

Participation of Rural Women in Sustainable Development – Demographical and Socio-Economic Determinants

Sevgi Rad,¹ Hacer Çelik Ates,^{2*} Şanser Delioğlan,³ Sefa Polatöz³ and Gülay Özçömlekçi⁴

¹University of Mersin, Erdemli School of Applied Technology and Management, Mersin, Turkey

²Suleyman Demirel University, Faculty of Agriculture, Department of Agricultural Economics, Isparta, Turkey

³University of Mersin, Silifke Vocational School, Mersin, Turkey

⁴University of Mersin, Marine and Commercial Vocational School, Mersin, Turkey

ABSTRACT

Empowering women is a top priority in the pre-accession process that is going on between the EU and Turkey. The accession partnership with the EU calls for identification of the challenges women face and specific priorities to promote the role of women in society. A gender-based disadvantageous socio-economic situation is more critical in rural communities. In this sense, studying, analyzing and understanding socio-demographic and socio-economic aspects of rural women's lives is the first step in formulating training and other services for empowering them. The status of rural women in Mersin (Turkey), where 46 per cent of inhabitants live in a rural area, was investigated and analyzed to provide the necessary quantitative and qualitative data for decision makers and public authorities to contribute to improvement of the status of rural women in the region. Chi-square analysis and multiple correspondence analysis (MCA) were used to investigate the relationships between several socio-demographic and socio-economic variables. Findings of this study reveal that the young population is better educated and that most women desire their daughters to obtain a better education and an occupation. Rather than age, education is emerging as an important factor determining the participation of rural women in decision-making processes, and the regularity and amount of monthly income seems to be an important determinant of the number of children per household. In this context the traditional perceptions and norms seem to be changing. Copyright © 2010 John Wiley & Sons, Ltd and ERP Environment.

Received 31 July 2009; revised 18 December 2009; accepted 30 December 2009

Keywords: rural women; socio-economic; sustainable development; Mersin; Turkey

*Correspondence to: Hacer Çelik Ates, Suleyman Demirel University, Faculty of Agriculture, Department of Agricultural Economics, Isparta, Turkey. E-mail: celikha@yahoo.com

Introduction

WOMEN CONSTITUTE HALF OF THE WORLD'S ADULT POPULATION AND OFTEN CONTRIBUTE MORE THAN THEIR DUE share to society, yet their personalities, interests, ideas and activities have not received the attention they deserve (Akpabio, 2007). As Conable and Siar (1998) points out, to sustain itself, development must help women. Also, as indicated in Agenda 21, the UNCED Action Plan for sustainable development, to strengthen the role of women in sustainable development requires certain actions (Wickramasinghe, 1997; Corral, 2002; Olufemi, 1993).

Around the globe, women are central actors in rural livelihood activities. The role varies within regions, countries and districts, and is divided in different ways between women and men. These gender differences in women's and men's roles in rural livelihoods are not just due to cultural norms and practices, but the types of environment and farming system that communities rely on for their livelihoods (Salkeld, 2008). Regardless of the significant role that rural women play in the economic survival of their families, they have the least access to productive resources, health care, education and decision-making processes (UNIFEM and DAW, 2001). Furthermore, women have the fewest employment opportunities and lesser occupational mobility (Agarwal, 1997). Garcia-Ramon and Baylina (2002) underline that professional qualifications of rural women are very low, but their economic contribution to the family budget allows the survival of small farms that otherwise would not be profitable. Conable (1988) emphasize that women's hands build the foundation of stable growing communities, but development efforts have not lent enough strength to these hands and have not entrusted enough resources to them, and along with women development itself has suffered.

Torkelsson and Tassew (2008) argue that the asset gap between women and men is particularly stark in rural areas in developing countries, where women receive less education than men, fewer extension services and less access to income and land.

A survey on the role of women in implementing Local Agenda 21 reveals that lack of gender consciousness, cultural traditions, women's multiple roles and gender biases are among the main challenges that women face (Corral, 2002).

The fundamental problem regarding the status of women in a society is the perspective that sees women as a homogeneous group. Yet women are not a homogeneous group in a society. It is important to recognize and understand the differences among women when gender-based issues are studied (Yodanis, 2002). Different circumstances and characteristics, such as cultural habits and socio-demographic and economic status, should be taken into consideration when dealing with the roles and responsibilities of women in gender notion (Hablemitoğlu, 2004). Historically, researchers from various social disciplines (sociologists, geographers, demographers and others) have observed important differences between urban and rural populations in many parts of today's developed countries. Compared with the urban residents, people living in rural areas generally show more conservative political and religious attitudes and are more likely to follow traditional values rather than 'modern' behavioral patterns, for example, more traditional family structures and living arrangements, higher fertility and lower level of education (Istemic, 2007). Midgley (2006) draws attention to gendered local social and economic relations that construct and affect behaviors and practices regarding the economic role(s) of women within rural households and communities.

The UNIFEM and DAW report (2001) underlines the need for more sex disaggregated data to analyze the situation of rural women and further calls for a better understanding of women's existing conditions with regard to their command over skill and resources, household structure and gendered division of labor and women's role in decision-making processes.

Even though Turkey has accomplished significant progress in gender equality, issues such as low participation of women in the labor market, access to education and their role in decision-making processes need to be further elaborated. This gender-based disadvantageous socio-economic situation is more critical in rural communities. In this sense, studying, analyzing and understanding socio-demographic and socio-economic aspects of rural women is the first step in formulating training and other services that would empower women in rural areas and would promote their contribution to sustainable development. However, the success of such extension services largely depends on constructing customized, target-group-specific projects. Such an approach

would require gender-based information and data that have been collected through regional or local scale surveys.

Several studies on the socio-economic status of rural women in different regions of Turkey have been carried out (Development Foundation of Turkey (TKV), 1991; Ertürk, 1993; Saltık *et al.*, 1994; İlkaracan, 1998; Abay *et al.*, 1999; Aziz *et al.*, 2000; Özgen and Ufuk, 2000; Fazlıoğlu, 2003). However, the socio-economic and socio-demographic characteristics of rural women in Mersin province, where 46 per cent of the inhabitants live in rural areas, have not yet been studied. Agriculture, along with tourism and logistics, are considered to be the strategic sectors for future sustainable development of Mersin province. It is widely acknowledged that rural sustainable development policies should also include women and promote their participation. Sustainable development encompasses environmental, social and economic perspectives (Plummer, 2006). The World Conservation Strategy report (IUCN *et al.*, 1991) shows a greater recognition of social issues, proposing changes in socio-economic structures to increase participation in decisions and improve the quality of human life, and modifications to the world economy (Hopwood *et al.*, 2005). This study concerns socio-economic and demographic aspects. Thus, it aims to determine participation of rural women in sustainable development of rural Mersin by investigating socio-economic and demographic factors. It further aims to recommend a set of actions to promote the status of rural women in the region. In order to achieve these goals,

- the social, economic and demographical characteristics of rural women,
- allocation of time to domestic and agricultural work among rural women,
- rural women's participation in decision-making processes,
- social relations of rural women and
- rural women's problems and expectations

are investigated.

Material and Methods

Study Area

This study was conducted in Mersin province, which is located on the Mediterranean region of Turkey. The province occupies a landmass of 1585300 ha, constituting 2.0 per cent of Turkey's surface area. 1595928 people live in Mersin, which includes nine districts, namely Tarsus, Erdemli, Silifke, Mut, Gülnar, Anamur, Aydıncık, Bozyazı and Çamlıyayla. According to the Turkish Institute of Statistics (TUIK), in 2007 the rural population was 539607, of whom 269379 were women and 270228 men. Mersin province has a significant contribution to Turkish agricultural production. In recent years agricultural production in Mersin province has corresponded to one-third of national citrus, 10 per cent of fruit and 5 per cent of vegetable production. Sixty-one per cent of the rural population is engaged in agricultural production (MTSO, 2004).

Sampling Procedures

Data was collected through face to face interviews using questionnaires. The study area was divided into different groups in terms of social, economic and cultural similarities. In this sense, Tarsus, Erdemli, Silifke, Mut and Gülnar districts were in the first group, Centrum in the second group and Anamur, Aydıncık, Bozyazı and Çamlıyayla in the third group. Sampling procedures were based on the 2000 census. Only females older than 14 years were included in the sampling procedures. The population size (>14 years old) of the target group to be surveyed in the study was therefore computed by subtracting females 14 years old or under (20616) from the total rural women's population (320616), which corresponded to 300000. A coefficient of 0.064 ($20.616/320.616 = 0.064$) was used to determine population size in each sampling group. Due to a limited budget, 0.1 per cent of the target population (300000) was accepted as the sample size (300). The sample size was allocated to groups as shown in Table 1.

Group I		Group II		Group III	
Erdemli	49 233	Centrum	96 408	Anamur	16 898
Gülnar	14 118			Aydıncık	1 809
Mut	19 304			Bozyazı	8 613
Silifke	44 980			Çamliyayla	5 004
Tarsus	64 279				
Total	191 914	Total	96 408	Total	32 294
Sample size		Sample size		Sample size	
$0.064 \times 191\,914 = 12\,282.5$		$0.064 \times 96\,408 = 6\,170.1$		$0.064 \times 32\,294 = 2\,066.8$	
$191\,914 - 12\,283 = 179\,631$		$96\,408 - 6\,170 = 90\,238$		$32\,294 - 2\,067 = 30\,227$	
$179\,631 \times 0.001 = 179\,631$		$90\,238 \times 0.001 = 90\,238$		$30\,227 \times 0.001 = 30\,227$	

Table 1. Targeted population of rural women (>14 years old) and sample size allocation

Statistical Analysis

The SPSS statistical program was used to establish frequency tables and cross-tables. Chi-square and multiple correspondence analysis (MCA) were applied for further assessments of interactions between independent variables, e.g. age, marital status, education, occupation, skills and participation in decision-making.

MCA is a useful and a popular descriptive technique to examine relationships among more than two sets of discrete variables. MCA is primarily a descriptive method designed to assign scores to rows (representing the subjects) and columns (representing the response categories of the discrete variables), yielding a graphical display that may facilitate the understanding of the interdependency among the data set. The parameters of MCA are estimated by pooling the data across respondents under the implicit assumption that all respondents come from a single, homogeneous group. However, it often seems more realistic to assume that respondents come from heterogeneous groups, such that they are different with respect to their attitudes and preference (Hwong and Takane, 2002; Hwong *et al.*, 2006). Socio-economic and demographic factors include many variables such as family and relative relations and economic indicators. MCA was preferred and used in this study because it can analyze the hypervariables more easily and more understandably and easily present the relations between variables visually and securely.

Results and Discussion

In this section the status of rural women in Mersin is presented by socio-demographic and economic indicators, family and relations. Statistical relationships between these variables are also presented for deeper analysis and illustrations.

Social and Demographic Indicators

Education is one of the important factors affecting the dynamics of change in a population. The purpose of education (both formal and informal) is first to communicate accumulated wisdom and knowledge from one generation to the next and second to facilitate active participation in innovation and the development of new knowledge (Lange *et al.*, 2009). Therefore, education of rural women is important for their participation in sustainable development.

As seen in Table 2, 66 per cent of the women interviewed were between the ages of 21 and 45, and the relationship between age and education was found to be statistically significant. (Calculated Chi-square 151.597, degrees of freedom 20, $p < 0.05$.) Accordingly, as the average age among rural women decreases the level of education increases. Parallel to stressing women's important role in sustainable development, in 1997, mandatory education

in Turkey was increased from five years to eight years, and this situation has increased the schooling ratio among the girls and extended their education period. The schooling ratio gap between boys and girls, especially at elementary school level, has dramatically decreased. By the enforcement of the eight-year mandatory education law, most children completed the first five years of their eight-year educational process. Li (2005) has also observed that older rural women are less educated than younger women. The educational gender gap in favor of women starts young in the OECD area. At the macro level, human capital, especially primary education, contributes to economic growth and in turn to poverty reduction (Iversen and Jones, 2008). Raising the education levels and literacy rates of women is one of the most effective investments for increasing female productivity as well as enhancing the well-being of families and children (OECD, 2008).

74.3 per cent of women had only elementary school education, 9.7 per cent were illiterate and 5 per cent were literate but did not have elementary school education (Table 2). In Turkey, 27 per cent of women older than 15 year old in rural areas were reported to be illiterate (TUIK, 2004). In this regard, the average illiteracy rate in Mersin province is one-third of the national average.

The relationship between the education level of women and that of their husbands was found to be statistically significant (calculated Chi-square 71.069, degrees of freedom 25, $p < 0.05$). It was revealed that the education level of women is generally the same as that of their husbands or higher. It was further seen that the illiteracy rate is eight times higher among women than among men, and at higher levels of education women remained behind men (Table 2). Women were given fewer educational opportunities than men in rural areas of developing countries

Age		%
	14–20	4.4
	21–35	35.0
	36–45	31.0
	46–55	21.3
	55+	8.3
Marital status	Married	85.7
	Single	8.7
	Widow	5.6
Number of children	1–2	46.5
	3–4	37.4
	5–6	6.2
	7–8	2.9
	9+	0.4
	None	6.6
Education level		
Women	Illiterate	9.7
	Literate	5.0
	Elementary school	74.3
	Secondary school	4.3
	High school	5.7
	University	1.0
Men	Illiterate	1.2
	Literate	1.2
	Elementary school	77.2
	Secondary school	10.8
	High school	7.7
	University	1.9

Table 2. Demographic indicators of rural women interviewed in Mersin

(Olufemi, 1993; Torkelsson and Tassew, 2008). However, education is one of the most important factors that help development to be realized. The effect of education can be seen as a determining factor in many areas: the rate of increase in population, average family size, protection of fertility health and participation in decision-making in the family are all affected by the level of education. In this context, the education of women, as main actors in development, is extremely important.

During the interviews with women, 97.7 per cent expressed that they desired their daughters to finish university education, possess an occupation and to enjoy better living conditions. 83.6 per cent of women interviewed believed that lack of regular income and financial difficulties were the main constraint in providing education to their daughters. Women who desired their daughters to have a higher level of education were between ages 14 and 45 years, while those who did not wish a higher level of education for their daughters were over 55 years old. This finding may be related to lower status of rural people, especially lower status of women in rural areas, and therefore these people desiring their daughters to have not the same low status, but a higher one. The main reasons for women not wanting their daughters to receive education are economic difficulties and not having a stable income. Also, Conable and Siar (1998) state that women are confronted with the challenge of realizing the dream of sending their children to university to enable them to escape poverty. This alone makes women one of the strongest stakeholders in sustainable development.

Akhun *et al.* (2000) and Sikiae (2007) believe that the traditional gender-based roles in the family lead to gender discrimination and prevent the recognition of equal opportunities for girls. They further stress that imprints on the roles of men and women do have reflections on the attitude of parents with regard to education of their daughters.

Ethical and religious rules along with a traditional rural lifestyle and engagements also lead to underprivileged conditions for women in rural communities with regard to education (Ministry of Agriculture and Rural Affairs (TKB), 2004).

The high ratio of women in the study area wanting higher education levels for their daughters is an indicator of the changing perceptions with regard to traditional gender-based roles. Rather than ethical and religious principles, economic conditions seem to be emerging as the main determinant.

A statistically significant relationship was determined between age and marital status (calculated Chi-square 72.245, degrees of freedom 8, $p < 0.05$). Accordingly, as the age increases the single woman ratio decreases. There were no single women above 46 years old. 85.7 per cent of women interviewed were married (Table 2). Marriage is seen as a respectable institution, which promotes the social status of individuals in the community.

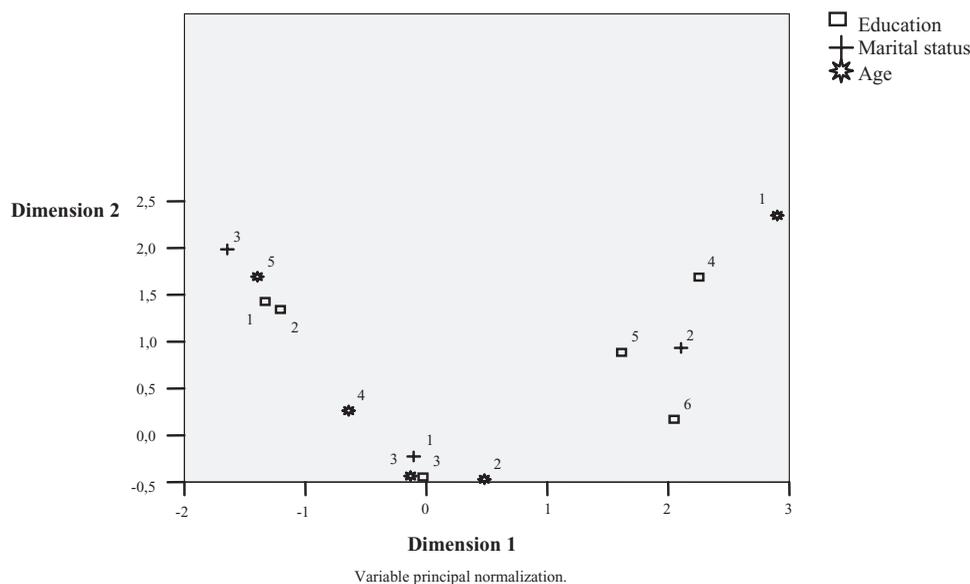
There is a statistically meaningful relationship between the education level and marital status of women (calculated Chi-square 61.675, degrees of freedom 10, $p < 0.05$). The widows had the lowest level of education while there were no illiterates among singles.

The relationships between education, marital status and age reveal that in general married women are between 36 and 45 years old and have elementary school education, single women are 14–20 years old and at high school level and widows are over 55 years old and illiterate (Figure 1).

As level of education increases, women tend to have fewer children and understand that uncontrolled population growth will undercut sustainable development efforts. If women could be empowered through education to control the number of children they have, the quality of life could improve. Also, as education levels increase, political participation tends to increase, resulting in increased pressure on leaders to be responsible and accountable (Lange *et al.*, 2009).

46.5 per cent of women were found to have one or two children, 37.4 per cent had three or four children and the average number of children was computed as 2.8 (Table 2). The average number of children per woman in Turkey is 2.53 (Kaya, 2008), meaning that the average in the Mersin region does reflect the national average.

The relationship between having regular income and the number of children was found to be statistically significant. (Calculated Chi-square 19.996, degrees of freedom 5, $p < 0.05$.) While 3.9 per cent of families with one or two children and 8.8 per cent of families with three or four children had regular income, 11.8 per cent of families with five or six children enjoyed regular incomes. Nearly three-quarters of interviewed women did not want any more children due to poor livelihood and the desire to provide better living conditions for their current children.



Education: 1 Illiterate, 2 Literate, 3 Primary school, 4 Middle school, 5 High school, 6

University

Marital status: 1 Married, 2 Single, 3 Widow

Age groups: 1 14–20, 2 21–35, 3 36–45, 4 46–55, 5 56+

Figure 1. Relationships between education, marital status and age

Economic Indicators

Occupation

Women's work in the home is also undervalued. In all countries, women perform the bulk of household duties without pay, even while working in the labor force (OECD, 2008). Some women in developing countries have had expanded access to employment, improving short-term incomes. For paid work to raise women's status, however, it must provide a secure income, but females are concentrated in unstable, low paid dead-end manufacturing jobs – a phenomenon mirrored in service and agricultural sectors of developing economics (UNDP, 1999).

97 per cent of women interviewed were housewives and the remaining 1.7 per cent were grocers/casual laborers/students (Table 3). However, only 13.3 per cent of women who identified themselves as housewives were solely housewives: 42 per cent were non-paid family workers, 23 per cent were both non-paid family and occasionally paid workers and finally 20 per cent were occasionally paid workers. Ilkkaracan (1998) has also documented that rural women who work in agriculture or other sectors as paid/unpaid workers as well as those who generate income at home identify and categorize themselves as housewives. This is an indication of the fact that rural women have internalized the gender-based labor division within themselves. Garcia-Ramon *et al.* (2003) state that women enter the labor market mainly as salaried workers: their professional qualifications are very low; their economic contribution to the family budget allows the survival of small farms that otherwise would not be profitable. This complementary income warrants some demographic and economic stability in rural areas.

Lowe and Ward (2007) state that that self-employment rates are high in England as well, but some of this is because of lack of suitably varied and rewarding local jobs, and this may be reflected in poor pay and working conditions, especially in the case of women's self-employment in rural areas.

Monthly income of the household		%	Monthly expense of the household		%
YTL	US \$		YTL	US \$	
<200	<139	23.4	<200	<139	25.8
201–400	140–278	33.4	201–400	140–278	34.8
401–600	279–417	27.4	401–600	279–417	26.1
601–800	418–556	6.1	601–800	418–556	6.7
801–1000	557–694	7.0	801–1000	557–694	4.7
1001–1200	695–833	1.0	1001–1200	695–833	1.3
1201+	834+	1.7	1201+	834+	0.7
Occupation			Social security		
Housewife			Bag-Kur		
Worker			SSK		
non-paid family worker			Green card		
both non-paid family and occasionally paid worker			Retirement fund		
occasionally paid worker					
Grocery, student, casual laborer					

Table 3. Economic indicators of rural women interviewed in Mersin

According to the data from the Turkish Central Bank, the average exchange rate for US dollars in 2006 was 1.44 YTL/1 US \$.

In general, worker women were literate and between the ages of 46 and 55, housewives were elementary school graduates and between the ages of 36 and 45 and grocer/student/casual laborer women were secondary school graduates and between 14 and 20 years old (Figure 2). Accordingly, worker women were the oldest and the least educated group. For integration of rural women in the labor market, education and vocational training and new sources of employment should be emphasized (Garcia-Ramon and Baylina, 2002).

Social Security

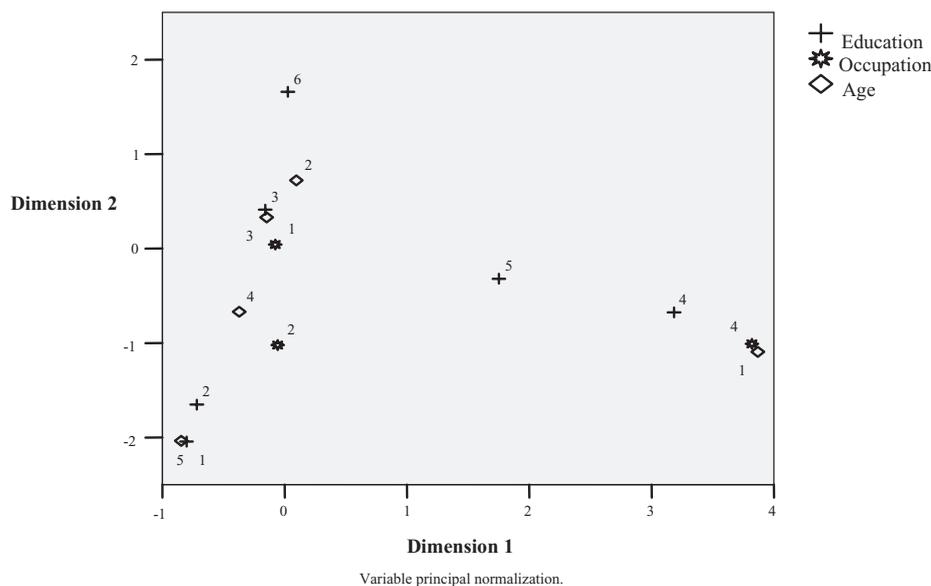
66.6 per cent of women interviewed had social security through either their husbands, fathers or children (Table 3). In rural areas of İzmir province, only 12.8 per cent of women had social security through their husband, father or children (Abay *et al.*, 1999). The high proportion of rural women possessing social security in Mersin is mainly due to expansion of the social security system in the country since the 1990s. Even though there is no legislative restriction, rural women generally are not entitled to direct coverage by social security systems due to the fact that in the agriculture sector rural women work as non-paid family workers or do not earn sufficient income (URL-1).

Income and Number in Household

Income reflects households' command over resources and is often used as an indicator of household welfare. Lack of income is one critical constraint that often inhibits households from buying the essential commodities needed for a decent quality of life (Pal, 2000).

82.7 per cent of the women interviewed live in private property, 5.3 per cent in rented, and 12 per cent live in housing belonging to their relatives. The average number in households is 4.14 and the average number of rooms in houses is 3.36. The breakdown of number in households is two or three 33 per cent, four or five 53 per cent, six or seven 11.4 per cent, eight or nine 2.3 per cent and 10 + 0.3 per cent. The average number in households in rural areas of Mersin is near to Turkey's rural area average, which is 4.33 (Yükseler and Türkan, 2008).

A statistically significant relationship was found between the number in households and number of rooms in the house (calculated Chi-square 89.363, degrees of freedom 12, $p < 0.05$). The number of rooms in a house increased parallel to the number in households.



Education: 1 Illiterate, 2 Literate, 3 Primary school, 4 Secondary school, 5 High school, 6

University

Occupation: 1 Housewife, 2 Worker, 3 Officer, 4 Other

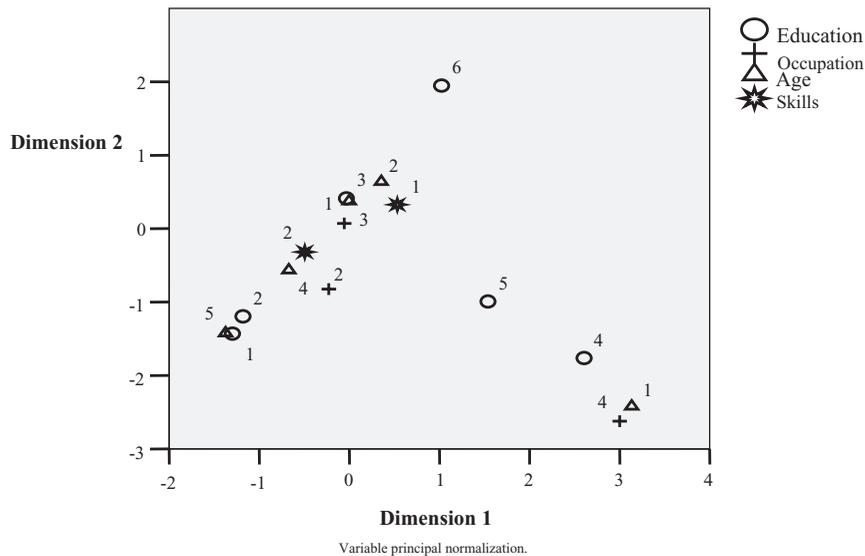
Age groups: 1 14–20, 2 21–35, 3 36–45, 4 46–55, 5 56+

Figure 2. Relationship between education, occupation and age

23.4 per cent of households have a monthly income of less than \$139, while 2.7 per cent have an monthly income over \$695 (Table 3). According to Bayıksel (2007), 40 per cent of households in Turkey have a monthly income of less than \$695. For rural areas of Mersin this ratio is 97.3 per cent. The relationship between the household monthly income and monthly expenditure was found to be statistically significant (calculated Chi-square 713.652, degrees of freedom 36, $p < 0.05$). Accordingly, as the monthly household income increases expenditure also increases.

Income of Women

The 1990s UN summit documents underscore the fact that women's labor force and employment participation is essential in advancing sustainable development (Vargas, 2002). There is little research that examines the long-term effects on women's well-being and empowerment of their increased employment access (Seguino and Grown, 2006). 6.7 per cent of women interviewed had a regular income as either a salary (30 per cent), retirement payment (25 per cent), widow payment (10 per cent) or others (35 per cent). To contribute to household income 41.7 per cent of women worked as paid workers in sowing, planting, weeding and harvesting. The women performing these and similar agricultural jobs are paid two-thirds as much as men in rural areas, as is seen in this research area and elsewhere in Turkey. It is also interesting to note that 35 per cent of women usually give these earnings to their husband or father to be used for food expenditure, 25 per cent spend it for household food expenditure, 15 per cent use the earnings for self-expenditure, 15 per cent spend it on household food and children's expenditure and 10 per cent use it for household food and their own spending. Some studies have documented that as women's access to outside income rises, they are better able to renegotiate the distribution of resources within the household to the benefit of themselves and their children (Seguino and Grown, 2006).



Education: 1 Non-literate, 2 Literate, 3 Primary school, 4 Middle school, 5 High school, 6

University

Occupation: 1 Housewife, 2 Worker, 3 Officer, 4 Other

Age groups: 1 14–20, 2 21–35, 3 36–45, 4 46–55, 5 56+

Skills: 1 Yes, 2 No

Figure 3. Relationships between education, occupation, age and income-earning skills

It was also found that 48.7 per cent of women had income-earning skills such as needlecraft, carpet weaving and cooking, or would work as paid cleaning workers. A statistically significant relationship was found between women's educational level and income-earning skills (calculated Chi-square 15.289, degrees of freedom 5, $p < 0.05$). As women's educational level increased, the ratio of women with income-earning skills also increased. A direct relationship between income-earning skills and age was also found. As women's age decreased, the ratio of women with income-earning skills increased. However, it is clear that involvement in income-earning activities would lead to heavier workload and less free time for rural women.

Women with income-earning skills were in general housewives 21–45 years old and elementary school graduates. Women lacking income-earning skills were found to be in general 46–55 years old, workers and literate (Figure 3).

Allocation of Time to Domestic and Agricultural Work

On average, rural women in Mersin province allocate 9.6 hours/day to both productive (cleaning house, child care, cooking vb.) and reproductive activities (livestock breeding, harvesting, plant protection, planting, weeding, irrigation). To be specific, 41 per cent of women interviewed allocate 9–14 hours/day to productive and reproductive activities, another 41 per cent allocate 6–8 hours/day and the remainder spend less than 3–5 hours/day on the above mentioned activities.

In general, rural women in Mersin carry out 76.7 per cent of livestock breeding, 41.7 per cent of plant protection, 40 per cent of pruning, 36 per cent of planting, 34 per cent of weeding and 31.7 per cent of irrigation work.

On average, women spend 5.7 hours/day on farm activities and 3.9 hours/day on domestic work. Although this is an unpaid activity, its contribution to the rural economy and the family is significant.

According to Akpınar *et al.* (2005), rural women in Turkey allocate their time to carry out both productive and reproductive activities and on average work 16 hours/day. Kazgan (1982) and Yıldırak (1987) further underline that the heavy workload of women is considered as a social norm in rural communities of Turkey.

In 1980, the National Council of Women's Societies in Nigeria reported that rural women did the bulk of the daily work in the villages, including daily chores, cooking, food processing and distribution, and farming (Olufemi, 1993). In Southeast Asia women provide up to 90 per cent of the labor for rice cultivation, and in Africa women are two-thirds of the workforce in the horticultural sector (OECD, 2008). In rural Bangladesh women spend around 60 per cent of their time in food preparation and other household work (Amin, 1997). In rural Papua New Guinea, women have the major role in food-crop production (Cahn and Liu, 2008). In both industrialized and developing countries women work longer hours than men. Women contribute at least 22 per cent to the household cash income and 40 per cent of the value of unpaid labor. Their contribution to the household cash income becomes larger than that of men when the value of livestock is computed (Conable and Siar, 1998).

Women's Participation in the Decision-Making Process

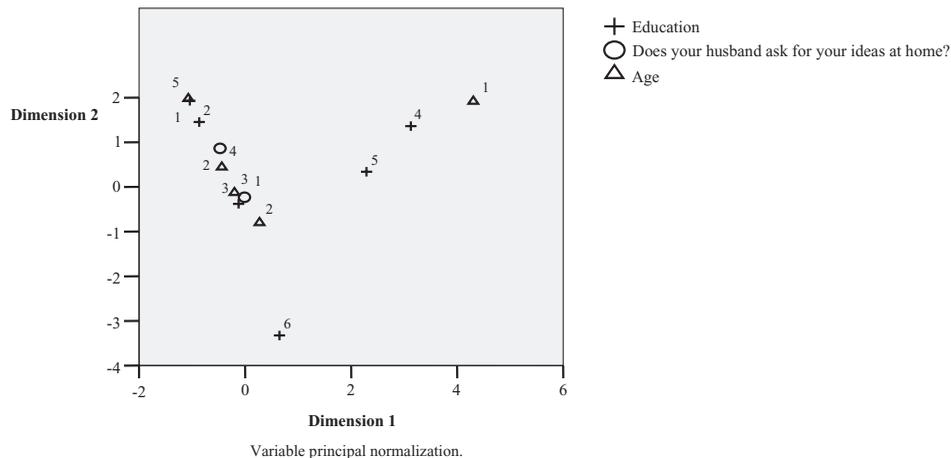
Women's everyday experiences are different from those of men. Traditional gender roles result in women juggling multiple responsibilities in the home, at the workplace and in the community. As a result, women are important for sustainability. However, the demands on women also leave them with less voice in the decision-making processes that impact their lives (Corral, 2002). It was found that women who are 36–45 years old and have at least elementary school education do in general participate in the decision-making process. Women who do not in general participate in the decision-making process are 46–55 years old and only literate. The relationship between age and participation of women in the decision-making process was found to be statistically significant (calculated Chi-square 12.210, degrees of freedom 4, $p < 0.05$). Accordingly, as women become older, the rate of participation in the decision-making process decreases. Another statistically significant relationship was observed to be between the education level and participation of women in the decision-making process (calculated Chi-square 12.491, degrees of freedom 5, $p < 0.05$). As women's education level increases, their participation in the decision-making process increases. Li (2005) has also reported a positive contribution of literacy to participation of women in the decision-making process in rural areas of China.

The majority (83.5 per cent) of women interviewed express that decisions in the family are taken by men and their ideas are only asked for in the cases of household expenditure and children. Women are occasionally consulted (4.6 per cent) in the case of a new idea, e.g. buying an agricultural machine or a tool. Women are subordinate to men and they are expected to obey men. Rahman and Ibrahim (2007) have documented that decisions on selection of enterprises, input procurements, input allocations and selling of products are made by men. In the cases of product consumption, processing and storing of products women equally participate in the decision-making process with men.

The relationship between the educational level of the husband and the participation of the wife in the family decision-making process was found to be statistically significant. Increasing educational level of men promoted the participation of women in the family decision-making process. MCA revealed that the husbands of women who participate in the decision-making process are in general secondary or high school graduates, while husbands of women who do not participate in decision-making are in general only literate (Figure 4). Li (2005) has also underlined the positive correlation between the educational level of husbands and the autonomy of wives and their exposure to outside world.

Social Relations of Women

According to MCA, women who come together in the village for cooperation are in general 36–45 years old, housewives and primary school graduates. Women also help each other in activities such as weddings, funerals, domestic work and some agricultural work.



Education: 1 Non-literate, 2 Literate, 3 Primary school, 4 Middle school, 5 High school, 6 University

Does your husband ask for your ideas at home?: 1 Yes, 2 No

Age group: 1 14–20, 2 21–35, 3 36–45, 4 46–55, 5 56+

Figure 4. The relation between education level, participation in decisions and age

Women who have expressed that they help each other on different occasions (76.3 per cent) have ordered these activities as making bread (53.9 per cent), preparing foodstuff for winter and making bread (19.3 per cent), agricultural work and making bread (7.9 per cent), cooking and making bread for funerals and weddings (5.3 per cent), making bread, preparing foodstuff for winter and agricultural work (4.4 per cent), agricultural work (3.5 per cent), weaving (3.1 per cent), cooking for funerals and weddings (1.3 per cent), preparing foodstuff for winter and agricultural work (0.9 per cent) and preparing foodstuff for winter (0.4 per cent).

Abay *et al.* (1999) have also reported that there is a sense of solidarity among rural women in Turkey and that they generally help each other on different occasions. For example, in rural areas of İzmir province, women help each other in domestic work as well as farm work.

Women's Problems and Expectations

During interviews women generally expressed their daily needs and problems. Women prioritized these problems as financial/livelihood problems (26.8 per cent), lack of regular income (23.4 per cent), lack of social security (22.4 per cent), lack of proper access to village (7.1 per cent), not having a personally owned house (3.1 per cent), unemployment (2.7 per cent) and others (14.5 per cent).

Women believe that their problems can be solved by having a regular income, state support for education, free health services, establishment of a medical station in the village, subsidized agricultural inputs, agricultural incentives and subsidized social security premiums.

Conclusions

Rural development initiatives must include women. Rural women are silent partners in family businesses or farming. Women allocate an important part of their time to domestic and farm work. However, their efforts are not remunerated. Illiteracy, endorsement of traditional gender-based roles and a culture of obedience have

contributed to the invisibility of rural women in developing countries. However; findings of this survey reveal that traditional perceptions and norms are changing. (a) *The young population is becoming better educated.* In Turkey, since eight year mandatory education was introduced in 1997, the net schooling ratio among girls in all levels of education has increased while the gap between girls and boys has decreased. This situation shows that legal arrangements have a positive influence on increasing the education level. (b) *Most women desire their daughters to get a better education and possess an occupation.* In the research area the majority of women wanted their daughters to attend school to attain better living conditions. However, lack of family income and the present poor living conditions are the most important obstacles to girls' education. This is because families having difficulties in finding enough to live on first give up sending their daughters to school. Education must go hand in hand with rural assistance, as low-income rural women are often poorly educated. (c) *Rather than age, level of education is emerging as an factor determining the participation of rural women in the decision-making process.* (d) *Regularity and amount of monthly income seems to be an important determinant on number of children per household.* Therefore, the state should establish policies contributing towards the education of children, particularly girls, in families with levels of income at which they are struggling. At the same time, central and local governments need to cooperate on developing policies towards empowering rural women.

References

- Abay C, Atuş E, Saner G. 1999. *The Effect of Education of Rural Women on Employment in İzmir.* Turkish Republic Prime Ministry General Directorate on the Status of Women: Ankara (in Turkish).
- Agarwal B. 1997. Environmental action, gender equity and women's participation. *Development and Change* 28: 1–44.
- Akhun İ, Bircan İ, Bülbül S, Kavak Y, Senemoğlu N. 2000. *Vocational Training for Girls and Employment,* Kuzgun Y (consultant). Turkish Republic Prime Ministry General Directorate on the Status of Women: Ankara (in Turkish).
- Akpabio AI. 2007. Women NGOs and the socio-economic status of rural women in Akwa Ibom State, Nigeria. *Journal of Agriculture and Social Sciences* 3(1): 1–6.
- Akpınar N, Talay İ, Ceylan C, Gündüz S. 2005. Rural women and agrotourism in the context of sustainable rural development: a case study from Turkey. *Kluwer Journal* 6: 473–486.
- Amin S. 1997. The poverty–purdah trap in rural Bangladesh: implications for women's roles in the family. *Development and Change* 28: 213–233.
- Aziz A, Hasipek S, Aktaş N, Ergün Y, Bora A, Aziz E, Aziz İ. 2000. *Participation of Rural Women in Employment.* Turkish Republic Prime Ministry General Directorate on the Status of Women: Ankara (in Turkish).
- Bayıksel ŞÖ. 2007. Is lower number of household barrier consumption? *Capital* 1 April (in Turkish). http://www.capital.com.tr/haber.aspx?HBR_KOD-4090 [18 March 2009].
- Cahn M, Liu M. 2008. Women and rural livelihood training: a case study from Papua New Guinea. *Gender and Development* 16(1): 133–135.
- Conable LM, Siar SV. 1998. Women and the question of sustainable development in a Philippine fishing village. *International Journal for Sustainable Development and World Ecology* 5(1): 51.
- Corral T. 2002. Women's sustainable development agenda. *Natural Resources Forum* 26: 249–253.
- Development Foundation of Turkey (TKV). 1991. *Status of Rural Women in Rural Areas: Problems and Recommended Solutions,* reports of ILO–TKV consultation meetings, Ankara, 1990 (in Turkish).
- Ertürk Y. 1993. *Modernization in Eastern Anatolia and rural women.* İletişim: Istanbul (in Turkish); 199–210.
- Fazlıoğlu A. 2003. Gender-balanced development approaches in rural development projects. In *Seminar on Fight Against Erosion and Social Aspect of Rural Development Projects,* Erzurum, 2003 (in Turkish).
- García-Ramón M-D, Baylina M. 2002. *The New Role of Women in Rural Development.* Antipode Blackwell: Antipode, Spain; 1011.
- García-Ramón M-D, Albet A, Zusman P. 2003. Recent development in social and cultural geography in Spain. *Social and Cultural Geography* 4(3).
- Hablemitoğlu Ş. 2004. *Gender papers talk about on women.* *Research and Review* 282: 180 (in Turkish).
- Hopwood B, Mellor M, O'Brien G. 2005. Sustainable development: mapping different approaches. *Sustainable Development* 13: 38–52. DOI: 10.1002/sd.244
- Hwong H, Dillon RW, Takane Y. 2006. An extension of multiple correspondence analysis for identifying heterogeneous subgroups of respondents. *Psychometrika* 71(1): 161–171.
- Hwong H, Takane Y. 2002. Generalized constrained multiple correspondence analysis. *Psychometrika* 67(2): 211–224.
- Ilkharacan İ. 1998. *Urban Women and Working Life, Review in 1998: Women and Men in 75 Years.* Historical Society: Istanbul; 285–302 (in Turkish).
- Istemic MC. 2007. Attitudes towards gender roles and gender role behaviour among urban, rural, and farm populations in Slovenia. *Journal of Comparative Family Studies* 38(3): 477–496.
- IUCN, UNEP, WWF. 1991. *Caring for the Earth: a Strategy for Sustainable Living.* IUCN: Gland, Switzerland.

- Iversen V, Jones PR. 2008. Literacy sharing, assortative mating, or what? Labour market advantages and proximate illiteracy revisited. *Journal of Development Studies* 44(6): 797–838.
- Kaya M. 2008. *Women Profile in Eskişehir*. Technological Research Center (in Turkish): Ankara.
- Kazgan G. 1982. *Women in Turkish Society: the Participation of Women in the Workforce, Professional Development, Level of Education, and Socio-Economical Status*. Kent: Istanbul (in Turkish).
- Lange WJ, Wise MR, Nahman A. 2009. Securing a sustainable future through a new global contract between rich and poor. *Sustainable Development*. DOI: 10.1002/sd.413
- Li J. 2005. Women's status in a rural Chinese setting, rural sociological society. *Rural Sociology* 70(2): 229–252.
- Lowe P, Ward N. 2007. Sustainable rural economies: some lessons from the English experience. *Sustainable Development* 15: 307–317. DOI: 10.1002/sd.348
- Mersin Chamber of Industry and Commerce (MTSO). 2004. *Economic Structure of Mersin: Agriculture and Forestry*. www.mtso.org.tr/jtr/ [14 March 2009].
- Midgley J. 2006. Gendered economies: transferring private gender roles into the public realm through rural community development. *Journal of Rural Studies* 22: 217–231.
- Ministry of Agriculture and Rural Affairs (TKB). 2004. Working document of Second Agricultural Congress: Ankara (in Turkish).
- OECD. 2008. *Gender and Sustainable Development, Maximizing the Economic, Social and Environmental Role of Women*. http://www.oecd.org/dataoecd/58/1/40881538.pdf [15 March 2009].
- Olufemi S. 1993. Mobilizing women for rural development: some principles for success from Nigeria. *Women and Environments* 13(3/4): 33.
- Özgen O, Ufuk H. 2000. *Education of Women in Rural*, Fifth Technical Congress Publication 38. Turkish Chamber of Agriculture Engineers: Ankara; 1063–1078 (in Turkish).
- Pal S. 2000. Economic reform and household welfare in rural China: evidence from household survey data. *Journal of International Development* 12: 187–206.
- Plummer R. 2006. The evolution of sustainable development strategies in Canada: an assessment of three federal natural resource management agencies. *Sustainable Development* 14: 16–32. DOI: 10.1002/sd.269
- Rahman SA, Ibrahim H. 2007. Socio-economic study of gender role in farm production in Nasarawa State of Nigeria. *Asia-Pacific Journal of Rural Development* 17(1): 57–66.
- Saltık A, Dersan N, Fazlıoğlu A, Okdemir S, Çakaloz B, Kapucu A. 1994. *An Investigation of Status of Women in the GAP Region of Turkey and Integration in the Development Process*. Office of Prime Minister Southeastern Anatolian Project Directorate of Regional Development, Afşaroğlu: Ankara (in Turkish).
- Salkeld A. 2008. The value of gender analyses in humanitarian livelihoods programming: a case study from Nias Island, Indonesia. *Gender and Development* 16(1): 117–131.
- Seguino S, Grown C. 2006. Gender equity and globalization: macroeconomic policy for developing countries. *Journal of International Development* 18L: 1081–1104. DOI: 10.1002/jid.1295
- Sikiae L. 2007. Gendered values and attitudes among rural women in Croatia. *Journal of Comparative Family Studies* 38(3): 459–476.
- Torkelsson A, Tassew B. 2008. Quantifying women's and men's rural resource portfolios – empirical evidence from Western Shoa in Ethiopia. *The European Journal of Development Research* 20(3): 462–481.
- Turkish Institute of Statistics (TUIK). 2004. *Census 2000: Social and Economical Characteristics of Population* (in Turkish). TUIK: Ankara.
- United Nations Development Fund for Women (UNIFEM), United Nations Division for the Advancement of Women (DAW). 2001. *The Situation of Rural Women Within the Context of Globalization*, Report of the Expert Group Meeting 4–8 June 2001, Ulaanbaatar, Mongolia.
- United Nations Development Program (UNDP). 1999. *Human Development Report*. http://www.undp.org/publications/annualreport2009/report.shtml [20 May 2009].
- URL-1: *Employment of Women, Labour Force Participation of Women in Turkey*. Turkish Republic Prime Ministry General Directorate on the Status of Women (in Turkish). www.ksgm.gov.tr/istihdam.html [27 December 2006].
- Vargas CM. 2002. Women in sustainable development: empowerment through partnerships for healthy living. *World Development* 30(9): 1539–1560.
- Yıldırak N. 1987. *Women in Rural Society*. Ayyıldız: Ankara; s.1–14 (in Turkish).
- Yodanis CL. 2002. Producing social class representations: women's work in a rural town. *Gender and Society* 16(3): 323–344.
- Yükseler Z, Türkan E. 2008. *Household in Turkey: Labour force, Income, Expense and Poverty*, Yayın No TÜSIAD-T/2008-03/455. TÜSIAD: Istanbul (in Turkish).
- Wickramasinghe A. 1997. Women and minority groups in environmental management. *Sustainable Development* 5: 11–20.