Division of Labor and Marital Satisfaction in China and Taiwan

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Division of Labor and Marital Satisfaction in China and Taiwan

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A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the

Master of Science

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June 2013

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ABSTRACT

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There is evidence that household division of labor is associated with marital satisfaction among Chinese populations. However, little research has compared different Chinese societies, as well as non-rural and rural regions. This study compared the division of household labor, and its association with marital satisfaction, between China and Taiwan, between non-rural and rural regions, and between males and females using data from a large, multinational study of countries in East Asia. The moderating effect of gender role ideology was examined as a potential moderating variable, as well. Overall, division of household labor was significantly associated with marital satisfaction. However, gender role ideology was not a significant moderator. Invariance testing revealed no group differences, including China and Taiwan, rural and non-rural, and male and female, in the relationship between division of household labor and marital satisfaction. Additional analysis indicated that gender role ideology was a significant moderator for females in rural China.

Keywords: division of household labor, gender role ideology, marital satisfaction, China, Taiwan, non-rural, rural
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Introduction

Over the last few decades, there has been a considerable amount of research that has examined the division of household labor. This has proven to be an important line of research because perceived inequity in the division of labor has been shown to be predictive of lower marital satisfaction (Greenstein, 2009; Grote & Clark, 2001). For example, one longitudinal study of 181 couples in the U.S. showed that perceived inequity of division of labor predicted subsequent marital dissatisfaction, while controlling for earlier dissatisfaction (Grote & Clark, 2001).

The impact of inequitable division of household labor on marital satisfaction is important because there is a large research literature linking marital distress with lower levels of physical and mental health (Hollist, Miller, Falceto, & Fernandes, 2007; Sandberg, Yorgason, Miller, & Hill, 2012). For example, marital dissatisfaction has been linked to higher metabolic syndrome with higher blood pressure and elevated fasting glucose in women (Whisman, Uebelacker, & Settles, 2010) and higher rates of mood disorders, such as depression (Du Rocher Schudlich, Papp, & Cummings, 2011; Beach, Katz, Kim, and Brody, 2003). Also, research has been consistent in finding an association between marital distress and global measures of self-reported health (Ryff, Singer, Wing, & Love, 2001; Sandberg, Miller, Harper, Robila, & Davey, 2009).

In recent years, the examination of the division of household labor and its effect on marital satisfaction has been studied cross-culturally in many countries. One study (Greenstein, 2009) examined the division of labor in 30 countries and found that the cultural context of how each country viewed gender equity had a significant effect on the relationship between the division of labor and marital satisfaction. Perceived fairness of the division of labor was affected
by the cultural views of gender equity, which, in turn, affected how satisfied participants were in their marriages.

The research of the effect of division of labor on marital satisfaction has extended into China, as well (Pimentel, 2006; Xu & Lai, 2004). A study comparing three East Asian countries, Japan, China, and Korea, found that unequal division of labor was negatively associated with marital satisfaction in all three countries (Oshio, Nozaki, & Kobayashi, 2012). The Chinese sample in this study reported a tendency towards a more egalitarian division of household labor, and dual earner couples in China were more satisfied with the equity of the division of labor than those in Japan and Korea. Overall, men in China participated in household labor significantly more than those in Japan and Korea, although Chinese women still performed the majority of the housework.

Despite the progress made in understanding the division of household labor in China, two important questions remain unanswered. First, are there differences between two Chinese societies, China and Taiwan, in division of labor and its effect on marital satisfaction? Although China and Taiwan share a common heritage of Chinese culture, their history over the last century has been markedly different, with Taiwan being occupied by Japan from the late 1800’s to 1945, and the two countries experiencing different government structures and policies during the past 60 years (Thornton, Chang & Sun, 1984). Research on family processes, including the division of household labor has previously been conducted in China and Taiwan (Pimentel, 2000; Xu & Lai, 2004), but the studies have been conducted separately. Consequently, it is unknown whether or not research conducted in one of these regions can be generalized to the other.

Second, are there differences between urban and rural regions of China and Taiwan in the division of labor and its effect on marital satisfaction? Rural communities often have more
traditional attitudes than urban communities. Urban residents typically have greater education, higher employment, and better health insurance than rural residents (Fang, Chen, & Rizzo, 2009). In addition, relationships often tend to be simpler and emotionally close in rural communities (Wang, 2001; Zhang et al., 2011). With the urban population at 690.79 million and the rural population at 656.56 million at the end of 2011, China is almost evenly split between these two culturally different populations (FlorCruz, 2012). Earlier research (Pimentel, 2000; Pimentel, 2006) used exclusively urban Chinese samples in their research, and the large three nation analysis (Oshio et al., 2012) sampled both urban and rural regions in China, but they didn’t differentiate between the two samples. Likewise, a study of the division of labor and marital satisfaction in Taiwan combined rural and urban samples without differentiating the two samples (Xu & Lai, 2004). Consequently, it is unclear whether or not current findings about the division of labor and its effect on marital satisfaction can be generalized to rural regions in China and Taiwan.

Recognizing the lack of knowledge concerning potential differences between China and Taiwan, the purpose of this study was to compare the division of household labor in China and Taiwan using data from a large, multinational study of countries in East Asia. In addition, the study compared urban and rural differences in China and Taiwan. Gender and gender role ideology were also examined as moderating variables in the relationship between division of household labor and marital satisfaction.

**Literature Review**

**Traditional to Modern Family Life in Chinese Societies**

In traditional China, marriages were typically arranged and were a major part of the culture for all classes in Chinese society. Marriages were characteristically arranged on basis of
wealth and family status. In many of these relationships, the couple did not meet until their wedding day (Xu & Whyte, 1990). Once they were married, the husband and wife had set roles in the relationship that society placed upon them. Individual adjustment to each other was less important than adjustment to the family. Arranged marriages focused on combining two families into one (Lee, 1953).

Within the different relationships in traditional Chinese culture, the husband-wife relationship was low in importance compared to the other relationships. Confucius taught that there are five cardinal relationships, which has greatly influenced Chinese family relationships for centuries. These relationships are the Parent-Child relationship, the Ruler-Subject relationship, the Elder Brother-Younger Brother relationship, the Husband-Wife relationship, and the Friend-Friend relationship, which is the only relationship where equality and mutual trust exist (Chen & Li, 2007; Li & Chen, 2002; Ko, 2004). The husband-wife relationship was considered an extension of the existing family, which referred to the husband’s family. In traditional Chinese culture, women were expected to be subordinate to men. The wife was expected to be obedient not only to the husband, but to her in-laws, as well. One important aspect of the husband-wife relationship was the segregation of roles, with the husband as the breadwinner and the wife as the homemaker (Chang, 2011; Ko, 2004). Thus, Confucianism influenced gendered roles with the idea that men are supposed to be primarily outside of the home, while women stayed primarily in the home (Choi & Chen, 2006).

The glory or disgrace of an individual reflected heavily on the reputation of the entire family (Lee, 1953). Thus, obedience and respect was encouraged in these families, with personal desires becoming second to family needs and honor (Stacey, 1983; Yang, 1988; Deutsch, 2006). In addition, fulfilling traditional roles was often part of bringing respect and honor to the family.
In modern Chinese society, Western culture has influenced marital relationships, which has elevated them within the society and made them more central. In line with western culture, Chinese young people are moving towards autonomy, arranged marriage is decreasing, and the reason for marriage is moving towards being love matches. People are also getting married later, and there is a rise in the divorce rate (Shen, 2005; Xu & Lai, 2004).

However, Eastern concepts of family relationships still persist in the Chinese culture. Marriage and children are still highly valued in modern Chinese culture. In addition, the expectation of adult children honoring and caring for their elderly parents continues to be a strong norm (Shen, 2005). Lu (2009) found that parents incorporated collectivistic and individualistic ideas when socializing their children in Taiwan, suggesting that modern and traditional values are being combined in modern Taiwanese relationships. Younger urban residents are showing more independence, with a weaker association with filial piety, while the older generation maintains a strong belief in filial piety. Interdependence between family members, a traditional value in Chinese culture, still persists in Chinese culture, especially among the older generations (Lu, 2009; Yang, 1981).

Although these traditional values exist in China and Taiwan, recent history creates some distinct differences between these two Chinese societies. Taiwan began to be settled by people from Mainland China in the 1800s. From the late 1800’s until 1945, Taiwan was occupied by Japan. Then in 1949, Taiwan had a distinct political separation from China (Thornton, Chang & Sun, 1984). Taiwan’s open democratic structure has influenced family interaction and personal ideology, with women in Taiwan demonstrating more liberal views than those in China, for example (Chia, Allred & Jerzak, 1997). Although the core cultures of Taiwan and China are
influenced by Chinese values, these recent events have created unique aspects in the Chinese and Taiwanese culture.

**Rural vs. Urban China**

Urban residents of China experience greater advantages, including more education, higher employment, and better health insurance than rural residents (Fang, Chen, & Rizzo, 2009). Rural residents also do not receive as much social security benefits from the government, and they have lower living standards than their urban counterparts (Zhang et al., 2011). People with higher education in rural China are often attracted to the cities and move when able to do so due to income being on average of three times higher than rural households (Wang, 2012). This increases the disparity in education among these two populations (Wang, 2012). One study showed that urban residents performed significantly better in verbal fluency and learning than their rural counterparts (Gupta et al., 2011).

This disparity in China is heightened even more by government policies. Rural to urban migration was unrestricted in the early 1950’s (Hsu, 1985). However, from the mid-1950’s, rural to urban migration has been controlled under the *Hukou* system (the household registration system) to encourage the economic growth in rural communities (Hsu, 1985). Particularly since 1964, migration from countryside areas to cities has been restricted. This, coupled with the laws favoring urban residents, has widened the gap in social welfare and economic development between urban and rural Chinese (Wang, 2012).

Despite this divide in policy favoring urban residents, rural residents generally report more life satisfaction than urban residents. For example, even though rural residents receive less healthcare benefits than urban residents, rural patients are more satisfied with healthcare services (Yan, Wan, & Li, 2011). Interestingly, satisfaction with health care decreased with increased
education and income. Low-income rural residents were the most satisfied (Yan, Wan, & Li, 2011). In addition, research suggests that relationships in rural China are characterized as closer, simpler, and more emotionally connected than their urban counterparts (Wang, 2001; Zhang et al., 2011).

**Gender Role Ideology**

Beliefs concerning gender roles, whether egalitarian or traditional, play an important role in patterns in the division of labor, as well as its effect on marital satisfaction. In Taiwan, traditional living arrangements, meaning those that included the older generation, was associated with greater gendered division of labor, whereas nuclear family arrangements resulted in more equal division of labor (Sun, 2008). In contrast, nontraditional views tend to increase the likelihood of having an egalitarian relationship (Xu & Lai, 2002) which in turn can increase harmony, decrease discord, which will lead to increased marital quality (Xu & Lai, 2004). For individual households, the division of labor varies, depending on the level of adherence to traditional or egalitarian values. Taiwanese men with egalitarian ideals were more likely to participate in housework to a greater degree than more traditional men (Hu & Kamo, 2002). Another study of married people living in urban China found that both gender ideology and perceived equity in the division of household labor were significantly associated with marital quality (Pimentel, 2006).

There is evidence that gender role ideology is changing in China and Taiwan. Many believe that education and increased international contact has played a strong role in more Chinese individuals shifting to more egalitarian views of gender roles. Western ideals of egalitarianism have been transported to Taiwan by mediums such as international visits and mass media (Thornton & Lin, 1994; Xu & Lai, 2002). In modern Taiwan, highly educated middle
class males are beginning to recognize that women’s increased involvement outside the home necessitates new patterns in the gendered roles of the division of labor (Xu & Lai, 2002). Similarly, in urban China, increased exposure to egalitarian ideology has led to increases in egalitarian socialization in community education (Shu, 2004). Higher education, job status, and egalitarian views of gender roles has equated into more decision-making power for Chinese wives (Xu & Lai, 2002; Tang, 1999). A steady increase in education among women has led to a dramatic increase in urban Chinese women prescribing to egalitarian gender ideology (Shu, 2004).

**Division of Labor in Modern Chinese Societies**

In modern China, there remains a large discrepancy in the amount of household work performed by men and women. Chen (2005) reported that in China the average hours spent doing household labor per week in 1997 for men was 2.8 hours, while women spent more than five times as much time on household labor at 17.6 hours. Based on interview responses of 43 Chinese couples in urban China, Zuo and Bian (2001) found that, even though women may be working outside the home, the gendered roles of husband as breadwinner and wife as homemaker remained. The findings of the study suggested that women could work if they wanted to, but this did not require men to step out of their gendered role as breadwinner. Pimentel (2006) state that the percentage of Chinese wives doing housework alone is decreasing, but not to a degree where wives feel the division of labor is fair, thus affecting satisfaction in marriage. Thus, the inequalities in household labor still persist.

This discrepancy exists in Taiwan, as well. A study by Hu and Kamo (2002) found that Taiwanese married women were responsible for more than 70% of household duties. Tao’s (2011) study of 861 married males and 875 married females reported that 79% of the household
labor is performed by the females. Although the status of Taiwanese women is on the rise, they are still primarily responsible for a majority of household labor. This time spent on household labor can lead to women having an insignificant amount of leisure time for themselves (Tsai, 2010), which can, in turn, affect life satisfaction.

**Division of Labor and Marital Satisfaction**

**Western studies.** Western studies show both the perception and the reality that one spouse does more housework than the other affects satisfaction in marriage. Women doing relatively more housework than men has been correlated with a decrease in wives’ family life satisfaction (Greenstein, 2009). Grote and Clark (2001) used longitudinal data to show that earlier perceived unfairness in the division of household labor significantly predicted later marital dissatisfaction. Decreased marital satisfaction often has to do with spouses perceiving that their partner undervalues contribution to maintaining the household (Wilkie, Ferree, & Ratcliff, 1998). The perception that the division of household responsibilities is unfair leads to lower marital satisfaction for men and women (Lavee & Katz, 2002).

Perceptions of the unfairness of division of labor differ depending on what type of gender ideology one subscribes to. Often, more traditional wives avoid conflict surrounding the division of labor, believing it is their responsibility to fulfill these duties, even though they have feelings of discontent (Kluwer, Heesink, & Van De Vliert, 1997).

Dissatisfaction with the division of labor, and not just perceptions of the level of participation in housework, is also associated with increased marital discord. Suitor (1991) found that satisfaction with the division of labor predicted marital happiness and conflict, while controlling for age, education, and employment status. The conflict over dissatisfaction with division of labor can lead to destructive patterns, such as wife-demand/husband withdraw
interactions, which breeds contempt (Kluwer, Heesink, & Van De Vliert, 1997). Dissatisfaction with the division of labor also can lead to women perceiving more conflict, making it more likely for them to think of divorce (Cubbins & Vannoy, 2004).

**Studies in China and Taiwan.** Only a few studies have examined the relationship between division of household labor and marital satisfaction in Taiwan and China. In a study of 1,778 married couples in urban China, the division of household labor correlated strongly with wives’ marital satisfaction. Overall, wives’ marital satisfaction was lower when they had primary responsibility for performing household duties, while this did not seem to be a factor for men in rating the quality of their marriages. On the other hand, integrated sharing of household labor correlated with higher marital satisfaction among women (Pimentel, 2000). Additional analysis of the data indicated that the effect of division of labor on marital satisfaction differed based on the gender ideology of the women. Among older women, who generally had a more traditional gender ideology, division of labor was not associated with marital satisfaction. However, among younger women, who generally had a less traditional gender ideology, division of labor was associated with marital satisfaction (Pimentel, 2006). In another study utilizing responses from 2,287 Chinese participants, higher relative amounts of housework was predictive of lower marital satisfaction (Oshio et al., 2012).

In a Taiwan study utilizing both urban and rural samples of 446 married Taiwanese women and 481 married Taiwanese men, more egalitarian views of division of labor for both men and women were linked with higher marital quality. In particular, when men made an active effort to change their involvement in domestic labor to a nontraditional egalitarian way, higher levels of marital quality were reported (Xu & Lai, 2004).
Gender Differences. There is limited evidence suggesting that there are no gender differences in the relationship between division of household labor and marital satisfaction in Chinese societies. Oshio et al. (2012) found that, when controlling for gender by using females as a dummy variable, there were no significant differences between males and females in division of labor and marital satisfaction. The difference in marital satisfaction across gender only came as a result of unequal division of household labor. Xu and Lai (2004) also found that there was not a significant gender difference across gender on division of household duties and marital quality. In addition, although Pimentel (2000) does not explicitly test for gender differences, the study found that men and women were generally more satisfied with the division of household labor when they proscribed to more egalitarian gender role ideology, implying similarity across gender.

The purpose of this study was to compare patterns of the division of labor in China and Taiwan, as well as among urban and rural populations. In addition, the study examined the effect of the division of household labor on marital satisfaction in China and Taiwan, as well as among urban and rural populations. We examined how gender role ideology moderates the relationship between the division of household labor and marital satisfaction. With previous research suggesting that gender role ideology influences this relationship, specific research questions include:

1. Is there a difference in the time spent on the division of household labor between China and Taiwan?
2. Is there a difference in time spent on the division of household labor in urban and rural samples?
3. Is there a difference in gender role ideology between China and Taiwan?
4. Is there a difference in gender role ideology between rural and urban samples?

5. What is the effect of division of household labor on marital satisfaction and how does this relationship differ in China and Taiwan?

6. What is the effect of division of household labor on marital satisfaction and how does this relationship differ in urban and rural samples?

7. Is gender role ideology a moderating variable between division of household labor and marital satisfaction in China and Taiwan?

8. Is gender role ideology a moderating variable between division of household labor and marital satisfaction in urban and rural samples?

**Methods**

**Procedure**

The data used for this study came from the East Asian Social Survey (EASS) program (Yasuda et al., 2011). This project coordinates the collection of similar data from large, national studies in China (Chinese General Social Survey-CGSS), Japan (Japanese General Social Survey-JGSS), Korea (Korean General Social Survey-KGSS), and Taiwan (Taiwan Social Change Survey-TSCS). For the purposes of this study we only used the data from China and Taiwan.

The Chinese General Social Survey used four-stage Probability Proportional to Size (PPS) sampling to gather data. Fieldwork interviews were done from September to December in 2006. They used face-to-face interviewing, with the interviewers filling out the data forms for the interviewees. The original eligible sample size was 6,853 participants. After excluding those ineligible for the study and those who could not be reached for whatever reason, the sample size consisted of 3,208 participants, resulting in a 46.8% response rate. Due to the nature of the study,
The Taiwan Social Change Survey used three-stage stratified sampling to gather the data. Fieldwork interviews were done in one month from July 16 to August 16, 2006. They also used face-to-face interviews. The original eligible sample size was 2,867 participants. After excluding those who were ineligible for the study and those who could not be reached for whatever reason, the sample size consisted of 2,102 participants, resulting in a 73.3% response rate. Due to the nature of the study, only those who classified themselves as married and living with their spouse were included in these analyses, resulting in a final sample size of 1,281 married individuals. Thus, when combining the two samples, there were a total of 3,863 married individuals.

Sample Characteristics

The sample from China was 43.9% male and 56.1% female. As for education, 9.9% had no formal education, 80.0% had 12 years or less of formal education, 9.3% had between 13 to 16 years of formal education, and .8% had 17 years or more of formal education. The mean age was 44.4 years old, with a range of 20 to 69 years old.

The sample from Taiwan was 51.3% male and 48.7% female. As for education, 6.1% had no formal education, 66.6% had 12 years or less of formal education, 24.8% had between 13 to 16 years of formal education, and 2.5% had 17 years or more of formal education. The mean age was 49.7 years old. The age range of the participants was age 21 to 86 years old.

Measures

Division of household labor. Division of labor was measured using a three-item scale. Participants responded to the question, “How often do you do the following? a. Prepare the evening meal b. Do the laundry c. Clean the house.” They responded on a seven-point likert-type
scale ranging from “almost every day” to “never.” By our analysis, this scale showed high reliability for the China and Taiwan samples with Cronbach’s alphas of .91 and .88, respectively.

Gender role ideology. Gender role ideology was measured using a three-item scale. Participants responded to the question, “To what extent do you agree or disagree with each of the following statements? a. It is more important for a wife to help her husband’s career than to pursue her own career. b. A husband’s job is to earn money; a wife’s job is to look after the home and family. c. During economic recession, it is all right for women to be laid-off than prior to men” They responded on a seven-point Likert-type scale ranging from “Strongly agree” to “Strongly disagree.” Thus, higher scores on the scale represent a nontraditional gender role ideology. By our analysis, this scale showed modest reliability for the China and Taiwan samples with Cronbach’s alphas of .60 and .62, respectively.

Marital satisfaction. Marital satisfaction was measured using a single-item global marital satisfaction question, “Considering all things together, how would you describe your marriage? Would you say that you are very satisfied or dissatisfied with your marriage?”. Participants responded on a five-point Likert-type scale ranging from “very satisfied” to “very dissatisfied.”

Non-rural vs. rural region. In China, the size of the community was measured in seven different categories (above 4,000,000; 2,000,000-4,000,000; 1,000,000-2,000,000; 500,000-1,000,000; 200,000-500,000; under 200,000; rural area), with “rural area” being clearly designated in its own category. For the purposes of this study, we put the first six categories in the non-rural category and the one designated as “rural area” in the rural category. About two thirds (65.4%) of the final sample size for China fit in the non-rural category, while about one-third (34.6%) fit into the “rural area” category. As for Taiwan, the size of the community was
measured by four different categories (large cities, medium cities, small cities or town, rural areas), with “rural areas” being clearly designated in its own category. About 94.2% of the final sample size for Taiwan fit in the non-rural category, while about 5.8% fit into the “rural areas” category. In both Taiwan and China, the size of the community was determined by the interviewer.

**Control variables.** Age, education, and employment status have been shown to be predictors of marital satisfaction in US samples (Anderson, Van Ryzin, & Doherty, 2010; Karney & Bradbury, 2010). Therefore, they were included as control variables. Education was measured by reporting the number of years each respondent attended school. Age was measured by how old the respondents were at the time of the interview. Employment status was recoded into three categories: “full-time,” “part-time,” and “unemployed.”

**Analysis**

In the first stage of our analysis, we compared the division of household labor and gender role ideology between urban and rural samples separately for males and females, as well as for China and Taiwan, utilizing ANOVA. We also did a correlation analysis. We used Structural Equation Modeling (SEM) to examine how the division of household labor effects marital satisfaction in China and Taiwan. We also tested the moderating role of gender role ideology on the relationship between division of household labor and marital satisfaction using SEM. This was done by creating an interaction term that was the product of division of household labor and gender role ideology variables. In order to test invariance for differences between China and Taiwan, urban and rural samples, and gender, we used multi-group models. The statistical program, Mplus, was used to conduct the analysis (Muthén, & Muthén, 1998-2012). Maximum likelihood estimation was used to calculate means in cases of missing data (Byrne, 2001).
Results

Preliminary Results

Results of the correlation analysis (Table 1) showed that division of household labor was significantly correlated with marital satisfaction ($r = -.06, p < .01$) and gender ideology ($r = .05, p < .01$). However, gender ideology was not significantly correlated with marital satisfaction ($r = -.01, p = .57$). Among the control variables, age was significantly correlated with education ($r = -0.096, p < .01$), work status ($r = .261, p < .01$), division of household labor ($r = -.140, p < .01$), gender ideology ($r = -.183, p < .01$), and marital satisfaction ($r = -.044, p < .01$). Education was significantly correlated with work status ($r = -.046, p < .01$) and gender ideology ($r = .096, p < .01$). Work status was significantly correlated with division of household labor ($r = .038, p < .05$) and gender ideology ($r = -.120, p < .01$).

Table 1 about here

Comparison of means. Because of gender differences in levels of reports of division of labor and gender role ideology in past research (Chen, 2005; Hu & Kamo, 2002; Pimental, 2006), mean comparisons between the different groups (China and Taiwan, non-rural and rural China, and non-rural and rural Taiwan) were reported separately by gender. Two one-way between-subjects ANOVAs were conducted to compare the means of division of household labor and gender ideology between non-rural China, rural China, non-rural Taiwan, and rural Taiwan. The means for males and females on division of household labor and gender ideology, as well as significant mean score differences, using Tukey HSD, are reported in Table 2. Among the males,
there were significant differences in means of division of labor among the four groups \[ F(3, 1787) = 65.44, p < .01 \]. Post hoc analyses indicated that both groups in China (rural and non-rural) had higher levels participation in division of household labor than both groups in Taiwan. There were also significant differences among the males in the mean levels of gender role ideology \[ F(3, 1787) = 6.14, p < .01 \]. Post hoc analysis indicated that the rural China group had significantly lower levels of nontraditional gender role ideology than the non-rural China and non-rural Taiwan groups. Among the females, the means of division of household labor were significantly different \[ F(3, 2068) = 30.00, p < .01 \], with post hoc analysis indicating that both groups in China participating more than the Taiwan non-rural group. The females also reported different levels of gender role ideology \[ F(3, 2068) = 11.42, p < .01 \], with post hoc analysis indicating that the rural Taiwan group reporting the lowest level of nontraditional gender role ideology, the rural China group reported the next lowest level, and the two non-rural groups reporting statistically equivalent levels.

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Table 2 about here

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**Path Model Results**

To test for Goodness-Of-Fit, we used a model using gender role ideology as a control variable because we cannot get fit indices when testing interaction effects. The goodness of fit analysis from that model showed that the data generally fit the model well. The chi-square value was 115.990 \( (df = 24, p < .01) \), the Tucker Lewis Index (TLI = .980) and the Comparative Fit Index (CFI = .989) were above the cutoff score of .95. Also, the Root Mean Square Error of
Approximation (RMSEA = .031) was below .06, and the Standardized Root Mean Square Residual (SRMR = .018) was below .08.

Overall results. Because standardized results are not available in Mplus when including an interaction effects in the model, all coefficients are unstandardized coefficients (Muthén & Muthén, 1998-2012). Results using the overall sample indicated that division of household labor was a significant predictor for our outcome of marital satisfaction ($\beta = -.04, p < .01$). However, the moderating path of gender role ideology was not significant ($\beta = .001, p = .58$). Among the control variables, age was significantly correlated with division of household labor ($\beta = -2.94, p < .01$) and gender ideology ($\beta = -2.21, p < .01$), and work status was significantly correlated with division of household labor ($\beta = .06, p < .01$) and gender ideology ($\beta = -.11, p < .01$). Education was significantly correlated with gender ideology ($\beta = 1.10, p < .01$), but not division of household labor ($\beta = -.19, p = .48$).

Results of invariance testing. We tested differences between groups (e.g. Taiwan vs China and rural vs. non-rural). This was done by testing for measurement invariance and then for structural invariance between paths. Vandenberg and Lance (2000) state that measurement invariance testing must be done before testing structural invariance across groups to avoid misinterpretations of data. Because invariance could not be computed on interaction effects (Muthén & Muthén, 1998-2012), the structural invariance test was done on the model where gender ideology was used as a control variable.
China vs. Taiwan. Results indicated that partial measurement invariance was found when comparing the China and Taiwan samples for division of household labor and complete measurement variance was found for gender ideology. The chi-square difference between the unconstrained model and the one with the factor loadings constrained to be equal for division of household labor was 2.069 ($df = 2, p = .36$). When constraining the intercepts, the difference was 339.021 ($df = 3, p < .01$). The chi-square difference between the unconstrained model and the one with the factor loadings constrained to be equal for gender role ideology was 6.653 ($df = 2, p < .05$). When the paths were constrained to be equal, the only significant chi-square difference was when we constrained the correlation between division of household labor and gender ideology ($\chi^2 = 8.953, df = 1, p < .01$), while the regression path between division of labor to marital satisfaction was not significant ($\chi^2 = .024, df = 1, p = .88$). For China, a one unit increase in the interaction of division of labor with gender ideology equated in a .009 unit decrease in marital satisfaction ($p = .40$). For Taiwan, a one unit increase in the interaction of division of labor with gender ideology equated in a .018 unit decrease in marital satisfaction ($p = .37$).

Non-rural vs. rural China. Results indicated complete measurement variance for the constructs of division of household labor and gender ideology with chi-square difference scores of 18.617 ($df = 2, p < .01$) and 8.724 ($df = 2, p < .05$), respectively. The structural portion of the model showed no variance, with chi-square difference scores of .358 ($df = 1, p = .55$) for the regression path of division of labor to marital satisfaction and 3.414 ($df = 1, p = .06$) for the correlation between division of labor and gender ideology.

Non-rural vs. rural Taiwan. Complete measurement invariance was found for division of household labor between non-rural and rural Taiwan ($\chi^2 = 6.027, df = 8, p = .64$). For gender ideology the chi-square difference between the unconstrained model and the model with factor
loadings constrained was 2.855 ($df = 2, p = .24$). Partial measurement invariance was found when constraining intercepts ($\chi^2 = 6.027, df = 3, p < .01$). The structural portion of the model showed invariance with chi-square difference scores of 2.010 ($df = 1, p = .16$) for the regression path of division of labor to marital satisfaction and 1.031 ($df = 1, p = .31$) for the correlation of division between labor and gender ideology.

Thus, the tests of invariance found that there were no differences in the path between division household labor and marital satisfaction when comparing samples from China and Taiwan, rural and non-rural China, and rural and non-rural Taiwan. Comparing the relationship between division of household labor and gender role ideology found only one difference, with the relationship being different among the China and Taiwan samples. However, although, the correlations were statistically different, both correlations failed to reach the level of statistical significance.

**Mean Gender Differences**

Means for males and females are reported in Table 2. Utilizing one-way ANOVAs, we determined how significantly different the mean scores of males and females were on division of household labor and gender ideology within each subpopulation (non-rural China, rural China, non-rural Taiwan, and rural Taiwan). In every subpopulation, males and females were significantly different on mean scores of division of household labor, with females reporting higher levels of participation. As for mean scores of gender ideology, only males and females in rural China and non-rural Taiwan were significantly different, with females reporting greater levels of nontraditional gender role ideology.
Gender Tests of Invariance

**Non-rural China.** Results showed that the chi-square difference between the unconstrained model and the model with factor loadings constrained of the latent variables of division of household labor and gender ideology were `.894 (df = 2, p = .64) and 3.726 (df = 2, p = .16)`, respectively. Partial measurement invariance was found when constraining intercepts; the chi-square value for division of household labor and gender ideology increased by 561.390 (df = 3, p < .01) and 30.160 (df = 3, p < .01). In the structural portion of the model, no significant variance was found in the chi-square differences for the regression path of division of household labor to marital satisfaction (\(\chi^2 = .887, df = 1, p = .35\)), and the correlation path of gender ideology and division of household labor (\(\chi^2 = 1.591, df = 1, p = .21\)).

**Rural China.** Results showed that measurement variance was found across gender in the chi-square difference between the model with no constraints and the model with constrained factor loadings of division of household labor (\(\chi^2 = 22.135, df = 2, p < .01\)). Partial measurement invariance was found in gender ideology because constraining factor loadings (\(\chi^2 = 4.389, df = 2, p = .11\)) showed no significant difference, while constraining intercepts (\(\chi^2 = 8.189, df = 3, p < .05\)) did. In the structural portion of the model, the chi-square difference test found no significant variance for the regression path of division of household labor to marital satisfaction (\(\chi^2 = 2.513, df = 1, p = .11\)), while the correlation path of gender ideology and division of household labor showed significant variance (\(\chi^2 = 5.125, df = 1, p < .05\)) across gender. Results showed that a one unit increase in the interaction of division of household labor with gender ideology, meaning more participation in household labor and more egalitarian gender beliefs equated in a .02 (\(p = .06\)) unit increase of marital satisfaction for men and a .12 (\(p < .05\)) unit decrease in marital satisfaction for women.
**Non-rural Taiwan.** Results showed that measurement variance was found across gender in the chi-square difference between the model with no constraints and the model with constrained factor loadings of division of household labor ($\chi^2 = 15.737$, $df = 2$, $p < .01$) and gender ideology ($\chi^2 = 6.179$, $df = 2$, $p < .05$). In the structural portion of the model, the chi-square difference showed no significant variance for the regression path of division of household labor to marital satisfaction ($\chi^2 = .803$, $df = 1$, $p = .37$), while the correlation path of gender ideology and division of household labor showed significant variance ($\chi^2 = 25.716$, $df = 1$, $p < .01$) across gender. Results showed that a one unit increase in the interaction of division of household labor with gender ideology, meaning more participation in household labor and more egalitarian gender beliefs equated in a .01 ($p = .76$) unit increase of marital satisfaction for men and a .05 ($p = .24$) unit decrease in marital satisfaction for women.

**Rural Taiwan.** Results showed that partial measurement invariance was found in division of household labor because constraining factor loadings ($\chi^2 = .820$, $df = 2$, $p = .37$) showed no significant difference, while constraining intercepts ($\chi^2 = 56.040$, $df = 3$, $p < .01$) did. On the other hand, gender ideology was invariant in terms of factor loadings and intercepts ($\chi^2 = 2.148$, $df = 13$, $p = .9997$). No structural variance was found across gender for the regression path of division of household labor to marital satisfaction ($\chi^2 = .198$, $df = 1$, $p = .66$) and the correlation path of gender ideology with division of household labor ($\chi^2 = 1.009$, $df = 1$, $p = .32$).

Thus, findings indicated that there were no gender differences in the path between division of household labor and marital satisfaction in any of the four regions. However, there were gender differences in the relationship between division of household labor and gender role ideology, with gender differences found in the rural China and non-rural Taiwan samples.
Discussion

Using the overall sample, division of household labor was a significant predictor of marital satisfaction. Thus, for the overall sample, married individuals from China and Taiwan had lower marital satisfaction with the more housework they performed. This relationship did not significantly differ between China and Taiwan or between rural and non-rural samples within each society. Past research has provided evidence that overall, division of household labor is associated with marital satisfaction (Pimentel, 2000; Pimentel, 2006; Oshio, Nozaki, & Kobayashi, 2012; Xu & Lai, 2004). The results from this study expand on previous findings by providing evidence that the relationship between division of household labor and marital satisfaction remains significant, regardless of whether or not the population is in China or Taiwan, in addition to whether or not it is in a rural or non-rural setting.

In addition, the overall findings suggested that on average there was no evidence that gender role ideology was a significant moderator in the relationship between division of household labor and marital satisfaction. Moreover, the relationship between gender role ideology and division of labor was nonsignificant in rural China, non-rural China, rural Taiwan, and non-rural Taiwan. This is surprising considering that men with more egalitarian views tend to do more housework (Hu & Kamo, 2002), and women who proscribe to more egalitarian ideology are significantly more satisfied in the perceived equity of division of labor (Pimentel, 2006).

There were differences in the mean levels of division of household labor among men, with those from China having significantly higher levels of participation than those living in Taiwan. There were also differences in the mean levels of gender role ideology, with the rural China group having significantly lower levels on nontraditional ideology than the non-rural
China and non-rural Taiwan groups. The men living in rural Taiwan actually had a lower mean level than the rural China men, but a large standard deviation and small sample size prevented the differences between the rural Taiwan group and the two non-rural groups from being statistically significant. Thus, these results suggest that, Chinese men participated in household work more than Taiwan men, while non-rural men living in China and Taiwan had significantly higher levels of nontraditional gender role ideology than rural men living in either country.

Similarly, there were significant differences in the mean levels of division of household labor and gender role ideology among women based on where they lived. Women from either group in China reported more participation than those in non-rural Taiwan. In addition, those living in either rural Taiwan or rural China had lower levels of nontraditional gender role ideology than those living in non-rural areas.

Thus, the results from the comparison on levels of participation in household work suggest that men and women living in China had higher levels of participation than those living in Taiwan. In regards to gender role ideology, the main difference was between rural and non-rural groups, with non-rural men and women generally having higher levels of nontraditional gender role ideology. This latter finding is consistent with research that has found that education plays an important part in gender ideology with more education typically being associated with more egalitarian gender ideology (Xu & Lai, 2002; Tang, 1999), and those who live in more urban settings have more opportunity for education (Fang, Chen, & Rizzo, 2009; Wang, 2012). Despite these mean differences, though, higher levels of participation in household work was consistently associated with lower levels of marital satisfaction across all groups.
Gender Differences

There was a significant difference between males and females in the division of household labor, with males reporting doing less housework than females. This is consistent with previous research that has found that females consistently perform more household labor than males in Chinese societies (Chen, 2005; Hu & Kamo, 2002; Pimentel, 2006). However, gender role ideology was only significantly different between males and females within the subpopulations of rural China and non-rural Taiwan. For these two subpopulations, women subscribed to more egalitarian gender role ideology, on average, than men. This is no surprise considering that past research has shown that women typically show more egalitarian gender role ideology than men in Chinese societies (Hu & Kamo, 2002; Pimentel, 2006). Rural Taiwan may not have shown significant differences due to the small sample size. Non-rural China did show difference with women being more egalitarian than men; however, it was not statistically significant.

Findings indicated that there were no gender differences in the path between division of household labor and marital satisfaction. These results are consistent with other studies that have found no differences in the relationship between division of labor and marital relationships in China and Taiwan (Oshio, Nozaki, & Kobayashi, 2012; Xu & Lai, 2004). When looking at gender ideology as a moderator of the division of labor and marital satisfaction across gender for rural China, men were trended towards significance in being more satisfied when they performed more housework and proscribed to more egalitarian gender beliefs, while rural Chinese women were significantly less satisfied when they showed likewise. This is consistent with the literature has found that men are more likely to participate in household labor when they proscribe to more egalitarian beliefs (Hu & Kamo, 2002) and that women are more likely to be dissatisfied when
they have more egalitarian beliefs and perceive the division of household labor as unfair (Pimentel, 2006).

**Clinical Implications**

When working with clients from Chinese societies, it is important for clinicians to understand how couples view the fairness of the division of labor in the couple system. This study found substantial evidence that the amount of work that married individuals in Taiwan and China perform doing household labor is associated with lower levels of marital satisfaction. Thus, couples that come from collectivistic societies are also negatively affected by perceptions of an inequitable division of labor.

Systems theory postulates that an organism operates according to the context within he or she lives (Trop, Burke, & Trop, 2013). It is within this system that background and culture influence actions. Geist and Cohen (2011) found support for the idea that as a world culture, we are moving towards greater gender equality. It does not translate over into the division of all tasks being exactly equal, but in a general sense of equality of beliefs existing in marriage. By all appearances, even the most egalitarian countries in Geist and Cohen’s sample (2011), women maintained primary responsibility for household tasks, even while maintaining egalitarian beliefs. Because cultural beliefs are moving towards more egalitarian beliefs, family systems are changing according to these beliefs. It is therefore important for clinicians to assess how couples view their roles in the division of household labor.

According to feminist couple therapy, it is important to address patriarchy in the practice of therapy with couples to address power differences between each partner (McGeorge, Carlson, & Toomey, 2013). Gendered power hierarchy has a great pull on marriages and can be a source of tension and conflict (Quek, Knudson-Martin, Rue, & Alabiso, 2010). When working with
couples from Chinese societies, it is important to understand gendered power rules in the couple system and how this will affect treatment. Clinicians need to understand the clients’ context in terms of culture, gendered power, and family rules in order to completely understand how the system returns to homeostasis. Also, based on the results of this study, clinicians need to assess the gender role ideology of the clients and how that affects how they see the division of household labor.

**Limitations and Future Directions**

One limitation of this study is that the rural Taiwanese sample was small, with less than 100 individuals in that category. A larger sample of rural Taiwanese married adults would have improved the robustness of the findings. Also, the conclusions of the study are limited by its cross-sectional design, which precluded temporal sequencing between the independent variable, division of household labor and the dependent variable, marital satisfaction. Future studies of a longitudinal design would add to the results of this study.

Also, the participants of this study were not married to each other. A study using dyadic data would add another level to this research that this study was not able to reach. Finally, both the division of household labor and gender role ideology were measured by three items each, making these measures particularly “thin”. In order to increase the quality of future studies using non-rural and rural data it would be better for these concepts to be measured with more empirically tested scales.

**Conclusion**

This study found that, on average, in the whole sample and in each subsample, the number of hours of household labor is negatively associated with marital satisfaction. Also, in the whole sample and each subsample, women performed more housework than men. Gender
role ideology was not a significant moderator in this study, except within the rural Chinese sample.
References


Table 1

*Correlations of Overall Model for Age, Education, Work Status, Division of Household Labor, Gender Ideology, and Marital Satisfaction*

<table>
<thead>
<tr>
<th></th>
<th>Mean (SD)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age</td>
<td>46.18 (12.68)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Education</td>
<td>10.33 (12.03)</td>
<td>-0.096**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Work Status</td>
<td>1.46 (.80)</td>
<td>0.261**</td>
<td>-0.046**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Division of Labor</td>
<td>5.39 (1.82)</td>
<td>-0.140**</td>
<td>-0.017</td>
<td>0.038*</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Gender Ideology</td>
<td>3.81 (1.09)</td>
<td>-0.183**</td>
<td>0.096**</td>
<td>-0.120**</td>
<td>0.054**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>6. Marital Satisfaction</td>
<td>3.95 (.72)</td>
<td>-0.044**</td>
<td>0.013</td>
<td>-0.026</td>
<td>-0.062**</td>
<td>-0.009</td>
<td>1</td>
</tr>
</tbody>
</table>

*Note:* **p < .01, * p < .05
Table 2

ANOVA results of division of household labor and gender ideology for Non-rural and Rural China and Taiwan, reported separately by gender

<table>
<thead>
<tr>
<th>Population</th>
<th>Male Mean (SD)</th>
<th>Female Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Division of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household Labor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. China Non-rural</td>
<td>4.68&lt;sup&gt;a,b&lt;/sup&gt; (1.66)</td>
<td>6.54&lt;sup&gt;c&lt;/sup&gt; (1.84)</td>
</tr>
<tr>
<td>b. China Rural</td>
<td>4.53&lt;sup&gt;c,d&lt;/sup&gt; (1.76)</td>
<td>6.58&lt;sup&gt;c&lt;/sup&gt; (1.87)</td>
</tr>
<tr>
<td>c. Taiwan Non-rural</td>
<td>3.46&lt;sup&gt;a,b&lt;/sup&gt; (1.81)</td>
<td>6.11&lt;sup&gt;a,b&lt;/sup&gt; (1.20)</td>
</tr>
<tr>
<td>d. Taiwan Rural</td>
<td>3.12&lt;sup&gt;a,b&lt;/sup&gt; (1.81)</td>
<td>6.22 (1.32)</td>
</tr>
<tr>
<td>Total</td>
<td>4.19 (1.83)</td>
<td>6.42 (.99)</td>
</tr>
<tr>
<td>Gender Role</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ideology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. China Non-rural</td>
<td>3.80&lt;sup&gt;b&lt;/sup&gt; (1.95)</td>
<td>3.90&lt;sup&gt;b,c,d&lt;/sup&gt; (1.02)</td>
</tr>
<tr>
<td>b. China Rural</td>
<td>3.57&lt;sup&gt;a,c&lt;/sup&gt; (1.94)</td>
<td>3.70&lt;sup&gt;a,c,d&lt;/sup&gt; (1.03)</td>
</tr>
<tr>
<td>c. Taiwan Non-rural</td>
<td>3.78&lt;sup&gt;b&lt;/sup&gt; (1.17)</td>
<td>4.01&lt;sup&gt;b,d&lt;/sup&gt; (1.30)</td>
</tr>
<tr>
<td>d. Taiwan Rural</td>
<td>3.46 (1.32)</td>
<td>3.17&lt;sup&gt;a,b,c&lt;/sup&gt; (1.28)</td>
</tr>
<tr>
<td>Total</td>
<td>3.73 (1.04)</td>
<td>3.87 (1.12)</td>
</tr>
</tbody>
</table>

Note: Letter designations indicate the means that are significantly different at \( p < .01 \) (* indicates significance at \( p < .05 \) )
Figure 1

*Structural Model for Division of labor, Age, Education, Work Status, Gender Role Ideology, and Marital Satisfaction*