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Exploring the socioeconomic and cultural challenges faced by women in rural Cyprus

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Abstract

This study presents findings from the first national-level survey since 2011 on the socioeconomic and cultural challenges faced by women in rural Cyprus. The study uses a quantitative design with stratified random sampling to survey a representative sample of 610 women. Data were collected using pen and paper, through an interviewer–facilitator paper-and-pencil interview and a structured questionnaire. Research identifies gender inequalities in education, employment, healthcare access, and financial independence. Respondents prioritized childcare, elderly care, infrastructure, and female entrepreneurship over issues such as gender-based violence. Using principal component analysis (PCA), we conclude to three components that describe the barriers and challenges women face in rural Cyprus. That is: (i) basic life necessities and economic stability, (ii) cultural engagement and environmental concerns, and (iii) caregiving responsibilities to children or to elders and gender representation. Similarly, PCA grouped the areas that can enhance the improvement of the quality of life of women in their communities. The first component focuses on social development and infrastructure support, the second component reflects cultural and entertainment facilities, and the last component focuses on the improvement of the economic status of women and the provision of basic services. The findings urge for women's empowerment, and rural development policies that move from gender neutral to gender sensitive.

Keywords: Women; Rural Cyprus; Challenges; Gender equality

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1. Introduction

This research focuses on deepening our understanding of women's position in rural Cyprus by collecting and analyzing data on their experiences. The aim is to identify the inequalities and socioeconomic and cultural challenges they face, as well as their expectations for the future, with a view to shaping policies that will improve their daily lives. The last comparable study conducted in Cyprus was in 2011 by the Union of Cypriot Farmers (EKA)-Section of Women's Farmers, with results published only locally. For nearly fifteen years, no nationally accessible data has been available. Therefore, the present study constitutes the first national survey to map the socioeconomic and cultural challenges faced by women in rural Cyprus.

The work is supported by the National Machinery for Women's Rights of the Republic of

Cyprus and is part of the 2024 Action Plan. The findings are expected to identify long-lasting problems and challenges that have not been documented previously and to deepen understanding of the social, economic, and cultural factors that influence the position of women. In addition, the findings are communicated to the respective Ministry of Agriculture, Rural Development and Environment of the Republic of Cyprus to evaluate the effectiveness of current policies and propose policies that will aim to improve women's access to resources and opportunities, as well as to create a more supportive environment. To situate the present study within the broader scholarly context, the following reviews relevant international and regional literature on gender inequalities in rural areas.

1.1. Literature review

Recent studies have shown that, worldwide, gender plays a significant role in shaping the development of rural areas while also remaining a key driver of discrimination and inequality. These inequalities vary from socioeconomic to cultural. Deiß *et al.* (2025) examined gender inequalities in loan sizes in Mali and found that female clients consistently receive loans that are statistically significantly smaller than those of male clients. In African Rwanda, men are empowered as "modern" farmers while women's agricultural spaces, labor, and crops are marginalized (Clay & Yurco, 2024). At the same time in Pakistan, "...skills development and technical training significantly influence rural women's development, whereas access to finance and social networking also ensure economic development in rural areas..." (Shenbei *et al.*, 2023, p.1). The significant role of women and the socioeconomic and cultural challenges they face are also present in Europe. In northern Spain, Gómez-Pellón (2024) claimed that men are the majority owners of the farms, and that women, as wives and producers, are left to take on an endless list of roles, both visible and "invisible." In 2024, Gawel *et al.* (2024) examined the green transformation's effect on the gender gap in agricultural entrepreneurship and suggested that the potential of green transformation will affect women's entrepreneurship in agriculture.

These phenomena are not unique to the Cyprus landscape. Cyprus is an island at the crossroads of Europe, the Middle East, and Africa, with a strategic geographical position in the eastern Mediterranean, which has relied extensively on rural land use since antiquity, especially outside the main urban centers, with communities depending heavily on agriculture and fishing (Delipetrou *et al.*, 2008). According to Morris, during the first half of the 20th century, the British Colony of Cyprus was a rural economy in which more than 70% of the population was settled in small rural communities (Ioannou, 2016). In 1960, the island's rural economy showed signs of underdevelopment and fundamental structural weaknesses (Orphanides & Syrighas, 2012). The island's economic growth began in 1961 and continued through 1973.

Within the context of the island's urbanization, it is important to address the multifaceted and critical issue of gender equality and to examine the position of women, particularly in rural areas. Gender and its dimensions—both social and economic—are significantly influenced by the spatial environment in which individuals live and operate. Consequently, the status of women residing in rural settings is inevitably shaped daily by various factors that affect their personal, social, and professional lives. Women who live and work in rural areas face ongoing challenges while simultaneously playing a vital role in the development of the countryside and the preservation of traditional values (Chimonidou *et al.*, 2008).

As reflected in the literature, the position of women in the European rural context is generally characterized as subordinate and invisible. Studies that seek to explain why rural women have historically occupied an inferior status—often defined as "farmers' wives"—investigate a range of contributing factors, including patriarchy, the customary transfer of agricultural property from father to son, traditional gender roles, biological determinants, rural ideology, and others. It appears that neither men nor women can easily escape entrenched gender norms that stem from centuries-old stereotypical beliefs. For instance, women continue to bear primary responsibility for domestic tasks, childcare, and the care of elderly family members, even when they are actively engaged in agricultural work or in other forms of paid employment outside the home. Conversely, it is generally socially unacceptable for men to perform the so-called "women's work" (Brandth, 2002; Croft *et al.*, 2015).

1.2. Women's roles in Cyprus

The role of women in Cypriot society is largely confined to the domestic sphere. During the previous century, the work of women in the household was undervalued and consequently lacked social recognition and perceived worth. In addition, the majority of women in rural Cyprus work on family farms and in the fields as unpaid family laborers, or engage in other forms of labor that are not recognized as significant or valuable (Stavrou, 2018). Women are regarded primarily as caretakers of their husbands, children, and parents. However, evidence suggests that women's contributions to the family, particularly in rural areas, extend beyond domestic chores and child-rearing (Markides *et al.*, 1978).

A critical dimension of gender equality is women's

exposure to violence, sexual harassment, and exploitation. During the 1990s in Cyprus, numerous cases of exploitation and sexual harassment in the workplace were documented (Βαρναβίδου Μ., Ρούσου, 1995). Notably, a legislative bill aimed at protecting victims of sexual harassment, submitted in 1996, was rejected by the House of Representatives (Stavrou, 2018).

Moreover, domestic violence often appears to be closely linked to and shaped by social and economic factors, not only in Cyprus (Mavrikiou *et al.*, 2014) but also internationally. Urban residence, older age, lower levels of education, reduced household income, unemployment, economic dependence, and generally low socioeconomic status are all demographic characteristics of women victims that are significantly associated with the occurrence of domestic violence (Gedikli *et al.*, 2023; Richardson *et al.*, 2002).

Over the past two decades, the status of women in rural Cyprus has gradually improved, and their contributions to rural and social development are increasingly gaining recognition. According to research conducted in the early 2000s (Antoniades & Papayiannis, 2000), the vast majority (82.9%) of rural women were exclusively engaged in agriculture, while only 13% reported having additional forms of employment. Younger women exhibited higher rates of non-agricultural employment, a trend largely attributed to their higher levels of education and their increased ability to choose the conditions under which they work.

Similar findings have been observed in research focusing on rural areas in other countries, such as the United Kingdom. There, rural women engaged in agriculture were found to assume a slightly greater role in farm management only when their farmer husbands were employed outside the agricultural sector. Even in such cases, however, evidence of increased decision-making power remained minimal, despite women often working more hours on agricultural tasks than their husbands (Gasson & Winter, 1992).

For more than 15 years, the voices of women living in rural areas of Cyprus have remained unheard. Both national and international literature have overlooked these women's perspectives, particularly their lived experiences and the challenges they face in daily life. The absence of national data since 2011 has created a significant "policy vacuum" with implications for the development and implementation of effective gender-sensitive policies in Cyprus. The integration of this study into the 2024 Action Plan adds value to this work by positioning it as a critical instrument for supporting evidence-based governance and by ensuring that women's voices are heard.

Against this background, this study examines the socioeconomic and cultural challenges faced by women in rural Cyprus, as well as their perceptions of changes in their quality of life and opportunities over time. Accordingly, it addresses the following research question: What are the main challenges women in rural Cyprus face, and how do they perceive their quality of life and opportunities within their communities? This study provides a first systematic mapping of these issues in a contemporary Cypriot context and identifies areas requiring targeted policy intervention to support women's empowerment and well-being in rural areas.

2. Data and methods

2.1. Sample and sampling

This study is based on a face-to-face survey conducted in 2024 and targeted 610 women living in the rural areas of Cyprus. We collected the data through an interviewer–facilitator paper-and-pencil interview (PAPI). The tool used was a structured questionnaire consisting mainly of closed questions. The PAPI personal interviewing was selected as the most appropriate data collection method for the specific study, due to the nature of the target population (Lavrakas, 2008), and is commonly used, especially when interviewees may need help (Lavrakas, 2008; Groves *et al.*, 2009). This face-to-face approach yields a high response rate (Groves *et al.*, 2009) and clarifies any ambiguities in the questions, thereby yielding reliable and valid data. In addition, the PAPI, single-mode survey, satisfies the need to build trust in the legitimacy of the research (Dillman *et al.*, 2014). The PAPI survey methodology is useful when budget constraints limit the purchase of tablets or laptops, making it more cost-effective for small-scale studies like this one. Finally, the research required high adaptability from the interviewers, and the paper's concrete nature yielded higher response rates than remote methods. For these reasons, the PAPI quantitative technique was selected as the most appropriate method for this survey.

The survey was addressed to adult, Greek-speaking women living in the rural areas of Cyprus. The sampling frame was based on the data from the 2021 Population and Housing Census of the Statistical Service of Cyprus (2023a, 2023b). According to Groves *et al.* (2009), probability sample designs can be made better with features to ensure representation of population subgroups in the sample, and stratification is one such method. Due to the nature of the survey, we employed a stratified random sampling technique, dividing the target population into strata based on geographical characteristics to ensure that women living in rural areas across Cyprus are adequately represented. Stratification was applied at the district level (Nicosia,

Limassol, Larnaca, Paphos, and Famagusta), with rural communities identified within each district according to the Statistical Service of Cyprus's official classification. Within each district, where feasible, further stratification was applied based on age groups. Proportional allocation was used to determine the number of participants drawn from each stratum, assuming one eligible unit (woman) per household. Participants were then selected using random sampling procedures within each stratum. Using a 4% margin of error and a 95% confidence level, the required stratified sample size was calculated as 605.

Data collection was conducted by members of the Union of Cypriot Farmers (EKA)-Section of Women's Farmers who served as facilitators. As the training of the interviewers has been shown to be critically important to the way in which interviewers do their jobs and precede data collection (Groves *et al.*, 2009), the facilitators received training on the random selection of households in each village or municipality, on how to interpret the questionnaire in case clarification was needed, and on ensuring impartiality during the interview.

The survey was conducted in 102 villages and municipalities across all five districts of the Republic of Cyprus. Data collection began in June 2024 and ended in early November 2024. During this period, trained EKA interviewers/facilitators visited households at random and conducted in-person interviews, resulting in the collection of 610 complete questionnaires. The process of collecting the questionnaires was difficult and arduous, requiring the interviewers to visit all 102 villages and municipalities in Cyprus. The final sample of 610 women ensures representativeness of women living in the rural areas of Cyprus. Attention was given to include, where feasible, participants from a wide age range and various socioeconomic backgrounds, enhancing the generalizability of the findings. The distribution of households by district is presented in Table 1.

2.2. The questionnaire

The questionnaire, written in Greek, consists of 93 questions organized into three parts. Each participant was invited to answer as many questions as they could anonymously. The first part of the questionnaire includes questions about participants' demographics. It includes questions on age, place of living (village, province), civil status (married, single, etc.), number of children, citizenship, educational level (elementary, high school, etc.), occupation, and whether they are engaged professionally in agriculture and livestock farming. The second part seeks the perceptions of women regarding infrastructure in the educational system of Cyprus, and the third part includes questions on the socioeconomic status of women living in the rural areas of Cyprus. The questionnaire includes closed-ended dichotomous questions (yes/no), nominal and ordinal questions, and, to measure perceptions and attitudes, a 5-point Likert scale. Some questions were mixed to allow participants to comment.

The reliability of the tool is assessed using Cronbach's alpha, which measures the internal consistency of the questions. According to the literature, Cronbach's Alpha values above 0.7 indicate a reliable questionnaire, while values above 0.8 indicate high reliability (Hair *et al.*, 2014). Based on the data analysis, the scales measuring barriers and challenges faced by women in rural communities, as well as areas that may enhance their quality of life, demonstrated high reliability, with Cronbach's alpha coefficients of 0.888 and 0.968, respectively.

2.3. Statistical analysis

Data analysis incorporates both descriptive and exploratory statistical analysis to uncover patterns and trends. Descriptive statistics include frequency tables, measures of central tendency (mean, median, mode), and measures of dispersion (standard deviation and range). Exploratory factor analysis and principal component analysis are used to

Table 1. Number of households per district according to the 2021 census, calculated and distributed sample

District	Household population	Calculated sample	Required sample	Distributed questionnaires	Coverage percentage
	N	*n*	*n*	*n*	%
Nicosia	163,239	198.8	200	202	33.1
Limassol	132,305	161.2	162	160	26.2
Larnaca	82,233	100.2	102	102	16.7
Paphos	74,498	90.7	91	96	15.7
Famagusta	40,280	49.1	50	50	8.2
Total	492,555	600	605	610	100.0

Note: Household population is based on the census of the Cyprus Statistical Service of October 1, 2021

identify the underlying structure of the observed variables and to reduce data complexity by grouping correlated items into latent constructs (Hair *et al*., 2014). These techniques are widely used in social sciences to summarize interrelated variables and to support scale development. Given the expectation that underlying constructions may be correlated, an oblique rotation (direct oblimin) was applied. The suitability of the data for factor analysis was assessed prior to analysis using standard diagnostic tests, including the Kaiser–Meyer–Olkin (KMO) measure and Bartlett's test of sphericity.

Questionnaires are numbered, coded and analyzed using Statistical Package for the Social Sciences (SPSS 20.0, IBM, United States), one of the most widely used statistical packages, ensuring accurate data processing. Participants were informed that the study's findings are part of a national project and could be used for conference presentations and publications in academic journals and/or book chapters. All dissemination of research findings complies with the requirements of the European Union legal framework for privacy, data protection and the security of personal data.

3. Results

3.1. Demographics of the participants

As mentioned above, 610 Greek-speaking women residing in the Republic of Cyprus participated in the survey, representing 102 different villages and municipalities. Most of the women who participated in the survey have Cypriot citizenship (595, 99.3%), while only four were Europeans (0.7%). The age distribution was approximately symmetric, with 191 women (31.3%) aged 45–54. Most of the respondents (587, 96.4%) live in villages, and were married (517, 85.3%), with a mean and median number of children of 2.43 (standard deviation [SD] = 1.06) and 2, respectively. The majority of women (308, 50.9%) have a lyceum level of education, and most of them (356, 58.6%) were working in the private sector. The demographic results are shown in detail in Table 2.

Table 2. Demographic data of the participants

Demographic data	*n*	%
Age group		
15–24	15	2.5
25–34	69	11.3
35–44	110	18.0
45–54	191	31.3
55–64	151	24.8
65+	74	12.1
Total	610	100.0
Residence		
Urban	22	3.6
Rural	587	96. 4
Total	609	100.0
Civil status		
Single	49	8.1
Married	517	85.3
Divorced	9	1.5
Widowed	31	5.1
Total	606	100.0
Highest educational level		
Primary school	57	9.4
High school	95	15.7
Lyceum	308	50.9
Technical school	19	3.1
College	51	8.4
University	75	12.4
Total	605	100.0
Profession		
Household	50	8.2
Public servant	23	3.8
Private employee	356	58.6
Freelancer	100	16.4
Unemployed	10	1.6
Retired	69	11.3
Total	608	100.0

3.2. Perceptions on education

Initially, respondents were asked whether female students from their community have the same opportunities as those from urban areas. Over two-thirds of respondents, that is 406 women (67.7%), disagreed or strongly disagreed, suggesting that most participants believe female students in their communities have fewer opportunities than those in urban areas.

In the question about the adequacy of infrastructure in public schools, respondents were asked to choose using a 5-point Likert scale whether they completely disagree or completely agree with a series of infrastructure items, such as: building facilities, library, air conditioning, heating, sports areas, indoor event halls, and special classrooms of: Physics, Chemistry, Technology, Home Economics,

and Computer Science. According to the results (Table 3), building facilities received the highest suitability (mean = 3.87, SD = 1.18), followed by Home Economics classrooms (mean = 3.54, SD = 1.28). On the other hand, air conditioning facilities are identified as the highest priority for immediate improvement (mean = 1.92, SD = 1.3), followed by Chemistry rooms (mean = 3.22, SD = 1.39) and Physics rooms (mean = 3.23, SD = 1.39). Table A1 presents, in detail and in order, the opinions of women regarding the adequacy of infrastructure in public schools. Cronbach's Alpha for this group of questions is equal to 0.945 (11 items).

3.3. Perceptions on the position of women in the rural areas

In the third part of the questionnaire, women were asked to compare their position with that of women in the city and whether their position is subordinate to that of men in their community. In the first question, it seems that women recognize the differences between women living in communities and those living in the city—84.3% disagree with the statement—but opinions are divided when it comes to their subordination. 52% agree or strongly agree that women in their community are in a subordinate position compared to the men in the community, while 45.7% disagree or strongly disagree with the statement (Table A2). This implies that gender roles are still strongly embedded, at least in the rural areas of Cyprus. When asked in which areas the position of women differs from that of men (Table A3), most women believe that they mainly have fewer employment opportunities (mean = 4.04, SD = 0.935) and fewer educational opportunities (mean = 3.24, SD = 1.34), both affecting women's quality of life.

3.4. Factor analysis results

3.4.1. Barriers and challenges

Women were also asked to select from 16 given options representing the barriers and challenges they face in their everyday lives in the rural areas. According to the results, the three biggest problems women face are, in order of priority: (i) Income/financials, (ii) employment and (iii) health. This group is followed by housing, financial independence and care for children and the elderly. Two problems that plague Cypriot society, domestic gender-based violence (Mavrikiou *et al.*, 2014) and drugs (Psichoudaki *et al.*, 2023), do not seem to be of concern to the same extent as the other problems, as they are at the bottom of the list. Nevertheless, most women (420, 69.9%) agree or strongly agree that the lives of women in their community today are better than in the past. Table 3 shows these problems and challenges in order of ranking. Cronbach's Alpha for this group of questions is equal to 0.888 (16 items).

To further investigate the barriers and challenges women face and to interrelate the variables, we use factor analysis. To use factor analysis, we need a sufficient sample size, no outliers, and no multicollinearity among the variables. To confirm the dataset's suitability for factor analysis (Hair *et al.*, 2014), we used the KMO measure of sampling adequacy. KMO was found to be equal to 0.849, indicating excellent data for factor analysis. In addition, Bartlett's Test of Sphericity provided a p-value of 0.0001, a strong indicator that the variables are sufficiently correlated, and the dataset (16 items) does not form an identity matrix, indicating that it is suitable for factor analysis.

We use principal components analysis with direct oblimin, an oblique rotation method that allows factors to correlate (Benson & Nasser, 1998). The method is preferred when working with psychological, social, or behavioral data, where underlying constructs may naturally correlate. Factor loadings are crucial in factor analysis, representing the correlation between the variable and the factor. Factor loadings $|\lambda| \geq 0.70$ are considered substantially strong, indicating that the variable is highly correlated with the factor and is often considered ideal in many fields. For sample sizes up to 300, absolute loadings of 0.40–0.50 may be acceptable, but higher loadings ($|\lambda| > 0.60$) are still recommended for clearer interpretation. Finally, it is expected that the resulting factor solution should explain at least 50% of the total variance (Hair *et al.*, 2014). In addition, communalities in factor analysis summarize, for each variable, the overall share of variance explained by the extracted common factors, ranging from 0 to 1. A high communality ($h^2 > 0.60$) indicates that a variable is highly represented by common factors. To evaluate the scale's internal consistency, the authors used the commonly accepted Cronbach's alpha coefficient, with values > 0.7 indicating good reliability (Hair *et al.*, 2014).

Table 4 shows the results of the factor analysis. The first component appears to encompass basic necessities and economic stability, including healthcare, housing, employment, transportation, financial resources, and education ($\lambda \geq 0.574$). The second component includes cultural engagement and environmental concerns ($\lambda \geq 0.871$). Finally, the last component includes caregiving responsibilities to children or elders, as well as gender representation ($|\lambda| > 0.655$).

All variables in the factor analysis have communality $h^2 > 0.605$ (Table 4), confirming that the variables are well represented by the extracted factors. Only the variables associated with domestic gender-based violence ($h^2 = 0.364$) and the use of drugs ($h^2 = 0.454$) have a communality lower than 0.6. Note that the variable of domestic gender-based violence does not appear in Table 4, as according to the

Table 3. Barriers and challenges faced by women in rural communities

Barriers and challenges	Completely disagree	Disagree	I do not know	Agree	Completely agree	Total
	n (%)	*n* (%)	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Income/financials	3 (0.5)	25 (4.2)	11 (1.8)	308 (51.2)	255 (42.4)	602 (100)
Employment	9 (1.5)	51 (8.5)	5 (0.8)	291 (48.3)	246 (40.9)	602 (100)
Health	30 (5)	93 (15.5)	7 (1.2)	232 (38.7)	237 (39.6)	599 (100)
Housing	12 (2)	72 (12)	12 (2)	267 (44.6)	236 (39.4)	599 (100)
Financial independence	11 (1.8)	58 (9.7)	31 (5.2)	291 (48.8)	205 (34.4)	596 (100)
Childcare	12 (2)	126 (20.9)	6 (1)	218 (36.2)	240 (39.9)	602 (100)
Elderly care	7 (1.2)	130 (21.6)	13 (2.2)	209 (34.7)	243 (40.4)	602 (100)
Transportation	19 (3.2)	110 (18.3)	23 (3.8)	209 (34.7)	241 (40)	602 (100)
Equal representation in decision-making centers	117 (19.4)	65 (10.8)	16 (2.7)	197 (32.7)	207 (34.4)	602 (100)
Lifelong learning	29 (4.8)	177 (29.4)	32 (5.3)	188 (31.2)	176 (29.2)	602 (100)
Domestic violence	44 (7.4)	77 (12.9)	206 (34.6)	124 (20.8)	145 (24.3)	596 (100)
Education-upbringing	42 (7)	191 (31.8)	23 (3.8)	176 (29.3)	168 (28)	600 (100)
Environmental destruction	136 (23)	151 (25.5)	84 (14.2)	189 (31.9)	32 (5.4)	592 (100)
Cultural events	241 (40.9)	89 (15.1)	40 (6.8)	188 (31.9)	31 (5.3)	589 (100)
Entertainment	226 (38.6)	81 (13.8)	40 (6.8)	196 (33.5)	42 (7.2)	585 (100)
Drugs	256 (43)	60 (10.1)	232 (39)	37 (6.2)	10 (1.7)	595 (100)

Note: Cronbach's Alpha = 0.888, 16 items.

results (factor loading and communality), it is not definitive in which component to be allocated-it loads weakly on all components. It seems that we need to shed more light on this topic and conduct further investigation into why this is the case (Mavrikiou *et al.*, 2014). Finally, note that some loadings are negative. Negative loadings do not indicate lesser importance but rather an inverse association between the variable and the factor (Tang *et al.*, 2024), in addition to burden. For example, positive loadings for variables like education, health, and employment suggest barriers arising from lack of access or opportunity, while negative loadings for childcare and elderly care indicate burden of caregiving responsibilities that women disproportionately face.

The scree plot in Figure A1 confirms the three-factor structure. The curve exhibits a clear inflection point following the third component, where eigenvalues are >1. This signifies that subsequent components provided less explanatory value. The graphical evidence of Figure A1 reinforces the distinction among (i) basic life necessities and economic stability, (ii) cultural engagement and environmental concerns, and (iii) caregiving responsibilities to children or to elders and gender representation.

3.4.2. Quality of life improvement areas

After identifying and grouping the challenges and problems, the women were presented with 22 areas to choose from, each aiming at improving their quality of life within their communities. Almost all women answered this question. Table 5 presents the distribution of opinions across all 22 areas, starting with those that can improve the quality of life of women in rural areas. According to the results, the five areas that can improve the quality of life of women in their communities are, in order of priority: (i) creation/increase of nurseries and childcare centers (mean = 4.65, SD = 0.521), (ii) improvement of housing for the elderly (mean = 4.64, SD = 0.533), (iii) strengthening female entrepreneurship (mean = 4.63, SD = 0.532), (iv) transfer of government services to rural areas (mean = 4.62, SD = 0.518), and (v) reduction of the wage gap between men and women (mean = 4.60, SD = 0.56). All five sectors differ marginally in their rankings. It is noteworthy that several areas identified as barriers in the previous question were also selected as areas for improving quality of life, indicating the consistency and reliability of the participants' responses (Neuman, 2011). Cronbach's Alpha for this group of questions is equal to 0.968 (22 items).

Similar to the barriers and challenges women face, we conducted a factor analysis of factors that can enhance women's quality of life. For this group of variables, the

Table 4. Factor analysis with loadings on the barriers and challenges women face in the rural communities

Variables	Component loadings (λ)			Communalities (h^2)
	1	2	3	
Health	0.912			0.725
Housing/mortgage	0.907			0.746
Employment	0.800			0.720
Transportation	0.780			0.683
Income/financial	0.762			0.681
Economic independence	0.743			0.605
Education-learning	0.649			0.682
Lifelong education	0.574			0.659
Elderly care			−0.814	0.879
Childcare			−0.798	0.868
Equal representation in decision-making centers			−0.711	0.760
Drugs			0.655	0.454
Cultural events		0.913		0.844
Entertainment		0.892		0.821
Environmental destruction		0.871		0.727
Proportion of variance	43.860	16.111	10.145	
Total variance		70.116		

Notes: Extraction method: Principal component analysis; Rotation method: Oblimin with Kaiser normalization; Kaiser–Meyer–Olkin measure of sampling adequacy, KMO = 0.849; Bartlett's test of sphericity, p-value = 0.0001.

KMO measure of sampling adequacy was 0.930, indicating excellent data for factor analysis, and Bartlett's test of sphericity provided a p-value < 0.001, a good indicator that there is sufficient correlation among the variables and that the dataset does not form an identity matrix. Both indicators suggest that the dataset (22 items) is suitable for factor analysis. Table 6 shows the results of the factor analysis.

The first component focuses on social development and infrastructure support ($0.589 \leq \lambda \leq 0.893$). It includes items on public services, access to education, connectivity, and community development initiatives. The second component reflects cultural and entertainment facilities. It is noteworthy that the negative loadings of this component indicate an inverse correlation with quality of life and burden: the absence of entertainment may improve women's quality of life in the communities ($-0.840 \leq \lambda \leq -0.721$). Finally, the last component focuses on improving women's economic status and providing basic services ($0.540 \leq \lambda \leq 0.926$). All variables in this factor analysis have communality $h^2 > 0.568$ (Table 6), confirming that the variables are well represented by the extracted factors.

The scree plot in Figure A2 confirms the three-factor structure. The curve exhibits a clear inflection point following the third component, where eigenvalues are > 1, and reinforces the distinction between the three components.

4. Discussion

The findings of this study provide recent empirical evidence on the socioeconomic and cultural status of women in rural Cyprus. The findings, which align with international and European literature, reveal a multifaceted reality in which women face both opportunities and challenges, influenced by their geographical location, limited access to resources and traditional gender roles.

Most participants in the survey are Cypriot women living in rural areas, with a significant proportion belonging to the middle-aged category, married and working mainly in the private sector. The dependence on private-sector employment is typically associated with lower job security, lower wages, and fewer benefits in rural labor markets (Rola-Rubzen *et al.*, 2023). The demographic data highlights the central role of women in

Table 5. Areas that can enhance the improvement of the quality of life of women in rural communities

Area of improvement	Completely disagree	Disagree	I do not know	Agree	Completely agree	Total
	n (%)	*n* (%)	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Creation/increase of nurseries and childcare centers	1 (0.2)	1 (0.2)	4 (0.7)	199 (32.8)	401 (66.2)	606 (100)
Improving the retirement houses of elderly people	–	3 (0.5)	7 (1.2)	193 (32.1)	399 (66.3)	602 (100)
Strengthening female entrepreneurship	1 (0.2)	2 (0.3)	3 (0.5)	207 (34.2)	393 (64.9)	606 (100)
Establishment of government services in rural areas	–	1 (0.2)	7 (1.2)	211 (34.9)	385 (63.7)	604 (100)
Reducing the wage gap between men and women	1 (0.2)	3 (0.5)	7 (1.2)	218 (35.9)	379 (62.3)	608 (100)
Providing financial incentives to stay in rural areas	1 (0.2)	3 (0.5)	4 (0.7)	226 (37.2)	374 (61.5)	608 (100)
Improving working conditions	–	4 (0.7)	6 (1)	235 (38.8)	361 (59.6)	606 (100)
Training to prevent domestic violence	–	5 (0.8)	15 (2.5)	227 (37.6)	357 (59.1)	604 (100)
Agrotourism development	–	8 (1.3)	13 (2.1)	237 (39)	350 (57.6)	608 (100)
Organization of lectures/discussions/ seminars	–	5 (0.8)	14 (2.3)	239 (39.5)	347 (57.4)	605 (100)
Provision of free internet access by municipalities and communities	8 (1.3)	11 (1.8)	11 (1.8)	199 (33)	374 (62)	603 (100)
Creation of craft units	–	5 (0.8)	15 (2.5)	248 (40.9)	339 (55.8)	607 (100)
New universities	–	8 (1.3)	19 (3.2)	230 (38.4)	342 (57.1)	599 (100)
Improvement of the health sector	4 (0.7)	6 (1)	3 (0.5)	261 (42.9)	334 (54.9)	608 (100)
Road network improvement	1 (0.2)	18 (3)	18 (3)	215 (35.6)	352 (58.3)	604 (100)
Increase and improvement of sports facilities	–	12 (2)	24 (4)	233 (38.6)	335 (55.5)	604 (100)
Creation of technical schools	–	11 (1.8)	25 (4.2)	233 (38.8)	331 (55.2)	600 (100)
Creation of cultural groups	2 (0.3)	15 (2.5)	9 (1.5)	250 (41.5)	327 (54.2)	603 (100)
Creation of regional theatres	8 (1.3)	11 (1.8)	11 (1.8)	246 (40.7)	328 (54.3)	604 (100)
Building libraries	9 (1.5)	16 (2.7)	23 (3.8)	229 (38.1)	324 (53.9)	601 (100)
Creation/increase of cinemas	8 (1.3)	22 (3.6)	17 (2.8)	238 (39.4)	319 (52.8)	604 (100)
More cafes/bars	12 (2)	26 (4.3)	8 (1.3)	231 (38.2)	327 (54.1)	604 (100)

Note: Cronbach's Alpha = 0.968, 22 items.

rural households, as they balance professional, family and community responsibilities.

The substantially high levels of agreement observed in core socioeconomic domains indicate that the concerns of women living in the rural areas of Cyprus are concentrated around economic security and welfare provision, such as their financial independence, the importance of the care economy that enables their labor force participation and the need for implementation of policies that address inequalities in service provision.

An educational and opportunity gap exists between rural and urban areas. Over two-thirds of respondents believe that rural girls do not have the same opportunities as those in the city. Inadequate school infrastructure, particularly in areas such as air conditioning and dedicated science and technology classrooms, further exacerbates this inequality. The uneven provision of public goods such as educational resources has important implications for human capital formation. When these resources are limited, the opportunities for access to knowledge and competencies are constrained. This finding is aligned with

Table 6. Factor analysis with loadings on the areas that can enhance the improvement of the quality of life of women in rural communities

Variables	Component loadings (λ)			Communalities (h^2)
	1	2	3	
Improvement of working conditions			0.926	0.844
Reducing the wage gap between men and women			0.926	0.806
Providing financial incentives to stay in rural areas			0.830	0.799
Creation of small industrial units			0.712	0.700
Improvement of the health sector (medical care, increase/improvement of medical care centers and hospitals)			0.612	0.568
Improvement/development of agritourism			0.571	0.670
Creation/increase of nurseries and childcare centers			0.540	0.779
Provision of free internet access by municipalities and communities	0.893			0.713
Creation of universities	0.849			0.804
Road network improvement	0.825			0.699
Organization of lectures/discussions/seminars	0.795			0.813
Creation of Technical Schools	0.788			0.768
Increase and improvement of sports facilities	0.751			0.793
Transfer of State Services to the countryside/rural areas	0.722			0.767
Training to prevent domestic violence	0.709			0.773
Strengthening of female entrepreneurship	0.650			0.802
Improvement of nursing homes for the elderly	0.641			0.771
Creation of cultural groups	0.589			0.733
Create/increase cinemas		−0.840		0.913
Creation of libraries		−0.797		0.859
Creation of regional theaters		−0.769		0.853
More cafes/bars		−0.721		0.795
Proportion of variance	62.007	10.259	5.114	
Total variance		77.380		

Notes: Extraction method: Principal component analysis; Rotation method: Oblimin with Kaiser normalization; Kaiser–Meyer–Olkin measure of sampling adequacy = 0.930; Bartlett's test of sphericity p-value = 0.001.

previous work that stressed: "urban environments amplify the advantages of high-SES families, whereas rural contexts appear to act as a 'leveler' that constrains opportunities regardless of social background" (Linarte & Spörlein, 2026, p.1).

Empowering women in rural Cyprus is imperative, as the survey reveals conflicting views on gender inequality in these communities. Although 84.3% of women acknowledge that rural women have fewer opportunities than urban women, only half of them believe they are in a subordinate position compared to men, while the other half disagree.

In the rural areas of Cyprus, patriarchal structure persists, and it is so embedded in women's lives that traditional gender roles are normalized to such an extent that unequal power dynamics are not necessarily perceived as "subordination", but women interpret their roles, especially within the household, as complementary rather than hierarchical. According to a previous study, "community-level gender norms are a byproduct of men's beliefs about women's roles and duties, especially in the context of cultural values, traditional family roles, gender values, and gender order" (Gopalakrishnan *et al.*, 2024, p.3). Unfortunately, this suggests that women in rural Cyprus, like men, without proper awareness and empowerment, can internalize and perpetuate patriarchal

norms, contributing equally to the maintenance of gender inequalities and subjective gender identity. At the same time, someone could interpret these results as a form of resilience among women in rural Cyprus, rejecting the term "subordination" to resist the stigma of being a weak, non-self-willed woman and to defend their dignity and self-worth.

The acknowledgment of the gap in education and opportunities between rural and urban women suggests that gender inequality is clearly recognized at the structural level and in life chances. This shows that rural women demonstrate a strong awareness of systemic disadvantages that affect their access to resources and opportunities. Evidence from the systematic review by Rola-Rubzen *et al*. (2023) supports this interpretation, showing that rural transformation is generally associated with improvements in women's employment, income, and empowerment.

This division in perspectives underscores the complex and context-specific nature of gender roles in rural Cyprus, where patriarchal norms persist but are not universally perceived as limiting. Therefore, it is important to use empirically supported deconstruction to debunk misinformed notions that undermine women's equality (Gupta *et al*, 2023).

Factor analysis grouped the main problems identified by the participants into economic and employment-related issues, access to health services and housing, financial independence and care for children and the elderly, and, finally, cultural engagement and environmental concerns. Rural communities, compared to urban areas, often face greater vulnerability due to limited infrastructure and fewer resources to adapt to climate shocks. In Cyprus, in recent years, we have faced increased heatwaves and water scarcity. Women often manage water and food production at the household level, so climate events like droughts disproportionately increase their workload and stress levels. Technology can help address climate challenges, but the existing tech gap can limit the benefits for women in rural Cyprus, especially for those with lower socioeconomic status.

The results are aligned with international literature and highlight structural and cultural constraints that limit women's ability to fully realize their potential (Khalil & Warner, 2025; Wood *et al.,* 2024; Vujko *et al*., 2024). Issues such as domestic violence and drug use were ranked lower, possibly reflecting social taboos or reluctance to disclose such experiences, rather than their absence (Tourangeau & Yan, 2007).

While surveys are among the most widely used methods in the social sciences, they are subject to common method bias (CMB), which can affect the reliability and validity of empirical results (Kock *et al.*, 2021). Even though this study employed a face-to-face questionnaire susceptible to CMB, the survey's setting was controlled, as the interviewers were well-trained and could provide clarification to reduce misunderstandings.

Including only Greek-speaking women in the sample limits the generalizability of the results, as migrant or minority women living in rural Cyprus were not included. Still, as the majority of women living in the rural areas of Cyprus are native Cypriots, the results can provide significant insights into the current situation and close the knowledge gap that has persisted for more than 15 years. It is foreseen that a second round of the survey will be launched in the next couple of years to include minorities such as women with disabilities, women of color, immigrants and non-Greek-speaking individuals, to reflect the rural landscape of Cyprus, intersectionally (Crenshaw, 1991).

5. Conclusion

This study examined the socioeconomic and cultural challenges faced by women in rural Cyprus, as well as their perceptions of their quality of life and opportunities. The findings highlight a complex reality in which progress coexists with persistent structural inequalities, particularly in relation to access to resources, recognition of women's contributions, and participation in economic and social life. Despite some improvements over time, traditional gender roles and unequal distributions of unpaid work continue to shape women's everyday experiences.

The study also identifies key priorities for improving the quality of life of women in rural areas, including increasing the availability of childcare services, improving care provision for the elderly, strengthening female entrepreneurship, decentralizing public services, and reducing the gender wage gap. These findings underscore that gender-neutral approaches are insufficient, as they often overlook care responsibilities, labor market segmentation, and structural barriers faced by women. The adoption of gender-sensitive policies is therefore essential for achieving inclusive and sustainable rural development.

At the broader level, the findings are consistent with evidence from the 2025 Gender Equality Index (European Institute for Gender Equality, 2025), which ranks Cyprus last among EU countries and highlights persistent inequalities in time and knowledge. Women in rural areas face a dual disadvantage, both in comparison to men within the same communities and to women in urban settings, reinforcing spatial and gender-based inequalities. Addressing these challenges requires not only targeted

policy interventions but also a shift in social norms and attitudes, to promote more equitable and inclusive development in rural Cyprus.

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Conflict of interest

The authors declare no conflict of interest regarding this manuscript.

Author contributions

Conceptualization: Petroula Mavrikiou
Data curation: Antria Karaoli
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Investigation: All authors
Methodology: Petroula Mavrikiou
Writing–original draft: Petroula Mavrikiou
Writing–review & editing: All authors

Ethics approval and consent to participate

This study was commissioned by the National Machinery for Women's Rights of the Republic of Cyprus. Participants were given written consent forms that explained the purpose of the study, its objectives, the duration, and the survey's anonymity and confidentiality. Participants could withdraw from the survey at any time. Informed consent was obtained from all participants in the survey. The consent form assured that all data would be anonymized and used solely for research purposes. Questionnaires were anonymous, and the authors had no access to the interviewees. The study was conducted in accordance with the Declaration of Helsinki and was approved by the Ethics Committee of the EKA Union of Cypriot Farmers on June 20, 2024.

Consent for publication

Written informed consent was obtained from all participants prior to their participation in the survey. The consent form assured participants that all data would be anonymized and used solely for research purposes, and that the findings may be disseminated through conference presentations, publications, and other academic activities.

Availability of data

Data are publicly available at https://zenodo.org/records/19132173 (doi:10.5281/zenodo.19132173).

Further disclosure

Preliminary findings from each section, as well as part of the methodology, were presented at an academic meeting attended by the Gender Equality Commissioner, the Union of Cypriot Farmers (EKA), the Section of Women's Farmers, and representatives from Frederick University. During the preparation of this manuscript, the authors used ChatGPT to improve language and readability. After using this tool/service, the authors reviewed and edited the content as needed and take full responsibility for the publication's content.

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Appendix

Table A1. Perceptions of the adequacy of infrastructure in schools

Infrastructure	Completely disagree	Disagree	I do not know	Agree	Completely agree	Total
	n (%)	*n* (%)	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Building facilities	26 (5.1)	72 (14)	23 (4.5)	214 (41.6)	179 (34.8)	514 (100)
Special classrooms: Home Economics	43 (10.1)	60 (14.1)	53 (12.4)	165 (38.7)	105 (24.6)	426 (100)
Special classrooms: Computer Science	64 (14.5)	59 (13.4)	68 (15.4)	133 (30.2)	117 (26.5)	441 (100)
Indoor event halls	63 (14.6)	6314.6)	55 (12.8)	136 (31.6)	114 (26.5)	431 (100)
Special classrooms: Technology	47 (10.8)	88 (20.2)	64 (14.7)	128 (29.4)	109 (25)	436 (100)
Library	70 (15.9)	56 (12.8)	72 (16.4)	123 (28)	118 (26.9)	439 (100)
Heating	86 (18.4)	66 (14.1)	55 (11.8)	110 (23.6)	150 (32.1)	467 (100)
Sports facilities	68 (15.6)	66 (15.1)	56 (12.8)	135 (30.9)	112 (25.6)	437 (100)
Special classrooms: Physics	58 (13.3)	97 (22.2)	77 (17.6)	95 (21.7)	110 (25.2)	437 (100)
Special classrooms: Chemistry	59 (13.5)	98 (22.5)	76 (17.4)	95 (21.8)	108 (24.8)	436 (100)
Air conditioning	271 (57.3)	84 (17.8)	34 (7.2)	52 (11)	32 (6.8)	473 (100)

Note: Cronbach's Alpha = 0.945, 11 items.

Table A2. Self-positioning of women

Self-positioning	Completely disagree	Disagree	I do not know	Agree	Completely Agree	Total
	n (%)	*n* (%)	*n* (%)	*n* (%)	*n* (%)	*n* (%)
The women in your community have the same opportunities as the women in the city.	123 (20.4)	386 (63.9)	10 (1.7)	71 (11.8)	14 (2.3)	604 (100)
The position of women in your community is subordinate to that of men.	140 (23.3)	135 (22.4)	14 (2.3)	169 (28.1)	144 (23.9)	602 (100)

Note: Cronbach's Alpha = 0.945, 11 items.

Table A3. Sectors in which the position of women differs from that of men

Sectors	Completely disagree	Disagree	I do not know	Agree	Completely Agree	Total
	n (%)	*n* (%)	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Fewer employment opportunities	12 (2)	59 (9.7)	3 (0.5)	349 (57.6)	183 (30.2)	606 (100)
Fewer educational opportunities	39 (6.4)	234 (38.6)	10 (1.7)	188 (31)	135 (22.3)	606 (100)
Fewer opportunities for civic participation	126 (20.8)	143 (23.6)	9 (1.5)	173 (28.5)	155 (25.6)	606 (100)
Fewer opportunities to participate in cultural events	155 (25.6)	139 (22.9)	13 (2.1)	151 (24.9)	148 (24.4)	606 (100)

Note: Cronbach's Alpha = 0.882, 4 items.

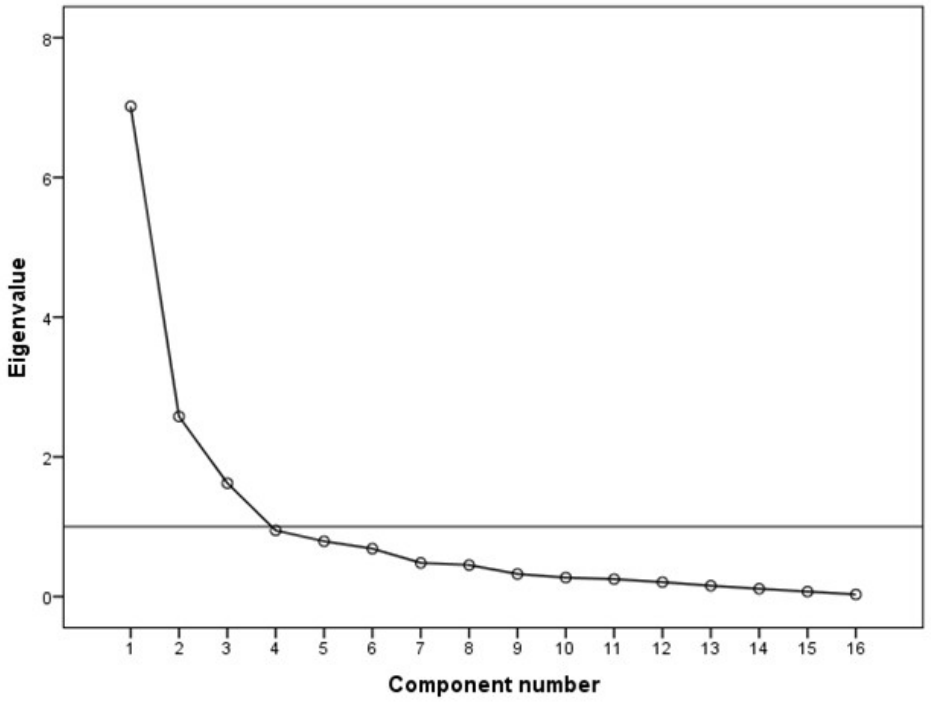


Figure A1. Scree plot showing the optimal number of components (three) extracted using factor analysis for the barriers and challenges women face in the rural areas (eigenvalue > 1)

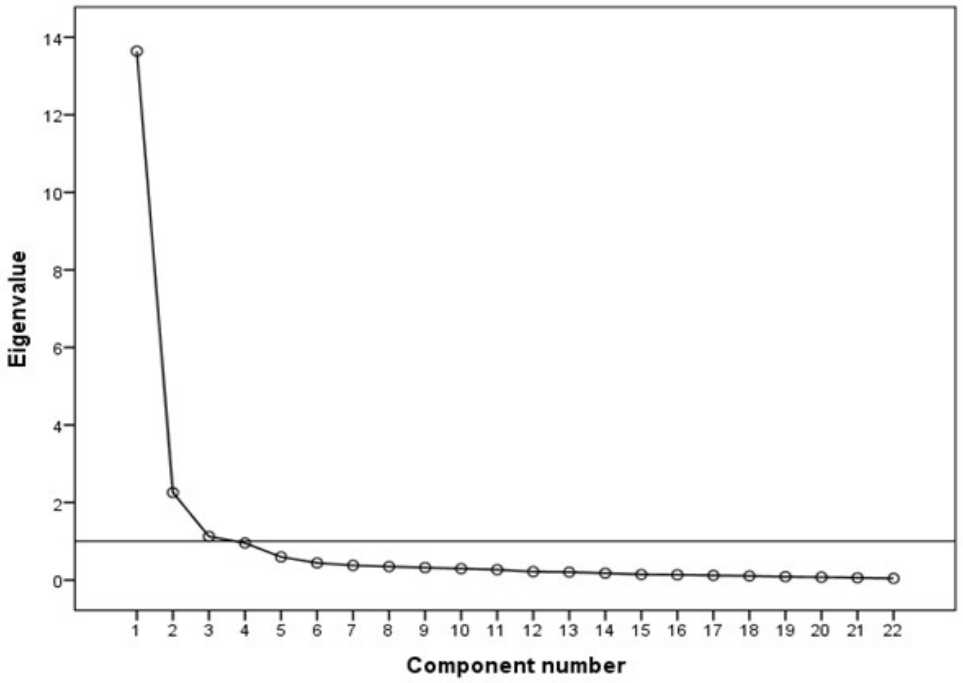


Figure A2. Scree plot showing the optimal number of components (three) extracted using factor analysis for the improvement of the quality of life of women in the rural areas (eigenvalue > 1)