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Gender Inequality in Unpaid Domestic Housework and Childcare Activities and its Consequences on Childbearing Decisions: Evidence from Iran[1]

By Mahmoud Ghazi Tabatabaei[2] and Nader Mehri[3]

Abstract

The present study addressed gender inequality in unpaid domestic housework and childcare activities and its presumed impact on childbearing decisions in Iran. We used the second Iran's Time Use Study (2014-2015), representing the urban population to investigate how the number of small children (aged seven and lower) affected the time devoted to unpaid domestic housework as well as childcare activities of urban employed couples in Iran.

The univariate analysis provided sufficient evidence of increasing workload with the number of small children for employed women, while men's workload remained almost unchanged across all parities. The results indicated that an increase in the number of small children significantly increased the workload of urban employed women, while men's meager participation in such chores suggested the existence of a significant gender gap in these activities. For example, urban employed men with no small children spent 8 hours and 43 minutes while those with one or two small children spent 8 hours and 40 minutes on paid and unpaid domestic work. In comparison, employed women with no small children spent 9 hours and 7 minutes, while those with one small child spent 9 hours and 20 minutes, and those with two small children spent 9 hours and 45 minutes on mentioned activities. Thus, the gender inequality in allocated time to paid and unpaid work peaked at 1 hour and 5 minutes in families with two and more small children. Based on the data presented, it can be concluded that along with an increasing amount of unpaid work a less gender egalitarian division of labor exists. Gender inequality in unpaid domestic work among employed couples might lead to continued low fertility and an even further reduction of it in the future in Iran.

Keywords: Fertility, Gender Inequality, Unpaid Work, Secondary Data Analysis, Time-Use Survey of Iran

Introduction and Backgrounds

In explaining employed women's fertility behavior, Weller (1969) emphasized the sociological concept of role conflict. He argued that in mixing paid work with unpaid domestic housework and childcare activities, employed women are faced with a continuous role conflict. In fact, their paid work participation is only considered legitimate if they can appropriately manage

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their unpaid housework and childcare activities. They are expected to integrate the role of working women with that of mothers and homemakers. In other words, in response to the expectations of their roles as paid employees and as good mothers/kind wives, women are faced with role conflict especially in countries like Iran in which women are principally considered responsible for unpaid work, regardless of their employment status. As a result, employed women expect a high workload in unpaid work if they want to have more children, which can dissuade them from subsequent childbearing.

Although the concept of role conflict seems convincing in explaining employed women's fertility behavior, the empirical findings do not always support the inverse relationship between fertility and women's employment status. Citing studies in Peru, Turkey, India, and Mexico, Weller (1969) asserted that a statistically insignificant association was found between women's employment status and their fertility behavior in these countries. More recent studies not only did not find a consistent inverse statistical relationship between fertility and labor force participation, but some studies also found that countries with the lowest fertility levels also have the lowest women's participation in paid work (Matysiak and Vignoli 2006, Matysiak and Mynarska 2009, Mishra, Nielsen and Smyth 2009). Likewise, Matysiak and Vignoli (2006) believed that the empirical findings on the relationship between women's employment status and fertility behavior, especially at the micro level, are so inconsistent that Meta-Analysis techniques are needed to decide on the direction and effect size of such a relationship.

Part of these inconsistencies might be due to the neglect of gender inequality in unpaid work and its consequences on childbearing decisions. Unpaid domestic housework and childcare activities are demanding activities, which potentially could affect childbearing decisions, especially among employed women. Wright (2007) demonstrated that subsequent childbearing significantly increases the amount of Australian mothers' unpaid domestic work. She also found that fathers' insignificant contributions to such activities considerably increases mothers' time cost, which in turn might lead to the decision to not have more children. Similarly, Komatsu (2011) indicated that the dissatisfaction of Japanese wives with their husbands' participation in unpaid domestic work and childcare services was an important factor in not having children. He further pointed out that gender inequality in unpaid work played a significant role in persistent low fertility rates in Japan. Likewise, Baizan (2009) found a positive relationship between formal childcare availability and fertility in the regions in which most women were working for pay. He also found that such relationships further intensify if other social institutions and arrangements were more in tune with gender equity issues. Other studies such as Cooke (2003) in Italy as well as Olah (2003) in Hungary and Sweden also reported a positive relationship between men's active participation in domestic housework and childcare activities and the birth of the second child (Cooke 2003 and Olah 2003 cited in Gigi 2007). In summary, it can be concluded that to explain employed women's fertility behavior, their paid work, unpaid domestic housework and childcare activities along with their partners' contributions to these activities must be taken into account. Otherwise, the result will be incomplete and fragmented.

The study of the relationship between paid and unpaid work and childbearing decisions is of crucial importance in Iran. On the one hand, employed women's Total Fertility Rate (TFR) in the country is low, and on the other hand, females' participation in paid work has significantly grown over the last few years. For instance, employed women's TFR was 1.1 between 2006 and 2010 while it was 2.2 among non-employed women at the same time (Eini-Zinab, Soltani, Shams-Gahfarokhi, Shiri, Eslami, and Motlagh, 2014). Regarding females' participation in paid work, Salehi Esfahani and Shajari (2010) pointed out that the labor force participation rate was 9.5

percent among the urban female population aged 20 years or over in 1956. The figure increased by 5.7 percentage points, reaching 15.2 percent in 2006[4] (Salehi Esfahani and Shajari, 2010).

Studies on employed women's fertility behavior in Iran have often ignored the gender inequality in unpaid work. Considering only females' paid work and ignoring the gender inequality in unpaid domestic work would not thoroughly explain employed women's fertility behavior. Unlike previous studies, the present study considered gender inequality in unpaid domestic work such as housework and childcare to study how gender inequality in these activities might potentially affect childbearing decisions. More specifically, our study aimed to explore the relationship between the number of small children (aged seven and lower) with unpaid domestic housework and childcare activities among urban employed couples in Iran. At present, due to the lack of national data in Iran, it is impossible to look directly at the relationship between gender inequality in time use and its effect on childbearing decisions. Instead, using Iran's Time Use Survey we can address gender inequality in time use and its presumed impact on fertility. The present study investigates gender inequality in unpaid domestic housework and childcare activities and its presumed impact on childbearing decisions in Iran. We used the Time-Use Survey of Iran (TUSI) that was conducted in 2014 (autumn and winter) and 2015 (spring and summer) in urban areas.

Data and Method

1. Data Description

We used the second Time-Use Survey of Iran (TUSI) representing the urban population. The survey was conducted in the autumn and winter of 2014, spring and summer of 2015. In each season, it covered a sample of between 9,786 and 8,248 people above the age of 15 in 16,912 urban households (i.e., 36,396 individuals). The surveyed people recorded their activities in a day mostly between the 10th and 16th of the last month of each season in 15-minutes intervals within a 24-hour span. The present study was concerned with 2,160 individuals (1,080 families) as employed couples. For these 1,080 couples, time devoted to paid work, unpaid domestic housework, and childcare activities, as well as other socio-demographic variables were extracted from the TUSI.

Paid Work, Unpaid Domestic Housework, and Child Care Activities in TUSI

The International Classification of Activities for Time-Use Statistics or ICATUS used several activities to categorize how a person spends time within a 24-hour span. The Statistical Center of Iran used ICATUS to classify activities in 15 broad and major categories. Among these categories, we were interested in the paid work, unpaid domestic housework, and childcare activities of urban employed couples. According to ICATUS (United Nations, 2012), the paid work fell under the first category, entitled, *SNA (System of National Account) work and related activities*. The examples of activities related to this category include "work for corporations/quasi corporations, non-profit institutions and government, work in household unincorporated enterprises engaged in primary production activities, looking for work/setting up business, and travel related to work" (UN, 2012: 31). The unpaid domestic housework was classified under the second category named, *unpaid domestic services for own final use within household*. Activities related to this category were "food management, cleaning and upkeep of dwelling and

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[4] It should be noted that the official surveys in Iran have a considerable undercounting of women's labor force participation (Moghadam, 2009). Thus, we expect a higher rate of women's labor force participation in Iran.

surroundings, do-it-yourself decoration, maintenance and small repairs, care of textiles and footwear, household management, pet care, shopping, travel and other activities related to unpaid domestic services for own final use within household" (United Nations, 2012: 33). Eventually, childcare activities fell under the third category called "unpaid caregiving services to household members", including activities such as "caring for children/physical care, teaching, training children, reading, playing and talking to children, accompanying children to places, minding children (passive care) and other activities related to childcare" (UN, 2012: 33).

Weighting and Analytic Strategy
  The data collected in the Time-Use Survey of Iran like most social and health surveys was not a simple random sample but instead consisted of respondents from a complex survey design. In this paper, in order to make valid estimates of any statistical parameters, sample design, and the respondent sample weight were taken into account. We took into account sampling weight in all descriptive, univariate and multivariate analyses. The descriptive and analytical results were reported separately for males and females, and the differences between them were discussed.
  As discussed earlier, in the present paper the dependent variables were time devoted to unpaid domestic housework and childcare activities. Using a univariate analysis, the daily mean of time devoted to these activities and paid work were compared between males/husbands and females/wives. Moreover, a multivariate analysis was used to explore the role of gendered division in the amount of unpaid domestic work and its possible implications for fertility behavior. In this regard, two Ordinary Least Square (OLS) regression models were developed for two subpopulations- husbands and wives- to investigate the effect of the number of small children (aged seven and lower) on the time devoted to unpaid domestic housework and childcare activities while various socio-demographic characteristics of urban employed couples were controlled.

2. Measures
Dependent Variables
  Two outcome variables were investigated separately for males and females: 1) mean daily minutes spent on unpaid domestic housework, and 2) mean daily minutes spent on unpaid childcare activities.

Independent Variables
  The major objective of the present study was to investigate the effect of the number of small children on daily minutes spent on unpaid domestic work and childcare activities. Since seven is the age at when school starts in Iran and children below seven years are regularly used in many TUS-studies, the present study defined small children as those below seven years of age. Hypothetically, we expected that the number of small children (aged seven and lower) be statistically correlated with the time devoted to unpaid domestic housework and childcare activities. In fact, since employed women were principally considered responsible for both unpaid domestic housework and childcare activities, it was expected that the greater number of small children employed couples have, the more time they spent on unpaid domestic housework and childcare activities. Moreover, we expected that the relationships between the mentioned variables were stronger among females.
  In addition to the number of small children, various socio-demographic and Time-Use predictors including time devoted to paid work, the number of children aged 8 to 15, the number of children aged 15 and over, component "appliances", access to the Internet inside of the homes,

age, and education levels, were also controlled in the regression models. The regression models were estimated separately for males and females.

Although most of the mentioned independent and dependent variables were directly extracted from Iran's Time-Use Study, one of the independent variables was created using the Principle Component Analysis (PCA). To prevent the multicollinearity issue, and to achieve a much more parsimonious model, access to home appliances such as vacuum, washer, dryer, dishwasher, microwave, and sewing machine were combined to create component appliances. After constructing the latent component, it was used as a new independent variable in the regression models.

Background Information of the Sample

Table 1 depicts the column percentage of respondents' socio-demographic characteristics separated by sex. It should be noted that the sample size in the 2014-2015 Iran's Time-Use Study represents the individuals who kept their diary for a one day and therefore, these two (i.e., individuals and diary days) match.

Results indicated that out of 1080 investigated couples, 56.11 percent had no small children, 37.96 percent had one, and 5.93 percent had two small children. In the case of the number of children 8 to 15 years old, results showed that 55.65 percent of the sample had no child, 36.30 percent had one child, and 8.06 percent had two or more children. Regarding adult children (over 15 years old), results showed that 63.24 percent had no adult child, 22.87 percent had one, and 13.89 had two or more adult children.

Around 40% of the respondents stated that they did not have access to the Internet inside of their homes. Regarding age, results showed that most of the males (around 40%) were between 40 and 49 years of age while most of the females (almost 42%) were 30 to 39 years old. Regarding education, approximately 28 percent of the males had up to a middle school education level, about 23 percent had a high school education, and the rest of them (48.80%) had attained at least some post-secondary education. In the case of females, the figures were 23.80%, 16.85%, and 59.35% respectively for up to middle school, high school, and college education levels.

Table 1. Socio-demographic Characteristics of the Sample by Sex (percentage)

Variables	Male	Female	Total
The number of small children (aged seven and lower)			
None	56.11	56.11	56.11
One	37.96	37.96	37.96
Two or more	5.93	5.93	5.93
The number of children 8 to 15years old			
None	55.65	55.65	55.65
One	36.30	36.30	36.30
Two or more	8.06	8.06	8.06
The number of children over 15 years old			
None	63.24	63.24	63.24
One	22.87	22.87	22.87
Two or more	13.89	13.89	13.89
Access to the Internet inside of the homes			
No	40.02	40.02	40.02
Yes	59.98	59.98	59.98
Age Groups			
Age 15 to 29	7.59	16.39	11.99
Age 30 to 39	34.81	41.85	38.33
Age 40 to 49	40.19	34.07	37.13
Age 50 to 59	14.54	6.76	10.65
Age over 60	2.87	0.93	1.90
Education Level			
Up to middle school	28.06	23.80	25.93
High school	23.15	16.85	20
College	48.80	59.35	54.07
Total	100% n=1080	100% n=1080	100% n=2160

Source: Our calculations based on The Time-Use Survey of Iran, 2014 and 2015.

Findings

Gender Inequalities in Allocated Time to Paid Work, Unpaid Domestic Work, and Childcare Activities by Sex and the Number of Small Children

Table 2 shows the mean daily hours and minutes spent on paid work, unpaid domestic housework, and childcare activities among urban employed couples separated by sex in Iran between 2014 and 2015. The negative figures indicate that women spent more time on the given activities than men.

Results showed that urban employed men with no small children spent 7 hours and 33 minutes on paid work. In comparison, their partners spent 5 hours and 17 minutes on such activities, which is 2 hours and 16 minutes less than men. In families with one small child, men's time devoted to paid work decreased by 18 minutes to 7 hours and 15 minutes. For women, it decreased by 54 minutes declining to 4 hours and 23 minutes. Men with two small children allocated 7 hours and 21 minutes, while their partners spent 3 hours and 11 minutes on paid work.

In total, men spent 7 hours and 26 minutes on paid work, while their partners spent 4 hours and 52 minutes. According to the Adjusted Wald test, all of the mentioned differences were statistically significant.

Results also indicated that urban employed men with no small children spent about an hour on unpaid domestic housework, which was 2 hours and 34 minutes less than their partners. In families with one small child, men's time devoted to mentioned activities remained approximately unchanged, while in the case of women, it increased by 16 minutes reaching 3 hours and 53 minutes. Thus, the gender inequality in time devoted to unpaid domestic housework increased to 2 hours and 50 minutes at this parity. In families with two small children, men's time devoted decreased by 10 minutes, while women's time devoted increased by 18 minutes reaching 3 hours and 19 minutes. In total and without considering the number of small children, urban employed men spent an hour and 2 minutes on unpaid domestic housework, while their partners spent 3 hours and 44 minutes that was 2 hours and 42 minutes more. All the mentioned gender-based differences were statistically significant. As a result, it can be concluded that the rise in the number of small children significantly increased women's unpaid domestic housework, while along with increasing the number of small children men's time devoted to such activities considerably decreased.

The results also indicated that the rise in the number of small children increased the amount of allocated time to childcare activities for both males and females. However, it should be noted that the increase for women was significantly higher than men across all parities. For instance, urban employed men without small children spent 6 minutes on childcare activities, while women spent 12 minutes. In families with one small child, men spent 22 minutes, while women allocated time increased to 1 hour and 4 minutes which was 41 minutes higher than their partners. In the families with two small children, men's time devoted increased by only 4 minutes reaching 26 minutes while in the case of women it increased by 1 hour and 19 minutes reaching 2 hours and 23 minutes. This created almost 2 hours of gender-based inequality in these activities. In total, men's time devoted to unpaid childcare activities were 12 minutes, while for women it was 36 minutes. The Adjusted Wald test confirmed that all the mentioned differences were statistically significant.

Table 2. Mean Daily Hours and Minutes Spent on Paid Work, Unpaid Domestic Housework, and Childcare Activities among Urban Employed Couples in Iran, 2014-2015 (weighted)

Variables	Male hrs:min	Female hrs:min	Difference hrs:min	Adjusted Wald test	p-value
Paid work					
No small children	7:33	5:17	2:16	115.81	<0.0000
One small child	7:15	4:23	2:51	139.06	<0.0001
Two small children	7:21	3:11	4:10	32.94	<0.0000
Total	7:26	4:52	2:34	241.62	<0.0000
Unpaid domestic housework					
No small children	1:03	3:37	-2:34	254.66	<0.0000
One small child	1:02	3:53	-2:50	274	< 0.0000
Two small children	0:52	4:11	-3:19	114.92	<0.0000
Total	1:02	3:44	-2:42	491.07	<0.0000
Childcare activities					
No small children	0:06	0:12	-0:05	9.82	<0.0018
One small child	0:22	1:04	-0:41	81.84	<0.0000
Two small children	0:26	2:23	-1:56	29.06	<0.0000
Total	0:12	0:36	-0:23	88.86	<0.0000
Total work (paid and unpaid)					
No small children	8:43	9:07	-0:23	6.73	<0.0097
One small child	8:40	9:20	-0:40	11.12	< 0.0009
Two small children	8:40	9:45	-1:05	7.40	<0.0067
Total	8:42	9:14	-0:31	19.56	<0.0000

Number of observations= 2160, Population size = 9,101,084, Design df =554.
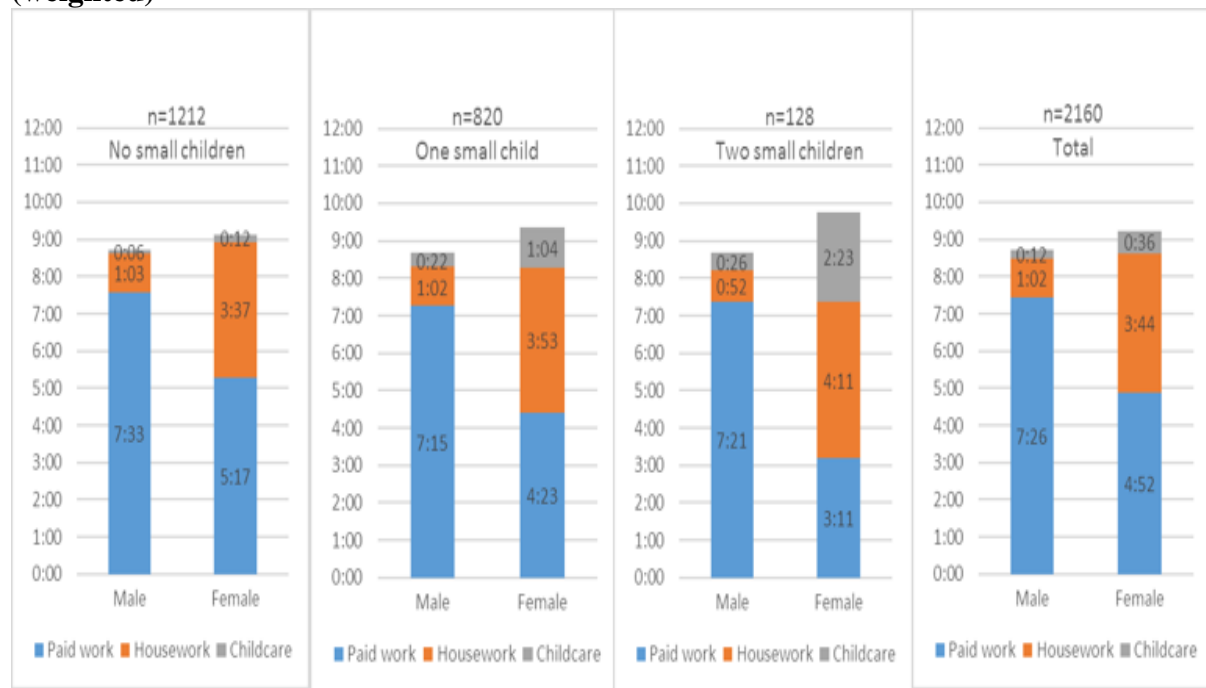Source: Our calculations based on The Time-Use Survey of Iran, 2014 and 2015.

As shown in graph 1, men with no small children spent 8 hours and 43 minutes on both paid and unpaid domestic work, while women spent 9 hours and 7 minutes that was 23 minutes higher. In the case of families with one small child, men spent 8 hours and 40 minutes on such activities that were 40 minutes less than women. In this parity, women spent 9 hours and 20 minutes on both paid and unpaid domestic work. In other words, employed women's workload increased by 13 minutes in families with one small child than families with no small children. In families with two small children, men's total workload remained unchanged, while in the case of women it increased by 25 minutes reaching 9 hours and 45 minutes. The gender inequality in allocated time to unpaid domestic work peaked at this parity reaching 1 hour and 5 minutes. The Adjusted Wald test provided statistical support for the mentioned differences.

In summary, the univariate analysis provided sufficient evidence of increasing workload with the number of small children for employed women relative to their employed partners. However, it should be noted that the rise in women's workload should be higher than what presented earlier in this paper. In fact, we think that employed women with small children probably relied more on informal and formal childcare services. Moreover, they were most likely forced to

do their unpaid domestic work faster to be able to manage their limited time resources. Thus, if the informal and formal childcare resources, as well as the pace of doing activities, were taken into account then the gender inequality in time use among employed couples might be even much higher.

Graph 1. Mean Daily Hours and Minutes Spent on Paid Work, Unpaid Domestic Housework, and Childcare Activities among Urban Employed Couples in Iran, 2014-2015 (weighted)

Source: Our calculations based on The Time-Use Survey of Iran, 2014 and 2015.

The Results of Multivariate Analyses of the Devoted Daily Minutes to Unpaid Domestic Housework and Childcare Activities

Table 3 depicts the results of weighted OLS regression models of urban employed couples' devoted daily minutes to unpaid domestic housework activities in Iran between 2014 and 2015. The R-Squared for the males' model and the females' model were 0.17 and 0.34, respectively. This indicates that predictors accounted for 17% and 34% of the outcome variable's variance. In addition, the F statistics were statistically significant that confirms both models fitted well.

Results also indicated that in the case of men, only the time devoted to paid work was statistically associated with the time devoted to unpaid domestic housework. The Unstandardized Regression Coefficient for this variable was -0.14 meaning that males who allocated more time to paid work spent less time on unpaid domestic housework. Regarding the women, two predictors including time devoted to paid work and those aged over 60 were statistically associated with time devoted to unpaid domestic housework. The Unstandardized Regression Coefficient for time devoted to paid work was -0.34 that was 20 units higher than males. The coefficient for those aged over 60 was around 97 indicating that urban married females aged 60 or over spent almost 97 minutes more on unpaid domestic housework relative to those aged 15 to 29 years.

Results also indicated that neither for males nor females, the number of small children are statistically associated with the time devoted to unpaid domestic work. This indicates that

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employed married couples were not forced to spend more time on unpaid domestic housework because they have more small children. It is of note that this finding must be interpreted in the light of limitations of time-use data. That is, time-use data only measures the time devoted to activities, as such typically the intensity of unpaid work is not measured in the time-use studies. We believe that employed women are expected to do paid and unpaid domestic work faster than usual to be able to manage their time resources. Besides, working for pay for women in Iran is a fertile ground for role conflict which in turn can increase adverse physical and psychological outcomes (e.g., stress, depression, anxiety) preventing them from having further children. Further studies are needed to examine the impact of the intensity of paid and unpaid work as well as role conflict on childbearing decision among employed couples.

Table 3. The Results of OLS Regression Models of Devoted Daily Minutes to Unpaid Domestic Housework Activities among Urban Employed Couples in Iran between 2014 and 2015 (weighted)

Dependent variable: *Time devoted to unpaid domestic housework activities*	Model 1 Males n=1080	Model 2 Females n=1080
Independent variables	B (95% CI)	B (95% CI)
Time devoted to paid work	-0.14(-0.17–-0.10) ‡	-0.34(-0.39–-0.30) ‡
No small children (reference group)	Omitted	Omitted
One small child	0.96(-12.44–14.37)	12.17(-7.75–32.11)
Two small children	-6.64(-33.30–20.01)	11.26(-23.98–46.50)
The number of children aged 8 to 15	1.93(-7.99–11.86)	12.38(-1.90–26.66)
The number of children aged 15 and over	2.58(-14.41–19.58)	11.91(-0.58–24.40)
Component "appliances"	4.79(-0.57–10.16)	0.18(-6.87–7.23)
Access to the Internet (1=yes)	8.66(-5.14–22.47)	-1.03(-24.77–22.69)
Age 15 to 29 (reference group)	Omitted	Omitted
Age 30 to 39	14.48(-10.45–39.43)	-3.12(-28.24–21.99)
Age 40 to 49	12.50(-16.20–41.21)	5.63(-21.58–32.85)
Age 50 to 59	16.14(-17.14–49.42)	13.41(-25.99–52.82)
Age over 60	-4.74(-48.25–38.75)	97.06(24.45–169.67) †
Up to middle school (reference group)	Omitted	Omitted
High school	-11.55(-28.40–5.29)	-26.14(-53.56–1.28)
College	-2.58(a-25.00–19.84)	-26.20(-52.59–0.18)
Intercept	109.60(77.74–141.46) ‡	327.55(294.43–360.66) ‡
	R-squared: 0.17 F(13,542): 6.35‡	R-squared: 0.34 F(13,542): 32.58‡

B – Unstandardized regression coefficients; CI – confidence intervals *p≤0.05, †p≤0.01, ‡p≤0.0001
Source: Our calculations based on The Time-Use Survey of Iran, 2014 and 2015.

The regression models shown in Table 4 narrate a different story. The outcome in these models was the time devoted to unpaid childcare activities. The R-squared coefficient shows the amount of the variance of dependent variable accounted for by the combination of the independent variables. We would thus say here that in the case of males, the regression model accounted for about 14% and for the females 30% of the dependent variable's variance. For both models, the F-statistics were statistically significant suggesting that both models were fitted well.

Regarding the men, some predictors listed in Table 4 including the time devoted to paid work, the number of small children, the number of children aged 15 and over, as well as education level were statistically associated with the time devoted to unpaid childcare activities. The coefficient for time devoted to paid work was -0.03 indicating that the more time urban married men spent on paid work, the less time they spent on childcare activities. In comparison, the coefficient for females was -0.05. The difference in the coefficient shows that paid work affected childcare time among women more than it did for men. In fact, women need to play with their time resources more than men to be able to manage both paid and unpaid work. Results also indicated that urban employed men with one small child spent around 15 minutes while those with two small children spent 19 minutes on childcare activities more than men without small children. In comparison, employed women with one small child spent about 47 minutes while those with two small children spent approximately 122 minutes on childcare activities more than women without small children.

The number of children aged 8 to 15 also significantly increased the time devoted to childcare activities for women; an increase in the number of children aged 8 to 15 increased the time devoted to childcare activity by around 12 minutes. In comparison, it did not influence the males allocated time to childcare activities. Results also showed that unlike children aged 8 to 15, the number of adult children (aged 15 and over) negatively affected the time devoted to childcare activities only for males. In fact, it was statistically significant only for males indicating that an increase in the number of adult children decreased the time devoted to childcare activities by around 4 minutes.

In a similar fashion to unpaid domestic housework, results showed that neither for males nor females the component "appliances" and access to the Internet inside of the home were statistically associated with the time devoted to childcare activities. This confirms that even though housekeepers now have access to many home appliances, the amount of the time spent on unpaid domestic work has not decreased. As Giddens and Griffiths (2006) indicated, "surprisingly, the average amount of time spent on domestic work by women has not declined very markedly, even since the introduction of labor-saving equipment such as vacuum cleaners, washing machines and dishwashers" (p. 742-743). This is not surprising from a feminist analytical perspective. Typically, these appliances are affordable with both partners working and with college-educated parents, whom, as we note below, take on more labor in other areas including childcare related tasks.

In the case of the variable age, results showed that employed couples in age groups listed in table 4 relative to the reference group (age 15 to 29) did not spend statistically different time on childcare activities. Regarding the education level, results indicated that males with a college education spent almost 14 minutes more on childcare activities relative to the reference group (up to the middle school), while for females the figure was around 19 minutes. Therefore, males and females with a college education were more likely to spend more time on childcare activities.

Table 4. The Results of OLS Regression Models of Devoted Daily Minutes to Childcare Activities among Urban Employed Couples in Iran between 2014 and 2015 (weighted)

Dependent variable: Time devoted to unpaid childcare activities	Model 1 Males n=1080	Model 2 Females n=1080
Independent variables	B (95% CI)	B (95% CI)
Time devoted to paid work	-0.03(-0.04–-0.02) ‡	-0.05(-0.07–-0.03) ‡
No small children (reference group)	Omitted	Omitted
One small child	14.80(9.57–20.07) ‡	47.01(37.36–56.66) ‡
Two small children	18.61(3.43–33.80) *	122.10(82.50–161.70) ‡
The number of children aged 8 to 15	4.26(-0.37–8.90)	12.32(5.31–19.33) †
The number of children aged 15 and over	-3.66(-6.48–-0.85) *	-2.58(-7.57–2.40)
Component "appliances"	-0.61(-2.51–1.27)	-0.74(-3.48–1.99)
Access to the Internet (1=yes)	-0.70(-6.71– 5.30)	-7.53(-17.72–2.65)
Age 15 to 29 (reference group)	Omitted	Omitted
Age 30 to 39	1.01(-6.00–8.03)	2.03(-10.98–15.04)
Age 40 to 49	2.02(-6.50–10.54)	-5.21(-21.23–10.80)
Age 50 to 59	6.49(-4.09–17.09)	8.15(-8.82–25.14)
Age over 60	5.44(-4.92–15.81)	-8.34(-22.29–5.50)
Up to middle school (reference group)	Omitted	Omitted
High school	4.06(-3.04–11.18)	5.36(-6.39–17.12)
College	9.05(3.62–14.48) ‡	15.94(5.49–26.38) †
Intercept	14.16(6.18–22.14) ‡	19.45(5.64–33.25) †
	R-squared: 0.14 F(13,542): 6.54‡	R-squared: 0.30 F(13,542): 19.58‡

B – Unstandardized regression coefficients; CI – confidence intervals *p≤0.05, †p≤0.01, ‡p≤0.0001
Source: Our calculations based on The Time-Use Survey of Iran, 2014 and 2015.

Discussion

The present paper linked gender inequality in unpaid domestic work including housework and childcare activities and their presumed impact on childbearing decisions. The study of the relationship between paid and unpaid work with childbearing decisions among Iranian employed couples is of crucial importance in Iran. On the one hand, employed women's total fertility rate is significantly low and, on the other hand, women's participation in paid work has significantly grown over the last few years in that country. We used the evidence of increasing workload with

the number of small children (aged seven and lower) to justify the assumption that employed women delay or reject childbearing because they anticipate the dual burden. The present study used the second Iran's Time-Use Survey Data (2014-2015), representing urban population to investigate how the number of small children affected the time devoted to unpaid domestic housework as well as childcare activities of urban employed couples in Iran. The univariate analysis provided sufficient evidence of increasing workload with the number of small children for employed women. The results indicated that an increase in the number of small children significantly increased the urban employed women's workload, while the men's meager participation in such chores suggested the existence of a significant gender gap in these activities. For example, urban employed men with no small children spent 8 hours and 43 minutes while those with one and two small children spent 8 hours and 40 minutes on paid and unpaid domestic work. In comparison, employed women with no small children spent 9 hours and 7 minutes, while those with one small child spent 9 hours and 20 minutes, and those with two small children spent 9 hours and 45 minutes on mentioned activities. Thus, the gender inequality in allocated time to paid and unpaid work reached 1 hour and 5 minutes in families with two small children. These findings are in line with findings for Australia (Wright, 2007), where women's unpaid housework and childcare activities increased along with the rise in the number of small children, while men's workload remained relatively unchanged across all parities. The multivariate analysis also showed that urban employed men with one small child spent around 15 minutes while those with two small children spent around 19 minutes on childcare activities more than men without small children. In comparison, employed women with one small child spent about 47 minutes while those with two small children spent approximately 122 minutes on childcare activities more than women without small children.

According to Bernardes (1997), "whilst there has been a great deal of talk about the 'new man' who shares housework and participates in the care of children, there is little evidence of such a dramatic shift in behaviors" (37). Likewise, the results of the present study did not provide evidence to support such a dramatic shift in behaviors among urban married males in Iran. Based on the data presented in this paper, employed women need to play with their time resources to be able to manage both paid and unpaid work. In other words, they should manage their time to deal with three jobs (paid work, unpaid domestic housework and childcare activities) at the same time. Otherwise, they would not be considered good enough to engage in the paid market. In fact, in response to the role expectations as a paid employee and the role expectations as a good mother, they are faced with role conflict. An increase in the number of small children along with men's meager participation in such activities exposes Iranian employed women to further role conflict, lost opportunity cost and further responsibilities in such a magnitude that they might decide not to add any further children to their family. In sum, gender inequality in time use in unpaid domestic work among employed couples might lead to continued low fertility and even further reduction of it in the future in Iran.

Conclusion

The TFR has significantly decreased in Iran over the last three decades. The United Nations Population Division (2009) described it as the largest percentage change in the world between 1975-1980 and 2005-2010. According to the United Nations Population Division (2015), Iran's TFR was 7 children per woman in 1950-1955. The figure decreased by one child, reaching 6 children per woman in 1970-1975. Then, it slightly increased to 6.53 children per woman in 1980-

1985. Since then it has sharply declined, dropping to 1.97 children in 2000-2005, which is below the replacement level fertility rate (TFR=2.1). In fact, the TFR decreased by 70 percent just within 20 years between 1980-1985 and 2000-2005. Recently, the country aimed to boost the birth rate through implementing rash and sometimes punitive pro-natalist policies such as banning vasectomies and cutting access to contraceptives. Based on the results of the present study, and the limited success of all pro-natalist policies even in most developed countries that are dealing with low fertility, we think that such policies should be directed towards an equity issue between men and women. That is, any policies towards fertility issues can only succeed if they acknowledge the rights of women as well as men to have a career, and to fulfill their needs and aspirations. Such policies must be able to address and enable the family as an institution that promotes and recognizes its constituting parts as individuals with equal rights, capable of making conscious and joint decision to have any number of children while equally bearing the ensuing, consequences and responsibilities of such decision. Iran might encourage family friendly and long-term policies such as alleviating the time cost of childbearing and child caring for employed women through increasing the maternity leave and paternity leave by providing full time and affordable formal child care centers. In a similar fashion, it is critical to reduce the gender gap in unpaid work through encouraging men to engage actively in unpaid domestic work, and pointing out the fact that a thriving family is a family with shared aspirations, shared responsibilities and just rights, for men and women, in all aspects of it. This includes child bearing, child rearing, having careers, and paid and unpaid domestic work.

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Appendix
ICATUS detailed classification of unpaid services within the household
'1 SNA work and related activities
11 Work for corporations/quasi corporations, non-profit institutions and government
12 Work in household unincorporated enterprises engaged in primary production activities
13 Work in household unincorporated enterprises engaged in non-primary production activities excluding construction activities
14 Work in household unincorporated enterprises engaged in construction activities
15 Work for household providing services for income
17 Looking for work/setting up business
18 Travel related to work
1x Other activities related to work not elsewhere classified (n.e.c)
2 Unpaid domestic services for own final use within household
21 Food management
22 Cleaning and upkeep of dwelling and surroundings
23 Do-it-yourself decoration, maintenance and small repairs
24 Care of textiles and footwear
25 Household management
26 Pet care
27 Shopping
28 Travel related to unpaid domestic services for own final use within household
2x Other activities related to unpaid domestic services for own final use within household (n.e.c)
3 Unpaid caregiving services to household members
31 Childcare
32 Care to dependent[5] adults
33 Help to non-dependent adults
38 Travel related to unpaid caregiving services to household members
3x Other activities related to unpaid caregiving services to household members (n.e.c)
Source: United Nations, Department of Economic and Social Affairs (2012), p. 28.

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[5] For people who suffer any physical or mental illness or any disability or impairment.