

Determinants of the ideal and actual number of children among married women: Evidence from a poisson regression model

Evli kadınların ideal ve mevcut çocuk sayılarının belirleyicileri: Poisson regresyon modelinden bulgular

Şeyma Şahin Kutlu¹  Muhammet Kutlu²  Serpil Sumer Adin³  Hilal Mola⁴ 

¹ Assoc. Prof. Dr., Bandırma Onyedi Eylül University, Faculty of Economics and Administrative Sciences, Economic Policy, Balıkesir, Türkiye



² Assist. Prof. Dr., Bandırma Onyedi Eylül University, Gönen Vocational School, Department of Accounting and Taxation, Balıkesir, Türkiye



³ Assoc. Prof. Dr., Atatürk University, Oltu Faculty of Humanities and Social Sciences, Department of Finance and Banking, Erzurum, Türkiye



⁴ Assist. Prof. Dr., Atatürk University, Oltu Faculty of Humanities and Social Sciences, Department of Finance and Banking, Erzurum, Türkiye



Corresponding Author:
Hilal Mola

Citation:

Şahin Kutlu, Ş., Kutlu, M., Sumer Adin, S. & Mola, H. (2026). Determinants of the ideal and actual number of children among married women: Evidence from a poisson regression model. *OPUS- Journal of Society Research*, 23, e1975468.
<https://doi.org/10.26466/opusjsr.1975468>

Open Access Statement:

This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). This license permits unrestricted use, distribution, and reproduction in any medium, provided that the original author(s) and the source are properly credited. The original publication in *OPUS Journal of Society Research* must be cited in accordance with accepted academic practice.

Review Note:

Evaluated by Double-Blind Peer Review

Ethics Reporting:

To report potential ethical concerns, contact:
editorialoffice@opusjournal.net

Similarity screening was conducted via intihal.net



Abstract

This study investigates the determinants of fertility levels and preferences among married women aged 15-49 in Türkiye, based on socioeconomic, demographic, and certain subjective assessments. For this purpose, a questionnaire was administered to 439 married women, and the determinants of the actual number of children and the ideal number of children were examined using a Poisson regression model. In all the models constructed within the scope of the study, the association between the ideal number of children and the actual number of children was found to be positive and statistically significant. According to the findings, higher educational attainment is associated with a lower actual number of children, while household income is associated with lower actual and ideal numbers of children; occupational concern and the perception of uncertainty regarding the future are negatively associated with the ideal number of children, whereas the associations of family and spousal expectations with the actual number of children were not statistically significant. In addition, it was found spousal expectation is associated with women's preferences regarding the ideal number of children, whereas no statistically significant association was found with the actual number of children. Chronic illness status is also significant in all models, and this result is important because it demonstrates a negative association between chronic health problems and the actual number of children. Another notable result of the study is the significant association between household income and the actual number of children.

Keywords: Fertility preferences, ideal number of children, poisson regression analysis

Öz

Bu çalışmada Türkiye’de 15-49 yaş arasındaki evli kadınların doğurganlık düzeyi ve doğurganlık tercihlerinin sosyoekonomik, demografik ve öznel bazı değerlendirmelere dayalı belirleyicileri araştırılmıştır. Bu doğrultuda 439 evli kadına anket uygulanmış ve Poisson regresyon modeli yardımıyla mevcut çocuk sayısı ile ideal çocuk sayısının belirleyicileri incelenmiştir. Çalışma kapsamında kurulan tüm modellerde ideal çocuk sayısı ile mevcut çocuk sayısı arasındaki ilişki pozitif ve istatistiki olarak anlamlı bulunmuştur. Elde edilen bulgulara göre, daha yüksek eğitim düzeyi mevcut çocuk sayısının daha düşük olmasıyla ilişkiliyken, hane geliri hem mevcut hem de ideal çocuk sayısının daha düşük olmasıyla ilişkilidir. Mesleki kaygı ve geleceğe ilişkin belirsizlik algısı ideal çocuk sayısı ile negatif ilişkili bulunmuş, aile ve eş beklentisi ile mevcut çocuk sayısı arasındaki ilişki ise istatistiki olarak anlamlı bulunmamıştır. İlaveeten, eş beklentisinin kadınların ideal çocuk sayısı tercihi ile ilişkili olduğu, ancak mevcut çocuk sayısı ile istatistiki olarak anlamlı bir ilişkisinin bulunmadığı ortaya konulmuştur. Ayrıca tüm modellerde kronik hastalık durumu anlamlıdır ve bu sonuç kronik sağlık sorunu ile mevcut çocuk sayısı arasındaki negatif ilişkiyi göstermesi bakımından önem arz etmektedir. Çalışmanın bir diğer dikkat çeken sonucu ise hane geliri ile mevcut çocuk sayısı arasındaki anlamlı ilişki olmuştur.

Anahtar Kelimeler: Doğurganlık tercihleri, ideal çocuk sayısı, poisson regresyon analizi

Introduction

Fertility is an important research topic in the demographic literature. Of critical importance for demographic sustainability, fertility is one of the fundamental indicators that affect the age structure of the population, labor supply, the social security system, economic growth, welfare, and social policy. Current population data, however, show a striking decline in the fertility rate on a global scale. While the total fertility rate worldwide was approximately 4.9 children per woman in the 1950s, this figure stood at approximately 3.2 in 1990. The data for 2023 and 2025 were calculated as 2.3 and 2.2, respectively (United Nations, 2024). In Türkiye, the total fertility rate has displayed a downward trend in line with the global tendency. The total fertility rate in Türkiye, which was 6.47 children per woman in 1950, was reported as 3.08 in 1990. Calculated as 2.38 in 2001, the total fertility rate fell to 2.19 in 2014, and a continuous downward trend has persisted since then. The total fertility rate data for 2023 and 2024 stood at 1.51 and 1.48 children per woman, respectively (Turkish Statistical Institute, 2024, 2025). Earlier survey-based estimates from the Turkey Demographic and Health Surveys (TDHS) reported total fertility rates of 2.26 children per woman in 2013 and 2.3 in 2018. The 2018 TDHS noted that these estimates were not statistically different, indicating relative stability in fertility during these five years (Hacettepe University Institute of Population Studies, 2014, 2019). Associating fertility solely with the fertility rate may, however, lead to misleading conclusions. Fertility rate data represent fertility behavior at the macro level. This results in the exclusion of individuals' preferences or norms on this matter. The necessity of considering fertility together with preference indicators such as the ideal number of children therefore arises (Gemicioğlu et al., 2019). The Turkey Demographic and Health Survey (TDHS) data for 1993-2018 show that the ideal number of children among married women aged 15-49 rose from 2.39 in 1993 to 2.97 in 2018 (Abbasoğlu Özgören & Türkyılmaz, 2023). These data are important because they show that, despite the decline in the

fertility rate, women's assessments of their desired family size may increase. At the same time, the total fertility rate and the number of children women have at the individual level cannot be regarded as directly identical indicators. While the total fertility rate provides a macro-level representation based on births occurring in a given period in a country, the actual number of children is a micro-based indicator showing the number of children a woman actually has over her life course. This distinction shows that fertility should be addressed in terms of micro-based, realized fertility behavior and preferred family size. Fertility behavior and fertility preference are, however, shaped by different mechanisms. Easterlin's socioeconomic theory of fertility provides a conceptual framework for this distinction, while the microeconomic fertility approaches of Becker and Schultz make it possible to explain the socioeconomic determinants of the actual number of children and the ideal number of children. In addition, economic uncertainty / concern about the future and the postponement hypothesis explain the potential economic, career-related, and future-expectation-based obstacles to the translation of preferences regarding the number of children into actual fertility behavior.

In the economic fertility literature, Becker (1960) and Schultz (1976) emphasize that the decision to have children is shaped by individuals' socioeconomic conditions and offer two distinct frameworks on this issue. Treating fertility as an economic choice of the household, Becker (1960) argues, through a more theoretical and demand-oriented approach, that the number of children and child quality may be shaped by socioeconomic conditions within the framework of utility, cost, and the budget constraints. In his analysis, Becker treats children as a demanded element, stating that children provide utility to their families but entail costs in terms of time, money, and labor. This approach is important in that it shows that an increase in income may raise individuals' demand for children, but that a rise in the costs of child-rearing and childcare may lead to a limitation in the number of children, and that families may prefer to raise higher-quality children rather than more children.

The demand for children that Becker explains theoretically through economic elements is addressed empirically by Schultz (1976) with broader micro-level determinants. He showed that factors such as educational attainment, the timing of marriage, marriage duration, age at marriage, the age factor, income conditions, child survival, and health conditions are influential on fertility decisions. In this respect, Schultz's (1976) microeconomic fertility model constitutes an important theoretical basis for empirical analyses. Easterlin (1975), unlike the classical economic fertility approaches that explain fertility mainly through the demand for children, proposes a broader model that explains the decision to have children through the demand for children, the supply of children, and the costs of fertility regulation, thereby contributing theoretically to the conceptual separation of the actual number of children and the ideal number of children. Easterlin's (1975) socioeconomic theory of fertility explains the distinction between realized fertility and preferred fertility through the demand for children, the supply of children, and the costs of regulating fertility. The demand for children, which expresses the number of children individuals want to have or regard as ideal, is affected by elements such as income, the cost of child-rearing, and expectations regarding living standards. The supply of children, which indicates the potential number of children that could be had when fertility is not consciously limited, is affected by factors such as marriage duration, health status, and child survival. According to Easterlin, individuals may wish to regulate fertility to reach the number of children they want to have. Referred to as the costs of fertility regulation, this concept denotes the monetary cost of regulating fertility, the level of knowledge, psychological costs, and socio-cultural conditions. At the same time, the current fertility literature regards economic uncertainty and the postpone-ment hypothesis as an important mechanism for explaining why child-related preferences do not translate into actual fertility behavior. Kreyenfeld (2005) and Kreyenfeld, Andersson, and Pailhé (2012) state that unemployment, low income,

home ownership status, and uncertainties regarding the future may delay individuals' decisions to marry and have children. It has been emphasized, however, that this effect may differ according to socioeconomic conditions. Current studies thus constitute an important basis for examining the potential effects of variables such as economic, career, health and relationship concerns on women's fertility.

In line with this theoretical framework, the aim of the study is to examine the determinants of fertility levels and preferences among married women aged 15-49 in Türkiye, based on socioeconomic, demographic, and certain subjective assessments. For this purpose, analyses were conducted through Poisson regression models using data obtained from questionnaires administered to 439 married women. The study was conducted with the approval of the relevant ethics committee. In order to test the determinants of the actual number of children and the ideal number of children, the variables of the ideal number of children and the actual number of children were related to a set of socioeconomic, demographic, and certain subjective-assessment-based variables. The principal contribution of the study to the literature lies in extending the micro-level analysis of fertility preferences by incorporating, alongside socioeconomic and demographic characteristics, selected subjective assessments and support-related factors, while also considering realized fertility within the same study. In particular, the analysis of the ideal number of children incorporates perceptual variables such as occupational concern, concern about uncertainty regarding the future, and concern about raising high-quality children, together with variables related to family support in childcare, accessible nursery support, spousal expectation, and support and incentives. In this way, the study provides evidence on the socioeconomic and demographic correlates of both realized fertility and preferred family size, while also examining the associations of these additional subjective assessments and support-related factors with fertility preferences.

Literature

Among the studies examining realized fertility through the actual number of children, Zhang (1990) showed that in China, as women's educational attainment increases, fertility does not decline linearly at every level. He also reported that marriage duration, place of residence, son preference, occupational status, ownership of durable consumer goods, and family structure are influential on women's fertility decisions. In their study investigating the determinants of the number of children women have in South Korea, Kim & Sung (2013) found that women with higher educational attainment have fewer children, whereas household income is not associated with the number of children. In their study identifying the determinants of the number of children born to married women over their lifetime in Ghana, Boateng et al. (2023) stated that variables such as place of residence, the wealth index, age, age at marriage, media exposure, educational attainment, and the number of miscarriages/abortions are significantly associated with the number of children. Among the studies conducted for Türkiye, Selim and Üçdoğruk (2005), using data from the 1999 TURKSTAT household labor force survey, concluded that although the effect of women's educational attainment on the actual number of children is higher than that of men, increases in educational attainment reduce fertility. Women's labor force participation negatively affects fertility.

Among the studies on the ideal number of children and fertility preferences, Upadhyay and Karasek (2012) stated that in sub-Saharan Africa, more empowered women generally reported a lower ideal number of children. Because the results differed across countries, it was noted that classical measures of women's empowerment are not good predictors of fertility preferences. Nonetheless, they showed that factors such as the level of welfare, educational attainment, the number of living children, and the husband's ideal number of children are associated with women's ideal family size. Akeju et al. (2021) measured fertility intention through the ideal number of children among

women aged 15-49 in Nigeria. They showed that the ideal family size is higher in rural areas than in urban areas and that the fertility preferences of educated families are lower. They also concluded that women aged 15-29 have lower fertility preferences than women aged 30-49. Ahinkorah et al. (2021) showed that women's preferences regarding the ideal number of children in Ghana differ according to socioeconomic factors such as education, place of residence, the actual number of children, religion, and age at first birth. The intention to have children was found to be higher among women with no education than among women with higher educational attainment. Women living in rural areas are more likely to have the intention to have children than those living in urban areas. The desire to have more children was found to be higher among women who had given 0-3 births than among women who had given 4 or more births. Haque et al. (2021) examined the relationship between women's empowerment (participation in household decision-making processes and attitudes towards spousal violence) and fertility decisions in 53 countries. It was stated that women who participate in household decision-making processes and who do not justify spousal violence tend to report a lower ideal number of children. Phiri et al. (2023) showed that, in sub-Saharan Africa, family planning reduces preferences for large families, and that an increase in educational attainment significantly lowers the likelihood of preferring a large family. In their study addressing the fertility intentions of individuals of reproductive age in China, Fang and Liu (2025) showed that education, income, place of residence, family structure, the value attributed to children, and the value of familial responsibility positively affect fertility intention. Investigating, with qualitative data, the effect of the husband's participation in housework and childcare on women's decisions to have an additional child in Türkiye, Kavas (2019) showed that husbands' participation in housework and childcare positively affects women's fertility intention.

Among the studies that address the actual number of children and the ideal number of children jointly or comparatively, Beaujouan and

Berghammer (2019) reported that, in 19 European countries and the United States, there is a significant difference between the lifetime fertility intentions women reported at a young age and the completed fertility levels they reached at older ages. They stated that this difference is largest among highly educated women in most countries examined. In their study examining the determinants of the desired and realized number of children in Ghana and Nigeria, Yaya et al. (2018) concluded that socio-demographic factors such as education, place of residence, religion, age at first birth, occupation, the level of welfare, and the sex composition of children are associated with these indicators. Okui (2025) examined whether the difference between the actual number of children and the ideal number of children among married couples in Japan varies according to socioeconomic status. In their study, they showed that low household income is associated with the likelihood of having fewer children than the ideal. Among the studies conducted for Türkiye, Aydemir and Sarıçoban (2023), using 2018 TDHS data, showed that women's intention to have children varies according to the number of children, and that the ideal number of children varies according to the number of living children and the level of welfare. Analyzing women's fertility intentions and the divergence between realized fertility and preferred fertility by parity using the 1993-2018 Turkey Demographic and Health Survey (TDHS) data, Abbasoğlu Özgören and Türkyılmaz (2023) showed that the actual number of children is associated with fertility intentions and the ideal number of children. In an analysis using the 2008 and 2013 TDHS data, Gemicioğlu, Şahin, and Er (2019) showed that a model taking future fertility preferences into account and a standard model can produce different findings, and that the signs of the coefficients can change, particularly for the variables of age, age at marriage, employment status, and the husband's age.

In summary, the actual number of children was associated with socioeconomic and demographic conditions at the woman and household levels. Studies focusing on the ideal number of children, in

turn, have shown that the preferred number of children is associated with various factors such as the level of welfare, educational status, family structure, and women's decision-making power. Some studies, that address the actual number of children and the ideal number of children jointly, provide evidence that these indicators may diverge. The economic uncertainty literature, in turn, draws attention to conditions that may limit the translation of preferences regarding the number of children into actual fertility behavior. Kreyenfeld (2005) stated that there is no clear evidence that economic uncertainty postpones childbearing behavior among all women in Germany. She showed, however, that this finding differs according to educational attainment; economic uncertainty postponed childbearing among women with higher educational attainment, but this effect differed, particularly among women with lower educational attainment. Conducting a multi-country assessment in the European context, Kreyenfeld, Andersson, and Pailhé (2012) reported that the relationship between economic uncertainty and fertility differs according to country, labor market conditions, gender, and educational attainment, thereby showing that this relationship is not unidirectional and simple. Vignoli et al. (2020) argue that explaining the fertility decline observed in European countries after the Great Recession solely through objective indicators such as unemployment and low income is not sufficient. Individuals' expectations regarding the future and their perceptions of uncertainty play an important role in shaping fertility decisions. In their experimental study in Italy, Matera et al. (2023) showed that the perception of economic uncertainty is influential on fertility intention. Buran and Çankaya (2023) identified the reasons why young women in Türkiye who plan to have children in the future postponed their intention to have children during the COVID-19 period as financial concerns, fear of COVID-19, and health-related uncertainty.

Data and Method

This study aims to analyze the socioeconomic, demographic, and selected subjective-assessment-

based determinants of women's fertility by distinguishing between realized fertility, measured by the actual number of children, and fertility preferences, measured by the ideal number of children, using survey data collected from 439 married women selected through convenience sampling, a non-probability sampling method. Data were collected through an online questionnaire. In the study, fertility was addressed through two distinct indicators: the actual number of children as a realized fertility outcome and the ideal number of children as a fertility preference indicator. In addition, the questionnaire included questions on age, marriage duration, educational level, the husband's educational level, household income, employment status, chronic illness status, child loss, the adequacy of current income in meeting needs, and various subjective assessments that may be associated with fertility decisions.

The variables of the actual number of children and the ideal number of children, included in the study as dependent variables, are count data that are non-negative and can take integer values. Therefore, the preference for regression approaches that consider this data structure emerges as a necessity. This is because addressing variables with a count-data structure in a linear regression form may, contrary to the nature of count data, give rise to negative predicted values. It may also lead to biased, inconsistent, and inefficient estimators (Üçdoğruk Birecikli et al., 2021: 179). One of the alternative approaches that takes this characteristic of the dependent variable into consideration is the Poisson regression model, which assumes that the dependent variable is drawn from a Poisson distribution with parameter λ_i conditional on the explanatory variables. Let y_i denote the number of occurrences of the event under investigation and let x_i be a $(k \times 1)$ -dimensional column vector representing the k independent variables that are assumed to determine the dependent variable. The basic equation for the distribution can thus be written as

$$f(Y_i = y_i | x_i) = \frac{e^{-\lambda_i} \lambda_i^{y_i}}{y_i!}, \quad y_i = 0, 1, 2, \dots \quad (1)$$

The distribution parameter λ_i in the log-linear specification of the model is expressed as a linear function of the explanatory variables, as shown in Equation (2).

$$\lambda_i = \exp(x_i' \beta) \quad \text{or} \quad \ln \lambda_i = x_i' \beta \quad (2)$$

Here β represents the parameter vector. Evaluating Equations 1 and 2 together, the conditional probability function can thus be arranged as

$$f(Y_i = y_i | x_i) = \frac{\exp(-\exp(x_i' \beta)) \exp(y_i x_i' \beta)}{y_i!}, \quad y_i = 0, 1, 2, \dots \quad (3)$$

Considering the equidispersion assumption of the expected value and the variance of the Poisson distribution, the expected number of events per period is calculated as $E[y_i | x_i] = \text{Var}[y_i | x_i] = \lambda_i = \exp(x_i' \beta)$.

The standard approach for estimating the coefficients of this model is the maximum likelihood method. For n independent observations, the log-likelihood function is

$$\ln L = \sum_{i=1}^n [y_i x_i' \beta - \exp(x_i' \beta) - \ln y_i!] \quad (4)$$

The likelihood equations expressing the first-order condition are

$$\frac{\partial \ln L}{\partial \beta} = \sum_{i=1}^n (y_i - \exp(x_i' \beta)) x_i = 0 \quad (5)$$

There are k likelihood equations for the k parameters β . The values of β that satisfy these first-order conditions, that is, maximize the likelihood function, yield the maximum likelihood estimates $\hat{\beta}$.

Since a closed-form solution does not exist for these nonlinear likelihood equations, the coefficients are obtained through iterative methods (Cameron and Trivedi, 2013, pp.22-25; Winkelmann, 2008, pp.63-78; Greene, 2018, pp.885-886).

The most basic approach for the case in which the dependent variable has the character of count data is the Poisson regression model. In cases where the conditional mean and conditional variance equality, which is one of the assumptions of this model, does not hold, however, an overdispersion problem may arise. In this case, the negative binomial regression emerges as an alternative model. In this study, negative binomial models were estimated and the significance of the overdispersion parameters was checked. Since the dispersion parameters were not statistically significant, the findings are presented using the Poisson regression model. Robust standard errors were used to obtain inference that is less sensitive to possible misspecification of the conditional variance.

Findings

Table 1 presents the descriptive statistics of the variables used in the study. Accordingly, the mean actual number of children of the women who participated in the survey is 1.631, while the mean ideal number of children is 2.362. This finding shows that the number of children women actually have is lower than the number they regard as ideal. The mean age of the women who participated in the survey was 37.175 years, and the mean marriage duration was 11.103 years. In terms of educational level, 43.28% of the women hold a bachelor's degree, 24.60% a postgraduate degree, and 8.88% an associate degree. This shows that a substantial proportion of the participants (76.77%) hold an associate degree or higher. The husbands' educational status can likewise be said to be high. Of the husbands, 43.28% hold a bachelor's degree, 24.83% a postgraduate degree, and 8.66% an associate degree. This shows that the proportion of husbands holding an associate degree or higher is 76.77%. The household income variable was assessed across four different categories. Of the participants, 25.28% are in the first income category, 29.38% in the second income category, 20.96% in the third income category, and 24.37% in the

fourth income category. This shows that the participants consist of different income groups in terms of household income. In terms of employment status, the largest group, at 49.43%, consists of women engaged in housework. Among the participants, the proportion of those working in the public sector is 25.51%, and that of those working in the private sector is 8.43%. Of the participants, 11.39% are unemployed. Of the participants, 16.86% reported chronic illness status and 19.36% reported having previously experienced child loss. In terms of the ownership status of the dwelling, 59% of the participants reside in their own home, while 34.62% live in rented accommodation. The car ownership rate among the participants is 85.88%. It can therefore be assessed that a substantial proportion of the participants possess a certain level of household assets. The proportions of those reporting that spousal and family expectations are influential on fertility decisions are 45.79% and 17.77%, respectively. This significant difference is important in that it shows that, in participants' fertility decisions, spousal expectation is more visible than the expectations of elder family members. The proportion of those stating that they receive family support in childcare is 56.95%. When the perceptual variables are examined, 92.48% of the participants associated the decision to have children with period-specific hardship. In addition, 93.17% stated that concern about raising high-quality children, 72.44% that concern about the future, 60.36% that health concern, and 45.79% that occupational concern are important. The proportion of those reporting that motherhood limits individual freedom is 72.89%, and the proportion of those indicating the effect of work-family balance on the decision to have children is 45.79%. According to Table 1, the proportion of women stating that support and incentives are influential on fertility decisions is only 18.68%. This indicates that, for the great majority of participants, support and incentives are not a determining element in the decision to have children. In contrast, the proportion of those reporting that accessible nursery support is influential on the decision to have children is

46.47%. These data reveal that, in participants' decisions to have children, accessible nursery support that reduces the burden of childcare is more determinant than general support and incentives.

Table 2 presents the Poisson regression results for the determinants of the ideal number of children. The effects of the Age and Age² variables on the ideal number of children were statistically in-

significant. The effect of the actual number of children on the ideal number of children is statistically significant and positive. Accordingly, a 1-unit increase in the actual number of children is associated with a 15.3% higher expected ideal number of children. In other words, women's assessments regarding the ideal number of children are associated with their actual number of children. In terms of the

Table 1. Variables used in the study, variable categories, and descriptive statistics

Characteristics		Mean	Std. Deviation
Actual number of children		1.631	0.998
Ideal number of children		2.362	0.957
Age		37.175	6.045
Marriage duration		11.103	7.217
		Frequency	%
Educational level	Primary or secondary education	43	9.790
	High school	59	13.440
	Associate degree	39	8.880
	Bachelor's degree	190	43.280
	Postgraduate	108	24.600
Husband's educational level	Primary or secondary education	20	4.560
	High school	82	18.680
	Associate degree	38	8.660
	Bachelor's degree	190	43.280
	Postgraduate	109	24.830
Household income	First income category (lowest)	111	25.280
	Second income category	129	29.380
	Third income category	92	20.960
	Fourth income category (highest)	107	24.370
Employment status	Private sector employee	37	8.430
	Unemployed	50	11.390
	Engaged in housework	217	49.430
	Public sector employee	112	25.510
	Self-employed (own account)	23	5.240
Having experienced child loss in the past	No	354	80.640
	Yes	85	19.360
Chronic illness status	No	365	83.140
	Yes	74	16.860
Ownership status of the dwelling	Tenant	152	34.620
	Homeowner	259	59.000
	Other (public housing, family-owned home, etc.)	28	6.380
Car ownership	No	62	14.120
	Yes	377	85.880
Adequacy of current income for household needs	No	169	38.500
	Yes	270	61.500
Effect of family expectation	No	361	82.230
	Yes	78	17.770
Effect of spousal expectation	No	238	54.210
	Yes	201	45.790
Family support in childcare	No	189	43.050
	Yes	250	56.950
Period-specific hardship	No	33	7.520
	Yes	406	92.480
Occupational concern	No	238	54.210
	Yes	201	45.790
Limiting effect of motherhood on individual freedom	No	119	27.110
	Yes	320	72.890
Effect of support and incentives	No	357	81.320
	Yes	82	18.680
Concern about high-quality children	No	30	6.830
	Yes	409	93.170
Concern about uncertainty regarding the future	No	121	27.560
	Yes	318	72.440
Health concern	No	174	39.640
	Yes	265	60.360
Accessible nursery support	No	235	53.530
	Yes	204	46.470
Effect of work-family balance	No	238	54.210
	Yes	201	45.790

educational level variable, only the variable of holding an associate degree is statistically significant. The assessments regarding the ideal number of children of women holding an associate degree are 15.5% higher than those of women in the reference category, namely women who are primary or secondary school graduates. In contrast, the effects of holding a high school, bachelor's, or postgraduate degree on the ideal number of children were found to be statistically insignificant. These results therefore do not confirm the effect of the educational category on the ideal number of children. It should be borne in mind, however, that this situation may be related to the existing educational structure of the sample. As seen in Table 1, 76.77% of the sample hold an associate degree or higher. This constitutes a limitation in terms of the generalizability of the results. The expected value of the ideal number of children reported by women in the second income category was found to be approximately 13.3% lower than that of the lowest income group, which is the reference category. The expected values of the ideal number of children of women in the third- and fourth-income categories are approximately 15.7% and 18% lower, respectively, than that of the reference category. These results are consistent with Becker's microeconomic fertility approach, which states that families may prefer to raise higher-quality children rather than more children. The effect of the sample's employment status on the ideal number of children is not statistically significant at the 5% significance level. That the reports of the ideal number of children of those working in the public sector are higher than those of the reference category can be confirmed at the 10% significance level. Having experienced child loss in the past is not statistically significant. The effect of the woman having a chronic health problem on the ideal number of children was not found to be statistically significant at the 5% significance level. Likewise, the effects of the home ownership and car ownership variables on the ideal number of children cannot be confirmed at the 5% significance level. Participants were also asked whether their current income level is adequate to meet household needs. Those answering "yes" to this

question reported a higher ideal number of children than those answering "no", but this relationship holds only for assessments made at the 10% significance level. The effect of family expectations on the ideal number of children cannot be statistically confirmed. In contrast, the effect of spousal expectation on the ideal number of children is positive and significant. The ideal number of children of those reporting that spousal expectation is influential is 9.3% higher than that of those reporting that it is not influential. These results show that the ideal number of children is more closely associated with intra-household decision-making processes than with extended-family expectations. Family support in childcare is reported as a determinant of the ideal number of children. The expected ideal number of children of women reporting that they receive family support in childcare is approximately 8.1% higher than that of women reporting that they do not receive family support. The positive effect of the accessible nursery support variable on the expected ideal number of children can be confirmed at the 10% significance level. When these results are assessed together, it can be said that family support in childcare stands out in care support. The effect of support and incentives on the expected ideal number of children is positive and statistically significant. The expected value of the ideal number of children of those stating that support and incentives are influential is approximately 13.9% higher than that of the reference category. This reported finding is important in terms of policy implications. The concern-about-high-quality-children variable was not found to be significant. As seen in Table 1, however, approximately 93% of the sample stated that they carry concern about raising high-quality children. This concentration may therefore be related to the absence of a statistically significant association between this variable and the ideal number of children. The effects of occupational concern and concern regarding the future on the ideal number of children are negative and significant. The expected ideal number of children of women reporting that they carry occupational concern is approximately 14.1% lower than that of women

Table 2. Determinants of the ideal number of children: Poisson regression results

Characteristics	Coefficient	Robust std. error	Prob	AIIR
Age	-0.002	0.024	0.940	0.998
Age ²	0.000	0.000	0.763	1.000
Actual number of children	0.143	0.023	0.000	1.153
Educational level (ref: primary or secondary education)				
High school	-0.036	0.061	0.554	0.964
Associate degree	0.144	0.068	0.033	1.155
Bachelor's degree	0.096	0.066	0.146	1.101
Postgraduate	0.055	0.078	0.480	1.057
Household income (ref: first income category (lowest))				
Second income category	-0.142	0.049	0.004	0.867
Third income category	-0.171	0.064	0.008	0.843
Fourth income category (highest)	-0.198	0.068	0.003	0.820
Employment status (ref: private sector employee)				
Unemployed	0.059	0.073	0.417	1.061
Engaged in housework	0.109	0.070	0.116	1.115
Public sector employee	0.107	0.063	0.088	1.113
Self-employed (own account)	-0.086	0.110	0.431	0.917
Having experienced child loss in the past (ref: no)				
Yes	0.044	0.046	0.337	1.045
Chronic illness status (ref: no)				
Yes	0.074	0.042	0.078	1.077
Ownership status of the dwelling (ref: tenant)				
Homeowner	-0.027	0.036	0.449	0.973
Other (public housing, family-owned home, etc.)	-0.061	0.072	0.395	0.940
Car ownership (ref: no)				
Yes	0.019	0.041	0.655	1.019
Adequacy of current income for household needs (ref: no)				
Yes	0.069	0.039	0.080	1.071
Effect of family expectation (ref: no)				
Yes	0.002	0.041	0.965	1.002
Effect of spousal expectation (ref: no)				
Yes	0.089	0.037	0.016	1.093
Family support in childcare (ref: no)				
Yes	0.078	0.039	0.047	1.081
Period-specific hardship (ref: no)				
Yes	0.095	0.060	0.111	1.100
Occupational concern (ref: no)				
Yes	-0.152	0.039	0.000	0.859
Limiting effect of motherhood on individual freedom (ref: no)				
Yes	-0.034	0.038	0.370	0.966
Effect of support and incentives (ref: no)				
Yes	0.131	0.045	0.004	1.139
Concern about high-quality children (ref: no)				
Yes	-0.057	0.076	0.451	0.945
Concern about uncertainty regarding the future (ref: no)				
Yes	-0.134	0.039	0.001	0.875
Health concern (ref: no)				
Yes	0.013	0.037	0.730	1.013
Accessible nursery support (ref: no)				
Yes	0.072	0.040	0.068	1.075
Effect of work-family balance (ref: no)				
Yes	-0.067	0.034	0.050	0.935
Number of observations	439			
Wald χ^2	277.30			
Prob > χ^2	0.000			
Log pseudolikelihood	-648.419			

who do not carry occupational concern. The expected ideal number of children of women carrying concern about uncertainty regarding the future is approximately 12.5% lower than that of women who do not carry this concern. This finding is consistent with the economic uncertainty hypothesis in the current fertility literature. The effect of the work-family balance variable on the ideal number of children is statistically significant and negative.

When this result is assessed together with the occupational concern variable, the inference can be made that women's perceptions regarding their occupational futures and work-family balance are negatively associated with the ideal number of children.

Table 3 presents the Poisson regression results regarding the determinants of the actual number of children. The model was estimated using three different specifications.

Table 3. Determinants of the actual number of children: Poisson regression results

Characteristics	1		2		3	
	Coef. (Robust Std. E.)	AIRR	Coef. (Robust Std. E.)	AIRR	Coef. (Robust Std. E.)	AIRR
Marriage duration	-		0.040 ^a (0.003)	1.041	-	
Age	-		-		0.033 ^a (0.004)	1.033
Ideal number of children	0.215 ^a (0.031)	1.239	0.149 ^a (0.028)	1.161	0.170 ^a (0.030)	1.185
Educational level (ref: primary or secondary education)						
High school	-0.207 ^a (0.077)	0.813	-0.068 (0.082)	0.934	-0.136 ^c (0.082)	0.872
Associate degree	-0.379 ^a (0.095)	0.684	-0.157 (0.097)	0.855	-0.288 ^a (0.096)	0.750
Bachelor's degree	-0.492 ^a (0.092)	0.611	-0.166 ^c (0.091)	0.847	-0.379 ^a (0.092)	0.684
Postgraduate	-0.541 ^a (0.119)	0.582	-0.171 (0.110)	0.843	-0.437 ^a (0.115)	0.646
Husband's educational level (ref: primary or secondary education)						
High school	0.047 (0.095)	1.048	0.039 (0.109)	1.040	0.056 (0.103)	1.058
Associate degree	0.190 ^c (0.107)	1.209	0.112 (0.120)	1.119	0.150 (0.110)	1.161
Bachelor's degree	0.089 (0.112)	1.093	0.147 (0.115)	1.158	0.152 (0.108)	1.164
Postgraduate	0.172 (0.136)	1.188	0.163 (0.132)	1.177	0.182 (0.130)	1.200
Household income (ref: first income category (lowest))						
Second income category	-0.016 (0.065)	0.984	-0.044 (0.061)	0.957	-0.056 (0.063)	0.946
Third income category	-0.207 ^b (0.098)	0.813	-0.177 ^b (0.085)	0.838	-0.194 ^b (0.088)	0.824
Fourth income category (highest)	-0.194 ^b (0.093)	0.824	-0.153 ^c (0.086)	0.858	-0.180 ^b (0.087)	0.835
Employment status (ref: private sector employee)						
Unemployed	0.180 (0.149)	1.197	0.111 (0.124)	1.118	0.141 (0.133)	1.151
Engaged in housework	0.343 ^b (0.146)	1.409	0.086 (0.118)	1.090	0.170 (0.126)	1.185
Public sector employee	0.219 (0.138)	1.245	0.080 (0.112)	1.084	0.140 (0.120)	1.150
Self-employed (own account)	0.432 ^a (0.144)	1.541	0.164 (0.121)	1.179	0.248 ^c (0.130)	1.281
Chronic illness status (ref: no)						
Yes	-0.241 ^a (0.080)	0.786	-0.334 ^a (0.077)	0.716	-0.351 ^a (0.082)	0.704
Effect of family expectation (ref: no)						
Yes	-0.009 (0.066)	0.991	-0.043 (0.066)	0.958	-0.056 (0.066)	0.946
Effect of spousal expectation (ref: no)						
Yes	-0.054 (0.054)	0.947	-0.047 (0.047)	0.954	-0.055 (0.050)	0.946
Number of observations	439		439		439	
Wald χ^2	243.620		383.200		308.930	
Prob > χ^2	0.000		0.000		0.000	
Log pseudolikelihood	-594.945		-570.868		-582.540	

Note: The values in parentheses indicate robust standard errors. a, b, and c represent the 1%, 5%, and 10% significance levels, respectively.

Model 1 is based on a specification that excludes the variables of marriage duration and age. Model 2 incorporates marriage duration, whereas Model 3 controls for age. In this way, the analysis examines whether the effects of socioeconomic variables on the actual number of children vary when age and marriage duration are included under different model specifications.

In all models, the effect of the ideal number of children on the actual number of children was positive and statistically significant. An increase in the ideal number of children is associated with 23.9%, 16.1%, and 18.5% higher expected actual numbers of children according to Model 1, Model 2, and Model 3, respectively. The results show that the number of children the sample regards as ideal is

associated with the number of children they actually have. The findings obtained from the models show that the relationship between the woman's educational status and the actual number of children is negative; the expected actual number of children is lower in higher educational-level categories. The consistency of this negative relationship, however, weakens when marriage duration is controlled for, that is, in Model 2. The necessity of taking marriage duration into account in assessing the effects of educational attainment on the actual number of children can therefore be stated. This situation may also be related to the tendency of women who remain in education for longer to marry later. The findings obtained regarding the husband's educational level were found to be insignificant at the 5% level for all three models. For this reason, it can be stated that the husband's educational level is not statistically significantly associated with the actual number of children. Household income is statistically significant for the third- and fourth-income categories in all models. The expected actual number of children of women in the third income category is approximately 16-19% lower than that of women in the first income level, which is the reference category. A similar situation was observed for the highest income category. The expected actual number of children of women in the fourth category decreases by approximately 14-18% relative to the reference category. These findings are important in that they show that the relationship between household income and the actual number of children is negative. As seen in Table 3, the findings obtained for the employment status variable differ. This reveals that the relevant variable is sensitive to the model specifications. The findings reported for chronic illness status are significant in all models. The expected actual number of children of women reporting chronic illness status was found to be approximately 21.4%, 28.4%, and 29.6% lower in Model 1, Model 2, and Model 3, respectively, than that of women without a chronic health problem. These results are important in that they show the negative association between chronic health problems and the actual number of children. The effect of family and

spousal expectations on the actual number of children is not statistically significant. The finding reported for family expectation coincides with the finding obtained for the ideal number of children. It can therefore be stated that family expectation cannot be used in explaining the ideal or actual number of children for the sample addressed. The findings obtained from spousal expectation, however, differ. This shows that spousal expectation may be associated with women's preferences regarding the ideal number of children, but this association is not observed for the number of children actually held.

Conclusion

Fertility, one of the research topics that has attracted attention in recent years, is extremely important for demographic sustainability. Viewed on a global scale, the decline in the fertility rate also emerges as an issue that increases the importance of the subject. Various studies have been conducted on the reasons for the decline in the total fertility rate since the 1950s. The studies conducted on the subject in the literature show us that there are various factors causing the decline in the fertility rate worldwide. Many socioeconomic and demographic factors, such as place of residence, educational attainment, age at marriage, the sex of the child, and income level, exert an influence. Associating fertility solely with the fertility rate may, however, lead to incorrect and misleading conclusions. For this reason, it is necessary to address fertility with variables that can also reflect individual preferences. The aim of this study is to examine the determinants of fertility levels and fertility preferences among married women aged 15-49 in Türkiye, based on socioeconomic, demographic, and certain subjective assessments. Within the scope of the study, a questionnaire was administered to 439 married women, and a Poisson regression analysis was conducted using the data obtained.

In the study, the participants' demographic information was first examined, and analyses were

then conducted by constructing models on the determinants of the ideal number of children and the determinants of the actual number of children. For the sample group addressed within the scope of the study, it can be said that the actual number of children, spousal expectation, family support in childcare, and support and incentives were positively and statistically significantly associated with the ideal number of children. These findings indicate positive associations between these factors and the ideal number of children in the study sample. Considering that the ideal number of children for women who have children is higher than the number of children they have, having children is associated with an increase in the ideal number of children. That the ideal number of children is a decision taken within the household rather than one driven by family expectations is also a result reached within the scope of this study. The fact that society has a nuclear-family structure rather than an extended-family structure is thought to have an effect on this result. The higher ideal number of children among those who receive family support also confirms this result. Another striking result in the study is that the associations of occupational concern and uncertainty regarding the future with the ideal number of children are negative and significant. In the world today, women's career plans, their expectations regarding the future, and their job-security concerns can affect their preference to have children. The perception of uncertainty regarding the future in particular, that is, concern not only about the present economy but also about future economic conditions, is negatively associated with the ideal number of children. This result is consistent with the results of the studies conducted by Vignoli et al. (2020) and Matera et al. (2023). To put it briefly, economic uncertainty is associated with the ideal number of children.

When the findings obtained from the model constructed for the actual number of children are examined, there is a significant relationship between the ideal number of children and the actual number of children. That is, it can be said that the actual number of children held by the women from whom data were obtained within the scope of the

study is associated with the ideal number of children they want to have. Higher educational-level categories among women are associated with a lower actual number of children. This result is consistent with the results obtained by Selim and Üçdoğruk (2005), Kim and Sung (2013), and Boateng et al. (2023). It is similar in particular to the results of the study previously conducted by Selim and Üçdoğruk (2005) for the case of Türkiye. The result obtained in this study also shows that women's educational level is associated with the actual number of children, whereas no statistically significant association was found for husbands' educational level. Another striking result of the study is the significant association between household income and the actual number of children. The negative relationship between household income and the actual number of children can be associated with the rising costs of child-rearing. This result is consistent with the findings reported by Becker (1960) in his study of the demand for children. According to Becker (1960), having children is not only related to income level but also to all the costs associated with raising children. Within the framework of utility maximization, the decrease in the demand for children as household income rises—reflecting a preference for raising fewer but higher-quality children rather than more children—can be attributed to Becker's approach. However, in his study, Easterlin (1975) argued that the ideal number of children is not only related to the economic resources an individual currently possesses but also to expectations and concerns regarding future economic resources. The approaches put forward by Becker (1960) and Easterlin (1975) provide a complementary framework from the perspective of household income to explain the difference between the ideal number of children and the actual number of children in the present study. Chronic illness status is also significantly associated with the actual number of children. The actual number of children of women with a chronic illness is lower than that of women without a chronic illness. The result reached within the scope of the study is also similar to the study of Buran and Çankaya (2023), which indicates the effect of

health and health-related uncertainties on childbearing.

The general conclusion reached in this study is that there is a difference between women's actual number of children and ideal number of children. As for the determinants of these differences, we can say that they are associated with factors such as economic conditions, perceptions of uncertainty, health status, spousal expectations, and educational attainment. That fertility cannot be associated solely with individual preferences and that social and economic factors are also associated with fertility is a conclusion reached within the scope of this study. Based on the study's findings, it is recommended that policies be implemented in the areas of the economy, employment, and health to reduce the gap between the number of children women desire and the number they actually have. In the economic sphere, incentives could be provided to reduce costs, particularly in education, health, and care expenses. Postnatal employment security could be provided to reduce perceived uncertainty. Furthermore, it is believed that policies aimed at prioritizing access to healthcare services before and after childbirth will also contribute to reducing the difference between the desired number of children and the number of children they actually have.

Limitations

It can be stated that the models used in the study have certain limitations when the data and sample structure are considered. Individuals' actual and ideal numbers of children are associated with many social, economic, psychological, and demographic factors. It should therefore be borne in mind that only a limited number of these variables can be represented in the model. Unlike its predecessors, the study investigates the associations of perceptual variables such as occupational concern, concern about uncertainty regarding the future, and concern about raising high-quality children, together with variables relating to family support in childcare, accessible nursery support, spousal expecta-

tion, and support and incentives with fertility preferences. As a consequence of this, the use of survey data was preferred. Given the cross-sectional structure of the survey data obtained, it can be stated that the findings cannot assert causal relationships. Considering the non-probability sampling method of the study, it is also emphasized that the findings reveal sample-based empirical relationships. In addition, the use of convenience sampling and online data collection may have resulted in the overrepresentation of certain groups in the sample. In particular, the relatively high proportion of women with higher levels of education limits the generalizability of the findings to all married women in Türkiye. Therefore, the sample should not be considered nationally representative. Furthermore, some factors that may be associated with fertility preferences and the actual number of children, such as access to family planning services, contraceptive use, and reproductive health knowledge, were not measured within the scope of the study.

Declarations

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflict of interest.

Ethical Approval: Ethical committee approval for this study was obtained from Chairmanship of the Ethics Committee for Social Sciences and Humanities of Atatürk University on February 6, 2026 (decision/document number: E.88656144-000-2600056051).

Informed Consent: Oral informed consent was obtained from all participants included in the study (Married women aged 15–49).

Data Availability: The data that support the findings of this study are available from the corresponding author upon reasonable request.

Author Contributions: Conceptualization, Ş.Ş.K. (25%), M.K. (25%), S.S.A. (25%), H.M. (25%); introduction and conceptual analysis, Ş.Ş.K. (30%), M.K. (30%), S.S.A. (20%), H.M. (20%); investigation and data analysis, Ş.Ş.K. (30%), M.K. (30%), S.S.A. (20%), H.M. (20%); writing – original draft preparation, Ş.Ş.K. (25%), M.K. (25%), S.S.A. (25%), H.M. (25%); writing – review and editing, Ş.Ş.K. (35%), M.K. (30%), S.S.A. (20%), H.M. (15%).

AI Disclosure: No artificial intelligence (AI)-based tools or applications were used in the preparation of this study. The entire content of the study was produced by the authors in accordance with scientific research methods and academic ethical principles.

References

- Abbasoğlu Özgören, A., & Türkyılmaz, A. S. (2023). Türkiye'de değişen doğurganlık tercihleri: Pariteye göre analizler. *Sosyal Politika Çalışmaları Dergisi*, 23(59), 321–355. <https://doi.org/10.21560/spcd.vi.1247658>
- Akeju, K., Owoeye, T., Ayeni, R., & Jegede, L. (2021). Variations in desired fertility preferences among young and older women in Nigeria: Evidence from Demographic Health Survey 2018. *The Open Public Health Journal*, 14, 84–93. <https://doi.org/10.2174/1874944502114010084>
- Ahinkorah, B. O., Seidu, A.-A., Armah-Ansah, E. K., Ameyaw, E. K., Budu, E., & Yaya, S. (2021). Socio-economic and demographic factors associated with fertility preferences among women of reproductive age in Ghana: Evidence from the 2014 Demographic and Health Survey. *Reproductive Health*, 18, 2. <https://doi.org/10.1186/s12978-020-01057-9>
- Aydemir, E. I., & Sarıçoban, S. (2023). Türkiye'de yaşayan 15–49 yaş arası kadınların doğurganlık ve aile planlaması tercihleri. *Journal of Health Sciences Institute*, 8(2), 124–129.
- Beaujouan, É., & Berghammer, C. (2019). The gap between lifetime fertility intentions and completed fertility in Europe and the United States: A cohort approach. *Population Research and Policy Review*, 38(4), 507–535. <https://doi.org/10.1007/s11113-019-09516-3>
- Becker, G. S. (1960). An economic analysis of fertility. In Universities-National Bureau Committee for Economic Research (Ed.), *Demographic and economic change in developed countries* (pp. 209–240). Columbia University Press.
- Boateng, D., Oppong, F. B., Senkyire, E. K., & Logo, D. D. (2023). Socioeconomic factors associated with the number of children ever born by married Ghanaian females: A cross-sectional analysis. *BMJ Open*, 13(2), e067348. <https://doi.org/10.1136/bmjopen-2022-067348>
- Buran, G., & Çankaya, S. (2023). Çocuk sahibi olmayı planlayan kadınların doğurganlık niyetleri, doğum ve COVID-19 korkuları arasındaki ilişki. *Balıkesir Sağlık Bilimleri Dergisi*, 12(2), 372–379. <https://doi.org/10.53424/balikesirsbd.1069474>
- Cameron, A. C., & Trivedi, P. K. (2013). *Regression analysis of count data* (2nd ed.). Cambridge University Press.
- Easterlin, R. A. (1975). An economic framework for fertility analysis. *Studies in Family Planning*, 6(3), 54–63.
- Fang, J., & Liu, L. (2025). The influence of the value of children on the fertility intentions of people of childbearing age in China. *Frontiers in Sociology*, 10, 1686244. <https://doi.org/10.3389/fsoc.2025.1686244>
- Gemicioğlu, S., Şahin, H., & Er, E. (2019). Türkiye'de doğurganlık analizi: Gelecekteki doğurganlık tercihlerinin önemi. *Sosyoekonomi*, 27(41), 223–234. <https://doi.org/10.17233/sosyoekonomi.2019.03.11>
- Greene, W. H. (2018). *Econometric analysis* (8th ed.). Pearson Education Limited.
- Hacettepe University Institute of Population Studies. (2014). *2013 Turkey Demographic and Health Survey*. Hacettepe University Institute of Population Studies, T.R. Ministry of Development and TÜBİTAK.
- Hacettepe University Institute of Population Studies. (2019). *2018 Turkey Demographic and Health Survey*. Hacettepe University Institute of Population Studies, T.R. Presidency of Turkey Directorate of Strategy and Budget and TÜBİTAK.
- Haque, R., Alam, K., Rahman, S. M., Keramat, S. A., & Al-Hanawi, M. K. (2021). Women's empowerment and fertility decision-making in 53 low- and middle-resource countries: A pooled analysis of demographic and health surveys. *BMJ Open*, 11(6), e045952. <https://doi.org/10.1136/bmjopen-2020-045952>

- Kavas, S. (2019). The gendered division of housework and fertility intention in Turkey. *Genus*, 75, 21. <https://doi.org/10.1186/s41118-019-0068-8>
- Kim, J., & Sung, J. (2013). Socioeconomic status and number of children among Korean women: The Healthy Twin Study. *Journal of Preventive Medicine and Public Health*, 46(1), 50–60. <https://doi.org/10.3961/jpmph.2013.46.1.50>
- Kreyenfeld, M. (2005). *Economic uncertainty and fertility postponement: Evidence from German panel data* (MPIDR Working Paper No. WP 2005-034). Max Planck Institute for Demographic Research. <https://doi.org/10.4054/MPIDR-WP-2005-034>
- Kreyenfeld, M., Andersson, G., & Pailhé, A. (2012). Economic uncertainty and family dynamics in Europe: Introduction. *Demographic Research*, 27, 835–852. <https://doi.org/10.4054/Dem-Res.2012.27.28>
- Matera, C., Dommermuth, L., Bacci, S., Bertaccini, B., Minello, A., & Vignoli, D. (2023). Perceived economic uncertainty and fertility intentions in couples: A dyadic extension of the theory of planned behaviour. *Journal of Family and Economic Issues*, 44, 790–806. <https://doi.org/10.1007/s10834-022-09872-x>
- Okui, T. (2025). The difference between the actual and ideal number of children depending on socioeconomic status: An analysis of National Fertility Survey data in Japan. *Social Sciences*, 14(6), 330. <https://doi.org/10.3390/socsci14060330>
- Phiri, M., Lemba, M., Shasha, L., Sikaluzwe, M., & Simona, S. (2023). Perceived ideal number of children among adolescent girls in sub-Saharan Africa: Does exposure to family planning messages matter? *BMC Women's Health*, 23, 479. <https://doi.org/10.1186/s12905-023-02609-4>
- Schultz, T. P. (1976). Determinants of fertility: A microeconomic model of choice. In A. J. Coale (Ed.), *Economic factors in population growth* (pp. 89–135). Palgrave Macmillan.
- Selim, S., & Üçdoğruk, Ş. (2005). Türkiye'de doğurganlık: Kalite-miktar yaklaşımı. *Nüfusbilim Dergisi*, 27, 49–66.
- Turkish Statistical Institute. (2024). *Birth statistics, 2023*. Turkish Statistical Institute. <https://data.tuik.gov.tr/Bulten/Index?p=Birth-Statistics-2023-53708&dil=2>
- Turkish Statistical Institute. (2025). *Birth statistics, 2024*. Turkish Statistical Institute. <https://data.tuik.gov.tr/Bulten/Index?p=Birth-Statistics-2024-54196>
- United Nations, Department of Economic and Social Affairs, Population Division. (2024). *World population prospects 2024: Online edition*. United Nations. <https://population.un.org/wpp/>
- Upadhyay, U. D., & Karasek, D. (2012). Women's empowerment and ideal family size: An examination of DHS empowerment measures in Sub-Saharan Africa. *International Perspectives on Sexual and Reproductive Health*, 38(2), 78–89. <https://doi.org/10.1363/3807812>
- Üçdoğruk Birecikli, Ş., Kökcen Eryavuz, A., & Özdemir, M. O. (2021). Saymalı modeller ve Stata uygulamaları. In Ş. Üçdoğruk Birecikli & S. Şengül (Eds.), *Uygulamalarla mikroekonometri* (ss. 179–217). Nobel Akademik Yayıncılık.
- Vignoli, D., Guetto, R., Bazzani, G., Pirani, E., & Minello, A. (2020). A reflection on economic uncertainty and fertility in Europe: The Narrative Framework. *Genus*, 76, 28. <https://doi.org/10.1186/s41118-020-00094-3>
- Winkelmann, R. (2008). *Econometric analysis of count data* (5th ed.). Springer-Verlag.
- Yaya, O. S., Osanyintupin, O. D., & Akintande, O. J. (2018). Determinants of desired and actual number of children and the risk of having more than two children in Ghana and Nigeria. *African Journal of Applied Statistics*, 5(2), 403–418. <https://doi.org/10.16929/ajas/403.222>
- Zhang, J. (1990). Socioeconomic determinants of fertility in China: A microeconomic analysis. *Journal of Population Economics*, 3(2), 105–123. <https://doi.org/10.1007/BF00187287>