

## Does working in the agricultural sector affect the selection of a family planning method?

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### ABSTRACT

Seasonal farmworkers are one of the groups that should be examined in terms of family planning method because low socio-economic levels, limited accommodation, and living conditions in agricultural areas can restrict workers' access to information and health services. The study was carried out to determine the effect of working environment in agriculture on female seasonal workers' choice of family planning method. This cross-sectional study was performed on 300 women. It was found that the working and living conditions in the agricultural sector forced women to change their family planning method.

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### Introduction

Although fertility is a normal physiologic fact for a female body, it cannot be dissociated with the risks that pregnancy may bring. Each pregnancy has a potential risk even for a healthy woman. Maternal deaths are the second most common cause of death for women at reproductive age. Every year, approximately 287,000 women die due to complications of pregnancy and childbirth, and 99% of them are from developing countries. Most of these deaths could have been prevented, if access to family planning and some basic services have been provided (WHO Media Center Women's Health, 2013).

Family planning (FP) services are important in terms of preventing unwanted pregnancies and controlling inter-birth intervals and therefore ensuring safe motherhood (WHO Safe Motherhood, 1994). For this reason, national FP campaigns were launched, particularly in the developing countries, by various international organizations; and they were included in the 'safe motherhood package' developed by the World Health Organization (WHO) in 1987 (Starrs, 2006). Despite the increase in using family planning method (FPM) over the past 30 years, many women in all regions still do not have access to modern contraceptive methods.

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For example, in sub-Saharan Africa, one in four women who wish to delay or stop childbearing does not use any of the FPM (WHO Media Center Women's Health, 2013). In order to decrease the problems caused by superfecundity in Turkey, various legal regulations have been set in place since 1960s, and FP services have been provided with governmental support. There has been an increase in the number of women using modern contraceptive methods as a result of these efforts, but it is a striking finding that the use of traditional methods still remains high (Turkey Demographic and Health Survey, 2013).

Many factors affect the use of FPMs; woman's age, the educational status of the male partner, socio-economic status, family structure, socio-cultural structure of the society, marriage, age during first pregnancy, male partner participation for reproductive health, unwanted pregnancies, voluntary abortion, religious beliefs, and delivery methods are among them (Saka, Ertem, & İclin, 2001). In addition, factors such as the reliability of the method, the misuse of the method, false beliefs regarding the method, and individual and social characteristics, all affect the method used (Gözükara, Kabalcıoğlu, & Ersin, 2015).

All these factors demonstrate that seasonal farmworkers (SFW) are one of the groups that should be examined in terms of FPM due to the fact that low socio-economic status, and limited accommodation and living conditions in agricultural areas can restrict workers' access to information and health services (Kutlu & Koruk, 2014). Apart from these, patriarchal family structure is another factor predominating in families of agricultural workers living in Southeastern Anatolian Region of Turkey also covering the province of Şanlıurfa. As a characteristic of this community, philoprogenitiveness is supported, and increasing number of population is considered as a symbol of power in these communities. Many women deliver more babies in order to promote their status in the community despite the fact that each delivery adds up a risk on these women. Women who do not wish to give birth are exposed to pressure from their spouses, relatives, and friends (Şimşek, 2011). These women, regardless, keep their unwanted pregnancy. Likewise, studies with agricultural workers showed that the use of FPM was lower and fertility rates were higher (Gözükara, Ersin, & Şimşek, 2015; Şimşek, 2011). This study was carried out to determine the effect of working in agricultural areas on the FPM choices of female SFWs.

## Materials and methods

### Study area

The present study was carried out in the province of Şanlıurfa, which is located in the Southeastern Anatolia Region of Turkey. Şanlıurfa has been ranked as the 73th by the State Planning Organization among 81 cities in terms of socio-economic development, and this ranking also includes education, health, and social indicators (Republic of Turkey Ministry of Development, 2011). However, with the "Southeastern Anatolia Project", the economy in the southeast part of the country

has improved in recent years. Atatürk Dam was built (1983–1992), Urfa irrigation channels were constructed and water was provided to arid and semi-arid areas, leading to agricultural development in southeastern Anatolia. In addition to economic benefits, the project is also expected to reverse the migration flow from the region to the rest of the country. Although agricultural capacity has increased, the region is still poor in terms of industrial production. Maternal and child health services and FP services have been prioritized in this region. And these provided services have become important due to the large proportion of women at reproductive age and children in the population; high infant, child, and maternal mortality rates; the demand for FP services; and the limited availability of prenatal and postnatal care (the total fertility rate is 3.41, the mean number of children born to women aged 40–49 years is 4.83 and the infant mortality rate is 24 per 1000 live births). And, the education level is extremely low in the region (47.7% of women and 28.2% of men are illiterate). The families in this region are characterized by lower parental education, larger household sizes, higher numbers of children, and greater poverty (Turkey Demographic and Health Survey, 2013). Thus, in the study area, residents have low education levels, the local community is mostly composed of unemployed people, and there is also a high proportion of seasonal agricultural workers (Kutlu & Koruk, 2014).

### ***Study population***

In terms of socio-demographic characteristics, the majority of these SFWs were female, married, and uneducated. The mean number of households was  $8.0 \pm 3.3$ , and 90.0% of the SFWs earned below the minimum wage (311 USD per annum). The mean time spent in the field for working was  $9.4 \pm 8.9$  months during the year (Kutlu & Koruk, 2014). The total number of families of SFWs was estimated to be 124,630, constituting 25% of the Şanlıurfa's urban population. Some families of SFWs work for a single employer during the harvest season and returned directly to their home at the end of the season. Others, however, “follow the crops,” moving a few times per season among 23 different cities/towns to perform specialized work such as hoeing beets or harvesting cotton (Koruk, Simsek, Tekin, Doni, & Gürses, 2010).

### ***Setting and sample***

This cross-sectional survey was conducted from February to March 2015 in the province of Şanlıurfa. The target population of the study was married women aged between 15 and 49 years old who were working as seasonal agricultural workers. The sample selection was made by using the WHO/Expanded Programme on Immunization (EPI) 30 by 7 cluster sampling technique. The 30-cluster survey is a modified two-stage cluster sampling method (WHO, 1991). In this study, this method was used for a total of 300 people, and each cluster contains ten people.

The written permission of the Ethics Committee of Harran University and the verbal permission of participants were obtained for the research.

### **Data collection**

The study data were collected via face-to-face interviews using a structured questionnaire form. The participants were interviewed upon their return to home from agricultural field so that we would not be missing any detail in our interview regarding their daily life in the field. Due to the social structure, there might be more than one married woman in a household in the region. If this is the case, then we used Kish Method to select one married woman in that household. This method is based on random selection method (Kish, 1949). In so doing that, we interviewed one married woman per household. Each interview took approximately 30 minutes. Data regarding FPM were obtained for three different time periods—before going to the agricultural area, during the time in the agricultural area, and after returning home from the agricultural area.

### **Definitions**

SFW refers to an individual who is employed in agricultural employment of a seasonal or other temporary nature.

In this study, FPMs are grouped as either modern or traditional. Modern methods include female sterilization, pill, intrauterine device (IUD), injectables, and male condom. Traditional methods include lactational amenorrhoea and withdrawal. Therefore, the information on “knowledge of a family planning method” is indicative of whether the respondent had heard of that method.

### **Data analysis**

Data were analyzed by the researchers using Statistical Package for Social Sciences (SPSS) for Windows 16.0. Among descriptive statistics, percentage, mean, and standard deviation were used for data analysis. By means of kappa consistency test, FPMs were firstly analyzed between 2 periods—before going to the agricultural area and the time in the agricultural area in regards to the consistency on choosing FPMs. Secondly, by using the same test, FPMs were analyzed between 2 periods—the time in the agricultural area and upon returning home from the agricultural area.

### **Results**

Of these women, 53.0% were 35 years old and above, 9.3% could not speak Turkish, which is the official language, 47.0% were illiterate, 81.3% did not complete their elementary school, 60.0% had poor economic conditions as stated by themselves, 8.7% did not have health coverage but 55.3% had health cards provided for low income people by government, 41.3% stated that they had been working as SFWs for more than 20 years, 49.3% stated that they had stayed in the agricultural areas for more than 7 months, 79.0% got married at or under the age of 18; also, 77.0% of them had their first pregnancy at or under the age of 18. Of the women,

71.0% became pregnant with 2 years apart or less, 67.7% stated that they got pregnant 5 times or more, 49.0% stated that they wanted 5 or more children under normal conditions, 58.0% had 5 and more children, and 50.7% stated that they did not decide on the number of children they would have.

It was found that 95.7% of the women were aware of modern FPMs and the most commonly known methods were IUD (89.75%) and male condoms (85.4%). Of these women, 68.2% were still using modern methods and 17.0% were using traditional methods, while 14.6% of the women did not use FPMs in order to become pregnant (7.3%) or because they were planning to become pregnant (7.3%). Of the women, 24.2% stated that their spouses decided on the method and 75.8% stated that they participated in decision-making on the method.

Contraceptive effectiveness of the method (56.6%) and their spouses' choice (24.3%) were first two reasons for choosing FPMs (Table 1).

Of the women, 89.7% were living in tents in agricultural areas. 32.2% of the women changed their choices on FPMs during the period they worked in agricultural area. The reasons for changing the methods were having no access to other methods (100.0%), not being able to keep the method available (68.8%) (i.e. not being able to maintain the condom under right temperature, not able to keep the pills away from children), not being able to use the method timely (31.3%), and not being able to use the method correctly (31.3%) (Table 2).

**Table 1.** Distribution of features regarding women's use of contraceptive methods.

Features	Number	%
Knowledge of modern methods		
Yes	287	95.7
No	13	4.3
Known modern methods*		
IUD	277	89.7
Condom	266	85.4
Pill	206	65.4
Female sterilization	109	35.5
Injection	102	33.2
Use of methods		
Modern method	205	68.2
Traditional method	51	17.0
Does not use method	44	14.6
Currently pregnant	22	7.3
Wants to conceive	22	7.3
The person deciding on the method to be used*		
The woman participated in the decision-making	194	75.8
The husband alone	62	24.2
Reasons for choosing the method*		
High degree of contraception	145	56.6
Health reasons	27	10.5
Husband's wish	62	24.3
Health personnel's suggestion	4	1.6
Ease of use	18	7.0
Total	300	100

\*Calculation was made for those using these methods ( $n = 256$ ).

**Table 2.** Distribution of features regarding women's accommodation during their period as agricultural workers and their choice of method.

Features	Number	%
Accommodation		
A room provided by the employer	31	10.3
Tent	269	89.7
Choice of method changed		
Yes	96	32.0
No	204	68.0
Reason for changing the method during the period working on agriculture land*		
Not being able to use the method correctly	30	31.3
Not being able to use the method in a timely fashion	30	31.3
Not having access to the method	96	100.0
Not being able to use the method under suitable conditions	66	68.8
Total	300	100

\*More than one answer was given to the question and calculation was made using those whose choice of method changed ( $n = 96$ ).

The methods used by women before going to the agricultural areas were IUD (30.0%), male condom (22.0%), withdrawal (12.0%), pills (11.0%), female sterilization (6.0%), injectable drugs (4.3%), and lactational amenorrhea (1.3%); whereas the methods used during the period they stayed in the agriculture area were withdrawal (39.0%), IUD (34.0%), female sterilization (6.0%), injectable drugs (4.3%), male condom (2.7%), and pills (0.7%) (Table 3). It was found that the consistency on the method used at home and in agricultural areas was 58.0%, which was statistically significant (Kappa = 0.58,  $P < 0.001$ ). There was no change in using injectable drugs and female sterilization, but there was an increase in the use of IUD in agricultural area. There was no change on the percentage of women who did not use any method, but there was nearly 3 times increase in using the withdrawal method. However, the rate of women using pills, male condom, and lactational amenorrhea was quite low (Table 3). The methods used by the women upon returning home were IUD (29.0%), male condom (20.3%), withdrawal (10.7%), pills (9.0%), lactational amenorrhea (6.3%), female sterilization (6.0%), and injectable drugs (4.0%) (Table 4).

It was also found that there was 86.2% consistency between the periods before going to the agricultural area and upon returning home from the agricultural area, which was statistically significant (Kappa = 0.86,  $P < 0.001$ ). Upon returning home from the agricultural areas, women mostly restarted using the methods they used under normal conditions (Table 4).

## Discussion

Almost half of the female SFWs were illiterate and 81.3% of them did not even complete elementary school. This rate is higher than the rate in overall Turkey (6.28%) reported by the Turkish Statistical Institute in 2015 (TSI, 2015). In the



**Table 3.** Change in contraceptive methods used before going to work in agricultural areas and while staying in agricultural areas.

Method used before going to the agricultural land	Method used in agricultural area									
	Does not use method	IUD	Condom	Pill	Injection	Female sterilization	Withdrawal	Breastfeeding	Total	
Does not use method	Number 40								40	
IUD	Number 13.3	90							13.3	
Condom	Number 30.0	5	1	1			59		90	
Pill	Number 1.7	1.7	0.3	0.3			19.7		66	
Injection	Number 5	5	7	1			20		22.0	
Female sterilization	Number 1.7	1.7	2.3	0.3	13		6.7		33	
Withdrawal	Number 4.3				4.3	18			11.0	
Breastfeeding	Number 6.0					6.0			13	
Total	Number 34	2					34		18	
	Number 11.3	0.7					11.3		6.0	
	Number 4						4		4	
	Number 1.3						1.3		1.3	
	Number 117	102	8	2	13	18	117	0	300	
	Number 39.0	34.0	2.7	0.7	4.3	6.0	39.0	0.0	100.0	

**Table 4.** Change in contraceptive methods used before going to the agriculture areas and after returning from the agricultural area.

Method used after returning from the agricultural areas	Method used before going to the agricultural areas									
	Does not use method	IUD	Condom	Pill	Injection	Female sterilization	Withdrawal	Breastfeeding	Total	
Does not use method	Number 30	3	3	3	1		4		44	
	% 10.0	1.0	1.0	1.0	0.3		1.3		14.7	
IUD	Number 85	28.3		1			1		87	
	% 28.3			0.3			0.3		29.0	
Condom	Number 61		61						61	
	% 20.3		20.3						20.3	
Pill	Number 27			27					27	
	% 9.0			9.0					9.0	
Injection	Number 12				12				12	
	% 4.0				4.0				4.0	
Female sterilization	Number 18					18			18	
	% 6.0					6.0			6.0	
Withdrawal	Number 29						29		32	
	% 10.7						9.7		10.7	
Breastfeeding	Number 4							4	19	
	% 1.3						0.7	1.3	6.3	
Total	Number 300	90	66	33	13	18	36	4	300	
	% 100.0	30.0	22.0	11.0	4.3	6.0	12.0	1.3	100.0	



study carried out by Kutlu and Koruk on farmworkers, it was found that 86.2% of female SFWs were not able to complete elementary school. In the same study, it was found that the percentage of female SFWs is way higher than male in agricultural sector, and a significant portion of these women could not or did not continue their education and they could not benefit from equal opportunity principle in education due to their gender (Kutlu & Koruk, 2014). Considering the fact that education is an important factor affecting access to health services, it should be considered that female SFWs are a disadvantaged group.

The official language in Turkey is Turkish, but there were female SFWs who did not know Turkish and spoke only Arabic or Kurdish. Therefore, it is essential for a successful health service to provide services compatible with the workers' language and culture. It was stated that even in the USA the most significant obstacle for agricultural workers to accessing health services is language barrier and communication problems (Arcury & Quandt, 2007).

More than half of the female SFWs have low income. In many studies, farmworkers were reported to comprise the social group with the lowest income (Koruk et al., 2010; Şimşek, Koruk, & Doni, 2012). According to a research by the Confederation of Turkish Trade Unions, the majority of migrant farmworkers live below the hunger and poverty line (Confederation of Turkish Trade Unions, 2011). Data from the National Institute for Occupational Safety and Health (NIOSH) show that the average annual income per family ranges between 7,500 and 9,999 USD (McCurdy & Carroll, 2000). Similar to the results of the present study, poverty is a huge recurring problem for migrant agricultural workers in many different countries.

One in every ten female SFWs does not have health coverage. However, individuals with health coverage will benefit more from health services and also from FP services.

In Turkey, marriage is usually considered to be the beginning of the reproductive period. First marriage age has a significant effect on giving birth. The women marrying at early ages have the risk of longer pregnancy period (Öner & Yapıcı, 2010). Female SFWs marry at an early age; conceive at an early age; and have more frequent and more pregnancies. Due to this reason, they have more children at early ages. As a matter of fact, the majority of the women stated that they wanted to have 5 or more children and 58.0% of these women had 5 or more children. Female SFWs generally reach their target number of children within a 10-year period. It is considered that age at marriage and pregnancy in the study area being under the average values for Turkey stems from patriarchal social structure, gender roles of women, and that women are voiceless in terms of marriage and having children (Gözükara, Ersin, & Şimşek, 2015).

Almost all female SFWs are aware of modern contraceptive methods and the most commonly known methods are IUD and male condom. In the study by Gözükara et al. on female SFWs, it was stated that 96.7% of the women were aware of at least one contraceptive method (Gözükara, Ersin, & Şimşek, 2015).

According to the data from the Institute of Population Studies in 2013, 98.7% of the women were aware of contraceptive methods, and the most commonly known methods were IUD, pills, and male condom (Turkey Demographic and Health Survey, 2013).

Variety is essential to FP methods and it is important to carry out studies to ensure this variety. The use of modern methods in female SFWs is more common than that reported (47.4%) by the Turkey Demographic and Health Survey (TDHS, 2013), which is one of the remarkable results of this study. However, it is not a surprising finding that female SFWs marry and conceive at early ages, give birth frequently, and have the number of children they desire in a short time (10 years), because more than half of the female SFWs are aged 35 years and above, and hence they have come to the end of their period of greatest fertility. The finding that women stated high degree of contraceptive success as the first reason to choose a method suggests that these women do not want to become pregnant any more.

In the present study, one of every four women selected an FPM in accordance with the preference of their spouses and the method of family planning to be used by the women was decided by the male partner. Considering socio-demographic characteristics of the participating women, it is an anticipated result that these women are not involved in decision-making process about their fertility. Social status of woman, traditional family structure and educational status cast a passive role for women while choosing an FPM. In a study that was conducted on a patriarchal community in Nigeria, males were found to have dominated selection and use of FPM (Duze & Mohammed, 2006).

It was seen that female SFWs spent most of their lives working as agricultural workers and stayed in agricultural areas most of the time in a year. Staying in the agriculture area for a long time affects SFWs' relationships with their family members, neighbors, co-workers, and individuals in other groups.

SFWs live in primitive shelters such as tents when they are in rural areas (Kutlu & Koruk, 2014). Life in these shelters is unhealthy and deprived of opportunities that may enable the workers to rest and have a degree of family privacy. The children and parents have to sleep in single-room shelters, which negatively affect the sexual life of the parents (Kutlu & Koruk, 2014). Life and working conditions in agricultural areas causes many changes in the workers' daily routine as well as in their use of FPM. The women continue using modern methods, such as IUD, 6-month injectable drugs, and female sterilization, when they go to agricultural areas, while the use of methods such as pills, male condom, and lactational amenorrhea was rather low.

The methods used may change due to factors such as difficult working and living conditions in the agricultural areas, not having access to the method, not being able to store the method properly, not being able to use the method correctly and in a timely fashion. In a study carried out in the province of Şanlıurfa, it was found that the majority of female SFWs were migrating and living far from the city

centers most of the time in a year and had difficulties accessing health services while working in rural areas (Şimşek et al., 2012) Hence, they also have difficulty in accessing FP services in the field. As a matter of fact that most female SFWs continue using the method they used before going to the agricultural areas validates this information. As a result, providing FP services becomes more important in the agricultural area. Unfortunately, there are no such FP services provided to those SFWs in the field. However, local primary health care service providers, coordinated by community health centers, should provide FP services to SFWs with the help of their mobilized health team.

## Conclusion and suggestions

It was found that the working and living conditions of female SFWs in agricultural area affected their FPM choices. It is suggested that factors preventing female SFWs' access to and use of FPMs must be identified and interventions must be made to eliminate these factors. In addition, education and counseling on FP should be given to male partners of female agricultural workers due to the fact that male partners of these women dominate the selection and use of FPM.

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