliffe, 2011; Philip, 2014). Nevertheless, there is no a specific indicator to capture all dimensions of household food security (Calogero et al., 2013). Hence, a combination of these indicators indicates the multifaceted reality of household food insecurity.

Indeed, a level of household hunger or food insecurity must be addressed by getting information on different circumstances, performances, and experiences that serve as indicators of the unreliable degrees of severity of the situation or state. However, the measurement of household food security is a complicated issue; and the most appropriate tool is the Household Food Insecurity Scale (HFIS) to measure the food insecurity of households (Onismo, 2015).

Afghanistan is considered to be one of the food and nutrition insecure countries where a large number of households experience in lack of food and malnutrition by environmental disasters, poverty and four decades of internal and external conflicts and wars. Therefore, Afghanistan was ranked 171st food secure country of the world in 2015 in UNDP Human Development Index report (FSIN, 2017). In addition, Afghanistan has one of the lowest Human Development Index (0.374) in the world (UNDP, 2013). Besides, the poverty is continuously increasing in the country, as Afghanistan Living Conditions Survey (ALCS, 2017) reported that in the last seven years, there has been an increase in poverty from 36% to 43% in overall Afghanistan particularly in eastern region, because of a large influx of internally displaced people (IDP) and returnees from neighboring countries Pakistan and Iran. On the other hand, there are 11.1 million food-insecure people in Afghanistan (SFSA 2017). More or less 60% of children under the age of five years experienced chronic and 8% suffered from acute malnutrition (Johnecheck and Holland, 2007).

The National Risk and Vulnerability Assessment in 2012 estimated that 30.1% or 7.6 million people of the Afghans are severely to reasonable food insecure and among these, 8.5% or 2.2 million people is extremely food insecure; as food consumption is on average less than 1500 Kcal per person per day (AFSANA, 2014). Nevertheless, according to the 2012 statistics, about one-third of the Afghan population suffered from food insecurity, and 36% lived under the national poverty line (CSO, 2013).

The SFSA in 2017 noted that the high rate of chronic food insecurity, which is not the result of a specific shock, especially among landless households, is indicating that availability of food (Poor harvests) was not seemed to be the major driver of food insecurity,

and access to food (distribution of the food available) were important factors.

The households both in the urban and rural areas are bared to risk and vulnerability to food insecurity. The urban households experience more financial shocks, but the rural households are more faced with natural disasters and security. Thus, it is estimated that on average Afghan households spent between 56-77% of their total income on food (CSO, 2008; CSO, 2013). The most vulnerable are women and children, not only in Afghanistan but also all over the world as it is estimated that 60% of those hungry being women and more or less two-thirds of the affected households live in the Pacific region and Asia (FAO, 2017), followed by the elderly and disabled.

The high rate of food insecurity is caused by the lack of access to a sustainable income in the country, because of the high susceptibility of such a large share of the households, major shocks, siege, conflicts, floods, earthquakes, droughts or price changes, can quickly degenerate in acute food security emergencies. Nevertheless, there are some other principal factors as well; for example, security, instability, low wages and salaries, lack of job opportunities, low household income, inadequate local production of cereals especially wheat, declining livestock production, lack of access and poor quality of drinking water, insufficient water resources for agriculture, lack of education and health service particularly for rural areas, and refugee and IDP migration (Michael et al., 2007).

Eastern region is considered as a food insecure region due to physical security as well as returning a large influx (1.6 million) of returnees from neighbor countries Pakistan and Iran into the region (SFSA, 2017). On the other hand, food insecurity was high in the insecure areas of the region, which is linked to lack of employment opportunities, landscaping, lack of access to agricultural land and water. However, in 2017, Afghanistan has experienced an important factor affecting household food security: Half of the country has been controlled by Anti Government Elements that is limiting access to public services such as road transportation, education or health services.

The objective of this study is to analyze the factors affecting household food security and show the status of household food insecurity and coping strategies to minimize food insecurity among all households in the Eastern Region of Afghanistan. This study will help and give a bright conception on analyzing the socio-economic characteristics of households, household hunger score, food security situation, the level of food insecurity, key factors affecting food availability and shocks causing of food insecurity, reduce food consumption coping strategy, main income sources, food expenditure share and food consumption degree in the eastern region.

MATERIAL and METHOD

The primary data of this study comes from a large household survey which was jointly conducted between May and September 2017 by the government of Afghanistan and international organizations in the eastern region. This was the first survey that has been done about household food insecurity in one region.

The survey was conducted on 9774 households in the eastern region of Afghanistan which consists of four provinces Nangarhar, Laghman, Kunar, and Nuristan and each includes many districts, villages and households. It was targeted to cover 10257 households including IDPs, Returnees, and locals in this study, but due to security concerns, 9774 households were included. Furthermore, the households were divided by cluster-based which were the most food insecure districts of the eastern region.

The data collection was carried out, when the physical insecurity increased in the country and the forced return of millions of refugees, mostly from Pakistan and Iran and marked by massive internal displacement, for accuracy. During the data collection group discussions were conducted with the community elders on average 25 persons of the selected communities to make sure that the collected data is representing the view of the majority of the population to obtain a general overview of the communities; however, households were interviewed individually.

RESULTS and DISCUSSION

Socio-Demographic Characteristics of Respondents

This section expresses the socio-demographic characteristics of respondents and households including the age, gender, education, residence type, registered returnees, household size, number of disabled members (mental or physical) in the household, and some other special characteristics of the household head.

Afghanistan is a male dominant society, and it is considered the responsibility of males to fulfill all the requirements of household members such as food, education, and health facilities, clothing and sheltering. Therefore, most of the households are led by males although in rare case females also lead the household in the term of widowed, divorced or separated. But female-headed households are more than twice likely to be food insecure compare to those households which the heads are male (ALCS, 2016). The male-led households are higher in security assets, formation, human resources, possession, and increasing earning opportunities and having food security. By Contrast, the female-led households are more food insecure by having low income as the Zambian Living Conditions Monitoring Survey explained low-female-headed households are more likely to be very poor and have higher food insecurity than male-headed households (Chibende, 2011). The most important reasons for this are the active role of

women in agricultural activities, while the majority of men works in income generating areas other than agricultural activities. In this study, 95.0% of respondents are male and 5.0% female (Table 1). This pattern of male domination of the household heads situation is similar in all over four provinces in study areas. However, the female-headed household's position changes in some regions of Afghanistan; for example, the highest percentage of female-headed households recorded in Farah 22%, Faryab 15.4% and Nimroz 10% (SFSA, 2014).

In the country like Afghanistan, where the family structure is very strong and based on strong family relationships, respects, values and community norms behavior; the household head is always the decision maker of the family; therefore, age is very important to the level of maturity and making better household and socio-economic decisions (SFSA, 2014). The age of the household heads relates to food insecurity status as the age of households increases the vulnerability of household food security decreases (Bashir et al., 2012). In this study, the majority of household heads (91.7%), which has the highest percentage in the age group, is in the range of 18-64 years. However, the age groups under 18 and over 65 are more to be food insecure than the second group because of lower income and limited employment opportunities. As Johnecheck and Holland (2007) reported that there are 60% of children less than five years old are suffered from chronic and 8% suffered from acute malnutrition in Afghanistan.

The result indicates that 60.9% of household heads are illiterate (no reading and writing). The household, whose head has no schooling at all, is more open to food insecurity and are the worst situation in term of both food expenditure and consumption. In general, the level of illiteracy among the household heads is very high in the study areas; therefore, it is likely to increase the vulnerability of household food insecurity. However, the household heads with high school or higher education have a high level of income, food consumption, and expenditure; For example, households, whose head have no education, had 3.5 points food consumption scores lower than those that had a primary school and nine points lower than household heads with higher education (SFSA, 2016). The households' residence type in the study areas were classified into three groups: Permanent Residences, Returnees, and IDPs (Internally Displaced People). IDPs are groups of people who have been obliged or forced to flee or to leave their homes, in particular as a result of or to prevent the effects of armed conflict, conditions of generalized violence, human-made disasters or violations of human rights, and who have not crossed an internationally recognized State border (UNCHR, 2014). Nevertheless, IDPs are the most vulnerable and worst affected by food insecurity in Afghanistan, due to not having access to food, sanitation and health facilities (FSIN, 2017).

Table 1. Socioeconomic characteristics of household head in the eastern region of Afghanistan
Çizelge 1. Afganistan'ın doğu bölgesindeki hanehalklarının sosyo-ekonomik özellikleri

Variables (<i>Değişkenler</i>)	Category (<i>Kategori</i>)	Frequency (<i>Frekans</i>)	%
Age of household head (years) (<i>Hanehalkı reisinin yaşı (yıl)</i>)	<18	167	1.7
	18 - 64	8961	91.7
	65 >	645	6.6
Gender of household head (<i>Hanehalkı reisinin cinsiyeti</i>)	Male (<i>Bay</i>)	9283	95.0
	Female (<i>Bayan</i>)	491	5.0
Education level of household head (<i>Hanehalkı reisinin eğitimi</i>)	No school (<i>Okula gitmeyen</i>)	5951	60.9
	Primary school (<i>İlkokul</i>)	1300	13.3
	Secondary school (<i>Ortaokul</i>)	853	8.7
	High school or üniversite (<i>Lise veya üniversite</i>)	1300	13.3
	Islamic school (<i>İslami okul</i>)	369	3.8
Residence type of household (<i>Ev tipi</i>)	Permanent residence (<i>Daimi ikamet</i>)	4616	47.2
	Returnee (<i>Geri dönenler</i>)	3040	31.1
	IDP	2118	21.7
Household size (<i>Hanehalkı genişliği</i>)	<9	5520	56.5
	10-14	2810	28.7
	15-60	1439	14.7
Household income (AFs/month) (<i>Hanehalkı geliri</i>)	No Income (<i>Geliri yok</i>)	5137	52.6
	≤ 5000 AFs	1181	12.1
	5001-11999 AFs	2157	22.1
	12000-19999 AFs	913	9.3
	≥20000 AFs	386	3.9

As shown in Table 1, the majority of the households are a permanent residence with the percentage of 47.2%, followed by returnees with 31.1% and 21.7% IDPs. Among the returnees 17% of households are registered with the UNHCR and government of Afghanistan and could get different assistance, however, 14 % remained unregistered. According to UNHCR report, the total estimated number of IDPs in Afghanistan was two million by 2016. Moreover, the number of IDPs is increasing all over Afghanistan day by day, as merely 318000 persons were newly displaced from 1st January to 30th September 2017 due to disasters, military operations and conflicts between the armed groups and Afghan military forces (FSIN, 2017). Based on province wise, the highest percentage of returnees and IDPs are 36.8% and 26.6% in Nangarhar, followed by Laghman 33.2% and 18.1%; Kunar and the lowest percentage is in Nuristan 0 and 17%. Larger households have a higher probability of being food insecure than smaller ones (Mudefi, 2011). As Table 1 demonstrates that on average household size is 10.05 which is larger than a typical household size

of a country. The average household size in Afghanistan is 8.0 members (UN, 2017). On the other hand, the result shows that the vast majority of households (56.5%) had 1 to 9 members followed by 28.7% between 10 to 14 members, whereas 14.7% accommodated 15 to 60 members. Moreover, the last two groups are the most vulnerable of household food insecurity due to having a large household size, as it is reported in many research that households with a larger number of members are more likely to be food insecure.

Sustainable income and its source are essential for household food security. The results found that 47.8% of households had one income, while 33.3% had a second income and the minority (16.4%) had third income as well. Table 1 demonstrates that the majority of households (52.6%) did not have any income. Such families might live in rural or insecure areas where there are no job opportunities and are the most food insecure as well as in such case the households withdraw children from school in order to work rather than study, followed by 22.1% (12000-19999) which is

the average income of the country and such households can be practicing agricultural activities. Therefore, the minority of households (3.9%) had income more than 20000 AFs and are the most food secure households in the study areas.

Household food expenditures

Economic vulnerability is the crucial factor of household food insecurity and can be measured by the relationship between food expenditures and overall household expenditures. Since food expenditure is generally inelastic (there is no percentage difference with income, as households are likely to increase spending on other items once food needs are satisfied), a high share of food expenditure shows a less capacity to deal with economic shocks and is generally related with poverty (SFSA, 2014).

Table 2 shows the importance of food expenditure in each income group. It revealed that the households with lower income spend an important amount of expenditure on food items compared to higher income household, the higher income households spend less amount of expenditures on food items rather than non-food items such as health, shelter, and education of the family members. This results similar to Akbay et al (2007) and Akbay ve Biliç (2011). However, it can be mentioned that when the food prices are higher, so it is needed to spend more on food items out of the total income, so less amount remains for other needs like health, education, and living etc. The structure of household food expenditure is clearly demonstrated by Engel's law stating that the share of food expenditure in total expenditure decreases as income increases (Patrick, 2012).

As shown in Table 2, on average 11.62% of households spend their income on food in the study area, which is much lower than SFSA findings (61.6%) in 2014. It is revealed that 27% of households did not spend their income in the last 30 days. It shows that such households consumed their own agriculture productions, while households with income less than 5000 AFs spent 18.09% of their income on food. However, highest income households spent only 7.28% of their income on food; it might be the case of social activity such as wedding or death or the month of Ramadan. The most important reason for these low shares is that most of the households live in rural areas and can mostly consume their own products. The majority of households (36%) spent their income on cereals as cereals are the typical daily meal of Afghan food, while 12.65% on oil and fat, 11.29% on sweets especially sugar, 11.11% on pulses, 9.74% on fruit and vegetables, 6.14% on meat and fish, and minority of households (5.51%) spend on dairy products because most of households have their own dairy production. As expected, the share of bread and cereals to total food expenditure declines but share of food away from home decrease when moving from the first to the fifth

quintile of the per-capita distribution of food expenditure. This results similar to Akbay et al (2007 and 2008), Patrick (2012) and Akbay (2018).

Household Food Consumption Scores

The Food Consumption Scores (FCS) considers as a proxy indicator for measuring the degree of current food security. FCS are the sum of consumption frequency (within 7 days recall from the date of the survey) of each food groups (cereal, vegetables, fruits, pulses, meat/fish and dairies, eggs, sugar and oil) weighted by their nutritional values. Standard weights were used for each of the food groups that constitute the food consumption score (Calogero et al., 2013). FCS based on food groups is calculated as following formula:

$$FCS = (\text{starches} * 2) + (\text{pulses} * 3) + \text{vegetables} + \text{fruit} + (\text{meat} * 4) + (\text{dairy} * 4) + (\text{fats} * 0.5) + (\text{sugar} * 0.5).$$

On the other hand, Household Food Consumption Score (HFCS) is the consumption pattern (frequency * diversity) of households over the past seven days. Dietary diversity (DD) is the number of different foods or food groups consumed over the past seven days (SFSA, 2014). However, food frequency (FF) is the number of food consumption of a specific food item by household in the past seven days (Icheria, 2012). The most diversified and best consumption, with maximal FCS at 112, means that all food groups are eaten 7 days a week (SFSA, 2014). According to HFCS, households are divided into three categories as "Poor" (1-28), "Borderline" (28.01 – 42) and "Acceptable" (above 42) (SFSA, 2016).

On average, 7.4% of household had poor food consumption, while, 40.6% had borderline and 52,0% had acceptable food consumption in study areas (Figure 1). On the other hand, the similar result was reported by SFSA in 2014; stating that on average 5.7% of household has poor food consumption, and 25.9% had borderline which was slightly lower than finding of this study area, however, 68.5% of household has acceptable food consumption in Afghanistan. As a similar study, Vaitla (2015) estimated that 10.7% of household had poor food consumption, while, 22.2% had borderline and 67.2% had acceptable food consumption with the pooled data set contained 10 countries: Ethiopia, Haiti, Kenya, Mongolia, Pakistan, Somalia, South Sudan, Sudan, Uganda, and Zimbabwe. Butaumocho and Chitiyo (2017) reported the similar findings when studying food security in rural Zimbabwe, with only 8% of households having a poor food consumption and 24% borderline and 68% having acceptable food consumption. Average FCS in Zimbabwe was found to be 48.6. According to WFP (2015), 13% of households having a poor food consumption, and 21% having a borderline food consumption in Kathmandu.

Table 2. The share of food expenditure by household income group (%)

Çizelge 2. Gıda harcamalarının hanehalkı gelir guruplarına göre Dağılımı (%)

Food Expenditures (Gıda Harcamaları)	Lowest income (Zero AFs) (Düşük gelir grubu)	1 to 5000 Afs	5001-11999 AFs	12000- 19999 AFs	<20000 AFs	Average (Ortalama)
Bread and cereals (Buğday ve tahıllar)	38.09	37.25	36.33	36.52	33.56	35.98
Meat/Fish (Et/Balık)	6.57	5.97	5.97	5.97	6.3	6.14
Pulses (Bakliyat)	11.24	11.24	11.4	10.91	10.92	11.11
Fruit/Vegetables (Meyve/Sebze)	9.19	9.11	10.15	9.29	10.44	9.74
Oil/Fat (Bitkisel ve hayvansal Yağlar)	12.79	13.04	12.79	12.29	12.54	12.65
Dairy products (Süt ürünleri)	5.88	5.78	5.34	5.52	5.28	5.51
Salt (Tuz)	4.78	4.31	4.2	4.02	3.87	4.16
Sweets (Tatlılar)	10.03	11.02	11.17	11.42	12.01	11.29
Drinking water (İçme suyu)	0.12	0.11	0.08	0.11	0.17	0.12
Milling (Unlu mamuller)	0.56	0.61	0.33	0.39	0.65	0.51
Meals outside (Ev dışında yemek)	0.77	1.54	2.23	3.55	4.25	2.79
Total (Toplam)	100.00	100.00	100.00	100.00	100.00	100.00
Share of food expend. on total expenditure (Gıdanın toplam harcamalardaki oranı)	27.05	18.09	14.03	11.60	7.28	11.62

The source of food is vital in the case of shock or vulnerability of household especially in rural areas. The households were asked about the sources of food taken in last seven days. It was found that the majority of the households purchased food from markets. For instance, on average 56.4% of households bought on

cash while 17.2 bought on credit. Nevertheless, 7.4% of household consumed own production which is come from rural areas and 1.4% got food aid assistance either from government, relatives or international organizations.

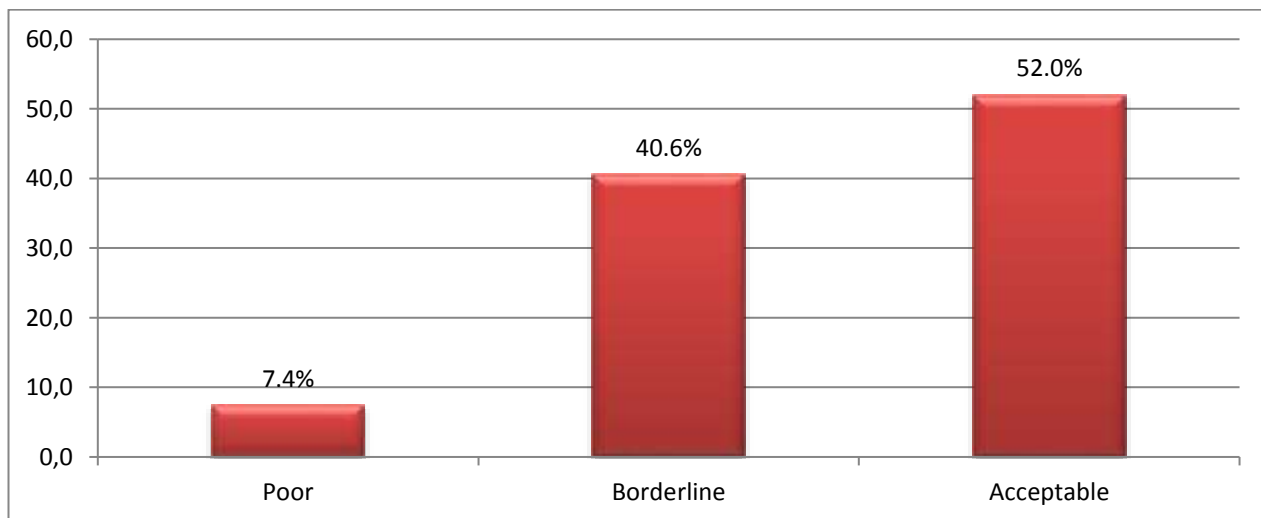


Figure 1. HFCS in overall

Şekil 1. Genel olarak HFCS

Reduced Household Coping Strategy Index

The Reduced Coping Strategy Index (RCSI) seizes the relations between household coping strategies and food consumption and it is a proxy indicator for food insecurity that records a score to each household depending on their dependence on food-based coping strategies in the past seven days (Rukundo et al., 2016). The above strategies are weighted as per their severity of borrowing and changing food distribution.

According to results, average RCSI was 9.02 and 32.26% of households rely on less preferred and inexpensive food, while 37.92% limited portion size at meal time, however, 14.75% borrowed or rely on help food and 4.32% restrict consumption by adults for small children to eat (Table 3). Vaitla et al (2015) estimated RCSI for 20 region and found that RCSI varied across region from 4.53 (Pakistan) to 24.86 (Sudan).

Table 3. Households' reduced coping strategy index

Çizelge 3. Hanehalkı'nın azaltılmış başa çıkma stratejileri

Variables (<i>Değişkenler</i>)	Number of days (<i>Gün sayısı</i>)	Universal severity weight+ (<i>Evrinsel ağırlık</i>)	Weighted score = frequency*weight (<i>Ağırlıklı puan = sıklık * ağırlık</i>)	Percentage (<i>Yüzde</i>)
Rely on less preferred and less expensive food (<i>Daha az tercih edilen ve daha az pahalı gıdaların tercihi</i>)	2.91	1	2.91	32.26
Limit portion size at mealtime (<i>Yemek zamanında porsiyonun azaltılması</i>)	1.71	2	3.42	37.92
Reduce the number of meals per day (<i>Günlük öğün sayısını azaltan</i>)	0.97	1	0.97	10.75
Borrow food or rely on help from relatives or friends (<i>Gıda ödünç alımı veya akraba veya arkadaşlarının yardımına güven</i>)	0.44	3	1.33	14.75
Restrict consumption by adults for small children to eat (<i>Küçük çocukların yemesi için yetişkinlerin tüketimini kısıtlayarak</i>)	0.39	1	0.39	4.32
Total (<i>Toplam</i>)			9.02	100.00

+ : The Universal severity weight is standard formula of World Food Programme (Maxwell and Caldwell, 2008).

In this study, the RCSI classified into five different categories based on its scores as minimal (0-8), moderate (9-15), severe (16-25), very severe (25-30) and extreme (30-56) coping strategy. The Figure 2 shows that on average, 1.6% of household had extreme category, while 1.3% very severe, however, 12.1% had severe, 31.1% had moderate and 53.8% had minimal coping strategy. On the other hand, SFSA reported in

2014 that in overall Afghanistan on average, 1.1% of the households are both in extreme and very severe categories, while, 14.3% are in moderate and 79.9% are in minimal. According to results of Vaitla et al (2015), 41.6% of households were food secure, 15.9% are moderately insecure and 38.5% are severely food insecure.

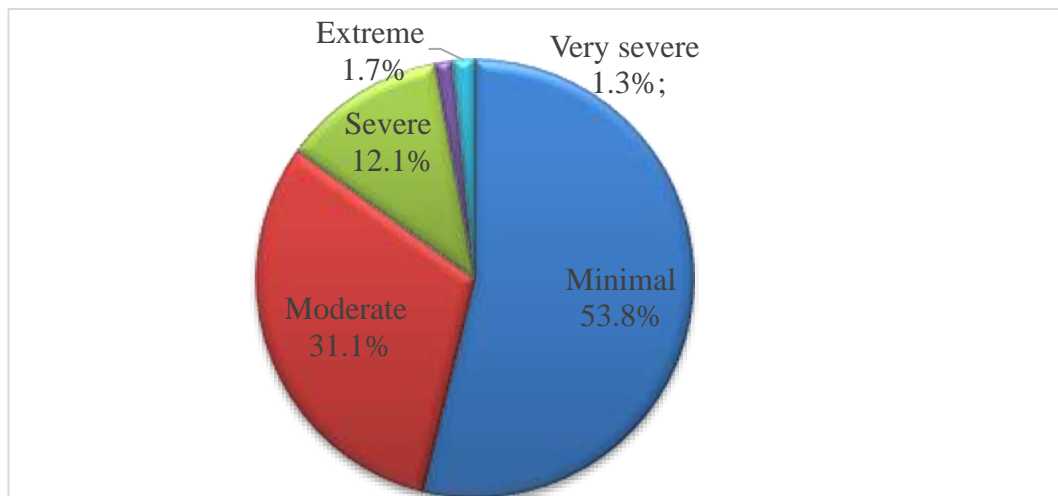


Figure 2. The percentage of households' reduced coping strategy index in the eastern region of A

Şekil 2. Afganistan'ın Doğu bölgesindeki hanehalklarının azaltılmış başa çıkma stratejisi endeksi yüzdeleri

In this study, the general coping strategy included six months with a series of questions to understand the food security situation in the short-run (acute food insecurity). It was found that 66% have faced a lack of money to buy food in the past six months due to different general coping strategies.

Moreover, the survey results show that the most generally adopted short term strategies were increasing daily working (43.1%), followed by 27.9% spent their savings and 21.3% increasing the collection and selling of natural resources (stones, wild plants, etc.). However, some of the distress adopted strategies also observed; for example, 4.1% households withdrew children from school, 3.9% sold their land or houses and 1% engaged in illegal activities such committing crime.

Household Hunger Scale and food insecurity

The Household Hunger Scale (HHS) is an individual indicator; which is a household food deprivation scale based on the scheme that the experience of household food deprivation causes expected responses that can be recorded by a survey and summarized in a scale (Ballard et al., 2011). However, the number of organizations broadly used for estimating the current food security during the nineties, when other food security quantitative measures were not available for quantitative measurements like FCS and the share of household expenditure on food, with the introduction of them, the usage of HHS has decreased. However, the HHS is a tool for measuring the acute food insecurity merging with other vital indicators, like food diversity and food groups (SFSA, 2016).

The HHS finds almost a quarter of households during the pre-harvest period in Afghanistan are so food deprived that households experience hunger having

inadequate food to feed household members or having to skip meals for a whole day and night due to the incapability of accessing any type of food (SFSA, 2014). Based on data collection on HHS the household were asked three questions about (i) was there no food, (ii) did anyone sleeps hungry, (iii) did anyone goes whole day hungry in the last 30 days? On the other hand, the answer was recorded with (never for 0, rarely for 1-10 and often more than 10 times) and group into five scales, no, little, moderate, severe and extreme hunger. According to survey results, on average 55.5% of the households reported no hunger, while 25.6% reported little hunger, moreover, 21.8% had moderate, and 1.7% had severe hunger, however, the 0.5% of household had extreme hunger which is not much come in Afghanistan except in some provinces due to lack of access to food markets or food production areas (Figure 3). Butaumocho and Chitiyo (2017) reported that the 82% of household little or no hunger, 16% had moderate and 2% had severe hunger in Zimbabwe. On the other hand, Samwel (2014) found different results in Kenya; only 19.4% of the households are food secure overall while 80.6% of the households are food insecure. Moreover the study area was revealed to be food insecure with severe hunger because most of the households (32.5%) were severely food insecure.

When we compare FCS, RCSI and HHS, the FCS gives the highest level of food insecurity followed by RCSI while the HHS gives the lowest food insecurity. According to FCS, 52% of household food secure but 48% of household food insecure while results for HHS indicated that 76% of household food secure but 24% of household food insecure in the research area. These numbers for RCSI were 53.8 and 46.2%. This results consistent with the findings of Butaumocho and Chitiyo (2017) and Maxwell et al (2013).

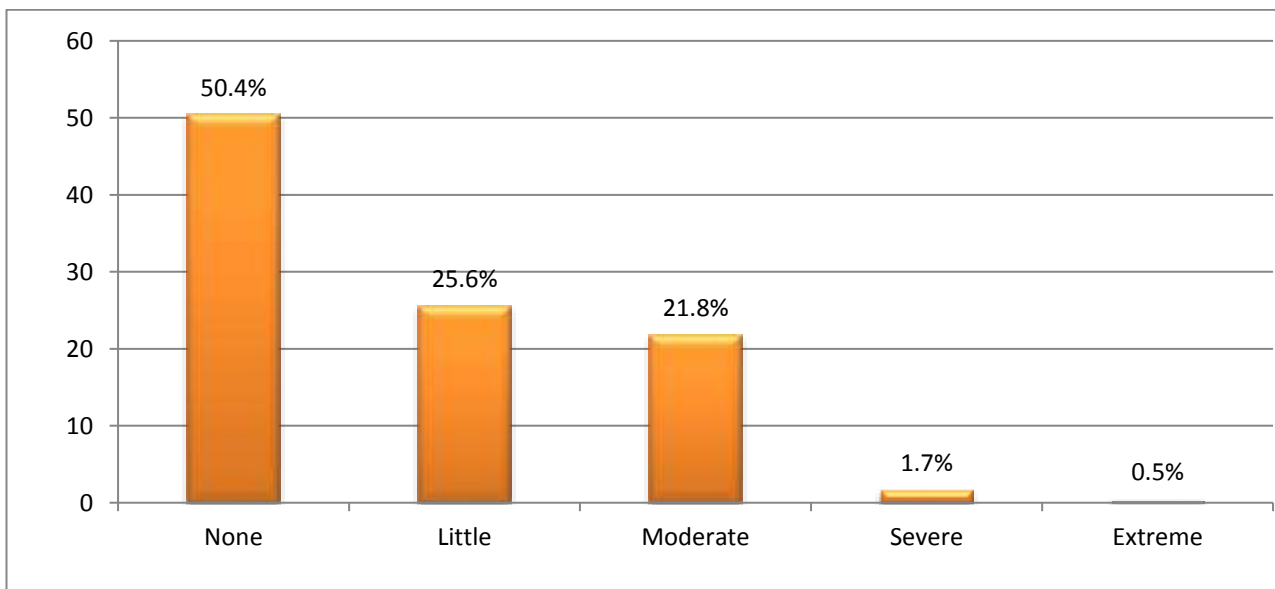


Figure 3. Household hunger scale in the region
Şekil 3. Bölgedeki hanehalkı açlık ölççeği

According to survey results, on average, 7.4% of households had poor food consumption, while, 40.6% had borderline and 52% had acceptable (adequate) food consumption in study areas. It is found that 32.24% of households rely on less preferred and inexpensive food, while 37.93% limited portion size at mealtime, however, 10.73% borrowed or rely on help food and 4.32 restrict consumption by adults for small children to eat. According to results, %95.1 of households spent more than 60% of their total expenditure on food. 2.6%

spent 40-60% of their expenditure on food and 2.4% of household spent less than 40% of their expenditure on food. By comparing household food consumption score and share of food consumption expenditure in total expenditure, it is found that 46.9% of households are food insecure (red colored area), while 49.4% were in borderline (yellow colored area) and 3.8% were food secure (green colored area) in the study areas (Table 4).

Table 4. Household food insecurity in the eastern region of Afghanistan
Çizelge 4. Afganistan'ın doğu bölgesindeki hane halkı gıda güvensizliği

Household food security (<i>Hanehalkı Gıda Güvenliği</i>)		Expenditure on food (%) (<i>Gıda Harcaması</i>)		
		Poor (>60%) (<i>Fakir</i>)	Borderline (%40- %60) (<i>Sınırdá</i>)	Acceptable (<40%) (<i>Kabul edilebilir</i>)
Food consumption score (%) (<i>Gıda Tüketim skoru</i>)	Poor (1-28) (<i>Fakir</i>)	Poor (6.9) (<i>Fakir</i>)	Poor (0.4) (<i>Fakir</i>)	Bordering (0.1) (<i>Sınırdá</i>)
	Borderline (28.1-42) (<i>Sınırdá</i>)	Poor (39.6) (<i>Fakir</i>)	Bordering (0.7) (<i>Sınırdá</i>)	Acceptable (0.3) (<i>Kabul edilebilir</i>)
	Acceptable (>42) (<i>Kabul edilebilir</i>)	Bordering (48.6) (<i>Sınırdá</i>)	Acceptable (1.5) (<i>Kabul edilebilir</i>)	Acceptable (2.0) (<i>Kabul edilebilir</i>)

CONCLUSIONS and RECOMMENDATIONS

The objectives of this research were to analyze the socio-economic characteristics of households in the term of food insecurity in the eastern region, followed by the food security situation, understand the level of food insecurity and the key factors affecting food security and its availability, access and food utilization in the eastern region of Afghanistan. The study showed the result of the following questions: What are the critical factors of food insecurity in the eastern region? What level of food insecurity is in the region? How can households suffer from food insecurity?

The findings of this research show that socio-demographic factors played an important role in household food insecurity in the eastern region as food insecurity was higher among vulnerable households; such as, household heads with less than 18 and over 64 years age; female-headed and separated or divorced households; illiterate household heads; household size particularly with 10-14 and 15-60 members including a large number of children; permanently disabled household heads; household types especially in tent camp and open space; newly IDPs and returnees from Iran and Pakistan; households with no or one income source.

On the other hand, the primary key factors which

affected household food security in the eastern region were: insecurity and conflicts, natural disasters including floods, droughts, earthquakes and extreme weather; unsustainable livelihoods and declining livestock production, the lessening of livelihood assets; insufficient water resources for irrigation; poor infrastructures roads, houses, schools and markets; lack of access and poor utilization of food and under development, food price fluctuations and inadequate market functionality, increase in food prices, poverty; a lack of employment opportunities in the ruler areas; low wage and household income; lack of education and health services, particularly for women; landlessness in rural areas, and huge influx of refugee and IDP migration; as whole were the significant drivers of food insecurity in Afghanistan.

According to results, in the research area, the illiteracy level of the household heads is very high thus it recommends for the government of Afghanistan to provide vocational training and short term workshops about food security to the heads of households. On the other hand, the vulnerable food insecure household students must get free monthly food kits such as cereals, sugar, and oil to reduce students' school withdrawal.

As there is a lack of job opportunities for women in the

eastern region, it is recommended for an international and governmental organization to provide beekeeping, poultry, and rug waving assistance to have a sustainable income to reduce food insecurity.

The eastern region has enough water but the conflict and war immensely damage the irrigation system, and all the water goes to Pakistan. It is obligatory for the government to rebuild the irrigation system and save the water. On the other hand, there are many rangelands and desserts the government must distribute a medium size land to food vulnerable food insecure households to cultivate and improve their income as well as the country's agriculture.

The majority of the households in the rural areas are directly and indirectly rely on land; most of them are small farmers and have many problems regarding cultivations and agriculture inputs. The availability of the food market is very weak in the eastern region, so it is better to establish bazaar days during the weekdays. It will both help farmers and households because farmers can sell their products and get a good income and the households can access food quickly and cheaply.

Results of this study will provide relevant input in making decisions and policies in the area of household food insecurity. Therefore, the result will also help international and local nongovernmental organizations (NGOs) in the planning of development food aid programs for the government or international organizations.

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Statement of Conflict of Interest

Authors have declared no conflict of interest.

Author's Contributions

The contribution of the authors is equal.

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