

Original Article

Rural women indigenous knowledge of traditional food and household food security in Kurdistan Regional Government, Iraq

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Abstract

Indigenous knowledge of traditional food can have high potential and a major role in achieving a sustainable food security system. Rural women usually have responsibility in securing household food security by applying their indigenous knowledge of food processing and preservation. This study was conducted in Shahrazor plain, which is a culturally and historically rich area in Kurdistan region of Iraq, to investigate Kurdish rural women's indigenous knowledge of food processing and preservation and their role in achieving and sustaining household food security. The data in this study showed that 100% of the respondents still apply their indigenous knowledge of traditional food processing and preservation methods depend on the availability of the needed resources and family members or market demand on these foods. Generally, most of the respondents are making some specific foods especially dairy products such as Masti Kurdi (Kurdish Yogurt) 72.89%, Paniri Kurdi (Kurdish Cheese) 37.35% and Dou (a sour yogurt-based beverage) 34.94%; and processing cereal grains such as Sawar 37.95%. Despite the fact that, Kurdish women still practice their indigenous knowledge of food processing and preservation but there are some ancient foods which are less practiced by the Kurdish women household, particularly fermented food and sundry food. Women in rural areas of Kurdistan region has a wide indigenous knowledge of food processing and preservation which offer a number of traditional Kurdish food products and a big contribution to improving food security in the region, sustainably.

Keywords: indigenous knowledge, traditional food, rural women, Kurdistan Region, Shahrazor Plain

1. Introduction

Indigenous knowledge is knowledge that is unique to a given culture or society [9].

Basically, the knowledge of Indigenous food processing methods represents a valuable source of local solutions to the food insecurity in terms of accessibility by the rural population, particularly during seasonal food shortage or major stress periods such as droughts [15]. Women are extensively involved in agricultural activities food processing and preservation which are the dominant livelihood

feature of rural areas [11, 15]. This is what put rural women in a position where they play an essential role in the four pillars related to food security: availability, accessibility, utilization and stability. Furthermore, Being knowledgeable local resources and environment, rural women are best placed to ensure sustainable food supplies and achievement of household food security [5, 8]. Kurdish ethnic has its own unique traditions and culture which is varied from and area to another and availability of the resources around them. Traditional Kurdish food is one of the most important part of Kurdish culture. Kurdish people have numerous varieties of traditional foods and these foods are prepared and consumed contingent on the seasons, in other words, Kurdish foods are mainly seasonal foods.

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There some examples of the traditional Kurdish food that been mentioned in this research study (Tirkhena, Doina, Kashik, Qara Kharman, Sawar, Ganma-kutaw, Do-kulliw, Paniri-Kurdi, etc.) [1]. Kurdish rural women also have indigenous knowledge about food processing, preserving, storage activities and other important survival skills which they derived from their direct interaction with the local environment. Such indigenous knowledge and its associated skills and practices are developed over ages, and passed down through the generations and became embedded in people's cultures.

The main objective of this study is to identify Kurdish rural women's indigenous food practices and preservation and their ability to manage available resources to secure food supplies for their household and ensuring the protection of the Kurdish Cultural and traditional foods.

2. Material and Method

The study area. Kurdistan region is a semi-autonomy region located at northern Iraq. Kurdistan region consist of four major governorates: Erbil, Sulaymaniyah, Duhok and Halabja. This study was taken place in Shahrzor plain which is located in Halabja District. Shahrzor plain is known to be one of the most fertile land of the area [2].

Archeological studies and discoveries show that human has been living in Shahrzor plain since prehistoric times [14]. Several villages from Shahrzor district were randomly selected as area of the study, namely; kani Pankai Saru, Kani Pankai Khwaru, Qaliyo, Muwani Hamai Hassan, Muwani Mala-Tahir, Muwana Kon, Greza, and Barika.

Sampling Design and Data Collection. A descriptive cross-sectional survey was used in this

study. The women within different range of age were randomly chosen as unit of study. The data were collected using questionnaires.

The respondents were interviewed face to face. The questionnaire was basically divided into the main sections.

The first section was designed to study the characteristics and Socio-demographic profile of the respondents, and the second section was the main area of investigation regarding the main objectives of this study to investigate the indigenous knowledge of women of food processing and preservation.

Data Analysis. The all collected data were analyzed using the Statistical Package for Social Sciences (SPSS version 25.0) to run descriptive statistics (frequency distributions and arithmetic mean) to present the quantitative data in form of tables based on the major research questions.

3. Results and Discussions

Socio-demographic profile of respondents

The following table (Table 1) shows the distribution of socio-demographic variables among the study population.

The all respondents in this study were women aged between 16 – 70 years old, and the mean of the age of the respondents was 39.2 ± 1.01 .

The data shows that majority of the respondents were single (70.5%) and (88.6%) of them were housewives or unemployed girls.

The highest rates of the respondents' literacy were illiterate (44.6%), then Primary school (26.5%) and then Secondary school (21.7%) which shows that the majority of respondents belong to low education level. The average mean of household size of the respondents was 5.99 ± 0.195 .

Table 1. Distribution of socio-demographic variables of the respondents

Variables	Category	Frequencies	Percentage
Gender	Female	166	100
	Male	0	0
	Total	166	100
Age	15-25	17	10.2
	26-35	65	39.2
	36-45	38	22.9
	46-55	18	10.8
	56-65	22	13.3
	Over 65	6	3.6
	Total	166	100
Marital statues	Married	28	16.9
	Single	117	70.5
	Widow	21	12.7
	Total	166	100
Educational Background	Illiterate	74	44.6
	Primary school	44	26.5
	Secondary school	36	21.7

Table 1. Distribution of socio-demographic variables of the respondents - continued

Variables	Category	Frequencies	Percentage
	High school	0	0.0
	Bachelor Degree	11	6.6
	Postgraduate Degree	1	0.6
	Total	166	100
Occupation	House wife & unemployed	147	88.6
	Farmer	1	0.6
	Office worker	10	6.0
	Student	8	4.8
	Total	166	100

Respondents' traditional food processing knowledge

In this study it is observed that the indigenous knowledge of Traditional Kurdish food processing and preservation is mainly passed from a generation to another via family knowledge sharing (from parents to their children) and some other channels. The respondents gained their knowledge through either family member (88.6%) or relatives (4.2%) or neighbors (7.2%) (See Table 2). This result show that the families are the main source of passing on indigenous knowledge of Kurdish food as it was in the earlier time. Recently, many ethnics groups

worldwide have been facing a problem in how to continue to pass on their cultural and traditional knowledge in a manner that helps them to maintain their cultural identity in modern lifestyles and globalization [12, 11]. So that, collecting detailed information and documenting these indigenous knowledges must be prioritized on the national level and to be archived for the next generations which can have a valuable input in achieving national food security system. Additionally, these traditional techniques can be useful for the contemporary food manufacturing process turned on a right path toward a sustainable food production system.

Table 2. Source of gained knowledge of traditional food processing

Source of Knowledge	Frequency	Percentage
Family members	147	88.6
Relatives	7	4.2
Neighbors	12	7.2
Total	166	100

There are many kinds of Traditional Kurdish food which varies from an area to another area. In this study each respondent had choices to mention five of the traditional foods that they have knowledge of its processing practically and still make them at home, for any purpose.

All respondents had mentioned one or more than one indigenous food that they still make at home. In overall, the number of traditional foods recoded in this study were 25 traditional food products which we divided them on seven major categories based on its processing or preservation techniques, namely: bread making, Sundry, Grains, Fermentation, Dairy Products, Salting, and Sugaring (Table 3).

Nani tiri is a traditional Kurdish Nan. It is delicate crispy dried thin bread which has a long shelve life. Among 166 respondents only 22 respondents are making Nani tiri at home (13.2%). The data shows that more respondents are making yogurt at home in a traditional way (72.89%). Sawar is coming in the second position (37.95%) (Sawar is made of wheat grain which is boiled until it is getting soft "at that stage it is called Daluna" then, it is going

to be sundried, grounded and sieved), then Paniri Kurdi (Kurdish Cheese) in the third position (37.35%). The data in Table 3 shows that only one of the respondents (0.6%) dries fruits, namely mulberries and also only one respondent (0.6%) dries vegetables, namely purslane (it is called Pallpeena in Kurdish, usually wild Pallpina is appear in the summer season) and keep them for another season, however sun-drying vegetables and fruits used to be one of the most common food processing techniques that Kurdish people used to practices in the rural areas especially for some vegetables such as tomatoes (Dried tomatoes is called Latika in Kurdish), Okra, Egg plants, Zucchini, etc., but unexpectedly none of them were mentioned by the respondents in this study.

The availability of fresh fruits and vegetables in the all seasons due to applying new farming technologies, importing food from other countries around the world, and the preferences and purchasing power of the households are the major reasons of this decline in sun drying process among the people in Kurdistan region which may lead to the loss of food security, food culture, and food knowledge and

skills. The data in table (3) shows that only 46 respondents (27.71%) have knowledge of processing Tirkhena and Doina and apply them at home, however Tirkhena and Doina are considered as two of the

oldest fermented food in Kurdish people's history, usually eaten in the winter season, that's recipe has been passed on through generations and the history of these foods is very old and still not determined.

Table 3. Traditional food made by respondents and the processing methods

Processing technique	Traditional Food	Number of responds out of 166 respondents	Percentage of responds out of 166 respondents
Bread making	Nani Tiri	22	13.25
Sun Dry	Dried Okra	1	0.6
	Dried Palpina - Purslane	1	0.6
	Dried Malberry	2	1.2
	Dried Fig	1	0.6
Grains	Genme Kutraw	11	6.62
	Sawar - Cuscus	63	37.95
	Qara-Kharman	34	20.48
Fermentation	Tirkhena	46	27.71
	Doina	46	27.71
	Grape viniger & Kurdish Pickles	35	21.08
Dairy Products	Yougurt	121	72.89
	Kurdish Cheese (Paniri Kurdi)	62	37.35
	Kashik	23	13.85
	Sirezah	14	8.43
	Fro	3	1.81
	Ron-kara (Kurdish Butter)	33	19.88
	Dou	58	34.94
	Ron-Kurdi (Kurdish Ghee)	27	16.26
Salting	Olive Pickling	2	1.20
	Tomato Paste	5	3.01
Sugaring	Fruits Jam	12	7.23

The data on Fig. 1 shows the percentage of the traditional food which are frequently been made seasonally by the respondents. The data shows that the respondents depend on the availability of the food resources. Some of the foods are made throughout the year such as some of the dairy food products for example yogurt, cheese, Ron-kara, Dou because the availability of milk throughout the year, meanwhile, the capability of making these food change depends on the season.

This fluctuation in availability of food resources happens due to the climate of Kurdistan region. Kurdistan region is located in a semi-arid climate with four major seasons (spring, summer,

autumn and winter) that hot dry summers and cold wet winters. The climate of Kurdistan region and especially Shahrzoor plain area is characterized by its fluctuation in rainfall and periods of droughts [16]. Indigenous knowledge plays an important role in during extreme weather conditions periods such as drought [6]. Rural women can play a key role in using and preserving their indigenous knowledge a valuable source of solution to food insecurity in terms of ensuring the accessibility to food for their households.

Some other foods are only made in a specific season or some specific seasons and used in different seasons such as sundry fruits and vegetables.

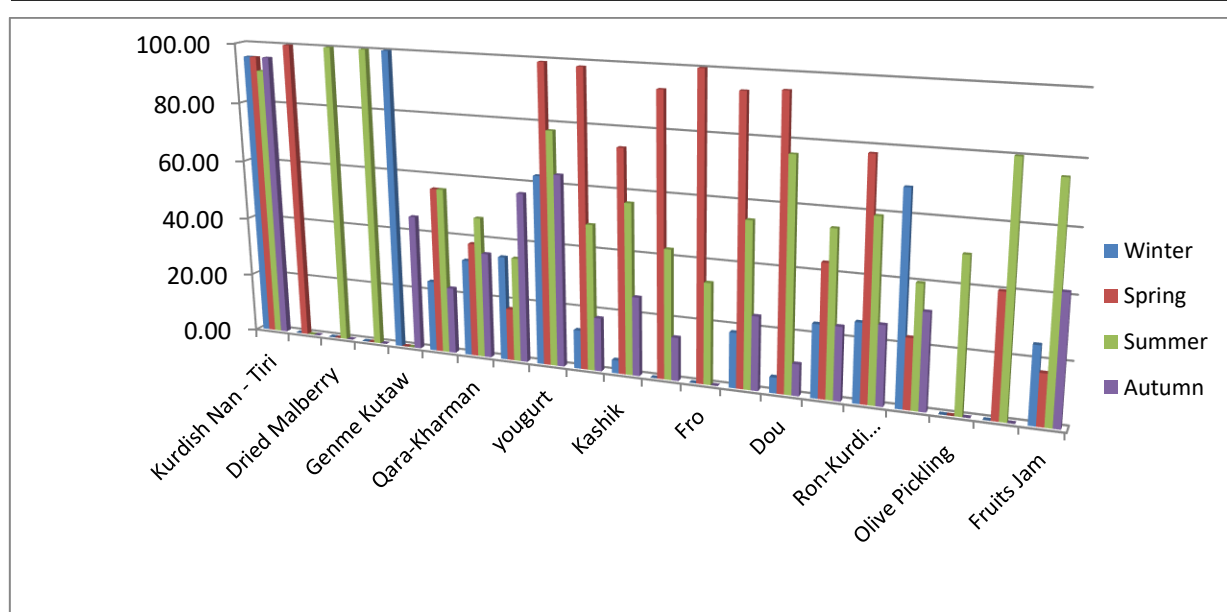


Figure 1. Seasonality of the traditional food preparation in this study

Respondents' traditional food preservation knowledge

In this study it is observed that the women in the rural area of Shahrazor plain besides applying their indigenous knowledge of food processing they also use their indigenous knowledge of food preservation using traditional techniques to keep availability of food during the seasonal food gaps. The main methods that were been observed in this study are keeping the food in cool places which was

used for keeping food for shorter period compared with other methods, Drying techniques which was used for preserving some traditional food for lengthening their shelf life for a year or more such as Tirkhena, Douina, Kashik, Ganima Kutaw, and Nani Tiri, Salting methods was mainly used for preserving Paniri-Kurdi and Hizza Store (Hizza is a especially designed pottery used for keeping Ghee) was mainly used for preserving Roni-Kurdi (Fig. 2).

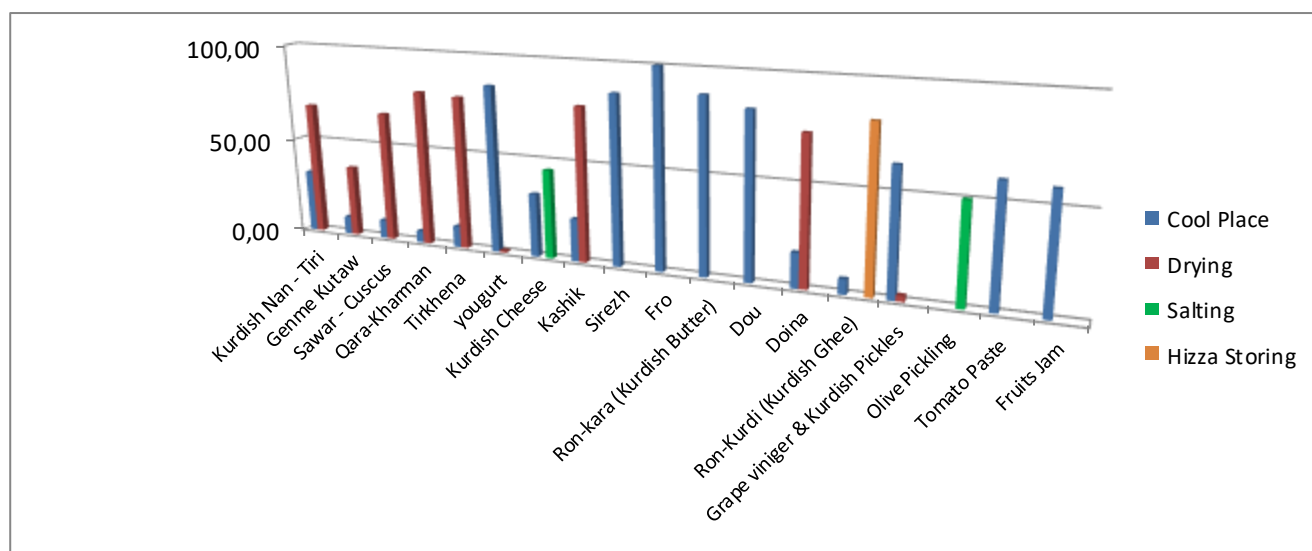


Figure 2. Traditional Preservation techniques among the traditional foods in this study

Respondents' involvement in traditional food marketing

In this study it is observed the rural women respondents in this study have already been involved in marketing and selling their food products. As it is

shown in the Fig. 3, 69.3% of the respondents were making the traditional food for their households and 30.7% of the respondents were making traditional food to sell in the local markets.

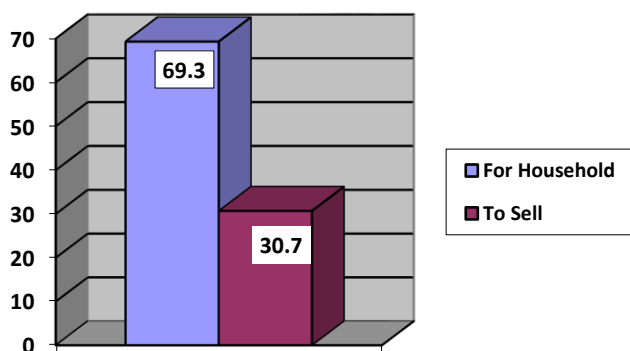


Figure 3. The purpose of making traditional food

It is also observed that 70% of the respondents among those sell their home-made traditional food products, they were selling them through middlemen and 29.4% of them were directly selling food products to their consumers (Fig. 4).

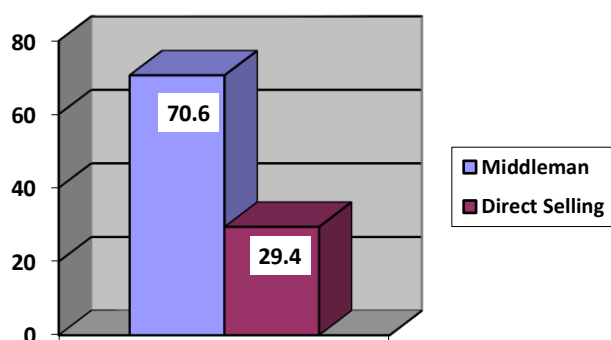


Figure 4. The market channels to sell the traditional food

The results from these data show the active role of women and their involvement in achieving food security for their households and their involvement in the agricultural value chain from production to processing to marketing.

Contribution of local food in food security and sustainable development has been shown in previous studies [3, 7, 13, 17, 4].

Rural women with their indigenous knowledge and applying this knowledge can provide food security for their households and communities and be the backbone of sustainable livelihoods. Recently, rural tourism sector is developing in Kurdistan region which gives more opportunity to the traditional food producers to become an entrepreneur and develop their market in accordance to consumer's needs and wants [10].

4. Conclusion

People who live in Kurdistan have a rich culture and traditions that need to be documented and kept from the effects of globalization and possessing these traditions by the dominant ethnics in the host countries where Kurdish people live mainly in Iraq, Iran, Turkey and Syria. Traditional Kurdish food is one of the most important fortune and uniqueness that show the identity of Kurdish people. This study showed that the young generation of some areas in Kurdistan region of Iraq has less indigenous knowledge than expected and some major traditional Kurdish foods haven't even been mentioned by the respondents. More study needs to be conducted in the other areas of Kurdistan to evaluate people's indigenous food knowledge in their area and to identifying, documenting, and archiving all Traditional Kurdish food products to protecting them from disappearance and fading. The disappearances of indigenous food knowledge for using locally available food resources effectively will negatively affect the household food security in Kurdistan region. Further research needs to be done on nutrition value of the Kurdish indigenous food products.

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