



저작자표시-비영리-변경금지 2.0 대한민국

이용자는 아래의 조건을 따르는 경우에 한하여 자유롭게

- 이 저작물을 복제, 배포, 전송, 전시, 공연 및 방송할 수 있습니다.

다음과 같은 조건을 따라야 합니다:



저작자표시. 귀하는 원저작자를 표시하여야 합니다.



비영리. 귀하는 이 저작물을 영리 목적으로 이용할 수 없습니다.



변경금지. 귀하는 이 저작물을 개작, 변형 또는 가공할 수 없습니다.

- 귀하는, 이 저작물의 재이용이나 배포의 경우, 이 저작물에 적용된 이용허락조건을 명확하게 나타내어야 합니다.
- 저작권자로부터 별도의 허가를 받으면 이러한 조건들은 적용되지 않습니다.

저작권법에 따른 이용자의 권리는 위의 내용에 의하여 영향을 받지 않습니다.

이것은 [이용허락규약\(Legal Code\)](#)을 이해하기 쉽게 요약한 것입니다.

[Disclaimer](#)

Ph.D. Dissertation of
Child Development and Family Studies

Korean dual-earner' s
synchronization of housework and
childcare

맞벌이 부부의 가사노동 및 자녀돌봄 시간 동기화

February 2023

Graduate School of Human Ecology
Seoul National University
Child Development and Family Studies Major

Hyejoong Kim

Korean dual-earner's synchronization of housework and childcare

맞벌이 부부의 가사노동 및 자녀돌봄 시간
동기화

지도교수 진미정

이 논문을 아동가족학 박사 학위논문으로 제출함

2023 년 2 월

서울대학교 대학원

아동가족학과

김 혜 중

김혜중의 박사 학위논문을 인준함

2023 년 2 월

위 원 장 _____ (인)

부위원장 _____ (인)

위 원 _____ (인)

위 원 _____ (인)

위 원 _____ (인)

Abstract

The purpose of this study is to investigate the synchronized time of dual-earner couples in Korea and whether the time use is related to the husbands' and wives' daily emotional experiences by using dyadic data. This study focused on the time use of the domestic domain, specifically housework and childcare activities on weekdays and weekends. It also aimed to investigate whether there are gender differences in time use and the daily emotional experiences between husbands and wives.

For the analysis, this study used the 2019 Korean Time Use Survey conducted by Statistics Korea. A total of 250 couples aged between 20 and 59, with the oldest child under 10 years old, were selected for the sample. There were 250 husbands and 250 wives, and the number of participants was 500. In the survey, each participant submitted a two-day diary so a total of 1,000 diaries were used for the analysis.

For the analysis, it investigated the total amount of time spent on housework and childcare first. Then it examined how much time couples synchronized in housework and childcare, and whether there were differences in the perceived amount of time between synchronized time between husbands and wives. As a result, it identified that wives still did more housework and childcare even in dual-earner couples than their husbands. Husbands spent more time on paid work compared with their wives. The perceived synchronized housework and childcare time was

different between husbands and wives, with wives reporting a slightly larger amount of synchronized time than their husbands.

Second, it has outlined the “timing” of the activity. The timing of housework and childcare was highly concentrated in the evening on the weekdays but was evenly distributed throughout the day on the weekends for both husbands and wives. It is because the couples were engaged in paid work during the daytime on the weekdays and they can spend time for the domestic domain only during unpaid working hours. Synchronization of housework and childcare time also appeared highly during this time. The rate of synchronization in each domain was usually higher on weekends than on weekdays.

Third, it investigated the factors associated with couples’ synchronization in housework and childcare time. The results demonstrated that the more individuals were engaged in housework or childcare, the more they synchronized housework or childcare time.

Last, it examined whether the synchronization of housework and childcare was related to the daily emotional experiences of husbands and wives and whether there are differences between the groups – 1) those who do not have synchronized time; 2) those who have synchronized time below-average; and 3) those who have synchronized time above-average. As a result, synchronized housework and childcare time was related to the daily emotional experiences, but the result appeared differently between husbands and wives. To be specific, the total amount of housework and childcare was

negatively associated with wives' daily emotional experiences both on weekdays and weekends. However, synchronized housework and childcare time was positively associated with wives' emotional experiences on weekdays. Husband's daily emotional experiences were not significantly related to the total amount of time in housework or childcare. On the contrary, husbands' synchronized housework and childcare time with their wives on weekends was associated with their positive emotional experiences.

The results in this study suggested that an individual's time use and daily emotional experiences were closely related. Further, an individual's time use was not only associated with one's own emotional experiences but was also associated with one's spouse's daily emotions.

Equity theory suggests that all people are seeking equity, but not to be over-benefitted or under-benefitted, and unfair exchanges of domestic labor sometimes cause fragility in the couple's relationship. An equitable relationship does not necessarily mean they have to synchronize housework and childcare, but it is evident from this study that synchronized housework and childcare time partially illustrate equity in the domestic domain. When wives were engaged in domestic labor alone, it makes them feel they are under-benefitted. However, when synchronized time for housework and childcare with husbands were positively associated with wives' emotional experiences. Wives, who had synchronized housework and childcare time with their husbands felt less under-benefitted than the wives who had no synchronized time for housework and childcare with their husbands. Further,

as this study shows, the interactions between time use and emotional experiences were especially distinctive within the couple and such relationships cannot be observed between two people who are a non-couple.

Yet, it is notable that synchronization of housework and childcare was observed when husbands were engaged in housework or childcare. It means that wives carry out domestic work with or without the present of husbands, but husbands were most likely to be engaged in domestic work while their wives were engaged in domestic work. Therefore, the husband's participation in housework or childcare is the main variable for the synchronized time.

In sum, the findings from this study deepened the understanding of dual-earner couples' time use, focusing on the synchronized time in the domestic domain, and its relationship with daily emotional experiences. These findings can be used as evidence to establish family-related policies or suggestions for time use at the couple or family level.

Keywords: Couples' time use, dual-earner couples, synchronization, housework, childcare, dyadic data, domestic domain, daily emotional experiences

Student Number: 2017-30462

Table of Contents

Chapter 1. Introduction	10
1.1. Statement of the problem and significance of the study	10
1.2. Research questions	16
Chapter 2. Literature review.....	18
2.1. Theoretical approach.....	18
2.1.1. Dual-earner couples' "time use" and "gender roles"	18
2.1.2. Equity theory.....	21
2.2. Dual-earner couples' time use in the domestic domain	24
2.2.1. Housework	24
2.2.2. Childcare	28
2.2.3. Synchronization of time.....	29
2.2.4. Timeline approach	32
2.2.5. Daily emotional experiences within the couple....	33
2.3. The current study.....	35
Chapter 3. Method	37
3.1. Characteristics of data and sample.....	37
3.1.1. Data	37
3.1.2. Sample.....	38
3.2. Measures	38
3.2.1. Housework time	38
3.2.2. Childcare time	39
3.2.3. Enjoyment of time	40
3.3.4. Control variables.....	40
3.3. Data analysis plan	42
3.3.1. The total amount of dual-earner couples' time spent on housework and childcare	43
3.3.2. Synchronized time with a partner	43
3.3.3. The timing of housework and childcare	45
3.3.4. Synchronized time and daily emotional experiences	46

Chapter 4. Results	48
4.1. Descriptive statistics	48
4.2. Synchronized housework and childcare time of dual- earner couples.....	51
4.2.1. Amount of time spent on paid work, housework, and childcare	51
4.2.2. Amount of synchronized housework and childcare time.....	52
4.2.3. Timing of the synchronized housework and childcare	54
4.2.4. Factors associated with synchronized housework and childcare time	58
4.2.5. Synchronized housework/childcare time and the daily emotional experiences of husbands and wives	62
 Chapter 5. Discussion.....	68
5.1. Interpretation of results	68
5.2. Limitations and directions for future research.....	75
5.3. Contributions and implications	76
 Appendix	78
 References	79
 Abstract in Korean.....	91

List of Tables

<Table 3-1> Sub-categories of housework and childcare division	40
<Table 3-2> The relationship code.....	44
<Table 4-1> Demographic characteristics	50
<Table 4-2> Dual-earner couples time use	52
<Table 4-3> Synchronized housework and childcare time	54
<Table 4-4> Factors associated with synchronization of housework	61
<Table 4-5> Factors associated with synchronization of childcare	61
<Table 4-6> The average synchronized time	62
<Table 4-7> The number of people and proportions of three groups by the amount of synchronized time	63
<Table 4-8> Synchronized time and daily emotional experiences on weekdays	66
<Table 4-9> Synchronized time and daily emotional experiences on weekends	67

List of Figures

<Figure 4-1> Housework timing of the dual-earner couples.....	57
<Figure 4-2> Childcare timing of the dual-earner couples.....	57

Chapter 1. Introduction

1.1. Statement of the problem and significance of the study

“Togetherness” is one of the most important considerations that couples value in their marriage. A couple’s relationship requires intimacy and romance, but may also require one to spend time on unpaid housework and childcare, that is, mandatory obligations to maintain a family life.

Time is a fundamental resource that reflects how people live their daily life. For couples, time is a shared and mutually influential resource (Vagni, 2022; Van Klaveren & Van den Brink, 2007). For dual-earner couples, “time” is an especially important, but limited, resource. They must invest time both at paid work and in their domestic domain, and they often develop strategies to deal with work–family challenges (Matias & Fontaine, 2015). One option is an increase in the husband’s participation in the domestic domain (An, 2021; Collins, 2004; Fahlén, 2016; Goldscheider, et al., 2015; Kim, 2016; Sullivan, et al., 2014). This has gradually resulted in the weakening of traditional gender roles of the husband as the breadwinner and the wife as responsible for domestic work (Fahlén, 2016; Taylor, 2019). A growing body of literature suggests that, although the speed of change in the division of household labor is not comparable with that of women’s advancement in the labor market, the change is in progress (Gershuny et al., 1994; Mannino & Deutsch, 2007; Kim, 2017). Gershuny and others (1994) explain this phenomenon as “lagged adaptation.” Similar studies evidence

gradual changes in traditional gender roles, especially among dual-earner couples (Carriero, 2011; Fahlén, 2016; Kim, 2017; Kwon et al., 2019; Lesnard, 2008; Taylor, 2019). While unpaid domestic work, such as housework and childcare, are traditionally considered a “women’s job,” the number of husbands participating in domestic work is increasing, sometimes, leading to synchronized housework and childcare.

Synchronization refers to the activities that two people engage in at the same time (Barnet-Verzat et al., 2011; Joo & Choi, 2019). In other words, when two people spend time together to perform a certain activity, they are synchronizing their time. Similarly, synchronized housework time is when two people are engaged in housework together at the same time. When couples synchronize their time, it means more than just “being together.” Couples synchronize their time for various purposes such as intimacy, efficient use of time, or fulfilling the needs of other household members. Some studies suggest that couples try to organize their schedules to maximize time together (Carriero et al., 2009; Van Klaveren & Van den Brink, 2007; Qi et al, 2017) and couples synchronize their time more compared with two people who are a non-couple (Van Klaveren & Van den Brink, 2007). On the contrary, others argue that couples desynchronize time such as childcare or paid work for the efficient use of time (Barnet-Verzat et al., 2011; Carriero et al., 2009). Such conflicting outcomes outline that couples negotiate and compromise on “how” to spend their time and “when” to spend time together differently for different occasions.

Out of diverse activities, couples also synchronize time to do daily housework or childcare in everyday life with or without realizing it. Then, what does it mean for husbands and wives to spend time together to carry out such obligatory responsibilities? In examining dual-earners' synchronized time in the domestic domain, this research specifically draws attention to housework and childcare in Korean families. Dual-earner couples have different time structures from single-earner couples, and the dynamics and changes in the life of a dual-earner couples are expected to be represented by their time use.

Until recently, the discourse on time use has mainly focused on the amount of time spent on certain activities at an individual level. Yet, diverse approaches to understanding people's time use are needed. For example, how we spend time is also related to our daily emotional experiences. "When" the activity was done also deepens our understanding of the time use patterns. Further, along with "how much" time and "when" one spends time on certain activities, "with whom" one spends time is another critical factor that shapes daily emotional experiences (Flood & Genadek, 2016; Lesnard, 2008; Vagni, 2022; Vagni & Widner, 2018). Therefore, by using dyadic data, this study aims to investigate how dual-earner couples synchronize time for unpaid domestic responsibilities and whether the synchronized time is related to daily emotional experiences.

To investigate dual-earner couples' time use, it will first clarify the terms and the theoretical background in chapter two. The theoretical

background is built on the basis of the effect of gender roles and equity theory. When comparing couples' time use, it is commonly argued that the most influential factors in the allocation of time in a family are not based on the efficient use of time or economical contribution, but are decided by socialized gender roles. Equity theory, on the other hand, predicts men and women's reactions in a variety of encounters and provides a precise conceptual definition of what is meant by an equitable relationship (Hatfield & Traupmann, 1981). An equitable relationship does not necessarily mean couples should spend an equal amount of time on certain activities. However, it is expected that couples who are in an equitable relationship or satisfactory relationship may also have more time together and share domestic responsibilities or vice versa (Garcia & Sanchez, 2003; Hill, 1988). Bernard (1972) stressed that "his" experience and "her" experience are different in every marriage. This argument is well accepted for single-earner couples because they are likely to maintain traditional gender roles with a gendered time structure. However, dual-earner couples have a rather similar time structure, with both husbands and wives having to allocate time to market labor and domestic domain. Bernard's statement must be re-examined to see if it holds for the case of dual-earner couples. When husbands and wives have a similar time structure and synchronize certain activities, do they experience an equivalent level of daily emotions, or do they still have gendered experiences as Bernard (1972) argues?

Chapter three will introduce the data and method of analysis. For

the analysis, 2019 Time Use Data by Statistics Korea (2019) will be used. The survey includes information such as where the activity was performed, whom they spent time with, what electrical devices they used, as well as emotional experiences such as housework satisfaction, leisure satisfaction, tiredness, and enjoyment.

In chapter four, this research will examine the dynamics and interactions related to the couples' synchronized time. First, it will investigate how much time couples spend on housework and childcare and when they spend time together, using timeline data. Housework is one of the core activities of people at home. Childcare is an activity that entails the most contradictions. Some studies suggest that couples tend to desynchronize childcare time because one of the parents must take childcare responsibility while the other parent is at work (Carriero et al., 2009; Schwanen, 2007). Other studies claim couples want to synchronize childcare time the most (Kimmel & Connelly, 2007). Therefore, this study will clarify which activities couples synchronize and when they synchronize the most in the Korean context.

Second, this study will examine what factors are associated with couples' synchronized time. To be specific, it will explore the main predictors of husbands and wives synchronizing their time and whether there are differences in the factors that are associated with the synchronized time between husbands and wives.

Third, it will examine whether the perceived synchronized time is different

between husbands and wives. Studies examining couples' time together show mixed results. Some report that synchronized time is perceived differently between husbands and wives (Flood & Genadek, 2016; Garcia Roman & Cortina, 2016). Gager and Sanchez (2003) explain that such mismatch in the couples' quantity and quality of synchronized time may be due to gendered notions of what close relationships entail. Others find no gender differences in the reported time together (Freedman et al., 2012; Vagni, 2019). Such contradictory outcomes may be the dissimilarities in the actual time differences or different perceptions of the individual's time use.

Last, this study will compare and contrast differences in the daily emotional experiences between husbands and wives in accordance with the synchronized time. Vagni and Widmer (2018) suggest that couple time influences emotional experiences such as enjoyment of time. Because both husbands and wives in dual-earner couples are engaged in the labor market, it is likely they feel time constraints on what they can and cannot do. Such shortage of time may be closely related to the daily emotional experiences that husbands and wives feel. Couples may synchronize time for housework or childcare as a strategy to use time efficiently or increase the level of satisfaction or enjoyment (Vagni, 2022). Even then, studies show that the level of life satisfaction or emotions experienced by husbands and wives may not be identical even if they synchronize certain activities (Flood & Genadek, 2016; Gennadek et al., 2016; Joo & Choi, 2019). Others suggest, in contrast, that time together may cause stress for some couples

(DePasquale et al., 2018; Milek et al., 2015). Therefore, this study will further analyze whether the couples' synchronized time for housework and childcare is related to their daily emotional experiences and whether there are differences in the daily emotional experiences between husbands and wives. It is hoped to contribute to deepening the understanding of the life of dual-earner couples by examining couples' synchronized time.

1.2. Research questions

The research questions of this study are as follows:

1. Are there differences in husbands' and wives' time use patterns?
 - 1-1) How much time do husbands and wives of dual-earner couples spend on paid work, housework, and childcare?
 - 1-2) How much time do husbands and wives of dual-earner couples synchronize in housework and childcare?
 - 1-3) Are there differences in the perceived quantity of synchronized time between husbands and wives?
2. When do dual-earner couples spend time on housework and childcare and when do they have synchronized housework and childcare time?
3. What are the main factors associated with synchronized housework and childcare of dual-earner couples?

4. Are there relationships between synchronized housework/childcare time, emotional experiences, and equity in gender?

4-1) Is there a relationship between synchronized housework/childcare and daily emotional experiences of dual-earner couples?

4-2) Are there differences in the association between synchronized time and daily emotional experiences by gender?

4-3) Are synchronized housework and childcare related to the equity within the couple?

Chapter 2. Literature review

2.1. Theoretical approach

2.1.1. Dual-earner couples' "time use" and "gender roles"

With the paid working time as a pivot, the time use of dual-earner couples is largely divided into paid and unpaid working time. They schedule their unpaid working time depending on the time availability, which is subject to the paid working time. For instance, time for housework and childcare is allocated during unpaid working time. If one has longer hours of paid work, she/he may have shorter hours for housework or childcare because time is a "zero-sum" resource (Kim, 2012).

Scholars continue to argue that the time use of dual-earner couples is based on socialized gender roles rather than time availability, especially in relationship to housework. A group of literature stressed that even in dual-earner couples, men still do less housework than their wives and that gender has dominant effects at many levels, structuring identities, norms, interaction, and institutions (Bittman et al. 2003; Ferree et al., 1999). One of the reasons that the traditional gender roles are still dominant even in the time use of the dual-earner couples is because of the pervasive social norms internalized by men and women – a tacit assumption that housework is to be done by women but men do not have any desire or sense of responsibility (Bittman et al., 2003).

The effect of socialized gender roles is evidently supported by many

other studies. Joo and Joo (2021) argue that gender differences are still dominant in the amount of housework time or leisure time. Other scholars also suggest that participation in housework by husbands in dual-earner couples did not changed dramatically while wives still spend a much longer time doing housework and only women are required to be responsible for “double labor” (Bittman et al., 2003; Kim, 2005; Lee & Lee, 2017). Song (2011) reports that the personal care time of women increased less than that of men while the childcare time of women increased more than that of men. In other words, even if both husbands and wives are engaged in paid work, they may not be equally engaged in unpaid work. Instead, there are still differences found in the husband and wife’s unpaid working time, resulting in an imbalance of unpaid work between husbands and wives. It represents the norm that husbands are still recognized as the main breadwinner of the family even in dual-earner families, while wives are still recognized as the primary person to be responsible for housework. Therefore, the expected gender roles of dual-earner couples still remain the same as those of single-earner couples and it is why dual-earner couples fail to balance time spent on given roles (Kim, 2012; Chang & Han, 2015).

As discussed, the effect of gender always has been at the center of the issues related to the couple, and many argue that the time allocation of dual-earner couples is heavily associated with socialized gender roles rather than economic power or other related variables. Nevertheless, studies rarely pay attention to the synchronized housework of couple, even when they are

expected and known to synchronize some time including time for domestic responsibilities such as housework and childcare. In regard to couples' childcare, a number of studies find gender differences in childcare, confirming that the contents of childcare are different between husbands and wives. For instance, even if childcare time is synchronized, husbands are mostly engaged in leisure activities, while wives are responsible for mandatory care such as changing clothes or feeding (Craig, 2006; Kwon, et al., 2019; Lee, 2012).

The recognition of the amount of synchronized time also differs by gender (Freedman et al, 2012; Kwon, et al., 2019; Vagni, 2019). For example, Freedman et al. (2012) reveal that wives reported 20 minutes less time in synchronized time than husbands' report on average. Such differences also resulted in inequality in the quality of time with wives who may feel more under-benefitted than husbands in doing housework or childcare (Gager & Sanchez, 2003; Matthingly & Sayer, 2006; Roxburgh, 2002; Ruppanner et al., 2018).

The discussions on the effect of gender are not limited to the quantity of time that dual-earner couples spend doing housework or childcare, but are also related to the broader dimensions such as the "timing" of the activity and their daily emotional experiences. For example, Joo and Choi (2019) show that, even if a husband and a wife synchronize housework, there exist gender differences in the level of satisfaction: Husbands are satisfied with doing housework but wife's level of satisfaction is not equal to that of the

husbands. Joo and Choi (2019) explain that it is because husbands are engaged in housework only during the synchronized time while wives tend to be engaged in multi-tasks; hence wives feel more fatigue when the housework time is synchronized.

2.1.2. Equity theory

The “equity in gender” or “gender equality” has long been at the center of discussions related to couples and many scholars have examined couple relationships on its basis. Equity theory is one of the interlocking theories extending social exchange theory (Lan et al., 2017). According to Buunk and Schaufeli (1999), equity theory suggests that individuals want to balance their contributions and rewards in interpersonal relationships, which ultimately brings them greater psychological and emotional well-being. While social exchange theory argues that all people are seeking a maximum reward at minimum cost (Thibaut & Kelley, 1959), equity theory suggests that all people are seeking equity but not to be over-benefitted or under-benefitted (Hatfield et al., 1978; Walster & Walster, 1975).

According to equity theorists, equity occurs when one’s input is equal to the results that a person receives from the other party (Kalmijn & Monden, 2012), and people are most satisfied when they regard the relationship to be equitable (Buunk & Schaufeli, 1999; Hatfield et al., 1978; Lan et al., 2017). On the contrary, unfair exchanges in relationships increase the distress of the people in the relationships and reduce relationship

satisfaction (Adams, 1965; DeMaris, 2010; Kalmijn & Monden, 2012; Ruppanner et al., 2018; Walster & Walster, 1975). Thereafter, equity theory was often used as a framework for understanding the quality of the relationship of couples (Sprecher, 2011; Guerrero et al., 2008). These studies support the argument that men and women's perceptions of the equitability or inequity of their relationships are the keys to maintaining intimate relationships (Davidson, 1984; Hatfield & Traupmann, 1981; Kalmijn & Monden, 2012; Klumb et al., 2006).

Some argue that equity is associated with contentment, relational satisfaction, and commitment, whereas inequity is associated with negative emotions such as anger, guilt, and sadness (Sprecher, 2011; Walster et al., 1985). Couples who feel their relationships are equitable are most content and happy and least angry and guilty in the relationship (Guerrero et al., 2008; Hatfield & Traupmann, 1981; Kalmijn & Monden, 2012). For example, when time spent on paid and household labor is more equally distributed between the husband and wife, both report fewer depressive symptoms (Kalmijn & Monden, 2012; Lively et al., 2010; Ruppanner et al., 2018). If one partner is under-benefitted, however, depressive symptoms and/or discontent increase with the unfavorable exchange (Klumb et al., 2006; Lively et al., 2010; Ruppanner et al., 2018). Therefore, being under-benefitted (doing less housework than one's partner) or over-benefitted (doing more housework than one's partner) in domestic divisions is heavily associated with the emotional distress of both members in a couple

(Ruppanner et al., 2018).

Further, if a couple's relationship is regarded as inequitable and the marital relationship has long been in a state of imbalance, husbands or wives may be upset by the marital give-and-take. They may then be tempted to "abandon" the relationship and sometimes opt for separation or divorce (Guerrero et al., 2008; Hatfield & Traumpmann, 1981; Kalmijn & Monden, 2012). These studies suggest that romantic relationships are also subject to equity principles, and emphasize that an equal share of resources is important to maintain healthy relationships.

On the contrary, other scholars argue that there is little to no evidence on the relevance of equity considerations among intimate couples (Gager & Sanchez, 2003). Unlike employer-employee relationships, which are characterized by the exchange of money, couple households, especially those with children, are sustained by the contributions of both partners to a variety of shared goals because marriage represents a cooperative venture on the part of two individuals to share their lives (DeMaris, 2010). Critics of equity theory argue that each spouse's input to the relationship in a given domain, such as housework, is the other's outcome and vice versa, but each partner's contribution in a given domain does not have to be the same portion (Canary & Stafford, 1992; DeMaris, 2010). For example, DeMaris and Longmore's (1996) study reveals that wives spent more than twice as many hours per week on average doing housework compared with husbands, but both spouses saw this division of labor as less unfair to the wives. Such

an unequal division of housework can be also explained by socialized gender roles.

As a result, there are contradictions in the debate on whether a couple's relationship is subject to the equity theory, which requires further investigation. A more thorough analysis of equity theory on dual-earner couples is especially needed because most existing literature has examined equity theory regarding couples without considering lifestyle. However, compared with the traditional single-earner family, dual-earner couples have a rather equal allocation of time — both husbands and wives allocate time to paid working hours and unpaid working hours. When both husbands and wives are spending an almost equal amount of time for paid working, do they also maintain equity at other times?

2.2. Dual-earner couples' time use in the domestic domain

2.2.1. Housework

Grossbard-Shechtman (1984) stresses marriages as exchanges of “household labor,” and the labor benefits one's spouse through activities such as cooking, childcare, counseling, or gardening, and is performed for a longer time than one would spend on such activities if living alone. Housework is a subset of family responsibilities and accompanies other related but distinct subsets of responsibilities such as cleaning and childcare (Mannino & Deutsch, 2007). In other words, housework refers to unpaid work completed by family members to maintain a family (Shelton & John,

1996). Housework, however, is one of the significant areas in which traditional gender roles have been maintained for a long time. Many kinds of research across time and across countries have affirmed that women spend more time on domestic responsibilities than men do (Bianchi et al., 2012; Davis & Greenstein, 2004; Fuwa, 2004; Fuwa & Cohen, 2007; Kim, 2016; Sayer & Fine, 2011). Respectively, the division of housework always has been at the core of the discussion among couples and it is not different in dual-earner couples, too.

In the Korean literature on housework, Lee and others (1994) were among the first to analyze the time structure of couples at the dyadic level. Following prior studies, they show that wives of dual-earner couples have “double labor” of paid work and housework and so have different time structures from wives in single-earner couples (Lee et al., 1994). Moreover, husbands have longer paid working time regardless of the wife’s employment status, and the couple does not have shared household duties (Lee, et al, 1994). Through their examination of dual-earner couples housework time and life satisfaction, Cai and Lee (2004) claim that about 30 hours were spent on housework in a week in the dual-earner household, but 90% of housework was carried out by wives. Similarly, Son (2005) empirically shows gender differences in the unpaid labor of dual-earner couples. These analyses confirm gender inequality in housework.

In Eun’s (2009) study of the determinants of household division of labor among married couples, the husband’s time for domestic work

increased as the wife's income increased. These findings are supported by (2017), who compares couples from single-earner and dual-earner households in shared domestic labor. According to Kim (2017), husbands in dual-earner households share domestic labor more equally than husbands in single-earner households.

Gender inequality in housework has long been a feature of Korean society. With increased participation of married women in the paid economy, the husband's participation in housework has also been steadily increasing. This change is reported in the survey for Time Use Data conducted by Statistics Korea. In the survey, men's participation in housework in 2019 increased by 8.4 percent points in weekdays, 8.2 percent points on Saturdays, and 4.6 percent points on Sundays compared with 2014. There was an 8.5 percent point increase (or 72.8% of the whole population) in respondents against traditional gender roles compared with 2014 (Statistics Korea, 2019). Considering that the traditional norm of gender roles has been dominant in Korean society for a long time, such change may be a dramatic shift.

An early work on couples' housework synchronization in Korea, Lee (1997) pays an attention to the shared housework between household members, categorizing shared housework as the shared housework time of the couples, mother-child, father-child, and parents-child. In addition, Lee and others (2011), which examines the shared housework time of a family, and shows that husbands and wives have different recognition of the shared

housework time: Husbands reported that about half of the total housework is shared with other family members, while wives reported only a quarter of the housework is shared with other family members. Performances of activities by husbands and wives differ even in synchronized housework time. Last, it shows that the amount of synchronized housework was higher in weekends than weekdays. Lee and others (2011) attribute these differences to higher engagement of men in housework during the weekends than on the weekdays. However, this study was conducted at the individual level, not at the dyadic level, and did not present the outcome of synchronized housework time.

On the other hand, Joo and Choi (2019) examines the synchronized housework time of couples and finds that the level of satisfaction of the husband and wife is different even in synchronized housework time. They explain that these differences appear because wives are usually engaged in multi-tasking during this time, while men are focusing only on the housework; and the contents of their respective performances are different even in synchronized housework time. Others explain that the divisions of household labor among couples has serious consequences for relationship quality (Gager & Sanchez, 2003; Ruppaner et al., 2018). For example, women's larger share of the housework is associated with their distress and dissatisfaction with the relationship, which reduces the quality of the relationship and makes it fragile (Ruppaner et al., 2018).

2.2.2. Childcare

Unlike most housework, which decreases with an increase in wage, childcare time increases with an increase in wage, and Kimmel and Connelly (2007) insist that childcare time must be analyzed separately from other types of housework. Other studies claim that however, having young children is negatively associated with working time or couples' synchronized time (Barnet-Verzat, et al., 2011; Garcia Roman & Cortina, 2016; Hallberg, 2003; Hamermesh, 2000).

There are a number of researches in Europe and North America regarding the couples' synchronization or desynchronization of childcare time and they show that childcare time requires the most desynchronization out of domestic activities. For example, a couple with a young child tries to maximize the amount of time that their child spends with at least one of the parents, especially during pick-up time (Craig & Powell, 2012; Han et al., 2020; Han & Timmermans, 2019). In this case, coordinating work schedules can result in the desynchronization behavior of paid working time and childcare time (Han & Timmermans, 2019; Van Klaveren & Van den Brink, 2007). Even if the childcare time of dual-earner couples is considered the most significant time with high demand, the actual amount of childcare time that the couples spend together is not significant. This is because parents do not want their child to spend time without one of the parents or caregivers and thus parents adjust their work schedule as well as childcare time. On the

contrary, synchronized childcare time in North America has steadily increased since 1965 (Bianchi et al., 2012; Genadek, et al., 2016; Sayer et al., 2004). It may be interpreted as a culturally higher regard for family time in North America.

Unlike other countries, studies on synchronized childcare time in Korea are scarce. Son (2010) explains that it is because childcare time least spent by a couple together in Korea. In fact, a couple takes turns to fulfill childcare duty. Kwon and others (2018; 2019) compare differences in synchronized childcare time between dual-earner and single-earner couples. The results confirm European findings that dual-earner couples have less synchronized childcare owing to limited time resources (Kwon et al., 2019). There existed differences in activities performed during childcare time between weekdays and weekends, and between husbands and wives (Kwon et al., 2019). Evidently, childcare time is distinct from other times, but only limited studies explore the synchronization of childcare time, particularly in a Korean context.

2.2.3. Synchronization of time

Time is consumed not only at the individual level but is frequently shared with two or more people together. Activities spent with other people provide more pleasure and satisfaction than solitary activities (Hallberg & Klevmarken, 2003; Juster & Stafford, 1985), and people usually value time together with others than time alone (Habib et al., 2008; Zhang et al., 2005).

Henceforth, researchers started to draw attention to the shared time.

Shared time or doing joint activities is called “synchronization,” that is sharing the same activity at the same time (Barnet-Verzat et al., 2011; Joo & Choi, 2019). A husband and wife engaged in housework at the same time are engaged in synchronization of housework. Couples, because of their special commitment to the relationship, synchronize their time in many different domains compared with two people who are non-couples (Jenkins & Osberg, 2004; Hallberg, 2003). Their synchronization of time, to be specific, is measured by the sum of the durations invested in activities carried out simultaneously (Barnet-Verzat, et al., 2011).

The term synchronization was first introduced by Hamermesh (2000) in an economic context, by assuming that couples prefer for shared than separate leisure, and seek to maximize time spent together. Even before Hamermesh (2000), however, scholars had explored the shared time of the couples, knowing that their allocation of time to particular synchronized activities may indicate what they value in their life together as well as their marital satisfaction (Kingston & Nock, 1987; Sullivan, 1996). For instance, couples who enjoy spending time with one another may further synchronize their activities so they can have more time together and increase intimacy (Hamermesh, 2000; Qi et al., 2017). The synchronization of activities can improve the efficiency of labor division in household production and positively associated with satisfaction levels (Gager & Sanchez, 2003; Qi et al., 2017).

Notably, couples have more synchronized time in daily activities than two non-couple individuals. This has increased research interest in comparisons of the extent to which couples versus “pseudo couples” synchronize their time (Jenkins & Osberg, 2004; Hallberg, 2003). Naturally, real couples have higher rates of synchronized paid working time as well as leisure time compared with the overlapping time of two randomly matched people who are non-couples or pseudo couples (Jenkins & Osberg, 2004; Hallberg, 2003; Van Klaveren & Van den Brink, 2007). Qi and others (2017) analyze Chinese dual-earner couples’ synchronized time to show that couples deliberately synchronize their daily activities. In particular, while individuals performed their activities subject to restrictions such as paid working schedules, couples still gained an additional 11-22 minutes of simultaneous housework and 41-51 minutes more of simultaneous leisure each day by coordinating their paid working time schedules. This finding is not identically observed for two people who are a non-couple.

Likewise, couples share time and activity in their life that they do not share with others. As synchronization of time is uniquely observed among the couples, it will be meaningful to draw attention not only to what activities they synchronize, but also to how synchronized time is associated with daily emotional experiences. Couples who spend more time together will develop a set of shared experiences and a shared understanding of their marriage, have more equality, and result in a stronger marital bonds (Gager & Sanchez; Hill, 1988). However, studies about couples’ synchronized time

mainly focus on either paid working time or leisure time than synchronized unpaid working time in a family domain.

2.2.4. Timeline approach

There are numerous studies examining the amount of time spent on each activity, but fewer that consider the timing or schedule of time. The timing of the daily activities of an individual might be influenced by other people's timing of activity (Hallberg, 2003; Kwon, 2019). Studies that include the time schedule of the couples present a wide range of types of time use compared with the studies that only analyze the amount of time spent. For example, Lesnard and de Saint Pol (2009) and Lesnard and Kan (2011) categorize couples not only by the amount of working hours but also by the shift type, alternative work, or short workweek type, and showing differences in the economic ability in accordance with the working schedule types. Cornwell and Warburton (2014) divide the working types specified by the shift hours (e.g., 8-to-5 shift, 7-to-4 shift, short shift, evening shift, and night shift) to analyze the influence of the working schedule type on community involvement.

In the case of Korea, Kwon (2019) analyzed types of dual-earner couples by work hours, schedules, and flexibility and concluded with five different types of categories: 1) couples working full-time with standard schedules; 2) husbands working long hours with flexibility and wives

working full-time, standard schedules; 3) both partners working long hours with flexibility; 4) husbands working full-time with standard schedules and wives working full-time with flexibility; and 5) husbands working long hours with nonstandard schedules and wives with rigid work schedules.

As evident from the above studies, it is common for couples to coordinate their schedules differently (Kwon, 2019; Lesnard & Kan, 2011; Lesnard & de Saint Pol, 2009; Qi et al., 2017; Van Klaveren & Van den Brink, 2007). An approach of “timing” of activities or “timeline” approach on a daily basis, therefore, must be also considered along with the “amount” of time spent. While time use studies comparing differences between weekdays and weekends are common, there are gaps in the literature using the full timeline of the activities. For example, Kwon and others (2019) uniquely describe the timing of childcare carried out by fathers. In the studies about couples’ time use, the timeline approach is often missing. Thus, reviewing the timing of the couples’ synchronized time will provide a further understanding of the couples’ daily life.

2.2.5. Daily emotional experiences within the couple

How a person uses time is closely related to the daily emotions that one experiences. There are many variables related to daily emotional experiences. Yet, the time use context, such as the efficient use of time, the contents of time, and whom a person spends time with, is also associated with daily emotional

experiences. Also one's time use and daily emotional experiences are sometime related with the spouse's emotional experiences in a couple.

Daily emotional experiences are measuring the "instant feeling" of the moment. These experiences are measured with "reference to a particular point in time" and differs from global evaluations of life satisfaction (Helliwell et al., 2017; Sullivan, 1996; Vagni, 2022). Although various types of satisfaction are theorized, only few studies examined the daily emotional experiences on a variety of occasions, especially in examining couples' time use. Sullivan (1996) states that a partner's enjoyment of a certain time was the critical predictor of a person's own enjoyment in the analysis of the UK time diary data. In line with Sullivan's study, Vagni (2022) show that one's mood or enjoyment is shaped by how the person uses time.

Only a limited number of Korean studies have investigated the relationships between time use and mood. Most studies are limited to measuring time use and the level of satisfaction. Chang and Han (2015) examine the differences in daily time patterns and the emotional experiences between husbands and wives. However, they use the Experience Sampling Method (ESM) to acquire feedback from participants in particular moments that are detected by sensors connected to a device (Khan et al., 2008). Despite its advantages, ESM has shortcomings because the sampling may interrupt informants from their activities or it inquires at inappropriate moments. Moreover, due to its high cost, it is not easy for individual researchers to collect a large number of samples for the ESM (Khan et al.,

2008). The Time Use Survey, on the other hand, is conducted by Statistics Korea, and provides representative samples at the national level. This paper, therefore, will examine the daily emotional experiences of husbands and wives of dual-earner couples using the Time Use Survey. As this survey started to include a question related to daily emotional experience only from the 2019 survey, studies that investigated the relationships between time use and daily emotional experiences are not yet affluently explored.

2.3. Current study

Although there is a growing body of literature on couples' time use, studies about synchronized time are still limited (Barnet-Verzat et al., 2011; Brannen et al., 2013; Hallberg, 2003; Han & Timmermans, 2019; Joo & Choi, 2019; Van Klaveren & Van den Brink, 2007). Most studies focusing on couples' synchronized time are limited to the quantity of the synchronized time, with little investigation of the relationship between time use and daily emotional experiences. The work–family balance of dual-earner couples does not mean simply reducing the paid working hours, but requires a balance in unpaid housework and childcare. Synchronization does not necessarily mean a balance of time, but it partially shows how couples share their responsibility together.

This paper will present a comprehensive understanding of the relationships between dual-earner couples' time use specifically on

synchronized housework and childcare and its influences on daily emotional experiences by using dyadic data. Ultimately, this paper will extend the analysis by comparing the differences in synchronized time and daily emotional experiences between husbands and wives. Based on the effect of gender roles and equity theory, this study is expected to expand the current understanding of the benefits that couples derive from and contribute to their relational quality during their synchronized time.

Chapter 3. Method

3.1. Characteristics of data and sample

3.1.1. Data

This research will use 2019 Time Use Data by Statistics Korea (2019) for the analysis. Time Use Data is surveyed by the Statistics Korea every five years since the survey was first conducted in 1999. The 5th wave was conducted in 2019. In the 2019 survey, approximately 27,000 individuals over 10 years of age were surveyed out of 12,435 sample households.

The survey aims to provide basic data that can measure lifestyle and quality of life by measuring the activity of respondents in a unit of every 10 minutes. It divides time into three major categories: 1) necessary time such as sleeping time and mealtime which is necessary to maintain one's life; 2) mandatory time such as work, study, household, and transportation; and 3) leisure time such as culture and leisure activities, volunteer, and socializing, which are entirely decided by oneself. The time diary includes information about the major activities, secondary activities, simultaneous activities, where the activity is performed, use of transportation, use of ICT during the activities, and whom they spend time with. The survey also provides information about household information, the level of satisfaction, and emotional experiences such as enjoyment and time constraints. In the 2019 data, “daily emotional experiences” (or “mood”) was included for the first time, so it could be used as a variable in analyzing the quality of time. By

collecting data from the household, a dyadic analysis from the same household is possible in Korea Time Use Data.

3.1.2. Sample

The sample used in the analysis was selected following two criteria: 1) both husbands and wives should be engaged in full-time paid work; 2) and have children under 10 years old (a lower grade of elementary school age or younger in the Korean academic year).

It is expected that part-time workers spend less time in paid work and spend more time in the domestic domain. This research, however, aims to compare the time use of husbands and wives who have similar time structures; thus only full-time workers who are engaged at paid working for an average of 40 hours per week were selected for the sample. The age of the children must be also considered as this paper will analyze childcare time, and selected the household with children under 10 years old, the lower grade of elementary school. Ultimately, a total of 250 couples (250 males, and 250 females) were selected. Each participant recorded a two-days diary, therefore a total of 1,000 diaries were used for the analysis.

3.2. Measures

3.2.1. Housework time

In the 2019 Korea Time Use Survey, activities are divided into 9 major categories: 1) personal care, 2) work, 3) learning, 4) home

management, 5) caring for family members, 6) volunteer and unpaid training, 7) networking and social participation, 8) culture and leisure activities, and 9) traveling. Each major category is divided into several sub-categories. For the housework time, this research used the 4) home management section. Sub-categories of home management include meal preparation and dishwashing, laundry, cleaning, home maintenance, car maintenance, caring for pets and plants, shopping, and other types of home management. However, caring for pets and plants was excluded from the analysis because the average time spent in this category was less than 2 minutes among the dual-earner couples in the selected sample.

3.2.2. Childcare time

Childcare time was selected from 5) caring for the family members. This category includes not only childcare but also adult care and disability care. Therefore, this research selected variables from caring for children under 10 years old only for the analysis. Care activities for children include physical care, nursing, disciplining and helping learning, reading and conversation time, playing and doing sports, school visits or meeting teachers, and other activities. Also, it added traveling for childcare which is originally under 9) traveling section. Although traveling for childcare was categorized as a sub-category of traveling, this research regarded traveling for the purpose of childcare as a part of childcare activity and included this

traveling time under childcare activity.

<Table 3-1> Sub-categories of housework and childcare division

Division	Sub-categories
Housework	Meal preparation, clothing & laundry, cleaning, home maintenance, car maintenance, shopping, and others
Childcare	Physical care, nursing, disciplining & helping learning, reading & conversation time, playing & doing sports, school visits or meeting teachers, traveling for childcare, and others

3.2.3. Enjoyment of time

Enjoyment or status of mood was measured for the first time in the 2019 Korea Time Use Survey. It allowed expanding the analysis of the quality of time other than the level of satisfaction or tiredness. The question used in the 2019 Time Use Survey to measure the daily emotional experiences is as follows: “How did you feel in general on the day you recorded the Time Use Survey?” The respondents answered the question for two days with a 7-point Likert scale: 1) very good, 2) pretty good, 3) little good, 4) neutral, 5) little bad, 6) pretty bad, and 7) very bad. It was reverse-coded for the analysis.

3.3.4. Control variables

Control variables included husband’s working hours, wife’s paid working hours, and the number of children at preschool age. Lifestyle and time use of the family, especially in case of the dual-earner couples, vary

depending on their paid working hours. Kim (2012) explains that paid working time is the most important factor that leads to work-life balance, not other times such as leisure time or occupational characteristics. Qi et al., (2017) also emphasize that couples' synchronous time is significantly correlated with the husband's and wife's paid working time. In understanding the extent of the couples' time use, therefore, paid working time must be considered. This research controlled for the husband's paid working time and wife's working time separately.

The younger the children, the more they demand care time and the number of children under preschool age is influential in parental time (Algarvio et al., 2018; Garcia Roman & Cortina, 2016; Vagni, 2022). Therefore, the age of the first child and the number of preschool children is also used as control variables.

For the first analysis to examine the influential factors to the synchronized time, husbands' and wives' total amount of time in housework and childcare are controlled. For the second analysis which examined the relationship between daily emotional experiences and synchronized time, ones' own (husbands' own time for the analysis of husbands' diaries and wives' own time for the analysis of wives' diaries) total amount of time in housework and childcare is controlled.

3.3. Data analysis plan

3.3.1. Total amount of dual-earner couples' time spent on housework and childcare

This study will first overview the average time of activities performed by husbands and wives. The survey asked the participants to record the time spent on each activity in a unit of 10 minutes. Then the total number of hours spent on the activity was added to calculate the amount of time. For example, a participant may spend 20 minutes on meal preparation in the morning and 40 minutes on meal preparation in the evening. Then a total of 60 minutes was spent on meal preparation in a day.

The participants recorded details of the activity according to the sub-category under the housework or childcare division. For example, time for meal preparation and home maintenance were counted as housework time, while physical care for children or playing with children was counted as childcare time. All the sub-categories in housework were added together to measure the amount of time spent on housework and all the sub-categories in childcare were added together to measure the amount of time spent on childcare.

The survey required participants to record major activities, ssecondary activities, and simultaneous activities. This research, however only focused on major activities. All analyses were done separately for the weekdays and weekends, as the time use pattern of weekdays and weekends were expected to be different.

3.3.2. Synchronized time with a partner

Amount of synchronized time

The Time Use Data also allows us to identify whom the activity was performed with by adding the types of people coded by numbers. The types of people who carried the activity together are coded from (1) to (9) by the relational type as in <Table 3-2>.

To be specific, (1) is coded if the activity was done alone, and if it is coded (1), the participant should not record any other person in the activity. If it is coded (2), it means the participant was with a spouse when the activity was done and if it is coded (3), the participant was with his/her own child who is under 10 years old when the activity was done. Likewise, (4) is coded when the participant was with his/her own child who is older than 10 years old; (5) is coded for a parent or parent-in-law; (6) is coded for a sibling or other members of the family such as an uncle, aunt or grandparent; and (9) is coded for other people who is not a member of the participant's family such as friends, neighbor, or colleagues.

The participants can record all the codes for all types of people if the activity is done with more than one person. For example, if the participant was together with a spouse, a child under 10 years old, and other people while doing a certain activity, the participant can record it as "239" in the section to record whom she/he was with. Therefore, the data enables us to identify whom the participant was with when she/he was engaged in a

certain activity.

As this research aims to examine the synchronized activity with a spouse, it considers an activity as synchronized with a spouse when the code for the person included (2). It may include other codes such as (3), (4), (6), or (9) other than (2), which refers to a spouse, but as long as (2) was included in a code, it is considered synchronized time with a spouse. The synchronized unpaid work time includes 1) when both husbands and wives synchronize housework and 2) when both husbands and wives synchronize childcare.

This study uses the same method as finding the average time spent for each activity, but the time is summed when the activity was coded with (2), which indicates that the activity was done with a spouse.

<Table 3-2> The relationship codes

(1)	Alone – when the major activity was done alone without anyone else
(2)	Spouse – when the major activity was done with a spouse
(3)	Child(ren) under 10 years old – when the major activity was done with child(ren) or grandchild(ren) under 10 years old
(4)	Child(ren) over 10 years old – when the major activity was done with child(ren) or grandchild(ren) over 10 years old
(5)	Parent(s) – when the major activity was done with parent(s) or parent(s)-in-law
(6)	Other members of the family – when the major activity was done with other members of the family such as an uncle, aunt, grandparents, or others
(9)	Others – when the major activity was done with a person other than a family member such as friends, neighbors, colleagues, etc.

* (7) and (8) are not used as a code to identify the relationship

Ratio of synchronized time

The ratio of time spent on each activity other than the amount of time spent was also considered in this analysis because the amount of time spent and the ratio of time spent implies different meaning. For example, even if both a husband and wife spend 30 minutes doing synchronized housework, it may mean they have a different portion of their share. The wife may spend about 120 minutes doing housework and have 30 minutes of synchronized time while the husband spends 30 minutes doing housework and the whole time that he is engaged in housework is synchronized with his wife. Then the rate of synchronization for the wife is 25% while the rate of synchronization for the husband is 100%. The ratio of synchronized time is calculated as follows:

$$\begin{aligned} &Y_{ratio\ of\ synchronized\ time} \\ &= Y_{average\ synchronized\ time} / Y_{total\ time} \end{aligned}$$

Every analysis was done separately for husbands and wives in order to compare the differences between husbands and wives. Finally, it reviews whether the perceived amount of housework and childcare time is different between husbands and wives by comparing the reported synchronized time.

3.3.3. Timing of the activity

Along with the amount of time spent on each activity, the “timing”

or “scheduling” of the activity will be also analyzed. That is to say “when” the activity was taken in a day on average. Some activities are performed in the morning or in the evening while other activities are performed evenly throughout the day. It is possible to examine the timeline analysis, as the Korea Time Use Survey is conducted in a unit of every 10 minutes. For example, from 12:00 to 12:10, the number of people who have a meal is larger than the people who have a meal between 15:00 to 15:10. The number of people who are engaged in the activity will be added in every 10 minutes duration and will show a general pattern of when the activity was taken. Examining the timing of the activity will show not only the individual’s timing of the activity, but it will also present the degree of synchronization of the activity in each timeline during the day, illustrating the interaction in the couples’ time use.

3.3.4. Synchronized time and the daily emotional experiences

The ordinary least squares (OLS) regression, which controls for standard errors, is used in order to 1) identify the predictors associated with the synchronization of the couples’ time on housework and childcare, and 2) examine whether the synchronized time is associated with the daily emotional experiences of husbands and wives. This is because the number of samples used in the analysis is the number of diaries, not the number of participants, and the participants submitted a two-day recorded diary. Therefore, it needed to control standard errors by using a robust option.

Stata 17 is used for the analysis.

For the first analysis, the following independent variables will be used in order to investigate what factors are related with synchronized housework and childcare: the total number of hours that husbands spend on housework/childcare, the working time of husbands, the working time of wives, the total number of hours that wives spend for housework and childcare, the age of the first child, and the number of children.

Next, to analyze the relationship between daily emotional experiences and synchronized time, the following control variables are included: husband's paid working time, wife's paid working time, the total number of hours spent on housework and childcare, the age of the first child, and the number of children. The synchronized time will be used as a categorical variable in order to compare the daily emotional experiences by groups – the reference group is those who do not have any synchronized time (0); the second group is those who have the synchronized time below the average; the last group is those who have the synchronized time above the average. This approach enables us to understand the differences between the groups.

Chapter 4. Results

4.1. Descriptive statistics

The demographic characteristics of the sample are described in <Table 4-1>. There are 250 households with 250 husbands and 250 wives, which makes a total of 500 participants. Each participant is required to record a two-days diary and a total of 1,000 diaries are used for the analysis. Some are required to record weekday diaries, some are required to record weekend diaries, and some are required to record both weekday and weekend diaries, and the days of the diaries are distributed randomly. Therefore, 614 weekday diaries (307 the husband's diaries and 307 the wife's diaries) and 386 weekend diaries (193 the husband's diaries and 193 wife's diaries) are used for analysis.

The participants are selected among those with the oldest child under 10 years old. The age ranges from 20 to 59. The age group is highly distributed between 30 to 39 years with 165 husbands and 192 wives. The average age for husbands is 37.73 and the average age for wives is 35.73. The age of participants is relatively low because the samples are selected from those whose first child is under 10 years old. The participants with college degrees constitutes the largest proportion in terms of level of education for both husbands and wives, each recording 194 and 188 participants, respectively. Personal income per month is highly distributed between 2 million KRW and 3.9 million KRW, with 152 husbands and 156

wives. The total household income per month, however, is largely observed in “over 6 million KRW.” The average household income is about 5.8 million KRW per month, showing that dual-earner couples have a higher income than the average household income, which was recorded at around 4.8 million KRW (Statistics Korea, 2019). Households with 2 children are the largest group, recording 126 households, followed by households with 1 child, which recorded 109 households, and there are only 15 households with 3 or more children.

<Table 4-1> Demographic characteristics

	Male (%)	Female (%)	Total (%)
Gender			
Male	250	-	250
Female	-	250	250
Total	250	250	500
Age			
20-29	9 (3.60)	21 (8.40)	30 (6.00)
30-39	165 (66.00)	192 (76.80)	357 (71.40)
40-49	74 (29.60)	36 (14.40)	110 (22.00)
50-59	2 (.80)	1 (.40)	3 (.60)
Total	250 (100.00)	250 (100.00)	500 (100.00)
Education level			
Under high school	26 (10.40)	28 (11.20)	54 (10.80)
College Degree	194 (77.60)	188 (75.20)	382 (76.40)
Graduate Degree	30 (12.00)	34 (13.60)	64 (12.80)
Total	250 (100.00)	250 (100.00)	500 (100.00)
Personal income per month (KRW)			
Under 2 million	8 (3.20)	66 (26.40)	74 (14.80)
2 million - 3.9 million	152 (60.80)	156 (62.40)	308 (61.60)
4 million - 5.9 million	70 (28.00)	25 (10.00)	95 (19.00)
Over 6 million	20 (8.00)	3 (.60)	23 (4.60)
Total	250 (100.00)	250 (100.00)	500 (100.00)
Household income per month (KRW)			
Under 4 million		26 (10.40)	
4 million - 5.9 million		99 (39.60)	
Over 6 million		125 (50.00)	
Total		250 (100.00)	
Number of children			
1		109 (43.60)	
2		126 (50.40)	
3 or more		15 (6.00)	
Total		250 (100.00)	

4.2. Synchronized housework and childcare time of dual-earner couples

4.2.1. Amount of time spent on paid work, housework, and childcare

This research first examined how much time husbands and wives spend on weekdays and weekends on average as described in <Table 4-2>. The time is divided into three categories – paid work, housework, and childcare time.

For the paid working time, husbands spend an average of 448.70 minutes and wives spend an average of 358.76 minutes on weekdays. On weekends, husbands spend about 136.84 minutes and wives spend about 55.70 minutes when they are engaged in paid work. Thus, husbands have longer working hours than wives both on weekdays and weekends. The average time spent on total housework and childcare time is the opposite. On average, husbands spend about 30.19 minutes and wives spend about 94.46 minutes doing housework, and husbands spend about 65.31 minutes and wives spend about 141.60 minutes doing childcare on weekdays.

The husband's engagement in housework and childcare increases on weekends by 83.37 minutes and 105.28 minutes each, but the wife's increase in housework and childcare on weekends is even greater, 179.22 minutes and 142.34 minutes, respectively.

For both weekdays and weekends, husbands spend a larger amount

of time on childcare than housework. Wives spend more time on childcare than housework on weekdays but spend more time on housework than childcare on weekends. Indeed, their time spent on childcare is almost equal for both weekdays and weekends, but they spend more time on housework on the weekends compared with husbands, confirming that wives are mainly responsible for the housework even in dual-earner couples.

<Table 4-2> Dual-earner couples time use

(Unit: minutes)				
	Weekdays		Weekends	
	Husbands (n=307)	Wives (n=307)	Husbands (n=193)	Wives (n=193)
Paid work	448.70 (147.92)	358.76 (174.29)	136.84 (203.53)	55.70 (135.62)
Housework	30.19 (47.96)	94.46 (76.70)	83.37 (76.82)	179.22 (109.87)
Childcare	65.31 (81.49)	141.60 (111.11)	105.28 (115.28)	142.34 (109.99)

4.2.2. Amount of synchronized housework and childcare time

To understand the synchronized time of housework and childcare, this research first identified the total amount of synchronized time, and then the ratio of the synchronized time next. The result is shown in <Table 4-3>.

As described in <Table 4-3>, wives report slightly higher synchronized amount of time than husbands do for both housework and childcare on weekdays and weekends. While some research about

synchronized time on housework (Joo & Choi, 2019) reports that husbands perceive that the time is synchronized more than that of their wives, this analysis yields the opposite results. Perhaps, because wives spend more time on housework and childcare, and it is likely that they think they synchronize time with their husbands more compared with the husband's recognition of the synchronized time. Such differences are supported by other studies that gendered notions of what close relationships entail are different between husbands and wives, and that couples may have different ideas of what it means to spend time together (Gager & Sanchez, 2003; Kingston & Nock, 1987). The synchronized time increases on weekends compared with weekdays for both husbands and wives.

When it is examined by the ratio of synchronization, however, a different interpretation can be offered. The husband's reports on the synchronization ratio are higher than the wife's reports in general. This result illustrates that wives spend a large portion of time doing housework and childcare while husbands are absent, but husbands are more engaged in housework or childcare, while wives are also engaged. This result, along with the total amount of time spent on housework and childcare, confirms that wives are still considered as the primary person to be responsible for unpaid work such as housework and childcare whereas husbands act as a subsidiary person to be responsible for the unpaid work even in the case of dual-earner couples who are both engaged at paid work.

<Table 4-3> Synchronized housework and childcare time

Time spent		Weekdays		Weekends	
		Husbands (n=307)	Wives (n=307)	Husbands (n=193)	Wives (n=193)
The amount of time spent (Unit: minutes)	Synchronized housework	6.51 (18.43)	11.86 (23.29)	43.42 (58.81)	53.26 (66.66)
	Synchronized childcare	10.19 (26.81)	11.86 (22.84)	24.71 (41.98)	28.86 (40.45)
The ratio of time spent (Unit: %)	Synchronized housework	21.56 (35.77)	12.54 (24.59)	52.08 (41.69)	29.72 (29.65)
	Synchronized childcare	15.60 (32.06)	8.37 (22.77)	23.47 (32.17)	20.28 (26.65)

4.2.3. Timing of housework and childcare

Since this study also aims to examine when the activities are performed during the day, it examines the timing of each activity that husbands and wives have engaged in from 0:00 to 24:00 in the day for both weekends and weekdays. In examining the timing of the activities, it is also possible to view when couples synchronize each activity. The timeline pattern of housework and childcare is illustrated in <Figure 4-1> and <Figure 4-2>.

The horizontal line of the graphs indicates the time of the day from 0:00 to 24:00 and the vertical line indicates the amount of time in a unit of 30 minutes. By showing the amount of time spent each time, the graph shows the distribution of the timeline spent on the activity. For example, in the graphs of the husband's housework timing on weekdays, husbands show higher engagement in housework between 18:00 to 22:00 than any other time of the day. In the graph,

the blue colored area indicates the total amount of time spent on each activity in each timeline and the red colored area shows the synchronized time.

When comparing weekdays and weekends, it is evident from the graph that both husbands and wives of dual-earner couples spend more time on housework and childcare on weekends. On weekdays, owing to their time spent on paid work, mostly during daytime, their allocation of time for housework and childcare is mainly concentrated in the evening between 18:00 to 23:00. Wives are highly engaged in housework and childcare in the morning between 6:00 to 10:00 before they go to work. Some husbands are engaged in childcare in the morning between 6:00 to 10:00, but still less than the engagement rate of wives during the same time. Although wives spend some time on both housework and childcare in the morning, they spend more time on childcare than housework. Husbands, nevertheless, are barely engaged in housework on the weekday morning. The synchronized time for housework on weekdays is high in the evening for both husbands and wives, although the amount of synchronized time is not great.

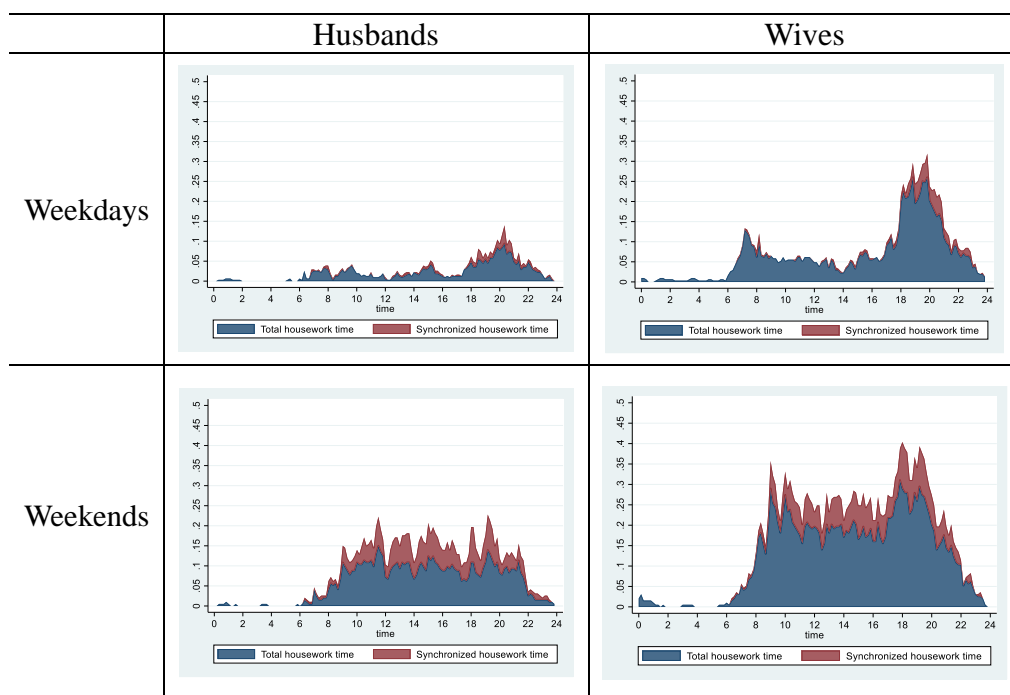
While the timeline pattern of housework and childcare are similar on weekdays, with the largest amount of time spent usually in the evening time, the timeline patterns of housework and childcare appear differently on weekends. Time for housework is evenly distributed throughout the daytime between 8:00 to 22:00 for both husbands and wives with a high synchronized rate. Yet, time for childcare is mostly observed in the morning time between 8:00 to 12:00 and in the evening between 18:00 to 22:00, with less time spent in the afternoon

between 13:00 to 18:00. While synchronized time is observed mainly in the evening on weekdays, synchronized housework and childcare is evenly distributed throughout a day on weekends, showing that couples share time to do housework and childcare on weekends more than weekdays.

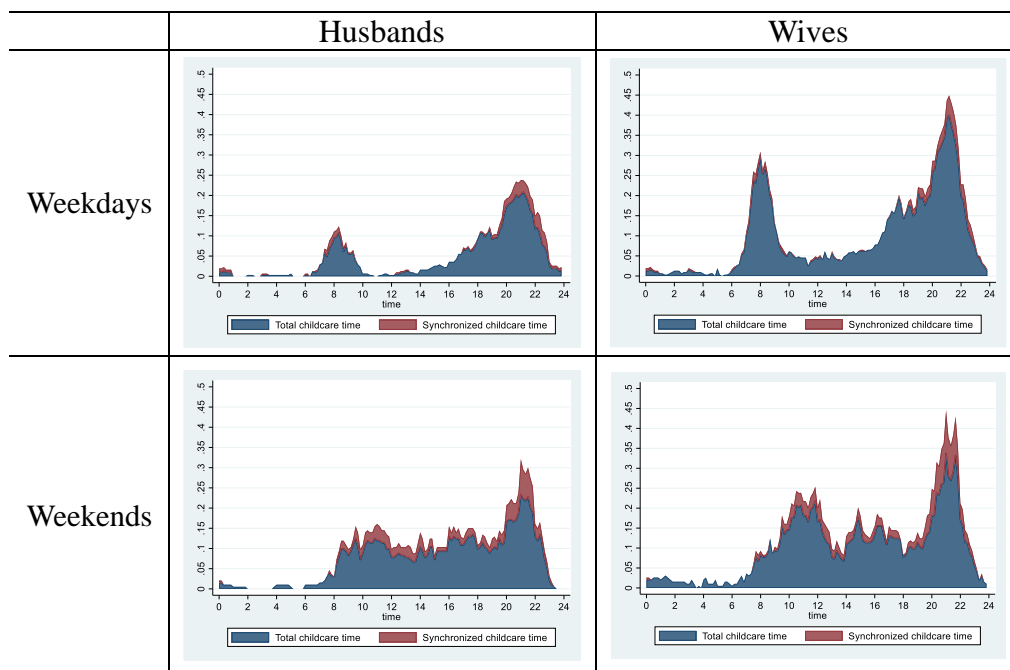
In sum, dual-earner couples' timeline schedule differs on weekdays and weekends, but both husbands and wives show similar patterns. Since they spend time on paid work during the daytime on the weekdays, housework and childcare time are distributed usually in the evening for both husbands and wives. The rate of synchronization of each work is also concentrated usually in the evening. However, there are some differences observed in the time use of husbands and wives. While husbands are engaged in housework and childcare usually only in the evening, wives are engaged in housework and childcare both in the morning and in the evening. Wives take more responsibility for housework and childcare than husbands. On the contrary, it is likely that they are not engaged in paid work on the weekends; hence their housework and childcare time is evenly distributed throughout the day.

Further, couples synchronize their time for housework and childcare on the weekends than on weekdays. Childcare time is less synchronized than housework, supporting studies suggesting that couples take turns for childcare, and thus at least one of the parents takes childcare responsibilities while the other spends time doing other activities (Carriero et al, 2009; Schwanen, 2007).

<Figure 4-1> Housework timing of the dual-earner couples



<Figure 4-2> Childcare timing of the dual-earner couples



4.2.4. Factors associated with synchronized housework and childcare time

Next, this research aimed to identify the factors associated with synchronized housework and childcare among dual-earner couples. The OLS was used for the analysis and the result is shown in <Table 4-4> and <Table 4-5>. The analysis is done separately for the weekdays and weekends. It also uses a robust option in the analysis in order to control standard errors caused by using two-day diaries from each person.

As shown in <Table 4-4>, the husband's total amount of time is associated with the wife's perceived synchronized housework time (weekdays: $b = .521$, $p < .001$, weekends: $b = .388$, $p < .001$). However, the husband's total amount of housework time is associated with their perceived synchronized housework time only on weekdays ($b = .148$, $p < .01$). The wife's total amount of housework time, on the other hand, is associated with their perceived synchronized housework time with their husbands for both weekdays and weekends (weekdays: $b = .107$, $p < .01$; weekends: $b = .244$, $p < .001$), but is significantly associated with the husband's perceived synchronized housework time only on weekends ($b = .142$, $p < .001$). The husband's paid working hours is negatively associated with both the husband and wife's perceived synchronized housework time ($b = -.109$, $p < .05$; $b = -.040$, $p < .05$) on weekends but not on weekdays. The wife's paid working hours, however,

are associated with the husband's perceived synchronized housework on weekends ($b = .036, p < .01$). These findings indicate that the more the husbands are engaged in housework in general, the more wives feel they synchronize housework with their husbands. The paid working times of husbands and wives are differently associated with the husband's perceived synchronized housework time on weekends. The husband's paid working time significantly lowers husbands' perceived synchronized housework time. However, when wives are engaged in paid work on weekends, it is positively associated with the husband's perceived synchronized housework time. Moreover, the age of the first child significantly lowers the husband's perceived synchronized housework time ($b = -3.948, p < .01$). This results support Garcia Roman and Cortina's (2016) study that the presence of younger children is differently associated with husbands' and wives' time use.

In the case of synchronized childcare, as shown in <Table 4-5>, the husband's total amount of childcare time is associated with the husband and wife's perceived childcare time for both weekdays and weekends (husbands on weekdays: $b = .127, p < .001$; wives on weekdays: $b = .187, p < .001$; husbands on weekends: $b = .074, p < .001$; wives on weekends: $b = .122, p < .001$). The wife's total amount of childcare time, however, is associated with their perceived synchronized childcare time only (weekdays: $b = .074, p < .01$; weekends: $b = .156, p < .001$). The number of children is negatively associated with the wife's perceived synchronized childcare time

for both weekdays and weekends (weekdays: $b = -10.627$, $p < .05$; weekends: $b = -11.330$, $p < .05$), but positively associated with the husband's synchronized childcare time on weekdays ($b = 6.519$, $p < .01$). Garcia Roman and Cortina (2016) explain that even if husbands in the dual-earner couples participate in childcare, it is insufficient to offset the decrease in wives' childcare time, and children spend less time with some of their parents. However, the findings from this study suggest that couples who spend more time on childcare also have more synchronized childcare time.

Overall, the more the husbands and wives spend time on housework or childcare, the more they are likely to synchronize these times. This is also shown in the graphs of <Figure 4-1> and <Figure 4-2> shown in the previous chapter. Paid working hours of husbands on weekends are usually negatively associated with synchronized time while the age of the first child is negatively associated with husbands' perceived synchronized housework time and the number of children is negatively associated with wives' perceived synchronized childcare time.

<Table 4-4> Factors associated with synchronization of housework

	Weekdays		Weekends	
	Husband (n=307)	Wife (n=307)	Husband (n=193)	Wife (n=193)
Husband's total amount of housework time	.148 ** (.054)	.521*** (.059)	.069 (.044)	.388 *** (.061)
Wife's total amount of housework time	.061 (.039)	.107** (.035)	.142*** (.040)	.244 *** (.051)
Husband's paid working hours	-.009 (.008)	-.008 (.011)	-.019* (.009)	-.040 * (.015)
Wife's paid working hours	.009 (.008)	.000 (.016)	.036** (.013)	.012 (.018)
The age of the first child	-.933 (1.212)	-.424 (3.472)	-3.948* (1.867)	-2.100 (3.819)
The number of children	-.467 (2.123)	-3.073 (5.497)	-.766 (2.555)	-6.899 (6.614)
Constant	-.366 (7.509)	-13.255 (11.546)	1.784 (8.622)	-4.249 (14.487)
<i>F</i>	2.47 *	33.58, ■■■	5.66, ■■■	24.84, ■■■
<i>R</i> ²	.230	.623	.145	.555

* $p < .05$, ** $p < .01$, *** $p < .001$

<Table 4-5> Factors associated with synchronization of childcare

	Weekdays		Weekends	
	Husband (n=307)	Wife (n=307)	Husband (n=193)	Wife (n=193)
Husband's total amount of childcare time	.127 *** (.027)	.187*** (.034)	.074 *** (.019)	.122 *** (.028)
Wife's total amount of childcare time	.009 (.018)	.074** (.026)	.027 (.016)	.156 *** (.026)
Husband's paid working hours	.011 (.011)	-.011 (.013)	-.014 (.012)	-.040 ** (.012)
Wife's paid working hours	.004 (.014)	-.024 (.015)	.003 (.009)	-.000 (.012)
The age of the first child	-3.436 (2.277)	-2.488 (3.477)	-2.645 (1.772)	-3.515 (3.553)
The number of children	6.519 * (3.110)	-3.073 (5.497)	4.914 (3.328)	-11.330* (4.847)
Constant	-6.865 (9.309)	-13.255 (11.546)	7.540 (9.744)	21.757 (11.589)
<i>F</i>	4.32 **	10.36***	5.66***	13.42 ***
<i>R</i> ²	.167	.353	.145	.402

* $p < .05$, ** $p < .01$, *** $p < .001$

4.2.5. Synchronized housework/childcare time and the daily emotional experiences of husbands and wives

In this part, this study analyzed whether synchronized housework and childcare are associated with the daily emotional experiences of husbands and wives and whether there are differences in the husband and wife's daily emotional experiences. First, in order to analyze the daily emotional experiences by groups, it categorizes the groups into 1) those who do not have any synchronized time, 2) those who have synchronized time below the average, and 3) those who have synchronized time above the average. In calculating the average synchronized time, those who do not have any synchronized time was excluded and the average was calculated with those who reported they have synchronized time. This allows to reveal the details and differences of couples in each group that cannot be observed in the analysis using continuous variables. The average synchronized time reported by husbands and wives on weekdays and weekends are described in <Table 4-6>.

<Table 4-6> The average synchronized time

	(Unite: minutes)			
	Weekdays		Weekends	
	Husbands	Wives	Husbands	Wives
Synchronized housework and childcare time on average	50.29 (43.52)	48.21 (39.80)	102.73 (77.00)	103.59 (79.42)

Also, both synchronized housework and childcare are merged together for analysis therein. Housework and childcare are distinct activities, as discussed earlier, but as the aim of this part is to examine the relationships between synchronized time and daily emotional experiences, the analysis employs the whole synchronized time rather than housework and childcare time separately. The number of people who did not synchronize, who synchronized less than the average synchronized time, and who synchronized more than the average synchronized time is shown in <Table 4-7>.

As it is shown in <Table 4-7>, there are more people — around 40% of the sample — who report they have synchronized housework and childcare time with their spouses on weekends compared with weekdays. Even among couples who have synchronized housework and childcare time, the number of those who have synchronized time below the average time is larger than the number of those who have synchronized time more than the average.

<Table 4-7> The number of people and proportions of three groups by the amount of synchronized time

	(Unit: person)			
	Weekdays		Weekends	
	Husbands (n=307)	Wives (n=307)	Husbands (n=193)	Wives (n=193)
Couples with no synchronized time	205 (66.78%)	156 (50.81%)	65 (33.68%)	40 (20.73%)
Couples with below average in synchronized time	52 (16.94%)	88 (28.66%)	71 (36.79%)	80 (41.45%)
Couples with above average in synchronized time	50 (16.29%)	63 (20.52%)	57 (29.53%)	73 (37.82%)

Next, this study analyzed the relationship between daily emotional experiences and the amount of synchronized time. The result is shown in <Table 4-8> for weekdays and <Table 4-9> for weekends.

First, <Table 4-8> shows that the total amount of housework and childcare time is negatively associated with the wife's daily emotional experiences (Model (1): $b = -.002, p < .01$; Model (2): $b = -.002, p < .01$), but does not have any significant relationship with the husband's daily emotional experiences compared with the reference group — those who do not have synchronized time. Wives in the group of below-average synchronized time, however, show positive emotional experiences when housework and childcare are synchronized with their husbands. These findings are also supported by the study of Joo (2018), which insist that synchronized housework is associated with the wife's satisfaction on the share of domestic division to a moderate degree. Gager and Sanchez (2003) also explain that wives have higher expectations for close spousal communication and friendship.

Second, as in <Table 4-8>, <Table 4-9> also report that the wife's daily emotional experience is also negatively associated with the total housework and childcare time on weekends (Model (1): $b = -.002, p < .001$; Model (2): $b = -.002, p < .001$). As it is shown on weekdays, the daily emotional experiences of husbands are not associated with the total amount of the husband's housework and childcare time on weekends either. However, when husbands have synchronized housework and childcare time below the average, it has positive relationship with the husband's daily

emotional experiences, suggesting that husbands enjoy spending time with their wives and sharing domestic responsibilities only to a moderate degree.

This result provides different interpretation of the argument that husbands' perceived shared time is significantly related to marital dissolution (Gager & Sanchez, 2003). The synchronized housework and childcare time is not positively associated with the wife's daily emotional experiences on weekends.

Further, it is confirmed that the increase of paid working time is significantly associated with negative emotional experiences for both weekdays and weekends. On weekdays, daily emotional experiences of both the husband and wife are associated with one's one paid working hours (husbands: $b = -.001, p < .01$; $b = -.001, p < .01$; wives: $b = -.002, p < .001$, $b = -.002, p < .001$.) On weekends, however, paid working hours of husband and wife are negatively associated with husbands' daily emotional experiences (husband's paid working hours: $b = -.002, p < .001$; $b = -.002, p < .01$; wife's paid working hours: $b = -.001, p < .01$; $b = -.001, p < .01$.) Wives' daily emotional experiences are negatively associated with their own emotional experiences only ($b = -.001, p < .01$; $b = -.002, p < .01$), but not with husband's paid working hours. These results show that the husband's daily emotional experiences on weekend is dependent on the wife's time use compared with wives. It also implies that husbands also prefer to synchronize time with their wives rather than desynchronize on weekends.

<Table 4-8> Synchronized time and daily emotional experiences on weekdays

	Weekdays			
	Husbands (n=307)		Wives (n=307)	
	(1)	(2)	(1)	(2)
Couples who have below-average synchronized time		.069 (.146)		.332 * (.139)
Couples who have above-average synchronized time		.021 (.151)		.237 (.139)
The total housework and childcare time	-.001 (.000)	-.000 (.000)	-.002 ** (.000)	-.002 ** (.000)
Husband's paid working hours	-.001 ** (.000)	-.001 ** (.000)	-.000 (.000)	.001 (.000)
Wife's paid working hours	-.000 (.000)	-.000 (.000)	-.002 *** (.000)	-.002 *** (.001)
The age of the first child	.037 (.074)	.041 (.075)	.004 (.074)	.021 (.073)
The number of children	-.052 (.099)	-.054 (.101)	.124 (.116)	.117 (.116)
Constant	5.341 *** (.311)	5.311 *** (.317)	5.364 *** (.358)	5.074 *** (.366)
<i>F</i>	2.71 *	1.94	3.50 **	3.35 **
<i>R</i> ²	.047	.048	.058	.079

* $p < .05$, ** $p < .01$, *** $p < .001$

* The reference group is the couples who have no synchronized time.

<Table 4-9> Synchronized time and daily emotional experiences on weekends

	Weekends			
	Husbands (n=193)		Wives (n=193)	
	(1)	(2)	(1)	(2)
Couples who have below-average synchronized time		.359 ** (.176)		-.110 (.179)
Couples who have above-average synchronized time		-.150 (.227)		-.129 (.194)
The total housework and childcare time	-.001 (.000)	-.001 (.001)	-.002 *** (.000)	-.002 *** (.000)
Husband's paid working hours	-.002 *** (.000)	-.002 ** (.000)	-.000 (.000)	-.000 (.000)
Wife's paid working hours	-.001 ** (.000)	-.001 ** (.000)	-.001 ** (.000)	-.002 ** (.000)
The age of the first child	.019 (.105)	-.039 (.105)	-.001 (.101)	-.005 (.102)
The number of children	-.123 (.160)	-.123 (.161)	-.111 (.157)	-.117 (.157)
Constant	5.478 *** (.354)	5.355 *** (.359)	5.395 *** (.354)	5.501 *** (.398)
<i>F</i>	6.41 ***	5.60 **	3.91 **	2.95 **
<i>R</i> ²	.128	.167	.091	.093

* $p < .05$, ** $p < .01$, *** $p < .001$

* The reference group is the couples who have no synchronized time.

Chapter 5. Discussion

The overall goal of this study was to understand and examine the daily time use in housework and childcare of Korean dual-earner couples and its influences on the perceived quality of time. With both husbands and wives engaged in paid work, dual-earner couples have different time structures from traditional single-earner families. Yet, many studies argue that socialized gender roles are still predominant among dual-earner couples even if wives are equally engaged in paid work. Assuming that husbands and wives of dual-earner couples have similar time structures, this study aimed to clarify to whether the husbands and wives in dual-earner couples have synchronized housework and childcare time to share the domestic responsibilities. The study was conducted based on the equity theory to examine whether there are gender differences in time use and the daily emotional experiences among dual-earner couples by using dyadic data.

5.1. Interpretation of results

The findings from this research suggest several implications. First, in examining how much time husbands and wives of dual-earner couples spend in paid work and in unpaid work. The results showed patterns of dual-earner couples that are distinct from single-earner couples.

Second, the review of the amount of time spent by husbands and wives in unpaid work in the domestic domain confirmed that the gendered

time structure is common even among dual-earner couples, with wives taking more responsibilities for housework and childcare. On weekdays, husbands usually spend more time on paid work, while wives spend more time on the domestic domain such as housework and childcare. The time use pattern slightly changes on weekends. There is an increase in the husband's participation in housework and childcare on weekends compared with weekdays. Nevertheless, wives are still predominantly engaged in housework and childcare for both weekdays and weekends even in dual-earner couples. As Gershuny and others (1995) note men display lagged adaptation: Although their participation in household division of labor is increasing, the speed of change does not follow women's advancement of the labor market. The findings from this study confirm prior studies claiming that wives still bear more housework responsibilities than husbands even among dual-earner couples (Bianchi et al., 2000; Bittman et al., 2003; Fuwa, 2004; Lee & Lee, 2017; Vagni, 2019).

Third, the rate of people who are engaged in synchronized activity is higher on the weekend than on the weekdays for both housework and childcare. Also, dual-earner couples cram housework and childcare time into the evening on the weekdays, after finishing paid work. Hence, the synchronized time of these activities is also concentrated in the evening. In the case of childcare, it is less synchronized on both weekdays and weekends compared with housework. Although couples may want to spend time together for childcare (Kimmel & Connelly, 2007), it is the activity that

is the most desynchronized because couples want to make sure that the children can stay with at least one of the parents (Carriero, et al, 2009; Schwanen, 2007).

Fourth, the timing of the activity is slightly different on weekdays and weekends. Housework is done usually in the evening on the weekdays, but evenly throughout the day on the weekends for both husbands and wives. The synchronization is also concentrated in the evening on the weekdays, but synchronization of housework on the weekend evenly distributed throughout the day, with a slightly higher rate of participation during the daytime than in the morning or evening.

The timing of the childcare on the weekdays also shows a similar pattern to that of housework timing, with a higher concentration in the evening. However, while husbands barely participate in childcare in the morning, it is observed the wife's engagement in childcare in the morning to be high. Couples' engagement in childcare on the weekend is also observed throughout the day but shows a higher concentration in the evening compared to housework time. For both housework and childcare, synchronized time is observed when both husbands and wives are engaged in housework and childcare.

Fifth, the amount of synchronized housework and childcare increases when the husband's and wife's engagement in housework and childcare. The more they spend time on housework or childcare, the more they are likely to synchronize these times. Paid working hours of husbands

on weekends are usually negatively associated with synchronized time. The age of the first child is negatively associated with the husband's perceived synchronized housework time, while the number of children is negatively associated with the wife's perceived synchronized childcare time. As Garcia Roman and Cortina (2016) suggested, the presence of younger children is associated with husbands' and wives' time use, which also results in different perception in the synchronized time.

Lastly, this research investigated the synchronization of housework and childcare and its association with daily emotional experiences. As a result, synchronized housework and childcare time on weekdays is positively associated with the wife's daily emotional experiences, while synchronized housework and childcare time on weekends is positively associated with the husband's daily emotional experiences. These results can be interpreted that synchronized housework and childcare time and its relationship to daily emotional experiences are differently associated for husbands and wives. When these responsibilities are shared with husbands, however, these feelings of being under-benefitted feeling are better moderated, although it may not positively increase emotional experiences. Housework and childcare time are still not considered the husband's main responsibilities even in dual-earner couples and husbands do not usually experience feelings of being under-benefitted even if they are engaged in housework and childcare. Still, husbands usually spend little time on housework and childcare compared with wives. Even if they are engaged in

housework or childcare, they usually take a subsidiary role. Since husbands consider these not their main responsibilities, their daily emotional experiences may be positively associated with the time they synchronize with their wives.

For couples, “togetherness” means more than just “physically being together.” Instead, it reflects diverse dynamics that appear during the interactions that occur when they are together. Scholars viewed that shared time or synchronized time as an avenue to develop an attachment or compatibility between spouses, which draws them closer together and helps to maintain the marriage in both the short and long term (Gager & Sanchez, 2003; Hill, 1988). Couples’ synchronized time occurs in diverse spheres of daily life such as housework, childcare or leisure. Although couples sometimes take turns to share the domestic responsibilities, it is also found from this study that synchronized time is one of the indicators that show couples share their responsibilities, their commitment and fairness. Equity in close relationships refer to the perceived balance in the relationship, but it is known that husbands and wives’ perceptions and expected equality in time spent together and in domestic responsibilities may vary by gender, with wives are more likely than husbands to be unhappy with their marriage (Gager & Sanchez, 2003).

In Korea, the phenomenon of “Childrearing alone (*dok-bak-yuk-a*)” has emerged owing to the social expectations of “super moms” or “pro moms.” while little to no engagement of fathers is expected in childrearing

and/or housework (Kim et al., 2021). It gives heavy psychological burdens and stress, and increases conflict with their husbands (Jeong & Park, 2019; Kim et al., 2021). Unfair shares of housework and childcare may make marriages fragile over time (Kalmijn & Monden, 2012; Ruppanner, et al., 2018), especially for dual-earner couples who have less time and where wives have “double labor.” Fanelli and Profeta (2021), on the other hand, report that the husband’s involvement in housework and childcare increases the wife’s employment rate as well as fertility rate in a sample of Central and Eastern European couples.

Based on the present results, the husband’s role in housework and childcare — synchronization — could be the main variable associated with the wife’s emotional experiences. While it is not clear if synchronizing housework and childcare reduces the total amount of time spent on these activities, synchronization is associated with the wife’s daily emotional experiences. The husband’s daily emotional experiences are also positively associated when the time for housework and childcare is shared with their wives.

According to the equity theory, feelings of being under-benefitted feeling may be negatively associated with fragile marital quality in the long term (Buunk & Schaufeli, 1999; Kalmijn & Monden, 2012; Lan et al., 2017). Through tolerable and thoughtful negotiation, couples should actively seek to create balance in their life in order to sustain a good relationship, especially if they are dual-earner couples who are more likely to feel a

shortage of time in everyday life. There is more gender equality in dual-earner couples compared with single-earner couples, but Garcia Roman and Cortina (2016) suggest that complete equality is far from existent. If dual-earner couples can balance of time use within the domestic domain, both spouses are likelier to achieve “the ‘work—family balance” and not one of them is under-benefitted while the other party is over-benefitted. Scholars find that wives’ sense of unfairness, more than that of husbands’, is a significant factor of the marital happiness (Garger & Sanchez, 2003). As it is shown in this study, wives daily emotional experience is positively associated with the synchronized housework and childcare time with their husbands, which in turn, will result in marital happiness in a long term.

Note that “work—family balance” does not mean simply reducing the amount of paid working hours, but equity in diverse parts of life in a couples’ interactions. An equitable relationship does not imply husbands and wives must spend an equal amount of time on housework or childcare or spend time together to share responsibilities. However, synchronized housework and childcare time partially shows that both husbands and wives share the responsibilities. In other words, when they do so, they likely have synchronized time, sharing the responsibilities as well. that they may have synchronized time, as well. They also share responsibilities when they desynchronize time for housework and childcare and take turns. Yet, desynchronization also reflects gender inequalities in the division of work between couples, with husbands and wives undertaking different activities,

— often gendered activities (Rauch, 2021). Synchronized time, on the other hand, increases when both the husband and wife's time spent on housework and childcare increases and is associated with daily emotional experiences, as evident from this study. Hamermesh (2000) asserts that spending time is the most valuable resource. For couples, spending time together to share the responsibilities in a family is also a non-substitutable and an unexchangeable valuable resource.

5.2. Limitations and directions for future research

The current study has a few limitations to be considered. First, although this study attempted to examine emotional experiences in relation to time use, the measure for daily emotion was analyzed through one question only in the survey. Thus, an in-depth understanding of the emotion may have been missing. Including more questions to measure daily emotional experiences should improve the reliability of the measurement.

Second, this study only collected samples from dual-earner couples who were full-time employees, and excluded those who were self-employed or part-time workers. Future studies should target various types of employment to enrich the findings on dual-earner couples.

Third, this study mainly focused on the major activities recorded in the survey. As the survey also includes secondary activities, the total amount of time may have been underestimated than the actual gross time. Future

studies may consider time for both major activities and secondary activities and compare whether there are differences between them.

Fourth, although there are diverse activities within housework and childcare, it was not able to identify which miscellaneous activities the couples synchronize in detail and whether they are undertaking different types activities within housework or childcare. For example, even when the couples synchronize housework, the husband may do the dishwashes while the wife may be cleaning the house. This study tried to attempt the analysis considering time spent on each sub-category. However, since the amount of time spent in each sub-category is very small, it was hard to find the association with the daily emotional experiences and the time spent at the miscellaneous level. The amount of time spent in each sub-category is presented at <Appendix I> for a reference.

Last, this study used dyadic data, which express the peculiarity of couples. However, it did not make the best use of the dyadic data and was limited to analyzing individuals within the dyads. Future studies may employ method of analysis that can help examine specialty of dyadic data such as interactions within couples.

5.3. Contributions and implications

Despite the shortcomings, the current study contributes to the body of existing literature and provides several implications.

First, this research disclosed unique dynamics of the dual-earner couples' interactions both in terms of time use and daily emotional experiences. In examining housework and childcare together, it provided a comprehensive understanding of the dual-earner couples' time use of the domestic domain, besides paid working hours.

Second, although the importance of the timing of the activity is recognized, studies with a timeline approach are not affluent. While analyzing the timing of the activity, this study discovered a pattern in dual-earner couples' time use in daily life. With the timeline approach, this study also identified when dual-earner couples synchronize certain activities.

Third, by investigating synchronized housework and childcare, it was able to provide information on what influences couples' synchronized time. Further, this study disclosed that couples' synchronized housework and childcare time is related to their daily emotional experiences and that the association between synchronized time and daily emotional experiences differs by gender.

In conclusion, it is hoped that studies of time use were expanded beyond an individual level to the couple level and presented couples' interactions through the couples' time use. The findings from this research can be used as evidence to establish family-related policies or suggestions for time use at the couple or family level.

Appendix

Below table shows a detailed description of time spent in each sub-category of housework and childcare.

Dual-earner couples' average time use in sub-categories

(Unit: Minute)

Category	Subcategory	Weekdays		Weekends	
		Husbands (n=307)	Wives (n=307)	Husbands (n=193)	Wives (n=193)
House -work	Meal preparation and dishwashing	10.07	52.54	22.90	87.43
	Laundry	2.12	10.53	3.39	29.05
	Cleaning	9.54	22.01	27.87	37.42
	Home maintenance	0.25	0.07	0.55	0.11
	Car maintenance	0.14	0.25	0.38	0.00
	Shopping	4.38	14.80	21.53	33.66
	Budget and others	0.56	0.53	1.31	1.47
	Net	27.07	100.74	77.92	181.97
Child -care	Physical care	18.27	52.12	32.18	54.64
	Studying & discipline	4.91	16.71	5.41	11.09
	Reading & Conversation	4.56	13.85	7.05	11.04
	Playing & sports	12.93	18.34	26.01	18.41
	School visits or meeting teachers	1.98	8.97	1.91	5.19
	Other activities	3.96	15.41	5.96	13.33
	Traveling for childcare	6.36	14.24	5.35	9.89
	Net	36.71	97.59	68.96	87.76

References

Adams, J. S. (1965). Inequity in social exchange. In L. Berkowitz (Ed.), *Advances in experimental social psychology*.

Adams, J. S. (1965). Inequity in social exchange. In L. Berkowitz (Ed.), *Advances in experimental social psychology*.

An, M. Y. (2021). Basic income and wives' and husbands' housework time. *Journal of Asian sociology*, 50(2), 465-486.

Barnet-Verzat, C., Pailhé, A. & Solaz, A. (2011). Spending time together: the impact of children on couples' leisure synchronization. *Review of Economics of the Household*, 9(4), 465-486. <https://doi.org/10.1007/s11150-010-9112-3>

Bernard, J. (1972). *The future of marriage*. New Haven. CT: Yale University Press.

Bianchi, S. M., Sayer, L. C., Milkie, M. A., & Robinson, J. R (2012). Housework: Who did, does or will do it, and how much does it matter? *Social Forces*, 91, 55-63. <https://doi.org/10.1093/sf/sos120>

Bianchi, S. M., Milkie, M. A., Sayer, L. C. & Robinson, J. P. (2000). Is anyone doing the housework? Trends in the gender division of household labor. *Social Forces*, 79(1), 191-228.

Bittman, M. England, P., Sayer, L., Folbre, N. & Matheson, G. (2003). When does gender trump money? Bargaining and time in household work. *The American Journal of Sociology*, 109(1), 186-214. <https://doi.org/10.1086/378341>

Buunk, B. P., & Schaufeli, W. B. (1999). Reciprocity in interpersonal relationships: An evolutionary perspective on its importance for health and well-being. *European review of social psychology*, 10(1), 259-291.

Canary, D. J., & Stafford, L. (1992). Relational maintenance strategies and

equity in marriage. *Communication Monographs*, 59, 243–267.

Cai, L. & Lee, K. Y. (2004). A study of dual-earner couples' household work time and life satisfaction. *Korean Home Management Association*, 22(5), 265-281.

Carriero, R. (2011). Perceived fairness and satisfaction with the division of housework among dual-earner couples in Italy. *Marriage & Family Review*, 47(7), 436-458. <https://doi.org/10.1080/01494929.2011.619299>

Carriero, R., Ghysels, J. & Van Klaveren, C. (2009). Do parents coordinate their work schedules? A comparison of Dutch, Flemish, and Italian dual-earner households. *European Sociological Review*, 25(5), 603-617.

Chang, M. & Han, G. H. (2015). A typology of dual-earner families using work · family · leisure time ratio and the differences in the daily emotional experiences between husbands and wives. *Family and Culture*, 27(2), 98-129.

Collins, A. C. (2004). *Husbands at home: Determinants of paternal involvement in single-earner and dual-earner families*. Unpublished doctoral dissertation. The University of Minnesota.

Craig, L. (2006). Does father care mean fathers share? A comparison of how mothers and fathers in intact families spend time with children. *Gender and Society*, 20, 259-281. <https://doi.org/10.1177/089124320528521>

Cornwell, B. & Warburton, E. (2014). Work schedules and community ties. *Work and Occupations*, 41(2), 139-174. <https://doi.org/10.1177/0730888413498399>

Craig, L. & Powell, A. (2012). Dual-earner parents' work-family time: the effects of atypical work patterns and non-parental childcare. *Journal of Population Research*, 29(3), 229-247. <https://doi.org/10.1007/s 12546-012-9086-5>

Davis, S. & Greenstein, T. (2004). Cross-national variations in the

division of household labor. *Journal of Marriage and Family*, 66(5), 1260-1271.
<https://doi.org/10.1111/j.0022-2445.2004.00091.x>

Davidson, B. (1984). A test of equity theory for marital adjustment. *Social Psychology Quarterly*, 36-42.

DeMaris, A. (2010). The 20-year trajectory of marital quality in enduring marriages: Does equity matter? *Journal of Social and Personal Relationships*, 27, 440–471. doi:10.1177/0265407510363428

DeMaris, A., & Longmore, M. A. (1996). Ideology, power and equity: Testing competing explanations for the perception of fairness in household labor. *Social Forces*, 74, 1043–1071. doi:10.2307/ 2580392

DePasquale, N, Mogle, J., Zarit, S. H., Koechukwe, Ca., Kossek, E. E., Almeida, D. M.. (2018). The family time squeeze: Perceived family time adequacy buffers work strain in certified nursing assistant with multiple caregiving roles. *The gerontologist*, 58(3), 546-555.

Eun, K. S. (2009). Household division of labor for married men and women in Korea. *Korea Journal of Population Studies*, 32(3), 145-171.

Fahlén, S. (2016). Equality at home – A question of career? Housework, norms, and policies in a European comparative perspective. *Demographic research*, 35(48), 1411-1440. Doi: 10.4054/DemRes.2016.35.48

Fanelli, E. & Profeta, P. (2021). Fathers' involvement in the family, fertility, and maternal employment: Evidence from Central and Eastern Europe. *Demography*, 58(5), 1931-1954. Doi.org/10.1215/00703370-9411306

Ferree, M. M., Lorber, J. & Hess, B. B. (1999). *Revisioning gender*. Altamira Press.

Flood, S. M. & Genadek, K. R. (2016). Time for each other: Work and family constraints among couples. *Journal of Marriage and Family*, 78(1), 142-

Freedman, V. A., Stafford, F., Schwarz, N. Conrad, F. & Cornman, J. C. (2012). Disability, participation, and subjective wellbeing among older couples. *Social Science & Medicine*, 74(4), 588-596. <https://doi.org/10.1016/j.socscimed.2011.10.018>

Fuwa, M. (2004). Macro-level gender inequality and the division of household labor in 22 countries. *American Sociological Review*, 69(6), 751-767. <https://doi.org/10.1177/000312240406900601>

Fuwa, M. & Cohen, P. N. (2007). Housework and social policy. *Social Science Research*, 36(2), 512-530. <https://doi.org/10.1016/j.ssresearch.2006.04.005>

Gager, C. T., & Sanchez, L. (2003). Two as one? Couples' perceptions of time spent together, marital quality, and the risk of divorce. *Journal of Family Issues*, 24, 21-50.

Genadek, K. R., Flood, S. M., & Garcia Roman, J. (2016). Trends in spouses' shared time in the United States, 1965-2012. *Demography*, 53(6), 1801-1820. <https://doi.org/10.1007/s13524-016-0512-8>

Gershuny, J., Godwin, M., & Jones, S. (1994). The domestic labour revolution: a process of lagged adaptation. *The social and political economy of the household*, 151-97.

Goldscheider, F., Bernhardt, E., and Lappegård, T. (2015). The gender revolution: A framework for understanding changing family and demographic behavior. *Population and Development Review* 41(2): 207-239. [doi:10.1111/j.1728-4457.2015.00045.x](https://doi.org/10.1111/j.1728-4457.2015.00045.x)

Grossbard-Shechtman, A. (1984). A theory of allocation of time in markets for labour and marriage. *The Economic Journal*, 94(376), 863-882. <https://doi.org/10.2307/2232300>

Guerrero, L. K., La Valley, A. G., & Farinelli, L. (2008). The experience and expression of anger, guilt, and sadness in marriage: An equity theory explanation. *Journal of Social and Personal Relationships*, 25(5), 699-724.

Habib, K. M. N., Carrasco, J. A. & Miller, E. J. (2008). Social context of activity scheduling: Discrete-continuous model of relationship between "with whom" and episode start time and duration. *Transportation Research Record*, 2076(1), 81-87. <https://doi.org/10.3141/2076-09>

Hallberg, D. (2003). Synchronous leisure, jointness and household labor supply. *Labour Economics*, 10(2), 185-203. [https://doi.org/10.1016/S0927-5371\(03\)00006-X](https://doi.org/10.1016/S0927-5371(03)00006-X)

Hallberg, D. & Klevmarken, N. A. (2003). Time for children: A study of parent's time allocation. *Journal of Population Economics*, 16(2), 205-226.

Hamermesh, D. (2000). *Togetherness: Spouses synchronous leisure, and the impact of children*, NBER Working Paper (7455).

Han, B. Kim, J. & Timmermans, H. (2020). Turn taking behavior in dual earner households with children: A focus on escorting routines. *Transportation*, 47(1), 203-222. <https://doi.org/10.1007/s11116-018-9865-8>

Han, B. & Timmermans, H. (2019). Synchronization of home departure and arrival times in dual earner households with children: Panel regression model of time gaps. *Journal of Traffic and Transportation Engineering*, 6(5), 504-513.

Hatfield, E., & Traupmann, J. (1981). Intimate relationships: A perspective from equity theory. *Personal relationships*, 1, 165-178.

Hatfield, E., Walster, E. H., Walster, G. W., & Berscheid, E. (1978). *Equity: Theory and research*. Allyn and Bacon.

Helliwell, J., Layard, R. & Sachs, J. (2017) *World Happiness Report 2017*. New York: Sustainable Development Solutions Network.

Jenkins, S. P. & Osberg, L. (2004). Nobody to play with? The implications of leisure coordination. *Contributions to Economic Analysis*, 271, 113-145. [https://doi.org/10.1016/S0573-8555\(04\)71005-6](https://doi.org/10.1016/S0573-8555(04)71005-6)

Jeong, W. Y. & Park, S. H. (2019). A qualitative study on the difficulties of others experiencing 'Dokbak' parenting. *Journal of Learner-Centered Curriculum and Instruction*, 19(20). 711-733. Doi : 10.22251/jlcci.2019.19.20.711

Joo, I. H. (2018). The effects of husbands' doing housework on the couples' satisfaction about division of housework. *The Women's Studies*, 97(2), 141-166. <https://doi.org/10.33949/tws.2018.97.2.005>

Joo, I. H. & Choi, S. (2019). When a man helps a woman: The importance of time overlap in the division of housework within married couples. *Korean Journal of Sociology*, 53(2), 213-251. <https://doi.org/10.21562/kjs.2019.05.53.2.213>

Joo, I. H. & Joo, E. W. (2021). Paidwork, housework, carework, leisure time use effects on leisure satisfaction: focusing on dual earner couples' spouse effects. *Korea Journal of Population Studies*, 44(1), 109-133. <https://doi.org/10.31693/KJPS.2021.03.44.1.109>

Juster, F. T. & Stafford, F. P. (1985). *Time, goods, and well-being*. University of Michigan Press.

Kalmijn, M., & Monden, C. W. (2012). The division of labor and depressive symptoms at the couple level: Effects of equity or specialization?. *Journal of Social and Personal Relationships*, 29(3), 358-374.

Khan, V., Markopoulos, P., Eggen, B., Ijsselstein, W. & de Ruyter, B. (2008). Reconexp: a way to reduce the data loss of the experiencing sampling method. *Proceedings of the 10th international conference on Human computer interaction with mobile devices and services* (September 2008). 471-476, <https://doi.org/10.1145/1409240.1409316>

Kingston, P. W., & Nock, S. L. (1987). Time together among dual-earner couples. *American Sociological Review*, 52(3), 391–400. <https://doi.org/10.2307/2095358>

Kim, J. W. (2005). An empirical study on the dual burden of married working women: Testifying the adaptive partnership, dual burden and lagged adaptation hypotheses. *Korean Journal of Social Welfare*, 57(3), 51-72.

Kim, J. H. (2012). *A typology of dual-income family work-life by time allocation*. Unpublished doctoral dissertation. Seoul National University.

Kim, S. (2016). *Changes in unpaid work time and factors associated with the change: Analysis of Korean Time Use Survey data from 1999 to 2014*. Unpublished doctoral dissertation. Seoul National University.

Kim, S. (2017). How satisfied are they with husbands' sharing of domestic labor? Comparing couples from single-earner and dual-earner households. *Journal of Family Relations*, 22(3), 47-72. <https://doi.org/10.21321/jfr.22.3.47>

Kim, E., Shin, S. & Kim, J. (2021). Discourse analysis on ‘alone childrearing’: Focusing on newspaper articles. *The Journal of Eco-Early Childhood Education*, 20(4), 47-73.

Kimmel, J. & Connelly, R. (2007). Mothers' time choices: Caregiving, leisure, home production and paid work. *The Journal of Human Resources*, 42(3), 643-681. <https://doi.org/10.3368/jhr.XLII.3.643>

Klumb, P., Hoppmann, C. & Staats, M. (2006). Division of labor in German dual-earner families: Testing equity theoretical hypothesis. *Journal of marriage and family*, 68(4), 870-882.

Kwon, S. (2019). *Dual-earner couples' work arrangements and work-life balance in Korea: A person-centered approach*. Unpublished doctoral dissertation.

Seoul National University.

Kwon, S., Kim, H. & So, H. (2018). Father involvement in infant care in single-earner and dual-earner households: Time, place, and relational analysis. *Journal of Korean Home Management Association*, 36(4), 31-40. <https://doi.org/10.7466/JKHMA.2018.36.4.31>

Kwon, S., Kim, H. & So, H. (2019). Shared time spent for childcare: A comparison of shared childcare between single-earner and dual-earner couples. *Journal of Korean Home Management Association*, 37(2), 103-110. <https://doi.org/10.7466/JKHMA.2019.37.2.103>

Lan, J., Li, X., Cao, H., Zhou, N., Lin, Q., Deng, L., & Fang, X. (2017). Inequity of sacrifice and marital satisfaction in Chinese young couples. *Journal of family therapy*, 39. 169-192.

Lee, S. M. (1997) *A study on the time shared with family*. Unpublished doctoral dissertation. Seoul National University.

Lee, Y. H. (2012). A comparative study on time of child caring between father and mother. *Journal of Korean Council for Children & Rights*, 16(3), 471-495.

Lee, K. Y., Kim, O. S., Seo, C. W. & Lee, S. M. (1994). Time use of urban employed husbands and their wives. *Family and Environment Research*, 32(1), 31-46.

Lee, K. Y., Lee, H. A., Kim, O. S., Lee, Y. S., Cho, H. K., ... Han, Y. S. (2011). Time use of family housework and the influencing factors on it. *Journal of Korean Family Resource Management*, 15(2), 103-128.

Lee, S. & Lee, S. (2017). Do women's attitude to domestic works and self-perception of social norms enforce the gender division of housework?: Analysis of mediation effects using the theory of reasoned action. *Korean Journal of Family Social Work*, 58(0), 5-36. <https://doi.org/10.16975/kjfs.2017..58.001>

Lesnard, L. (2008). Off-scheduling within dual-earner couples: An unequal and negative externality for family time. *American Journal of Sociology*, 114(2), 447-490. <https://doi.org/10.1086/590648>

Lesnard, L., & Kan, M. Y. (2011). Investigating scheduling of work: a two-stage optimal matching analysis of workdays and workweeks. *Journal of the Royal Statistical Society: Series A (Statistics in Society)*, 174(2), 349-368.

Lesnard, L. & de Saint Pol, T. (2009). Patterns of workweek schedules in France. *Social Indicators Research*, 93(1), 171-176. <https://doi.org/10.1007/s11205-008-9384-7>

Lively, K. J., Steelman, L.C., & Powell, B. (2010) Equity, emotion, and household division of labor. *Social Psychology Quarterly* 73(4): 358–379.

Mannino, C. A. & Deutsch, F. M. (2007). Changing the division of household labor: A negotiated process between partners. *Sex Roles*, 56(5), 309-324. <https://doi.org/10.1007/s11199-006-9181-1>

Matias, M. & Fontaine, A. M. (2015). Coping with work and family: How do dual-earners interact? *Scandinavian Journal of Psychology*, 56(2), 212-222. <https://doi.org/10.1111/sjop.12195>

Matthingly, M. J. & Sayer, L. C. (2006). Under pressure Gender differences in the relationship between free time and feeling rushed. *Journal of Marriage and Family*, 68(1), 205-221. <https://doi.org/10.1111/j.1741-3737.2006.00242.x>

Milek, A., Butler, E. A., Bodenmann, G. (2015). The interplay of couple's shared time, women's intimacy, and intradyadic stress. *Journal of Family Psychology*, 29(6), 831-842.

Nomaguchi, K. M., Milkie, M. A. & Bianchi, S. M. (2005). Time strains and psychological well-being: Do dual-earner mothers and fathers differ? *Journal of Family Issues*, 26(6), 756-792. <https://doi.org/10.1177/0192513X05277524>

Qi, L. Li, H. & Liu, L. (2017). A note on Chinese couples' time synchronization. *Review of Economics of the Household*, 15(4), 1249-1262. <https://doi.org/10.1007/s11150-017-9365-1>

Rauch, C. (2021). Social inequalities and the desynchronization of sleep within couples. *Economie et Statistique*, 522-523, 81-104. <https://doi.org/10.24187/ecostat.2021.522d.2040>

Roxburgh, S. (2002). Racing through life: The distribution of time pressures by roles and role resources among full-time workers. *Journal of Family and Economic Issues*, 23, 121-145. <https://doi.org/10.1023/A:1015734516575>

Ruppanner, L., Brandén, M. & Turunen, H. (2018). Does unequal housework lead to divorce? Evidence from Sweden. *Sociology*, 52(1), 75-94. <http://doi.org/10.1177/0038038516674664>

Sayer, L. C., Bianchi, S. M., & Robinson, J. P. (2004). Are parents investing less in children? Trends in mothers' and fathers' time with children. *American Journal of Sociology*, 110, 1-43. <https://doi.org/10.1086/386270>

Sayer, L. C. & Fine, L. (2011). Racial-ethnic differences in U. S. married women's and men's housework: Valuing time. *Social Indicators Research*, 101(2), 259-265.

Schwanen, T. (2007). Gender differences in chauffeuring children among dual-earner families. *The Professional Geographer*, 59(4), 447-462.

Shelton, B. A. & John, D. (1996). The division of household labor. *Annual Review of Sociology*, 22(1), 299-322. <https://doi.org/10.1146/annurev.soc.22.1.299>

Son, M. G. (2005). Women's dual burden and the characteristics of their paid work time: Focusing on dual earner couples. *Korea Journal of Population Studies*, 28(1), 277-311.

Son, M. G. (2010). *맞벌이 부부의 일상생활시간과 가족공유시간*:

생활시간조사자료를 중심으로. Seoul Foundation of Women & Family.

Song, Y. J. (2011). Changes in parental time spent with children. *Korean Journal of Population Studies*, 34(2), 45-64.

Sprecher, S. (2011). The influence of social networks on romantic relationships: Through the lens of the social network. *Personal Relationships*, 18(4), 630-644.

Statistics Korea (2019). *2019 Korea Time Use Survey*.

Sullivan, O. (1996). The enjoyment of activities: Do couples affect each others' well-being? *Social Indicators Research*, 38(1), 81-102.

Sullivan, O., Billari, F.C., and Altintas, E. (2014). Fathers' changing contributions to child care and domestic work in very low-fertility countries: The effect of education. *Journal of Family Issues* 35(8): 1048-1065. doi:10.1177/0192513X14522241

Taylor, J. R., (2019). *Meaning, perception and decision-making: Examining divisions of housework in newly cohabitating dual-earner couples*. Unpublished doctoral dissertation. Arizona state university. US.

Thibaut, J. W., & Kelley, H. H. (1959). *The social psychology of groups*. New York: Wiley.

Vagni, G. (2019). Alone together: Gender inequalities in couple time. *Social indicators research*, 146, 487-509. <http://doi.org/10.1007/s11205-019-02135-7>

Vagni, G. (2022). From me to you: Time together and subjective well-being in the UK. *Sociology*, 56(2), 262-279. <https://doi.org/10.1177/00380385211033147>

Vagni, G. & Widmer, E. (2018). Couple time and partnership quality: an

empirical assessment using diary data. SocArXiv Papers, 2018. Doi: 10.31235/osf.io/k7nmx

Van Klaveren, C. & Van den Brink, H. M. (2007). Intra-household work time synchronization: Togetherness or material benefits? *Social Indicators Research*, 84(1), 39-52. <https://doi.org/10.1007/s11205-006-9072-4>

Voorpostel, M., van der Lippe, T., & Gershuny, J. (2009). Trends in free time with a partner, a transformation of intimacy? *Social Indicators Research*, 93, 165–169. <https://doi.org/10.1007/s11205-008-9383-8>

Walster, E., & Walster, G. W. (1975). Equity and social justice. *Journal of social issues*, 31(3), 21-43.

Walster (Hatfield), E., Traupmann, J., Sprecher, S., Utne, M., & Hay, J. (1985). Equity and intimate relations: Recent research. In W. Ickes (Ed.) *Compatible and incompatible relationships* (pp. 91–118). New York: Springer-Verlag.

Zhang, J., Timmermans, H. J. P. & Borgers, A. (2005). A model of household task allocation and time use. *Transportation Research Part B: Methodological*, 39(1), 81-95. <https://doi.org/10.1016/j.trb.2004.03.001>

국문초록

본 연구는 맞벌이 부부의 가사노동 및 자녀돌봄의 동기화 시간에 대해 살펴보고, 동기화 시간이 남편과 아내가 인지한 시간의 질에 영향을 미치는지를 살펴보고자 한다. 분석은 통계청에서 조사한 2019년 생활시간조사를 사용하였고, 20세 이상 59세 미만 부부 중 첫째 자녀 연령이 10세 미만인 전일제 맞벌이 부부 250쌍을 선정하였다. 남편 250명, 아내 250명으로 총 500명의 2일치 생활시간조사일지를 사용하여 분석에는 총 1,000개의 일지를 사용하였다.

우선 남편과 아내의 가사노동과 자녀돌봄 시간의 총량을 각각 살펴보았고, 그 다음 남편과 아내가 각각 인식한 동기화 시간을 살펴보았으며, 남편과 아내가 인식한 동기화 시간이 차이가 있는지를 확인하였다. 또한 각 행동이 언제 수행되었는지와 관련된 행위별 시간대 분석을 실시하였고, 가사노동 및 자녀돌봄의 동기화 시간에 영향을 미치는 요인에 대해 알아보았다. 마지막으로 가사노동 및 자녀돌봄의 동기화 시간이 남편과 아내가 각각 인지한 시간의 질에 영향을 미치는지를 1) 동기화를 하지 않는 부부; 2) 동기화 시간이 평균 이하인 부부; 3) 동기화 시간이 평균 이상인 부부로 나누어 살펴보았다. 시간의 질은 가사분담만족도와 기분상태로 측정하였다.

분석 결과는 다음과 같다. 첫째, 맞벌이 부부도 여전히 여성이 남성보다 더 많은 시간을 가사노동과 자녀돌봄에 할애하고, 남편이 유급노동에 더 많은 시간을 할애하는 것으로 나타났다. 가사노동과 자녀돌봄의 동기화 시간은 아내가 남편보다 조금 더 많다고 보고를 하였는데, 이는 아내가 수행하는 가사노동과 자녀돌봄의 총량이 남편보다 많은 것에서 기인한 것으로 해석할 수 있다.

둘째, 맞벌이 부부의 가사노동 및 자녀돌봄시간은 주중에는 주로 저녁 때 분포되어 있는데, 이는 낮 시간 동안에는 유급노동에 종사하기 때문인 것으로 예상할 수 있다. 동기화 시간 또한 주중에는 저녁 시간대에 주로 집중되어 있다. 남편과 아내 모두 주말에는 주중과 다른 양상

을 보였는데, 가사노동은 주말에 오전부터 저녁에 걸쳐 고르게 분산되어 있었고, 자녀돌봄은 낮 시간대보다는 오전 시간대와 저녁시간대에 집중되어 있었다. 보통 주중보다 주말에 동기화 시간이 더 많은 것으로 확인되었고, 주말에는 가사노동이 자녀돌봄보다 동기화 시간이 조금 더 많은 것으로 나타났다.

셋째, 동기화 시간에 영향을 미치는 요소를 살펴 본 결과, 남편과 아내가 가사노동 또는 자녀돌봄에 참여하는 시간이 증가하면 동기화 시간도 증가하는 것으로 나타났다.

마지막으로 가사노동과 자녀돌봄의 동기화시간과 남편과 아내의 하루의 정서경험의 관계를 살펴보았다. 동기화 시간과 하루의 정서경험의 관계는 1) 동기화 시간이 없는 집단, 2) 동기화 시간이 평균 미만인 집단, 3) 동기화 시간이 평균 이상인 집단의 세 집단으로 나누어 분석하였다. 분석 결과, 동기화 시간과 하루의 정서경험의 관계는 남편과 아내에게서 다르게 나타나는 것을 확인하였다. 우선, 가사노동과 자녀돌봄 시간의 총량이 증가하면 주중과 주말 모두 아내의 기분상태가 유의미하게 낮아지지만, 남편의 경우, 가사노동시간과 자녀돌봄시간은 기분상태에 유의미한 영향을 미치지 않았다. 주중에 가사노동과 자녀돌봄시간을 배우자와 동기화하면 동기화 시간이 평균 미만인 집단이 동기화 시간이 없는 집단에 비해 아내의 긍정적인 기분상태가 유의미하게 증가하는 것으로 나타났다. 동기화 시간이 평균 미만인 집단에서는 남편의 주말 기분상태가 동기화 시간과 정적인 관계가 있는 것으로 나타났다.

본 연구는 맞벌이 부부의 시간사용이 남편과 아내가 인지한 하루의 정서 경험에 영향을 미치는 것을 확인하였다. 부부의 시간 사용은 개개인의 시간사용뿐만 아니라 배우자의 시간사용 및 정서 경험에도 영향을 미치는 요소임을 본 연구를 통해 알 수 있었다. 배우자와 시간을 공평하게 사용한다고 생각하는 경우, 가사분담만족도 및 기분 상태가 정적인 관계가 있지만, 그렇지 않을 경우 긍정적인 경험이 감소하기도 한다. 이러한 시간사용과 하루의 정서 경험의 관계는 타인과의 관계에서보다 부부사이에서 더욱 뚜렷하게 나타나며, 이는 부부 사이에서도 공평한

시간 사용이 이루어져야 함을 보여준다. 가사노동의 공평한 분담이란, 반드시 남편과 아내가 가사노동 및 자녀돌봄시간을 동기화 해야 한다는 의미는 아니지만, 부부가 공평하게 분담할수록 동기화 시간도 증가함을 본 연구를 통해 알 수 있었다. 가사노동 및 자녀돌봄시간을 아내만 수행할 경우, 아내의 긍정적인 기분상태가 유의미하게 낮아지지만, 배우자와 동기화를 할 때 아내의 긍정적인 기분상태가 유의미하게 증가하는데, 이는 아내가 혼자서 가사노동 및 자녀돌봄을 수행하며 불공평하다는 느낌이 완화되는 것을 의미하기도 한다.

아내가 인지하는 공평성은 결혼의 질에도 영향을 미치는데, 본 연구를 통하여 배우자와 동기화 하는 가사노동 및 자녀돌봄시간은 아내의 기분상태와 정적인 관계가 있음을 확인하였고, 이는 곧 장기적인 결혼의 질에도 영향을 미칠 것으로 예상된다. 본 연구의 결과는 가족의 시간사용 관련 정책 및 일-가정 균형 관련 정책을 수립하는데 근거자료로 사용될 수 있을 것이다.

주제어: 부부의 시간사용, 동기화, 가사노동, 자녀돌봄, 부부 쌍 데이터, 기분 상태

학번: 2017-30462