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Individual's gender ideology and happiness in China

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Abstract

Gender ideologies encompass normative beliefs about how men and women should behave in certain contexts. Although many studies have examined factors predicting individuals' gender ideologies, little research has focused on the implications of gender ideology on individuals' subjective well-being, especially in Asian contexts. Using the pooled cross-sectional data from the China General Social Survey (CGSS, 2010/12/13/15), we explore the association between individual-level gender ideology and happiness in rural and urban China, paying special attention to potential variations in this association by gender and education level. Results suggest that an egalitarian gender ideology is positively associated with happiness in both rural and urban China. The association is stronger for urban men than for urban women and stronger for higher educated people than for lower educated people. The study highlights the importance of gender equality on individual subjective well-being and extends the literature by contextualizing individual-level gender ideology in China.

Introduction

Gender ideologies—social norms concerning the proper roles and fundamental natures of women and men in human societies—have long been of interest to sociologists (Eagly, Wood, and Diekman 2000; Kroska 2007). Scholars have presumed that egalitarian gender ideologies that endorse men and women taking equal responsibility for family tasks and paid work will promote a better quality of life and greater well-being for both women and men (Audette et al. 2019; Kroska 2007; Walter 2018; World Bank 2013), while gender inequality will harm individual well-being (Boerma et al. 2016; Read and Gorman 2010; Yu 2018). Although there is substantial empirical evidence supporting this proposition in Western populations (Audette et al. 2019; Boerma et al. 2016; Kroska 2007; Walter 2018), few studies have tested it in the context of China.

China has witnessed dramatic social and economic changes in the past four decades, and these shifts have had a significant impact on individual social attitudes, particularly beliefs about gender. Although Chinese society has long been characterized by deeply rooted traditional, patriarchal gender norms, egalitarian gender attitudes have become increasingly

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prevalent in the context of rapid economic growth accompanied by the implementation of national-level one-child policy and increasing trends in women's education and employment. However, the progression of gender equality in China has been unevenly distributed across subpopulations such as urban vs. rural, men vs. women, higher vs. lower social status, which may widen the disparities in well-being (Attené 2012; Shu and Zhu 2012). Moreover, China also witnesses a pattern of "stalled" gender revolution as Chinese women, similar to women in other countries, often shoulder the double burdens of work and family, which increases their role conflicts and social stress and thus limits their benefits likely accrued from gender equality (England 2010; Hochschild and Machung 2012; Hori and Kamo 2018; Qian and Sayer 2016). Given this emerging scenario, it is important to understand whether endorsing a progressive gender ideology promotes happiness among individuals in today's China and whether this association varies across different social groups. Yet, there is little extant research on this topic.

We analyze pooled cross-sectional data from the China General Social Survey (CGSS) (2010, 2012, 2013, and 2015) based on a nationally representative sample of Chinese respondents to address three major research questions: (1) is an individual's gender ideology related to her/his happiness in both rural and urban China? (2) does this relationship vary by gender? and (3) does this relationship vary by education? China represents an understudied case that deserves more scholarly attention in this field. The rapid transformation in gender roles combined with remarkable economic and social changes in contemporary China provides a unique opportunity to explore key questions about gender equality and subjective well-being.

Gender ideology and subjective well-being

Gender ideology shapes people's perceptions about what is masculine or feminine, thus reinforcing systemic inequality through social control that instructs, regulates, or offers opportunities to engage in certain socially acceptable behaviors (Berkman, Ichirō, and Maria Glymour 2014; Butler 2004; Levant and Richmond 2016). An individual's gender ideology is a fruit of social and cultural construction, formed from socialization, education, and personal experience (Davis and Greenstein 2009). As a fundamental component of social attitude, gender ideology varies on a continuum from traditional to egalitarian (Kroska 2007). Traditional gender ideologies emphasize the value of women and men fulfilling distinct roles, for example, men as breadwinners and women as homemakers. By contrast, egalitarian gender ideologies entail a liberal, feminist, or progressive division of social roles (Davis and Greenstein 2009), maintaining that men and women should take equal responsibility for family tasks, and both men and women should participate in paid work (Kroska 2007; Walter 2018).

Previous empirical evidence—Previous studies on gender ideology have primarily focused on the causes and predictors of individuals' gender ideologies (Davis and Greenstein 2009; Shu 2004). Fewer studies have examined how gender ideology shapes happiness or other dimensions of subjective well-being (Inglehart, Norris, and Ronald 2003; Pampel 2011). These studies, mostly conducted in Western societies, suggest that rigid gender roles and stereotypes can constrain people's decision-making and limit their

ability to control their own well-being (Phillips 2005; Shannon et al. 2019; Wingood and DiClemente 2000). For example, studies conducted in the United Kingdom found that espousing traditional gender roles was positively associated with having serious suicidal thoughts for both older men and older women (Hunt et al. 2006) and it was also related to poorer mental health among wives (ages 45–79) but not husbands (Read and Grundy 2011). A study using large-scale panel data from the Netherlands Kinship Panel Study (NKPS) 2002–2004 examined the association between an individual's gender role beliefs, sharing household responsibilities, and psychological well-being and found that more egalitarian gender role beliefs and more equally shared housework were associated with better well-being for both men and women (Van De Vijver 2007). Similarly, a recent analysis of cross-national data from the World Values Survey and the Eurobarometer that focused on several industrialized democracies (the United States, Canada, Europe, Australia, New Zealand, and Japan) found strong and consistent evidence on positive relationships between gender equality and life satisfaction (Audette et al. 2019). Despite the emerging research on gender ideology and well-being in Western societies, few studies have examined this topic among non-Western populations. Specifically, there is little research on how individual gender ideology shapes subjective well-being in China where rapid progress in gender equality has not initialized until recent decades.

Gender ideology and happiness in China

Over the past few decades, China has experienced unprecedented economic growth and significant demographic transitions. Researchers have found that sociodemographic changes such as increased life expectancy, increased educational attainment among women, a declining fertility rate, an increasingly imbalanced sex ratio caused by the one-child policy, and a growing number of "dual-income-no-kids" (DINK) families have been accompanied by changes in gender ideology (Hu and Scott 2016). In 2018, 61% of Chinese women were engaged in paid labor, outperforming women in not only other Asian countries such as Japan (51%) but even many Western countries such as the United States (56%) (International Labour Organization 2019). However, the increasing labor force participation should not be interpreted as a full success of the gender revolution or an actual improvement of women's quality of life in China. Rather, scholars found that this transition of gender attitudes is "uneven": people often hold liberal attitudes toward women's dual roles as they make a contribution to family income but show conservative or ambivalent attitudes toward women's right in political leadership, equal salary, job security, and education attainment (Attené 2012; England 2010; Shu and Zhu 2012). Meanwhile, most Chinese families, remain "male-dominated" and traditional gender norms still prevail—men are expected to act as bread-winner and householder while women are expected to do most of the domestic work, resulting in "double-burden" on working women (Hori and Kamo 2018; Luo and Chui 2018).

A small body of research conducted in China and other East Asian countries suggests that gender ideologies may be related to individual well-being in China (Hori and Kamo 2018; Qian and Sayer 2016). For example, using data from the 2006 Family Module of the East Asia Social Survey, Qian and Sayer (2016) found that holding an egalitarian gender ideology was significantly associated with higher marital satisfaction in urban China.

Further, compared to Japanese and Korean couples, urban Chinese couples reported to have less egalitarian gender ideologies but share housework more equally and feel more satisfied with their marriages (Qian and Sayer 2016). Hori and Kamo (2018) analyzed data from the East Asian Social Survey (EASS) 2010[1] Health Module to examine whether conformity to social norms, including traditional gender roles, was associated with an individual's happiness and found that not working was negatively associated with happiness for Chinese men but not for Chinese women, a pattern that highlighted "the culture of emphasizing male-dominance based on Confucianism" in China (Hori and Kamo 2018). Although the study (i.e., Hori and Kamo 2018) offers insights into the factors related to happiness in East Asian contexts, the gender role measure was limited by using employment (e.g., full time employed or not) and parenthood (e.g., being a parent or not) as indirect indicators of work and family roles that did not directly measure individuals' perceptions of gender ideologies.

A handful of studies on gender ideology in China have merely focused on urban China, particularly comparing urban China with other Asian countries or Western societies (Huang, Wu, and Deng 2016; Qian and Sayer 2016; Wang and VanderWeele 2011). This is mainly because that a historical Hukou system has separated rural China and urban China into two different systems, not only leading to unbalanced economic development and social welfare but also creating a hukou based gender system (Lui 2016). Compared to their urban counterparts, rural residents are more likely to hold conservative gender norms and adhere to patrilineal culture (Koo, Hui, and Pun 2020; Lu and Tao 2015; Zhang, Li, and Xue 2015). For example, rural people are more likely to have son preference (Lu and Tao 2015) and rural girls' education attainment is lower than rural boys' as well as urban girls' (Zhang, Li, and Xue 2015). It is not clear whether gender ideology is equally associated with both rural and urban people's subjective well-being as there is little empirical evidence so far. It is possible that rural men and women are less empowered to make egalitarian claims, and therefore, the progressive gender ideologies may conflict with the stalled social norms, leading to psychological strain and distress. Yet, it is also likely that gender egalitarianism is uniformly associated with better subjective well-being for both rural and urban people as rural and urban boundaries tend to be blurred in today's China, especially in small and medium cities, due to the relaxation of Hukou restrictions, fast-spreading of Internet, and an increasing number of migrant workers (Lu et al. 2019; Tang and Su 2019). As far as we know, no studies have specifically examined the relationship between individuals' gender ideologies and happiness in contemporary rural and urban China. Based on the ample evidence linking gender ideology and subjective well-being in Western countries as well as some limited evidence from China, we test the following hypothesis:

> Hypothesis 1: Espousing an egalitarian gender ideology is related to higher levels of happiness in both rural and urban China.

Gender variation—In many cultures, men and women have different gender ideologies, which may contribute to different levels of happiness (Audette et al. 2019; Hori and Kamo 2018; Qian and Sayer 2016). Previous studies have found a consistent pattern of women espousing more egalitarian gender ideologies, on average, than men (Audette et al. 2019;

[1]·Data included both rural and urban residents in China.

Berkel 2004; Koo, Hui, and Pun 2020;; Qian and Sayer 2016; Van De Vijver 2007). Moreover, women who are inspired by feminist ideas are more likely to fight for their rights and to bargain their power against men's violence than women who do not embrace these ideas (Kabeer 2005). Further, working women are more likely to be financially independent and thus have the ability to control their personal lives and to manage their own development rather than being constrained by rigid family roles (Hori and Kamo 2018). Given these findings, it is reasonable to expect that for women, embracing progressive gender ideologies can improve subjective well-being.

However, research conducted in Western countries suggests that although women in the United States and Europe now have more rights and greater independence than in the 1970s, they reported being less happy and less satisfied with their lives. Stevenson and Wolfers (2009) described this scenario as "the paradox of declining female happiness." One major explanation for this paradox is that women's increasing participation in the paid labor force has not been accompanied by a shift to their reduced responsibility for domestic work, leading to women's double work and family burden that is detrimental to their well-being (Hochschild and Machung 2012; Meisenberg and Woodley 2015; Mencarini and Sironi 2012; Stevenson and Wolfers 2009). "The paradox of declining female happiness" also resonates with arguments put forth by scholars who have characterized the gender revolution as "incomplete" (Esping-Andersen 2009) or "stalled" (England 2010). These scholars contended that the gender revolution should encompass not only women entering the public spheres and the labor force market, but also men becoming involved in the private spheres of home and family. Prior studies suggest that men's involvement in domestic labor enhances relationship stability (Goldscheider, Bernhardt, and Lappegård 2015), which in turn promotes happiness and quality of life for both men and women (Qian and Sayer 2016). Although little research has examined whether having egalitarian gender ideologies benefits Chinese women more than Chinese men, previous studies have suggested that Chinese women face a double burden due to a combination of high labor force participation rate and traditional gender norms (Hori and Kamo 2018; Qian and Sayer 2016), indicating an "incomplete" gender revolution in China. In this sense, the shift in gender ideologies may have a limited effect on Chinese women's well-being.

Academic research and social media often emphasized how important gender equality to women's well-being but neglected its effects on men's. In general, the social stigma and isolation for men to be a stay-at-home dad are much more stronger than that for women to be a stay-at-home mom due to traditional masculinity and patriarchal culture (Harrington, Van Deusen, and Fraone 2013; Kramer and Kramer 2016). In China, the internalization of masculine value and patriarchal culture put great pressure on men who were not socially or financially successful. For example, economic prospects (e.g., education and employment status) were found to be strongly associated with the likelihood of marriage for Chinese men but not for Chinese women, and Chinese men in lower socioeconomic status were often left behind in the marriage market (Yu and Xie 2015). In this sense, liberal gender ideologies may be important for Chinese men's well-being, perhaps more so than for Chinese women.

Taken together, we expect the following hypothesis:

Hypothesis 2: The relationship between having an egalitarian gender ideology and happiness is stronger for men than for women in both rural and urban China.

Educational variation—Educational attainment is related to both gender ideology and well-being (Hu and Scott 2016; Kramer and Kramer 2016; Shu 2004; Xie and Mo 2014). Several studies have found that individuals with higher education levels are more likely to endorse egalitarian gender ideologies, especially among women (Hu and Scott 2016; Inglehart, Norris, and Ronald 2003; Kroska 2007; Shu 2004). Using data from the China General Social Survey 2006, Hu and Scott (2016) found that both people who had higher levels of education and those who spoke other languages were less likely to support patrilineal and traditional gender values. They argued that higher education levels could increase exposure to Western culture and feminist ideas, which promote egalitarian gender values (Hu and Scott 2016). Similarly, using Chinese national data in 1991, Shu's (2004) study found that higher educated individuals held more egalitarian gender attitudes, and people living in better-educated communities were more likely to be exposed to "fashionable" ideas. Thus, value transition toward gender equality was unevenly distributed across educational levels because elites often led the adoption of egalitarianism first and then promoted them through education (Shu 2004). Nevertheless, the data used in these two studies were outdated, and it was not clear how education was associated with gender ideology in today's China.

People with less privileged status (e.g., less education) have less leverage to challenge traditional gender role norms and thus are more likely to be limited to following the traditional model to obtain financial resources, social support, and subjective well-being (Ji and Wu 2018). In contrast, people with more privileged status (e.g., higher education) are more likely to live and work in urban areas with more liberal and egalitarian gender ideologies rather than in conservative rural areas. The benefits of gender egalitarianism might be smaller for those with less education if they experience greater social pressure and more social sanctions for "undoing gender" defined by Deutsch (2007, 122) as "social interactions that reduce gender difference" and "behaving in opposition to gender stereotypes." For those with less education, such limitations could cancel out the benefits of espousing egalitarian ideologies for happiness (Meisenberg and Woodley 2015; Mencarini and Sironi 2012). In this sense, individuals whose education level and gender ideology are consistent (e.g., a high level of education and an egalitarian gender ideology) are more likely to have higher levels of happiness, on average, than those whose education level and gender ideology are at odds (e.g., less education and an egalitarian gender ideology). Taken together, we predict the following:

Hypothesis 3: The relationship between having an egalitarian gender ideology and happiness is stronger for higher educated people than lower educated people in both rural and urban China.

Data and method

Data—The China General Social Survey (CGSS), which was initiated in 2003, is a nationally representative, cross-sectional survey project conducted by Hong Kong University of Science and Technology and Renmin University on an annual or biennial basis (Bian

and Li 2012). Data were collected via face-to-face interviews with an overall response rate of 70%. The CGSS used a multistage stratified design to conduct random sampling, which covered from the provincial level to the household level (Bian and Li 2012).[2] More than 28 province-level units were included in each survey year (31 in 2010, 29 in 2012, 28 in 2013, and 28 in 2015). Because data on gender ideology and happiness were only collected in four years—2010 (N=11,783), 2012 (N=11,765), 2013 (N=11,438), and 2015 (N=10,968), we pooled the data from these four years to increase sample size. Additional analyses by using single-year data revealed similar key results (results not shown but available upon request). Missing values on household income (11.10%) were imputed using multiple imputation by chained equations (MICE), and all other missing data (3.74%) were excluded using list-wise deletion. Additional analysis (results not shown but available upon request) of excluding missing values on household income revealed similar results as reported. Those aged under 18 were excluded (0.26%). For comparing the rural-urban differences, we separated the sample by place of residence. The final focal sample included 44,121 respondents, including 26,763 living in urban areas and 17,358 living in rural areas.

Dependent variable: Happiness—Happiness was measured based on responses to the question, "Overall, how do you feel about your life?" Responses included: (1) very unhappy, (2) relatively unhappy, (3) between unhappy and happy, (4) relatively happy, and (5) very happy. Because our preliminary analysis suggested that the parallel regression assumption attached to ordinal logistic regressions was violated (Long and Freese 2006), we recoded happiness into a binary variable, with 0 indicating unhappy (very unhappy, relatively unhappy, and between unhappy and happy) and 1 indicating happy (relatively happy and very happy).

Independent variable: gender ideology—The independent variable is a gender ideology construct from principle component factor (PCF) analysis. One of the original items (i.e., "*Husbands and wives should share housework equally*") has low weight and low correlation with the construct (i.e., the factor loadings for the varimax orthogonal rotation is −0.02) (see Table 1). Therefore, we excluded this item and used the other 4 items, which is consistent with previous studies (Hu and Li 2019; Qing 2020). In the final analysis, we measured gender ideology based on respondents' agreement with the following four statements:

Q1: "Men should prioritize their career and women should prioritize family."

Q2: "Men are naturally more competent than women."

Q3: "Marrying a good man is better than having a good job."

Q4: "During an economic recession, women should be fired first."

Each question included five-degree options ranged from 1= "totally disagree" to 5 = "totally agree." Items were reversely recoded so that higher scores indicated more egalitarian gender ideologies and lower values indicate more traditional ideologies.

[2]More details of the sampling procedure can be found at http://cgss.ruc.edu.cn/index.php?r=index/sample

Moderators: gender and education—*Gender* was coded as a binary variable, with 0=men and 1=women. *Education* was grouped into four categories following previous studies (Sun and Lai 2017): (1) Less than middle school (reference), including never attended school formally, literacy classes, and primary school; (2) middle school; (3) high school or GED (General Educational Development), including vocational high school, high school, high-school-level professional school, and technical school; (4) college or above, including specialized college part time, specialized college full time, university part time, university full time, and graduate school or above.

Covariates—We controlled three groups of potential confounding factors that could affect both gender ideology and happiness. First, previous studies indicated that people in higher socioeconomic status were more likely to hold liberal attitudes and have a higher level of happiness (Kramer and Kramer 2016; Shu 2004; Sun and Lai 2017; Tani 2017; Xie and Mo 2014). Therefore, we included comprehensive measures of *socioeconomic status*: (1) *Self-rated social status* ranged from 1 to 10, with higher numbers indicating higher perceived social status; (2) *Labor force participation* was measured based on a question asking respondents whether they worked more than one hour for earning income in the last week. It was coded with 0 indicating "not participated" and 1 indicating "ever participated"; (3) *Communist party member* was coded as a dichotomous variable: 0 indicating not a Communist Party member and 1 indicating a current Communist Party member; (4) *Household income* was coded as a continuous variable. (5) *House ownership* was coded with 0 indicating non-self-owned and 1 indicating self-owned (including self and spouse owned). (6) *Hukou status* (0=rural and 1=urban). Second, prior literature suggested that transitions of social roles were associated with changes in gender ideologies and well-being (Katz-Wise, Priess, and Hyde 2010; Liu and Umberson 2008; Pessin 2018; Read and Grundy 2011). Thus, we controlled two important life transitions: marriage and parenthood. *Marital status* included 5 categories: married (reference), single, cohabiting, divorced/separated, and widowed. Parenthood was measured by two indicators: *parenthood status* (0=no child, 1=having at least one child) and *number of children* (ranged 0–11). Last, people's physical health conditions can relate to both gender norms and mental health (Graham, Zhou, and Zhang 2017; Read and Gorman 2010), we thus controlled for *self-rated health* (0=very poor, poor, or fair health and 1 = good or excellent health). Besides three groups of confounding factors, we also included basic demographic characteristics that are related to both gender ideologies and well-being: *Age* was coded as a continuous variable in years (range = 18–96). Considering the curvilinear relationship between age and happiness, we also included quadratic age in the models. *Ethnicity* included Han (reference) and minority ethnicities. We also included a categorical control variable for *survey year*.

Analytic strategy—We first conducted principle component factor (PCF) to construct factor scores of gender ideologies. Considering the data clustering effects, we used multilevel mixed-effects models to account for both the individual and provincial levels of heterogeneity. We also tested three-level models with either city level (i.e., shi/qu/xian) or county level (i.e., xiang/zhen/jie dao) as the second level, the results are similar to the two-level models (results not shown but available upon request). We stratified the analysis by rural and urban samples and ran three models. Model 1 tested the basic association

between gender ideology and happiness controlling for all covariates; Model 2 added the interaction of gender and gender ideology to predict happiness; and Model 3 added the interaction with education and gender ideology to predict happiness. We used Stata version 15 (StataCorp 2017) for data cleaning and model analysis.

Results

Table 1 shows the means and factor loadings of the four gender ideology items along with the mean of the final constructed factor scores. In general, people in China disagree with the statement that women should be fired first during an economic recession, but less disagree with the statement that men should put career on priority and women should put family on priority, indicating that a quite large group of people adhere to binary gender role attitude. Significant differences between rural and urban respondents are shown across all four items and final factor scores, indicating that in general, rural respondents endorse more traditional gender ideologies compare to urban respondents.

Table 2 presents descriptive statistics for all analyzed variables in the full sample and by region. Results suggest that relative to those living in urban China, people living in rural China are older and unhappier, more likely to be minority ethnicities and rural *Hukouer*, and they are more likely to be married or widowed and to be parents and have more children. In addition, although rural people are less educated, less healthy, with lower perceived SES and household income, and less likely to be members of the Communist Party, they are more likely to participate labor force and have a self-owned house.

Table 3 shows the estimated odds ratios from the multilevel mixed-effects logistic regression models of the relationship between gender ideology and happiness among urban sample. The results of Model 1 in Table 3 suggest that gender ideology is positively associated with happiness in urban China. Specifically, after controlling for the effects of all covariates, every one-unit increase in gender ideology (i.e., embracing a more egalitarian ideology) is associated with a 12% increase in the odds of reporting having a happy or very happy life (OR = 1.12, $p<0.001$, CI = 1.08–1.16). The significant gender interaction effect in Model 2 of Table 3 indicates that gender ideology had a stronger effect on happiness among men than among women (OR = 0.94, $p<0.05$, CI = 0.88–1.00). Figure 1 illustrates the gender interaction results in Model 2 and shows that although urban women report higher happiness levels than urban men, the gender gap converges as gender ideology becomes more egalitarian.

Model 3 in Table 3 reveals a significant education interaction, suggesting that endorsing a progressive gender ideology benefits higher educated people more than lower educated people in urban China. Specifically, the insignificant main effect of gender ideology in Model 3 indicates that gender ideology is not significantly associated with happiness for urban Chinese with less than middle school education (OR = 1.05, $p>0.05$); while for urban Chinese with a high school/GED education, every one-unit increase in gender ideology is associated with a 16.55% ([1.05×1.11–1.00] X 100%) increase in the odds of reporting having a happy or very happy life, and for urban Chinese with a college education or above, every one-unit increase in gender ideology is associated with a 21.80% ([1.05×1.16–1.00]

X 100%) increase in the odds of reporting having a happy or very happy life. Figure 2 illustrates this interaction effect, showing that the association between gender ideology and happiness is stronger for higher educated individuals (as indicated by steeper slopes) than lower educated in urban China.

Table 4 shows the estimated odds ratios from the multilevel mixed-effects logistic regression models among rural sample. The results of Model 1 suggest that gender ideology is positively associated with happiness in rural China (OR = 1.05, $p<0.05$, CI = 1.01–1.10) after controlling for all covariates. The results in Model 2 of Table 4 suggest no significant gender difference in the association between gender ideology and happiness in rural China. Model 3 of Table 4 reveals significant educational difference in this association. Specifically, gender ideology is not significantly associated with happiness for rural Chinese with less than middle school education—indicated by the insignificant main effect of gender ideology (OR = 1.02, $p>0.05$). The relationship between gender ideology and happiness is not significantly different for those with middle school (OR = 1.02×1.03=1.05, $p>0.05$) or college and above education OR = 1.02×1.30=1.33, $p>0.05$) in comparisons to their counterparts with less than middle school education. Yet, the positive relationship between gender ideology and happiness is significantly stronger among rural Chinese with a high school/GED education: Rural Chinese with a high school/GED education show 27.5% ([1.02×1.25–1.00] X 100%) higher odds of reporting having a happy or very happy life. Figure 3 illustrates the education interaction effects in Model 3 of Table 4, suggesting that the effects of gender ideology on happiness are stronger among rural people who hold high school or GED degrees than those with less than high school education. Note, a stronger positive relationship between gender ideology and happiness also presents among rural Chinese with college and above education in comparison to their counterparts with less than middle school education, although this difference does not reach statistical significance (Model 3 of Table 4).

Discussion and conclusion

The world is witnessing an ongoing shift away from traditional gender ideologies toward more egalitarian gender ideologies as average family size reduces, fertility rate declines, and women's participation in the labor force increases (Inglehart, Norris, and Ronald 2003; Pessin 2018). A small number of previous studies have started to probe the possible consequences of this shift by examining the association between gender ideology and subjective well-being, but those studies have been conducted primarily in Western contexts. We provide one of the first studies on this topic in the context of China and examine the association between individuals' gender ideology and happiness in both rural and urban China using pooled cross-sectional data from the 2010, 2012, 2013, and 2015 CGSS. The findings generally support the proposed hypotheses.

Consistent with Hypothesis 1, the results show that egalitarian gender ideology is positively associated with happiness for people in both rural and urban China. This finding is consistent with previous studies based on data from Western industrialized countries suggesting that gender equality promotes individuals' mental health, quality of life, and psychological well-being (Audette et al. 2019; Hunt et al. 2006; Read and Gorman 2010;

Read and Grundy 2011; Van De Vijver 2007). Espousing egalitarian gender ideologies can empower both men and women to break the traditional constraints of rigid family roles and gender stereotypes (Hori and Kamo 2018; Phillips 2005; Shannon et al. 2019; Wingood and DiClemente 2000). Embracing ideologies of gender equality presumably not only encourages women to enter the public sphere to seek personal development but also de-stigmatizes men engaging in domestic work (Goldscheider, Bernhardt, and Lappegård 2015; Qing 2020). Moreover, having egalitarian gender ideologies may increase couples' marital satisfaction (Qian and Sayer 2016). Couples who believe in gender equality are more likely to value each other's contributions to the family, to have positive communication regarding the division of domestic labor, and to be willing to share housework equally. All these factors are related to higher levels of happiness.

We also find that, consistent with Hypothesis 2, espousing egalitarian gender ideologies benefits both men and women, but the effect on happiness is stronger for men than for women, particularly in urban China. Several factors might explain this gender difference in urban China. First, urban women on average report higher levels of happiness than urban men, and thus urban men's happiness levels have more room to increase due to changes in gender ideology. Second, the double burden that women in urban China face with respect to family and work may compromise their happiness and restrain them from gaining the full benefits of having egalitarian gender ideologies. Third, previous studies suggest that Chinese urban men who are unemployed may suffer from humiliation and social pressure both within and outside their family and thus report lower levels of happiness (Harrington, Van Deusen, and Fraone 2013; Hori and Kamo 2018). It is likely that urban men who believe in gender equality experience less social stress and self-blame for not fulfilling the role of family provider, thus alleviate the unhappiness especially in the case of unemployment. Fourth, urban men who hold egalitarian gender ideologies are more likely to share housework and make contributions to domestic labor, which is suggested to promote marital quality (Qian and Sayer 2016) and increase union stability (Goldscheider, Bernhardt, and Lappegård 2015). In China, marriage is strongly related to happiness, and the marriage benefit is more profound for men than for women (Hori and Kamo 2018; Qian and Qian 2015). Therefore, any marriage benefits that result from having progressive gender ideologies may enhance the happiness of urban men more than that of urban women. Yet, gender variation is not found in rural China. This is probably because both men and women in rural areas are more likely to endorse traditional, binary gender ideologies, and they are less empowered or motivated to "undoing gender" compared to their urban counterparts (Butler 2004; Deutsch 2007). For example, many rural husbands work in cities as migrant workers and leave wives behind in rural homes. In this case, rural men are dominant breadwinners, contributing to major household income and sharing less domestic labor, while their wives take a heavy burden taking care of children and elders as well as other household duties (e.g., farming). Given the high levels of gender specialization in rural China, rural men and women who espouse progressive gender role attitudes may not benefit as much as their urban counterparts in terms of promoting happiness.

Finally, consistent with Hypothesis 3, we find that the positive association between egalitarian gender ideologies and happiness was stronger among higher educated people than among lower educated people. This pattern is consistent with previous studies

suggesting that gender ideology and egalitarianism differ across education levels and that the relationship between gender equality and happiness might also depend on education (Kramer and Kramer 2016; Shu 2004). Although China has experienced dramatic economic growth and demographic transitions, individuals' gender ideologies do not change rapidly and abruptly, but rather slowly and in tandem with a gradual societal-level acceptance of new beliefs regarding men's and women's roles and responsibilities (England 2010; Kramer and Kramer 2016). In China, higher educated people have greater exposure, on average, to Western culture and feminist ideas because they often work in liberal, urban workplaces where gender egalitarianism is more accepted and/or promoted (Hu and Scott 2016; Shu 2004); while lower educated people are more likely to live in conservative rural areas where "undoing gender" is rare and sometimes rejected (Deutsch 2007), and thus are more likely to receive criticism or disapproval for violating gender expectations, and, in turn, more likely to experience a lower level of happiness.

This study has several limitations. First, the data are cross-sectional and thus cannot be used to determine the causal relationship between gender ideology and happiness. Future studies should use longitudinal panel data to tease out causality and identify how changes in gender ideologies affect the trajectory of subjective well-being. Second, higher scores on the gender ideology index used in the analysis might not fully represent more egalitarian values. Rather, some people might believe that complementary gender roles are part of an ideal and equal gender ideologies. Indeed, the interpretation of specific gender ideologies may vary by sociodemographic background. Qualitative work is needed to improve the scholarly understanding of men's and women's views about gender equality. In addition, the concept of gender ideology should be multiple dimensional, including but not limited to the division of domestic labor, equal salary, political participation, freedom of sex, and feminine and masculine identities. Scholars have found that the transition to liberal gender attitudes is "uneven" in China, indicating that increasing women's labor force participation and recognition of women's dual roles should not be interpreted as a full success of the gender revolution (Attené 2012; England 2010; Shu 2004). Future studies should use a more comprehensive set of questions to measure gender ideologies. Third, both the gender ideologies and happiness are subjective measures that are likely to be biased due to unmeasured factors or social desirability. For example, a woman who wants to meet social expectations may overestimate her happiness and describe her gender ideology as more conservative than it actually is. The sex of the interviewer may also influence respondents' answers. Last but not least, our significant findings may be related to the large sample size of this study. Readers should interpret the results in consideration of substantive significance.

Despite these limitations, this is one of the first studies to examine the link between individuals' gender ideology and subjective well-being in China. The study provides important empirical evidence based on data drawn from a large-scale representative sample in a non-Western context, highlighting the important effect of gender ideology on happiness at the individual level. The findings support two important conclusions. First, espousing ideologies of gender egalitarianism is associated with greater happiness for all examined subgroups (e.g., rural and urban, men and women, lower and higher educated) of the Chinese population. Second, those with a more privileged status (men, higher educated) gain more benefits from endorsing egalitarian gender ideologies than those who are less

privileged (women, less educated). For the latter group, having more egalitarian gender ideologies may conflict with the constraints of stalled gender attitudes at the societal level. Less privileged groups may face more difficulties in bargaining equal gender rights because they are often restricted by traditional gender norms for resources which may limit their benefits accrued from espousing egalitarian gender ideologies. The findings indicate that an uneven and unbalanced development in gender equality across subpopulations can widen the disparities in subjective well-being. Policymakers should seek to design and implement social welfare programs to improve gender equality across society as a whole. For example, providing paid parental leave for both fathers and mothers and reducing social sanctions for nonconformity in gender roles will likely promote the subjective well-being of the entire population. Future studies should investigate specific mechanisms through which gender ideologies influence individual well-being in order to design more effective public programs and social policies to promote individual and population well-being equitably.

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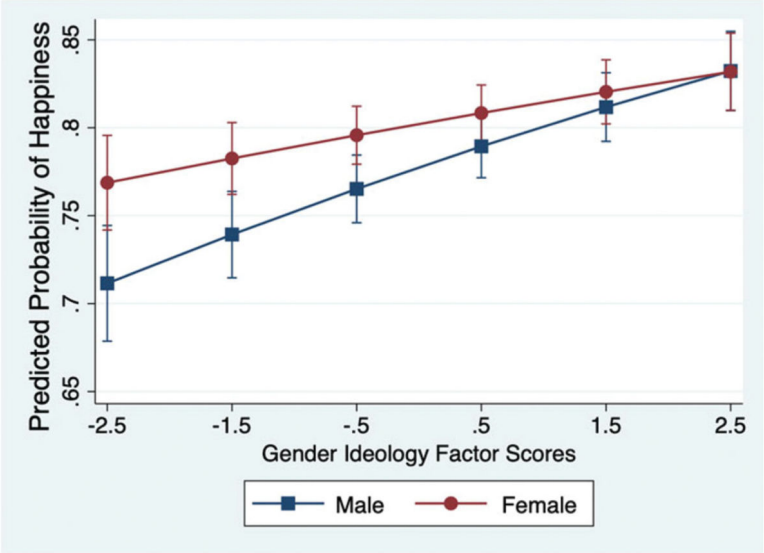

Figure 1.
Predicted probability of happiness by gender ideology factor scores among urban people.

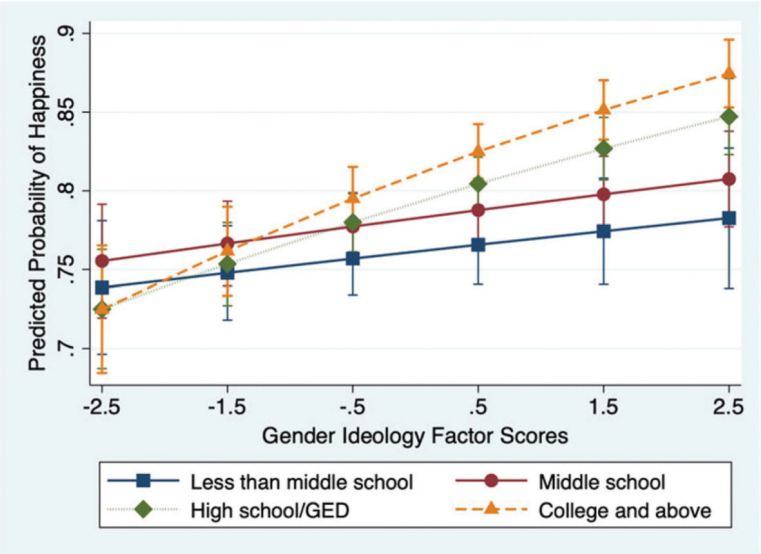

Figure 2.
Predicted probability of happiness by gender ideology factor scores for different education groups among urban people.

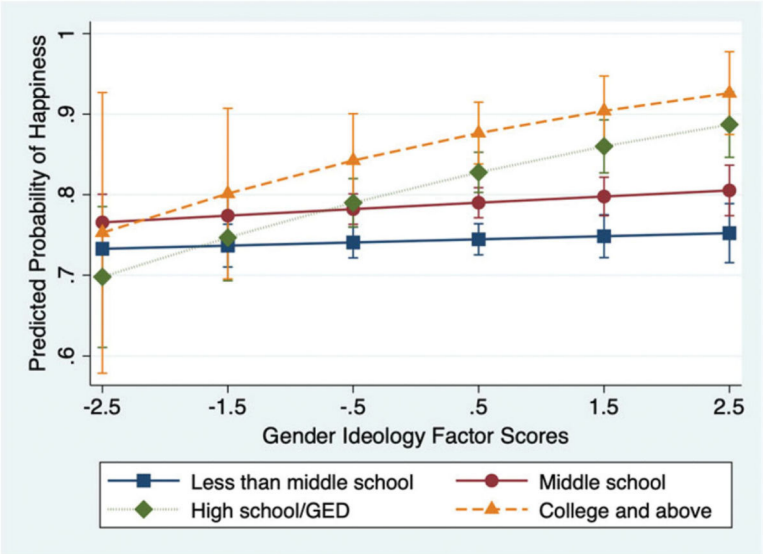

Figure 3.
Predicted probability of happiness by gender ideology factor scores for different education groups among rural people.

Table 1.

Gender ideology mean and factor loadings by region, CGSS 2010/12/13/15.

	Total (*N* = 44,121)		Urban (*n* = 26,763)		Rural (*n* = 17,358)	
	Mean[a] (SD)	Factor loading[b]	Mean (SD)	Factor loading	Mean (SD)	Factor loading
Q1. Men should put career on priority and women should put family on priority	2.53 (1.18)	0.75	2.71 (1.21)	0.75	2.27[c*] (1.07)	0.71
Q2. Men are naturally more competent than women	3.01 (1.21)	0.79	3.15 (1.20)	0.78	2.81[*] (1.18)	0.78
Q3. Marrying a good man is better than having a good job	2.89 (1.17)	0.69	2.97 (1.18)	0.69	2.77[*] (1.13)	0.69
Q4. During economic recession, women should be fired first	3.84 (1.00)	0.58	3.93 (0.99)	0.55	3.68[*] (0.99)	0.60
Q5. Husbands and wives should share housework equally	3.81 (1.02)	−0.02	3.83 (1.01)	−0.02	3.77[*] (1.02)	−0.01
Mean of factor scores	0.00 (1.00)	-	0.15 (1.00)	-	−0.23[*] (0.95)	-

Note:

[a] Higher scores suggest egalitarian gender ideologies and lower scores suggest traditional gender ideologies (scale: 1 = totally agree to 5 = totally disagree).

[b] AII factor loadings are statistically significant at the $p<0.001$

[c*] $p<0.05$ *t*-tests/proportion tests comparing regional differences were shown on the column of the rural sample.

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Table 2.

Descriptive statistics of variables by region, CGSS 2010/12/13/15.

Variable (%/mean (SD))	Total (*N* = 44,121)	CI (total)	Urban (*n* = 26,763)	CI (urban)	Rural (*n* = 17,358)	CI (rural)
Happiness (*ref*: unhappy and normal)						
Happy and very happy	74.62	[74.21–75.02]	75.08	[74.56–75.60]	73.90*	[73.25–74.56]
Women (*ref*: men)	50.72	[50.25–51.19]	51.23	[50.63–51.83]	49.94*	[49.19–50.68]
Age (18–96)	48.42 (16.24)	[48.27–48.57]	47.20 (16.53)	[47.00–47.39]	50.32* (15.60)	[50.08–50.55]
Ethnicity (*ref*: Han)						
Minority	8.42	[8.16–8.68]	6.17	[5.88–6.48]	11.89*	[11.40–12.37]
Education						
Less than middle school (*ref*:)	35.98	[35.53–36.43]	22.31	[21.81–22.81]	57.06*	[56.33–57.80]
Middle school	28.98	[28.55–29.40]	27.55	[27.01–28.08]	31.18*	[30.49–31.87]
High school/GED	18.89	[18.52–19.26]	25.21	[24.69–25.73]	9.14*	[8.71–9.57]
College and above	16.15	[15.81–16.50]	24.93	[24.41–25.45]	2.62*	[2.38–2.85]
Socio-economic status (1–10)	4.22 (1.69)	[4.20–4.24]	4.35 (1.68)	[4.33–4.37]	4.02* (1.69)	[4.00–4.05]
Communist party member (*ref*: non-member)						
Member	11.33	[11.04–11.63]	15.07	[14.64–15.50]	5.56*	[5.22–5.90]
Labor force participation (*ref*: no)						
Yes	61.21	[60.75–61.66]	56.86	[56.27–57.46]	67.91*	[67.22–68.61]
Household income (10K)	5.33 (9.65)	[5.26–5.43]	6.83 (11.40)	[6.69–6.98]	3.09* (5.47)	[3.00–3.17]
House ownership (*ref*: non-self-owned)						
Self-owned	63.51	[63.06–63.96]	57.43	[56.83–58.02]	72.90*	[72.24–73.56]
Hukou (*ref*: rural)						
Urban Hukou	46.16	[45.69–46.63]	71.85	[71.31–72.39]	6.54*	[6.18–6.91]
Self-rated health (*ref*: very poor, poor and fair)						
Good and excellent	60.07	[59.61–60.52]	63.45	[62.87–64.02]	54.86*	[54.12–55.60]
Marital status						
Married (ref)	79.03	[78.65–79.41]	76.74	[76.23–77.24]	82.58*	[82.01–83.14]

Variable (%/mean (SD))	Total (*N* = 44,121)	CI (total)	Urban (*n* = 26,763)	CI (urban)	Rural (*n* = 17,358)	CI (rural)
Single	9.55	[9.28–9.83]	11.8	[11.41–12.18]	6.09*	[5.73–6.45]
Cohabiting	0.63	[0.56–0.71]	0.75	[0.65–0.85]	0.45*	[0.35–0.55]
Divorce/separated	2.39	[2.25–2.54]	3.06	[2.86–3.27]	1.35*	[1.18–1.52]
Widowed	8.39	[8.14–8.66]	7.65	[7.33–7.97]	9.53*	[9.10–9.97]
Parenthood status (*ref*: no child)						
Having at least one child	87.42	[87.10–87.72]	84.21	[83.77–84.65]	92.36*	[91.97–92.76]
Number of children (0–11)	1.74 (1.31)	[1.73–1.75]	1.46 (1.17)	[1.45–1.48]	2.17* (1.38)	[2.17–2.19]

Note:

* $p < 0.05$ *t*-tests/proportion tests comparing regional differences.

Table 3.

Estimated odds ratios of multilevel mixed-effects logistic regression models, gender ideology and happiness among urban sample, CGSS 2010/12/13/15, n = 26,763.

	Model 1	Model 2	Model 3
Gender ideology	1.12*** [1.08–1.16]	1.16*** [1.10–1.22]	1.05 [0.97–1.14]
Women(*ref*: men)	1.15*** [1.08–1.23]	1.16*** [1.09–1.24]	1.14*** [1.07–1.22]
Age	0.93*** [0.92–0.95]	0.93*** [0.92–0.95]	0.93*** [0.92–0.95]
Age-square	1.00*** [1.00–1.00]	1.00*** [1.00–1.00]	1.00*** [1.00–1.00]
Minority ethnicities (*ref*: Han)	1.13 [0.98–1.30]	1.13 [0.99–1.30]	1.13 [0.99–1.30]
Education (*ref*: less than middle school)			
Middle school	1.12* [1.02–1.22]	1.12* [1.02–1.23]	1.13** [1.03–1.24]
High school/GED	1.20*** [1.09–1.33]	1.21*** [1.09–1.34]	1.21*** [1.09–1.34]
College and above	1.39*** [1.20–1.60]	1.40*** [1.21–1.61]	1.36*** [1.18–1.56]
Self-rated SES	1.42*** [1.39–1.45]	1.42*** [1.39–1.45]	1.42*** [1.39–1.45]
Communist party member (*ref*: not member)	1.37*** [1.24–1.51]	1.37*** [1.23–1.51]	1.37*** [1.24–1.51]
Labor force participation (*ref*: no)	0.86*** [0.80–0.94]	0.87*** [0.80–0.94]	0.86*** [0.80–0.94]
Household income	1.00*** [1.00–1.00]	1.00*** [1.00–1.00]	1.00*** [1.00–1.00]
House ownership (*ref*: non-self-own)	1.09* [1.02–1.17]	1.09* [1.02–1.18]	1.09* [1.02–1.18]
Urban Hukou (*ref*: rural Hukou)	1.00 [0.92–1.08]	1.00 [0.92–1.08]	1.00 [0.92–1.09]
self-rated Health (*ref*: poor to fair)	1.94*** [1.81–2.07]	1.94*** [1.82–2.08]	1.94*** [1.82–2.08]
Marital status (*ref*: married)			
Single	0.56*** [0.46–0.68]	0.56*** [0.46–0.68]	0.55*** [0.46–0.67]
Cohabiting	0.75 [0.52–1.08]	0.75 [0.52–1.08]	0.74 [0.52–1.07]
Divorce/separated	0.35*** [0.29–0.41]	0.35*** [0.30–0.41]	0.35*** [0.30–0.41]
Widowed	0.69*** [0.61–0.78]	0.69*** [0.61–0.78]	0.69*** [0.61–0.78]
Parenthood status (*ref*: no kid)	1.05 [0.88–1.26]	1.06 [0.89–1.26]	1.06 [0.89–1.26]
Number of children	1.07** [1.02–1.12]	1.07** [1.02–1.12]	1.07** [1.02–1.12]
Interactive effects			

	Model 1	Model 2	Model 3
Women X Gl		0.94 * [0.88–1.00]	
Middle school X Gl			1.01 [0.92–1.12]
High school/GED X Gl			1.11 * [1.00–1.23]
College and above X Gl			1.16 ** [1.05–1.29]
fear flag (*ref*: 2010)			
2012	1.08 [0.85–1.38]	1.08 [0.85–1.38]	1.09 [0.85–1.38]
2013	0.79 [0.60–1.03]	0.79 [0.60–1.03]	0.79 [0.60–1.04]
2015	1.09 [0.86–1.37]	1.09 [0.86–1.38]	1.09 [0.86–1.38]
Constant	1.64 * [1.05–2.56]	1.63 * [1.05–2.54]	1.63 * [1.05–2.56]

Note: confidence interval in square parentheses. Gl refers to gender ideology.

*** $p < 0.001$

** $p < 0.01$

* $p < 0.05$

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Table 4.

Estimated odds ratios of multilevel mixed-effects logistic regression models, gender ideology and happiness among rural sample, CGSS 2010/12/13/15, n = 17,358.

	Model 1	Model 2	Model 3
Gender ideology	1.05 * [1.01–1.10]	1.09 ** [1.02–1.15]	1.02 [0.95–1.09]
Women (*ref*: men)	1.10 * [1.00–1.20]	1.08 [0.98–1.18]	1.08 [0.99–1.18]
Age	0.98 * [0.96–1.00]	0.98 * [0.96–1.00]	0.98 * [0.96–1.00]
Age-square	1.00 *** [1.00–1.00]	1.00 *** [1.00–1.00]	1.00 *** [1.00–1.00]
Minority ethnicities (*ref*: Han)	1.20 * [1.04–1.39]	1.20 * [1.04–1.39]	1.21 * [1.04–1.39]
Education (*ref*: less than middle school)			
Middle school	1.26 *** [1.15–1.39]	1.26 *** [1.15–1.39]	1.28 *** [1.16–1.41]
High school/GED	1.48 *** [1.26–1.75]	1.49 *** [1.26–1.75]	1.48 *** [1.26–1.74]
College and above	2.33 *** [1.63–3.34]	2.35 *** [1.64–3.37]	2.15 *** [1.47–3.13]
Self-rated SES	1.37 *** [1.33–1.41]	1.37 *** [1.33–1.41]	1.37 *** [1.33–1.41]
Communist party member (*ref*: not member)	1.44 *** [1.18–1.75]	1.43 *** [1.17–1.74]	1.43 *** [1.17–1.74]
Labor force participation (*ref*: no)	0.99 [0.89–1.09]	0.99 [0.89–1.09]	0.98 [0.89–1.09]
Household income	1.00 * [1.00–1.00]	1.00 * [1.00–1.00]	1.00 * [1.00–1.00]
House ownership (*ref*: non-self-own)	0.88 ** [0.80–0.97]	0.88 ** [0.80–0.97]	0.88 ** [0.80–0.97]
Urban Hukou (*ref*: rural Hukou)	0.94 [0.77–1.14]	0.94 [0.77–1.14]	0.93 [0.76–1.14]
Self-rated Health (*ref*: poor to fair)	2.16 *** [1.98–2.35]	2.16 *** [1.98–2.35]	2.16 *** [1.98–2.35]
Marital status (*ref*: married)			
Single	0.58 *** [0.44–0.78]	0.58 *** [0.44–0.77]	0.58 *** [0.43–0.77]
Cohabiting	0.86 [0.58–1.29]	0.86 [0.58–1.29]	0.86 [0.58–1.29]
Divorce/separated	0.54 *** [0.40–0.73]	0.54 *** [0.40–0.73]	0.54 *** [0.40–0.73]
Widowed	0.65 *** [0.57–0.74]	0.65 *** [0.57–0.74]	0.65 *** [0.57–0.75]
Parenthood status (*ref*: no child)	1.01 [0.78–1.32]	1.01 [0.77–1.32]	1.01 [0.78–1.32]
Number of children	1.04 [1.00–1.08]	1.04 [1.00–1.08]	1.04 [1.00–1.08]
Interactive effects			
Women X GI		0.94 [0.87–1.03]	

	Model 1	Model 2	Model 3
Middle school X Gl			1.03 [0.93–1.14]
High school/GED X Gl			1.25** [1.06–1.48]
College and above X Gl			1.30 [0.94–1.79]
Year flag (*ref*: 2010)			
2012	1.28 [0.98–1.68]	1.28 [0.98–1.68]	1.29 [0.98–1.69]
2013	1.13 [0.88–1.46]	1.13 [0.88–1.46]	1.13 [0.88–1.46]
2015	1.31* [1.04–1.65]	1.31* [1.05–1.65]	1.32* [1.05–1.66]
Constant	0.53* [0.31–0.91]	0.54* [0.31–0.92]	0.50* [0.29–0.88]

Note: confidence interval in square parentheses. Gl refers to gender ideology.

*** $p < 0.001$

** $p < 0.01$

* $p < 0.05$

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