The Relationship of Gender Role Attitude and Division of Household labor with Couples' Perceived justice

Shahla Nourani (MSc)¹, Fatemeh Seraj Shirvan (MSc)²*, Mohammad Taghi Shakeri (PhD)³, Naghmeh Mokhber (MD)⁴

¹ Lecturer, Department of Midwifery, School of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran
² Graduate from Master of Midwifery, Department of Midwifery, School of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran
³ Professor, Department of Epidemiology and Biostatistics, Faculty of Health, Mashhad University of medical sciences, Mashhad, Iran
⁴ Professor, Psychiatric Research Centre, Mashhad University of Medical Sciences, Mashhad, Iran

ABSTRACT

Background & aim: Given the advancements in science, technology, and cultural globalization, Iranian families has changed in several aspects affecting individual’s perception of justice in division of household labor. Therefore, we sought to evaluate the correlation of gender role attitude and household labor division with perceived justice in couples.

Methods: The present correlational study was conducted in 180 couples visiting healthcare centers of Mashhad, Iran, in 2014. The participants were selected through the three-stage cluster sampling method. Data collection tools included questionnaires of gender role attitude, participation in household labor, and perceived justice. Spearman rho and Pearson correlation coefficient were run in SPSS, version 16.

Results: A significant correlation was seen between women’s gender role attitude with their involvement in household labor and perceived justice (P=0.04, P=0.03, respectively). But there was no correlation between their involvement in household labor and perceived justice (P=0.83). There was no correlation between men’s gender role attitude and their involvement in household labor (P=0.61), whereas their gender role attitude was correlated with perception of justice (P=0.01, r=−0.13). There was also a direct correlation between male involvement in household labor and perceived justice (P=0.00, r=0.19).

Conclusion: Most employed women despite having modern gender role attitudes, had still more involvement in household labor. Almost half of men who had traditional gender role attitudes, reported appropriate involvement in household labor. Men with more involvement in household labor had a higher perception of justice.

Introduction

Division of household labor over the past four decades has been a major issue for researchers. There are various reports on the different methods of labor division among people, their main mechanisms, and the effect of the strategy of determining the specifics of household labor on the quality of couples’ relationships (1). Sociologists are highly concerned about the significance and effects of labor division on people’s lives. Household labor division can play a pivotal role in creating or undermining marital satisfaction (2).

Industrialization and women’s movements have played the most significant role in defining the division of labor, which specifically demands the public domain from men (economic and legal affairs, etc.) and household domain from women (housekeeping management) (3). In addition, economic advancements and women’s freedom help to detect and challenge inequality...
and gender discrimination in household labor. Labor division seems to have become an important issue when women came into the workforce with a second shift, the first shift in the workplace and the second shift in demand at home (4). Undoubtedly, the meaning of special household labor is not negative, but when it comes to women's double workload difficulties due to the low position of women in comparison with men, because men often have more choices due to higher economic power (5).

Three theoretical views have been suggested to explain the imbalance in gender distribution of household labor as follows: 1-time available: those who are not hired outside home and have more time at home are expected to contribute more to household labor; 2. exchange of resources: the labor division between husband and wife indicates the difference between their power, the spouse who has the most resources does less household labor. In fact, resources are relative and often include conditions, education, income, and occupational status; and 3. role of gender ideology: in this view, labor division is correlated with gender role attitudes, such that men and women with egalitarian attitudes compared to the traditional attitude are expected to be fairer in sharing household labor and men are expected to be more involved (6). Today, events and developments in different fields (cultural globalization) have a profound impact on various aspects of life. Life style and ideology have changed and shifted thoughts and attitudes toward gender roles, women's employment, and how to divide household labor (7).

Undoubtedly, handling work and family at the same time, especially for employed women who have to adapt their jobs to family responsibilities, results in heavy psychological and social consequences. This can lead to family and job conflicts, depression, reduced job and family satisfaction, and ultimately, increased risk for couples' well-being, poor performance in parental and marital affairs, tiredness, poor mental health, and deteriorated marriage compatibility. Employed women, in particular, tolerate more labor pressures that can lead to burnout and perceived injustice in the long run (8).

On the other hand, the source of many conflicts between couples is family labor division. In various studies, the issue remains that the pressure of household labor, which is actually unpaid, should not be neglected. Indeed, women's participation in the labor market is not a major element in the equality of men and women, but the participation of men in household labor and child care is also a key issue (9). Various studies have been carried out on household labor division, perceived justice, and its relation with marital satisfaction, conflict in couples, and divorce (10, 11). Frisco et al. (2004) concluded that 96.6% of women, who categorized household labor as unfair, do most or all household labor. Moreover, 42.9% of men who report that they are participating in more than their fair share in household labor take the responsibility of almost half the household labor. Further, 62.5% of women who consider household labor to be fair to themselves are doing most or all of the tasks. On the contrary, men who consider the household labor to be fair to themselves are doing less than half of the tasks or do not participate at all. Only about one-third of men and women who think labor division is fair halve household labor (12).

The evaluation of women regarding the "quality of marital relationship" is dependent on the characteristics of the relationship (e.g., mutual respect, commitment, mutual action, and support that are all effective in the perception of one's justice), and assessments based on the objective behavior of the opposite side (e.g., share in the household labor division) are not likely to be effective. Therefore, it may be said that household labor division alone cannot affect the quality of relationships; but if this unfair relationship is perceived, it will result in marital dissatisfaction and conflict between couples (13). In general, studies on the household labor division indicate that fair estimation of household labor division by women has a positive correlation with marital satisfaction and a negative correlation with marital conflicts (2-5, 14).

However, workload causes couples to reduce their time together, and they have inadequate time and energy to solve conflicts; on the other hand, fatigue and weakness increase vulnerability and unpredictability of mood...
sings as an effective factor in marital relationship (15). Ghobadi et al. (2011) investigated the factors affecting household labor division, perceived justice, and marital satisfaction among couples in Kamyaran County (Iran) in 162 employed women and 150 housewives. The results showed a very weak correlation between household labor and marital satisfaction, but there was a stronger correlation between perceived justice of household labor and marital satisfaction (P<0.001). The pattern obtained from the regression analysis indicated that 16.9% of the total changes in marital satisfaction could be explained by perceived justice of household labor and women’s education, and 5.5% of the total variation correlated with household labor division could be explained by women’s working hours and husband’s educational level (14).

Rezvani et al. (2015) examined the factors affecting the family labor division in married women employed in education systems of Mashhad, Iran, and the results showed that the variables of power structure, number of children, responsive income, and social capital explain 21.5% of the household labor division pattern (16).

Given the rise in young population and women’s employment, women’s labor force is rising in Iran (17). Studies on household labor division are usually carried out only on women. Considering the importance of family status, it is better to examine both men and women for the accurate examination of household labor division, perceived justice, and gender beliefs of both couples. Therefore, we aimed to determine the correlation between gender role attitude and family labor division with perceived justice in couples visiting health centers in Mashhad, Iran.

Materials and Methods

The present correlational study was conducted on 180 couples visiting Mashhad health centers in 2014. Regarding the importance of women’s employment rate, the research units were sampled in two groups, 90 housewives and 90 employed women. The sampling method consisted of three steps. In the first stage, the five health centers of Mashhad were considered as clusters. In the second stage, the health sub-centers covered by each of the five health centers were randomly selected using random number table. In the third stage, the selection of the research units was made by the convenience sampling method.

At first, the health sub-centers covered by each of the health centers of 1, 2, 3, 5, and Samen were listed, then the population covered by each category of healthcare centers was determined and its percentage was calculated for the whole population covered by the healthcare centers. Next, the share of each category in the health centers was calculated in the total sample size of the present study. After that, according to the sample size in each of the categories of health centers, the required number of health sub-centers as clusters was calculated using the random number table. Finally, the number of couples required from each of the health sub-centers was determined (a total of 14 health sub-centers).

The population covered by the health centers of 1, 2, 3, 5, and Samen respectively constituted 28%, 16%, 33% 20%, and 3% of the total population of Mashhad, followed by calculating the share of each center as 4, 2, 4, 3, and 1 health sub-centers, respectively (a total of 14 health sub-centers).

First, a pilot study was conducted to determine the sample size. Given the analysis of the findings, the final sample size was determined according to the correlation formula.

\[ N = \frac{z^2 - 0.5}{\frac{1}{c} + \frac{1}{r} - \beta} + 3 \]

\[ C = 0.5 \ln (1 + r / 1 - r) \]

\[ \alpha = 0.05, \beta = 0.2, r = 0.7 \]

The inclusion criteria were literacy, living with the spouse at present, no history of mental disorders or incurable physical illnesses in couples, no history of drug, psychedelic, or alcohol abuse, and completion of an informed consent form. The exclusion criteria were refusal to continue the completion of the questionnaires by the wife or husband and incomplete questionnaire by a maximum of 5% by the husband or wife.
In order to prevent sample attrition, the questionnaires were examined immediately after completion and, if incomplete, the sampling process was continued. The research tools included a demographic information form, a researcher-made questionnaire of household labor division, a researcher-made questionnaire of perceived justice from household labor division, and a researcher-made questionnaire of gender attitude towards the household labor division.

The researcher-made questionnaire of household labor division: the questionnaire contains 15 items, and the participation rate of the individual in household labor was rated using a five-point Likert scale ranging from 1 (never) to 5 (always). Finally, the total scores were obtained.

The researcher-made questionnaire of perceived justice from household labor division: the questionnaire includes 15 questions, and the level of perceived justice from the household labor division was scored based on a five-point Likert scale ranging from 1 (at all) to 5 (very high). Finally, the total scores were obtained.

The researcher-made questionnaire of gender attitude towards household labor division: the questionnaire contains 15 questions. The individual participation rate in household labor is assigned a score of 1-2 by choosing one of the options (women's task, men's task, and shared task). Finally, the total scores were obtained. The purpose of this questionnaire was to measure the egalitarian (modern and egalitarian) or traditional beliefs about male and female roles. The score 1 was assigned to each of the women's or men's task option and the score 2 was awarded to the choice of the shared task.

The questionnaires were designed using the latest articles and tools by the researcher (13, 14, 18-22). After translating these tools, according to the culture of the Iranian society, necessary reforms were made and the suitable choices were selected in line with the objectives of this research under the supervision of the supervisors and advisers.

The content validity of the questionnaires was studied by 10 faculty members of midwifery and three faculty members of sociology and then examined and corrected. The reliability coefficient was calculated by the internal consistency of Cronbach's alpha method. The alpha coefficients were 0.81, 0.83, and 0.81, respectively, for the questionnaires of household labor division, perceived justice from household labor division, and gender attitude toward household division.

The researcher referred to the selected health centers after obtaining the approval of ethics committee and Faculty of Nursing and Midwifery of the university for sampling the couples. The couples were requested to complete the questionnaire independently and separately, if the couples were willing to participate in the study, after providing the necessary explanations about the research objectives, ensuring the confidentiality of the data, and being free to leave the study in each time. The sampling process lasted four months.

The collected data were encoded and analyzed by SPSS, version 16. Normal distribution of quantitative variables was checked by the Kolmogorov-Smirnov test; the normal data were tested by parametric statistics and non-normal data by the nonparametric equivalents. Demographic data and personal characteristics were described by mean, standard deviation, and frequency distribution table (relative and absolute).

Pearson and Spearman tests were used to determine the correlation between the variables. The confidence coefficient was 95%, and the significance level was set at \( \alpha = 0.05 \) in all the tests. Moreover, age, educational level, socioeconomic class, and income level of the couples were studied as demographic variables.

Results

In the present study, 180 couples were eventually analyzed. The mean age of men was 32.52±5.52 years and the mean age of women was 28.97±5.19 years. Moreover, 50% were housewives and 50% were employed. The educational level of couples is listed in Table 1.

The frequency distribution of socioeconomic class has been reported in men and women, which was significantly different according to the Mann-Whitney test (\( P<0.001 \)), such that the social class of women was higher (Table 2).
According to the Chi-square test, the results reflected significant differences between housewives and employed women regarding household labor division (P<0.001), such that 2.52% of housewives had traditional attitudes, 8.47% had modern attitudes, 6.25% of the employed women had traditional attitudes, and 4.74% of them had modern attitudes.

According to the Chi-square test, the rate of participation in household labor was not significantly different in both household and employed groups (P=0.17). According to the Chi-square test, the perceived justice was different in housewives and employed women (P<0.001), such that 52.2% of the housewives had a high level of justice and the rest (47.7%) had an average level of perceived justice. However, 5.6% of the employed women had a low perception of justice, 66.7% had average perception of justice, and 27.8% had high perception of justice in participation in household labor.

Based on Spearman’s correlation test, the female participation rate in the household labor division was not significantly correlated with perceived justice (P=0.83; Table 3), but the attitude of women with their participation rate in the household labor division was statistically significant (P=0.04, r=0.14). The attitude of women with perceived justice was statistically significant (P=0.03, r=-0.16; Table 4), meaning that women with a modern attitude had a high participation rate, but perceived less justice.

Findings showed that 57.2% of men had traditional attitudes toward household labor division. The reports of men on their participation rate in the household labor were as follows: low (3.9%), average (50%), and high (46.1%). The perceived justice of men from the household division of labor was low, average, and high in 2.8%, 38.3%, and 58.9% of the participants, respectively.

According to the Spearman correlation test, there was no significant correlation between male participation in household labor and their attitude (P=0.61), and there was a strong correlation between male participation rate and perceived justice (P=0.00, r=0.19), such that men perceived greater justice by increasing participation rate (Table 3).

The attitude of men toward household labor was significantly correlated with perceived justice (P=0.01, r=-0.13; Table 4).

According to the Chi-square test, women’s educational level had no significant correlation

---

**Table 1. Educational level of the studied males and females**

<table>
<thead>
<tr>
<th>Educational level</th>
<th>Females Frequency</th>
<th>Females Percentage</th>
<th>Males Frequency</th>
<th>Males Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary school</td>
<td>8</td>
<td>4.4</td>
<td>10</td>
<td>5.6</td>
</tr>
<tr>
<td>Secondary school</td>
<td>6</td>
<td>3.3</td>
<td>14</td>
<td>7.8</td>
</tr>
<tr>
<td>High school</td>
<td>46</td>
<td>25.6</td>
<td>53</td>
<td>29.4</td>
</tr>
<tr>
<td>Academics</td>
<td>120</td>
<td>66.7</td>
<td>103</td>
<td>57.2</td>
</tr>
<tr>
<td>Total</td>
<td>180</td>
<td>100</td>
<td>180</td>
<td>100</td>
</tr>
</tbody>
</table>

**Table 2. Frequency distribution of socioeconomic class in the studied women and men**

<table>
<thead>
<tr>
<th>Socioeconomic class</th>
<th>Females Frequency</th>
<th>Females Percentage</th>
<th>Males Frequency</th>
<th>Males Percentage</th>
<th>Mann-Whitney Test: P&lt;0.001</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7</td>
<td>3.9</td>
<td>4</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>6</td>
<td>3.3</td>
<td>33</td>
<td>18.3</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>45</td>
<td>25</td>
<td>62</td>
<td>34.4</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>119</td>
<td>66.1</td>
<td>71</td>
<td>39.4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>1.7</td>
<td>10</td>
<td>5.6</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>180</td>
<td>100</td>
<td>180</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

The significance level is was set at 0.05.

**Table 3. Correlation of participation in household labor with perceived justice and gender attitude**

<table>
<thead>
<tr>
<th>Type of test</th>
<th>Perceived justice</th>
<th>Gender attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Correlation coefficient</td>
<td>P-value</td>
</tr>
<tr>
<td>Men's participation in</td>
<td>Spearman</td>
<td>R=0.19</td>
</tr>
</tbody>
</table>
with participation rate in household labor division and perceived justice (P=0.63, P=0.39, respectively), but had a direct correlation with attitude (P=0.00), such that modern attitude can be achieved with increasing educational level. According to the Spearman correlation test, the age of women was not associated with any of the variables of participation in the household labor division, type of attitude, or perceived justice (P>0.05).

According to Spearman correlation test, women’s working hours were inversely correlated with the participation rate in household labor (P=0.035, r=-0.22), that is, the participation rate in the household labor was reduced by increasing the woman’s working hours. Women’s working hours was not significantly correlated with attitude and perceived justice (P=0.92, P=0.24, respectively). Women’s income had no significant correlation with household labor division, attitude, or perceived justice (P>0.05).

The age of men had a significant negative correlation with household labor division (P=0.03, r=-0.16), meaning that older men had lower participation rate. Similarly, age had a direct correlation with attitude (P=0.03, r=0.15), thus, older men had often egalitarian attitudes (modern). In addition, age had a significant negative inverse correlation with perceived justice (P=0.044, r=-0.15), such that older men realized less justice regarding participation in household labor.

Men’s educational level had no significant correlation with attitude (P=0.81), but it had a direct correlation with participation in household labor (P=0.04, r=0.30), meaning that men with higher educational level had further participation in household labor. In addition, men’s educational level was directly correlated with perceived justice (r=0.15, P=0.03), that is to say men with higher educational level reported higher participation in household labor and realized more justice.

Men’s income had no significant correlation with attitude, perceived justice, and household labor division (P>0.05). Men’s working hours also had no significant correlation with attitude, perceived justice, and household labor division (P=0.52, P=0.09, P=0.64, respectively).

**Discussion**

The purpose of this study was to compare gender role attitude and household labor division with perceived justice in couples visiting health care centers. According to the findings, women showed no significant correlation between perceived justice and participation in household labor division, type of attitude, or beliefs and the participation rate in household labor. The attitude of women had a significant negative correlation with perceived justice, that is, women with a modern attitude had more participation in household labor and even participated in some of the duties traditionally given to men. Therefore, because of their modern attitude, they expected their spouses to have high participation in tasks, but failing to meet this expectation would probably lead to understanding less justice in such women.

In women with a traditional attitude, since men and women’s responsibilities in household labor are clearly separated, they have less collaboration and only perform their own specific tasks, thus, they understand more justice. Due to the inaccessibility of a study completely the same as the present one, similar studies have been used. The findings of this
study are opposed to those obtained by Ghobadi et al. (2011) in that the type of gender beliefs in their study was not statistically significant with the participation rate in household labor. In their study, the rate of participation in household labor division was not significantly correlated with marital satisfaction, but they pointed out the importance of perceived justice in household labor division. According to the results of their research, perceived justice in household labor division was significantly correlated with marital satisfaction (14). The reason for this finding in the present study is probably that having a warm and intimate relationship with the spouse and maintaining family at the center of attention are more important than anything for some women; even if they are dissatisfied with the division of family duties, they will not pressure their husbands to participate in household labor due to fear of family crisis.

On the other hand, women who are respected and appreciated by the spouse, even when they are more involved in household labor, they understand more justice. In women who are less valued and respected by their spouse, the perception of justice is often justified by the traditional attitude that they have accepted to carry out traditional women's duties (23). In recent decades, gender structure theories have been developed that have more interactive attitudes in comparison with the above-mentioned theories. Based on these theories, women and men perform different tasks at home to show their gender role and confirm it again. The gender construct approach has been useful in relation to some of the limitations of previous approaches (24).

After examining various factors, the age of men was an important factor in attitude, participation rate, and perceived justice in the household labor division, while in contrast, the age of women showed no significant correlation with attitude, household labor division, or perceived justice. This finding contrasts with the study of Rezvani et al. (2015) because in their study on 400 women employed in education in Mashhad, Iran, male participation rate increased with advancing age in men and women (16). In the study of Khaje Noori (2006) on 1,223 married women, the age of woman was significantly correlated with the spouse's participation rate (7).

Men's educational level was another important factor that played an important role in the labor division and perceived justice, but it did not correlate with attitude. Conversely, women's educational level had a direct correlation with attitude and had no significant correlation with labor division and perceived justice. These findings were inconsistent with the outcomes of Rezvani et al. (2015) because men and women's educational level did not affect the participation rate (16).

Men's working hours and income had no correlation with attitude, labor division, and perceived justice, while in women there was a significant inverse correlation between working hours and labor division, meaning the rate of participation in household labor was decreased with increasing women's working hours. This finding is consistent with those of Ghobadi et al. (2011). In this study, men's educational level was correlated with labor division. This finding was inconsistent with those of Rezvani (2015) and Khaje nouri (2006) because they reported that increase in women's income and social capital, which resulted from social communication and class, led to an increase in male participation, but it was consistent with the results of Zipp et al. (2006) as they showed that women, even if they earned more than their husbands, agreed with their husbands (25). Therefore, women regardless of educational and income levels were still responsible for the majority of household labor.

The above-mentioned findings are consistent with the results of Coverman (1985), Kamo (1988), and Ghobadi (2011) (14, 26, 27), but inconsistent with those of Blair and Lickter (1991), Tompson and Walker (1989), and Kiger and Riley (1996), which showed that there is a correlation between relative sources of couples (income and education) and their participation in household labor (26-30). One of the strengths of this study is to evaluate the attitudes of both male and female genders because the interaction between the two determines how to divide labor. Among women, 47.8% of housewives and 74.4% of employed women had modern attitudes, but there was no correlation between attitude and labor division. In the
men’s group, despite the fact that 57% had a traditional attitude, only 3.9% reported low participation in household labor, and the others had average or high participation.

The findings showed that young men had a higher participation rate. Men’s participation rate was increased in the household labor division with increasing educational levels. Further, higher-educated men perceived more justice from participation in the household labor division. Educational level had no significant correlation with male attitude. Men’s income did not relate to participation rate in household labor or perceived justice.

There was a strong link between male participation rate in household labor division with perceived justice, such that men who had more participation understood more justice. This finding was inconsistent with the results of the study by Martinez et al. (2010), who examined both employed couples, and found that couples perceived more justice when traditionally dividing tasks (31).

The findings of this study showed no significant correlation between traditional and modern (egalitarian) attitudes in household labor division in men, which was not consistent with results of Gavran et al. (2002). Men’s beliefs and attitudes had a significant correlation with perceived justice, in such a way that men with modern beliefs perceived less justice and men with more traditional beliefs perceived more justice. This finding was consistent with the study by Martinez et al. (2010), the results of their study showed that perceived justice was correlated with male and female traditional beliefs (31).

In men, the rate of participation in household labor division was increased with higher educational level, and men with higher educational level perceived more justice in participation in household labor division. This finding was inconsistent with the results of the studies by Rezvani et al. (2015) and Ghobadi et al. (2011). In their study, there was no correlation between male education and participation rate.

Educational level was not significantly correlated with men’s attitude. Men’s income level did not relate to participation rate in household labor or perceived justice. This finding was consistent with the results obtained by Ghobadi et al. (2011), such that men’s income was not associated with participation in household labor and perceived justice.

The results showed that increasing women’s working hours reduces the rate of participation in household labor, but men’s working hours had no correlation with the rate of participation in household labor and perceived justice. Indeed, the findings of this research present that time limitation approach is only in women’s labor division and their participation rate in household labor, which is in line with the results of Kiger and Riley (1996) and Ghobadi (2011), but inconsistent with the results of Shelton (1992) and Coverman (1985) (32).

The main limitations of this research were limited sample size, not controlling individual differences, mental status, and response times of research units, which could have an impact on how they respond, and the large number of questions included in the questionnaire, which led to fatigue and reduced accuracy of the responses. The strengths of this study were examining both spouses, because only one of the couples completed questionnaires in most studies, and environmental factors such as light, heat, noise, and child restlessness were tried to be appropriate as much as possible.

We suggest further research in women and men from different occupational groups. The application of the results of this study in clinical settings is to teach couples about the importance of participation in household labor so that perceived justice can be enhanced by negotiating and gaining an understanding of the types of beliefs and attitudes of couples in order to enhance their satisfaction with marital life.

**Conclusion**

Despite the fact that working women often have a modern attitude, they still have a high rate of participation in household labor, and the key factor in women’s perceived justice is not household labor division, but attitude. Although almost half of men had a traditional attitude, they reported a good participation rate, and interestingly, more justice was perceived by increasing their participation.

**Acknowledgements**
The present article has been derived from an MSc thesis in Midwifery, No. 920690, approved by the Ethics Committee of the Mashhad University of Medical Sciences and funded by the Deputy of Research the university. The authors would like to thank and appreciate the support of the Deputy of Research, Faculty of Nursing and Midwifery, Ethics Committee of Mashhad University of Medical Sciences, the authorities of the health centers, the participants in the research, and all those who collaborated in the implementation of this project.

Conflicts of interest
The authors declare no conflicts of interest.

References