Ceding Power in Intra-Household Bargaining in Times of Economic Anxiety: An Experimental Study in Nepal

Margaret Boittin* Katrina Kosec[†] Cecilia Hyunjung Mo[‡] Soo Sun You[§]

December 31, 2021

Abstract

How do perceptions of one's relative economic status affect beliefs regarding gender roles? We conducted a 2019 survey experiment with approximately 2,000 adults in Nepal. Employing an established survey treatment called a priming experiment to subtly alter half of respondents' perceptions of their relative economic well-being, we find that increased feelings of relative deprivation make married women significantly less likely to support gender egalitarian perspectives. Women decrease their support for women making decisions over household expenditures, having equal control over household income, sharing household chores, and women working outside the home. A message randomly read to some women and designed to spur increased support for women's empowerment does little to alter beliefs regarding gender roles or to attenuate the effects of the relative deprivation prime. Despite the negative impacts on women's gender attitudes, however, we do not find a similar pattern among married men. The results underscore the deleterious effects that feelings of relative deprivation can have on women's own gender attitudes and provide a cautionary tale given trends toward greater economic inequality further exacerbated by the COVID-19 pandemic.

*Assistant Professor, Osgoode Hall Law School, MBoittin@osgoode.yorku.ca

[†]Senior Research Fellow, Development Strategy and Governance Division, International Food Policy Research Institute, K.Kosec@cgiar.org

[‡]Associate Professor, University of California, Berkeley, cecilia.h.mo@berkeley.edu

[§]Ph.D. Student, University of California, Berkeley, ssyoosun@berkeley.edu

Introduction

The impacts of economic vulnerability on male backlash—or the extent to which men raise opposition to the empowerment of women—are theoretically ambiguous. In particular, backlash may not apply equally to all facets of gender equality. For example, in a context of limited economic opportunity, compared to a context of abundance, the perception of women seeking social advancement might appear to be a relatively greater threat to men (Inglehart and Flanagan, 1987; Andersen and Fetner, 2008; Morgan and Buice, 2013), strengthening opposition to women’s empowerment. Yet the same lack of economic opportunity may simultaneously make men more inclined to support women’s economic participation—with a motive of increasing economic resources to thus lower economic anxieties for them and their families (Kosec et al., 2021). Given that economic vulnerability is growing in many contexts (Ravallion, 2014), and has been exacerbated by the COVID-19 pandemic, it is critical to understand when economic anxieties cause greater or less support for different facets of gender equality.

Extant research indicates that individuals evaluate their economic conditions compared to others around them (Kahneman and Tversky, 1979; Levy, 2003; Bendor, 2016). As such, this trend toward increased inequality may mean that economic anxieties have risen in lockstep with inequality among those being left behind. The *salience* of inequality has also been rising, in large part as a result of the proliferation of information technology and the increasing prevalence of migration. Both trends have led to a broadening of the reference group against which individuals compare themselves, resulting in a larger subset of the population feeling relatively deprived. Recent research has shown that while feelings of relative deprivation may prompt support for women’s economic participation—which can raise income for a household and thus lower economic anxieties—they could also incite greater intra-household tensions (Kosec et al., 2021). If men perceive a status threat in addition to relative economic deprivation, they may become increasingly hostile towards actions to promote gender equality. That is, threats to their economic status may make men more intent on holding on to their greater decision-making power vis-a-vis women in the household.

In this paper, we use a novel data collection effort covering 2,011 households in 8 districts of Nepal during February–April 2019 to examine whether feelings of relative economic deprivation affect attitudes toward women’s role in the household. As our outcomes generally relate to

attitudes about women’s decision-making power in the household, we primarily focus on married individuals for which all individuals have some chance of making the decision (e.g., as opposed to an unmarried daughter who is likely closed out of many decisions), and interactions between spouses are likely to affect women’s roles in decision-making. We utilize a relative deprivation priming experiment that provides us with exogenous variation in individuals’ perceptions of their relative economic status. Specifically, half of respondents are assigned to receive a relative economic deprivation prime and half are assigned to not receive it, allowing us to make causal interpretations regarding how the prime shifted gender attitudes.

We find that being made to feel relatively deprived (i.e., receipt of the poverty prime) leads married women, but not married men, to become less supportive of women’s decision-making power in the household. Effect sizes are fairly large. Among married women, we find a 0.0194 unit or 0.17 standard deviation decline in our Gender Egalitarian Index, which we use to assess the overall degree to which married women’s gender attitudes are egalitarian. Specifically, when women perceive that their household is in a relatively lower position compared to others in their neighborhood, they become less likely to believe that women and men should have equal ability to decide how to spend their household income and equal control over their household income, less likely to believe that women and men should share household chores, less likely to support women working outside the home, and somewhat more likely to uphold traditional values. Some attitudes were stickier than others, such as attitudes on women supporting their husband’s opinions and views on young women needing to follow tradition. In other words, the deprivation prime did not shift these attitudes. These results suggest that feeling relatively deprived leads women to be more willing to give up intra-household bargaining power on more practical matters, but does not fundamentally change their attitudes about how women should behave vis-a-vis their husbands or whether young women should continue to uphold tradition.

In addition, we test whether the effects of relative deprivation are moderated by gender egalitarian messages. We find that the messages have negligible effects on shifting attitudes. Married women who are induced to feel relatively poor held less egalitarian attitudes, even after receiving messages that were intended to empower women. The messages also failed to shift married men’s attitudes. Further, these messages did little to attenuate the effects of the relative deprivation prime. It is important to note that the egalitarian messages failed to pass

our manipulation check question, which asked the extent to which women are provided with different economic and social opportunities than men. Thus, it is possible that the messages were too weak for us to detect any effects. Yet, our results are consistent with a recent study which uses a stronger women’s empowerment intervention ([McKelway, 2021](#)), and therefore provide evidence that women’s empowerment interventions are ineffective in shifting attitudes on intra-household gender dynamics.

The Case of Nepal

Why examine the issue of intra-household bargaining in Nepal? In this section, we highlight the key characteristics of Nepali politics, economics, and society that shape intra-household bargaining in the country. To do this, we first discuss recent political developments in Nepal, specifically with an eye to their gendered elements. We then provide an overview of the status of women in the country, including detailed discussion of the state of the literature on intra-household bargaining in Nepal. We conclude this section with a focus on the specific issue of migration: it defines so much of life in Nepal today, such that any reflection on gender, including intra-household bargaining, would be incomplete without serious discussion of the phenomenon.

Politics and Gender in Nepal

Nepal is a new democracy. Until 2008, it was a Hindu monarchy which, from 1996 until 2006, battled a Maoist insurgency that ravaged the country. This conflict claimed the lives of an estimated 13,000 individuals, and resulted in the displacement of hundreds of thousands more ([Adhikari and Samford, 2013](#); [Joshi, 2013](#)). The conflict ended in 2006 with a peace accord between unified Maoist factions and the monarchy that led to a democratic election and, two years later, dissolution of the monarchy and formation of the Federal Democratic Republic of Nepal ([Grossman-Thompson and Dennis, 2017](#), 801). Since the abolition of the monarchy, the Maoist political party (Communist Party of Nepal-Maoist) has dominated Nepali elections, along with the liberal democratic Nepali Congress party and the Communist Party of Nepal-Unified Marxist Leninist ([Hachhethu and Gellner, 2010](#)).

The Nepalese Civil War had a profound impact on gender relations in the country. Indeed, women played an active role in combat during the decade-long conflict ([Pettigrew and Shneider-](#)

man, 2004), and gender equality lay at the heart of the demands the Maoists made throughout the conflict (Grossman-Thompson and Dennis, 2017, 801; Grossman-Thompson, 2019, 343).

Many of these demands have made their way into the formal policies that shape Nepali politics today. For instance, Nepal's 2015 Constitution guarantees gender equality in all spheres of life, including in education, work, and wages. A number of quotas guarantee female political representation at various levels of government. For instance, at the lowest administrative level, the ward (equivalent to a county in the United States), two of the four ward members must be women (Asian Development Bank, 2020, 3). In each district, which is one administrative level higher than the ward, three of the nine members must be women (Asian Development Bank, 2020, 3). Throughout the state, including elected bodies and political parties, there must be 33% representation of women (Hachhethu and Gellner, 2010, 142). Perhaps one of the most powerful signs of the success of some of these policies is the fact that the current president of Nepal, Bidhya Devi Bhandari, elected in 2015, is a woman.

Yet in many ways, formal policies in Nepal continue to serve as significant obstacles to gender equality in the country. For instance, one of the Maoists' specific grievances tied to gender was the fact that under the constitutional monarchy, only Nepali men could pass on citizenship to their children or foreign-born wives (Grossman-Thompson and Dennis, 2017, 802).

While this issue has been debated in the context of new drafts of Nepal's constitution, this specific issue has not been resolved in post-conflict Nepal. One significant barrier to its resolution is tied to nationalist sentiment and the threats that bordering India and China both pose to this small landlocked country. Placed in this geopolitical context, Nepali women are portrayed as possible threats to the Nepali state, particularly if women living on the borders of India or China have children with Indian or Chinese men and thus "contaminate" Nepal with their offspring (Grossman-Thompson and Dennis, 2017, 810). We highlight this specific example to underscore the fact that gender inequality continues to be enshrined within the letter of the law in Nepal. This can be seen in many areas of the law, including inheritance, property ownership, and legal claims-making, where the law consistently discriminates against women (Kunreuther, 2009). In fact, according to some accounts, formal laws and policies are in fact increasingly encroaching on women's rights over time, rather than expanding upon them (Grossman-Thompson, 2019).

Gender in Nepal: An Overview

Nepal is a patriarchal society with pervasive gender inequality and norms that discriminate against women in all aspects of life. Women are discouraged from engaging in wage-earning activities, and urged to focus their attention on child-rearing and household chores. They are perceived to be temporary members of their families of origin (Bennett 1983): when they marry, they leave their parental household to join their husband's family. In contrast, sons are considered permanent members of their family of origin (Grossman-Thompson and Dennis, 2017, 800). Menstruation is deeply stigmatized, and in some parts of the country menstruating women are required to sequester in an isolated shed. Although the practice is illegal, it continues to occur, with at times devastating consequences for the physical and mental health of those who engage in it, including death (Adhikari, 2020).

These types of gender discrimination, deeply embedded in Nepali society, lie at the root of a long list of quantifiable evidence that girls and women are not afforded the same opportunities as men. Overall, women lag behind men in most indicators of gender equality in Nepal, including in the areas of education, health, economics, and governance, and a female child born today is less likely to live a healthy and empowered life than is a male child (Gurung, Pradhan and Shakya, 2020, 157).

For instance, while 10% of men in Nepal are illiterate, 33% of women are (Asian Development Bank, 2020, 9). For every 100 employed men, there are only 59 employed women. The average monthly income for a woman is about 5,900 Nepali Rupees (50 USD) less than for a man—about 30% lower.¹ And 76% of respondents in one survey reported that women earn less than men for the same job (Gurung, Pradhan and Shakya, 2020, 76). In line with the gender quotas discussed above, more than 40% of elected local officials are women, and more than one third of those in state and federal assemblies are women (Asian Development Bank, 2020, 7). Yet women are under-represented in government services and often confined to less prestigious positions: they hold 10% of gazetted (higher ranked and more stable) positions, and 17% of those that are not gazetted (and therefore less secure). Women also constitute only 3% of the highest civil service positions (Special Class) (Asian Development Bank, 2020, 10).

Moreover, gender violence is a serious problem in Nepal. Indeed, 48% of Nepali women

¹The average monthly salary in Nepal in 2020 was 20,000 NRS, or 165 USD.

report having experienced violence over the course of their lives, and 27% of women in the country report having experienced physical violence ([Khatri Chhetri, 2020b](#)). Strong social norms resist reporting such abuse—among women who experience it, two-thirds report not sharing their experience with anyone ([Asian Development Bank, 2020, 7](#)).

These inequalities find echoes in many of the attitudes that Nepali men and women espouse towards gender. For instance, a study found that less than 40% of Nepali men and women hold egalitarian views toward household chores. Instead, they overwhelmingly believe that a woman's most important role is to take care of her home and family; that a woman loses the respect of her family or community if she does not carry out her domestic chores properly; and that it is shameful for a man to carry out chores such as sweeping the floor, or washing dishes or clothes ([Gurung, Pradhan and Shakya, 2020, 137-138](#)). Men and women also hold gendered attitudes toward appropriate social behavior of men/boys versus women/girls (for instance, expectations about submission to authority, modesty, and assertiveness) with only about 27% of people holding them to egalitarian standards ([Gurung, Pradhan and Shakya, 2020, 137-139](#)).

In contrast, Nepalis hold relatively egalitarian views when it comes to perspectives on gendered economic roles. For instance, over 70% of men and women disagree with the following three statements: women should not go for outside employment if the household economic conditions are better; when women work (outside the home for cash), they are taking jobs away from men; and it is shameful if a wife earns more than her husband ([Gurung, Pradhan and Shakya, 2020, 137](#)).

There are other positive signs to consider as well, such as a gender parity index (GPI) of 0.99 for enrollment in early childhood development programs, and 0.95 for school and college attendance ([Gurung, Pradhan and Shakya, 2020, 136](#)). More generally, indicators of gender equality have risen steadily in recent years ([Grossman-Thompson, 2019, 344](#)). And in some spheres of life, women are in fact more active participants in their community than men. For instance, one study found that women are more involved in local organizations than men ([Gurung, Pradhan and Shakya, 2020](#)). This is likely due to the growth of community groups throughout the country that work with women on a variety of different issues and that have been found to increase a sense of agency and empowerment amongst participants ([Shah, 2004; Pradhan, 2011](#)).

Viewed comparatively, Nepal ranked 101st out of 153 countries in the 2020 Global Gender

Gap Index rankings ([World Economic Forum, 2020](#)). Considering sub-rankings, Nepal was 153rd for economic participation and opportunity; 133rd for educational attainment; 131st for health and survival; and 59th for Political Empowerment ([World Economic Forum, 2020](#)).

Of note, our paper is focused on the overall status of women in Nepal. Yet much of the inequality that we describe varies according to the caste/ethnicity of women in the country. For instance, while the dominant Hindu caste/ethnic groups tend to see the lowest rates of female market employment, Dalit and Muslim women are more likely to work in the marketplace ([Lokshin and Glinskaya, 2009](#), 15). In contrast, Dalit and Muslim women tend to hold less egalitarian views on gendered economic roles than do Brahmin and Newari women. While recognizing these important intersectionalities between caste/ethnicity and gender, our focus in this paper is on the shared experiences of inequality that are a defining feature of Nepali women regardless of their diversity of backgrounds.

Gender in Nepal: Intra-Household Bargaining

Turning specifically to the issue of intra-household bargaining, married women in Nepal have some decision-making power in the household. According to the 2016 Nepal Demographic and Health Survey, most of them have sole or joint decision-making power about their own health care (58%), visits to family and friends (56%) and decisions about major household purchases (53%) ([International Organisation for Migration, 2019](#), 107). Yet women in Nepal participate less in decision-making than men, have less control over resources, and experience limits to their freedom of movement ([Gurung, Pradhan and Shakya, 2020](#), 142; [Asian Development Bank, 2020](#), 7).

Alarming, women's decision-making power in these realms appears to have decreased from 2011 to 2016 ([International Organisation for Migration, 2019](#), 107). In line with these findings, the NSIS (Nepal Social Inclusion Survey) found a decline in women's participation in the sphere of economic decision-making: women who can decide on disposal of self earned income (76% in 2012 versus 60% in 2018) and women who can decide on selling their own land and other assets (25% in 2012 and 11% in 2018) ([Gurung, Pradhan and Shakya, 2020](#), xxii). These developments signal the need for increased attention to drivers of women's empowerment.

Yet other data suggest reasons to be more optimistic about women's empowerment in the

household over time. For instance, the NSIS found extremely large increases in the following variables from 2011 to 2018: more women noted that they decided or were consulted on their marriage (61% in 2012; 75% in 2018); were consulted on the number of children to have (53% in 2012; 86% in 2018); were allowed to go to local market without permission (64% in 2012; 87% in 2018); were allowed to go to their parents' home without permission (47% in 2012; 79% in 2018); and were allowed to attend formal meetings without permission (37% in 2012; 67% in 2018) (Gurung, Pradhan and Shakya, 2020, xxi).

Gender and Migration

We turn now to an issue that affects almost all aspects of Nepali politics, economics and society: migration. The phenomenon is overwhelmingly male-dominated in Nepal, with important impacts on women and intra-household bargaining.

Nepal is one of the poorest countries in the world. By some accounts, about 20% of the population lives in poverty (International Organisation for Migration, 2019, 28), and this provides a crucial driving force behind migration out of the country. Indeed, an estimated 7% of the population is “absentee” (not living in Nepal)—one of the figures often used as an estimate of the size of the migrant population (International Organisation for Migration, 2019, 35). According to the 2011 census—the most recent one to have been conducted in the country—almost half of households in Nepal had a member currently or returned from working abroad (International Organisation for Migration, 2019, 2). Of note, Nepal does not track migration to India, which has an open border with Nepal, or migration elsewhere that starts through India.² Such records do not exist (International Organisation for Migration, 2019, 3). The 2011 census found that about 37% of individuals absent from Nepal were in India (International Organisation for Migration, 2019, 2-3). As such, actual rates of migration are likely substantially higher than these formal numbers indicate (Phadera, 2019, 5).

Formal remittances from this migration make up about 25% of the country's GDP (Khatr Chhetri, 2020a, xv). As a percentage of GDP, this figure places Nepal fifth in the world (Khatr Chhetri, 2020a, 92). Notably, these data do not include informal financial transfers, which

²This open border policy allows Nepalis (and Indians) to cross into the other country and work there or carry out any other activities without any papers. In the words of two scholars of Nepal, “it is a border that, in many of the modern understandings of the term, is not a border.” (Hachhethu and Gellner, 2010, 136-137).

are considered sizeable, although specific data on their volume is unavailable (Khatari Chhetri, 2020a, 92).³

As noted above, cross-border labour migration from Nepal is overwhelmingly a male phenomenon. According to official Nepal government data, in the past decade, women have been granted only between 5% and 8.5% of government labor approvals in any given year (Khatari Chhetri, 2020a, 12). This gendered imbalance in migration is the direct result of migration policies that perpetuate gender inequality in Nepal. Indeed, while Nepali men face relatively few barriers to migrating abroad, in the past 20 years women have faced a constant flow of shifting cross-border migration restrictions. In 2003, all women were required to receive permission from both their family and the local government if they wanted a foreign labor work permit (Grossman-Thompson, 2019, 345). Five years later, all women were prohibited from leaving Nepal for employment in Malaysia and the Gulf countries. This ban was briefly lifted in 2011, only to be quickly reinstated the following year.

The 2012 reinstatement banned women specifically under the age of 30 from migrating to Gulf countries, particularly for employment as domestic workers. In 2014, the ban expanded to once again include women of all ages seeking domestic work employment abroad. The following year, women aged 24 and above were permitted to migrate to the Gulf countries, if their children were over the age of 2. As of 2021, all women are once again forbidden from migrating abroad.

The gendered imbalance that these policies foster has resulted in a dominant narrative wherein Nepali women are often characterized as having been “left behind” by male migrants (Grossman-Thompson, 2019, 339). Yet, while these policies have certainly complicated efforts of women to migrate abroad, that does not mean female migration is non-existent in Nepal. First, the open border with India means that women encounter no regulatory obstacles to going there. Second, women can migrate illegally to any number of other countries. It is difficult to accurately measure the size of Nepal’s female cross-border migrant population: the open border policy with India complicates efforts to monitor India-Nepal border traffic, and the illegal movement of women elsewhere similarly evades the formal procedures in place to track movement of Nepali citizens.

These policies, framed in paternalistic terms as designed to protect Nepali women from

³Formal remittances are those transferred through approved companies or banks. Informal remittances are those that enter the country through unapproved channels, including smuggling (Khatari Chhetri, 2020a, 95).

encountering harm, are deeply problematic from the perspective of gender equality in Nepal. Indeed, given levels of poverty in Nepal and limited opportunities for lucrative employment domestically, the fact that the law makes it so difficult for women to access jobs abroad is an instance of state-perpetuated gender discrimination that essentially reserves the most well-paid and sought-after jobs for men. Furthermore, these rules increase the migration risks for those women who seek employment abroad in violation of the law. They are unable to access the protective measures and state support that come with the labor approval process, such as Nepali government verification of the legitimacy of the foreign employment offer and registration with authorities who keep track of the migrant’s whereabouts and can provide assistance as needed ([International Organisation for Migration, 2019, 22](#)).

What is the impact of migration on married women who remain behind? In addition to continuing to manage child-rearing and household chores, wives of migrant men often take on unpaid responsibilities tied to family agricultural plots and enterprises that husbands had previously managed ([Lokshin and Glinskaya, 2009, 3](#)). Of note, absent husbands do not necessarily provide greater freedom for wives to enter the formal work force outside the home. For instance, one study found that “male migration has a negative impact on the level of MWP (market work participation) by the women left behind” ([Lokshin and Glinskaya, 2009, 4](#)), a finding that others have confirmed and elaborated upon, such as [Phadera \(2019\)](#) who finds that “[m]ale-dominated migration pushes females to give up wage-employment and increase labor supply in their own farms” ([Phadera, 2019, 4](#)). Even when husbands are abroad, they continue to participate in major household and financial decisions ([International Organisation for Migration, 2019, 107](#)). Absent husbands often uphold Nepali society’s strong norms that oppose female employment outside the home, and their local family members and neighbors help reinforce these views ([Lokshin and Glinskaya, 2009, 3](#)).⁴ There is also evidence that left-behind wives are on the receiving end of more sexual harassment and abuse than women whose husbands are by their side ([International Organisation for Migration, 2019, 107](#)). Overall, there is no consensus in the literature on whether male migration has overall more positive or negative impacts on the women left behind ([International Organisation for Migration, 2019, 105-106](#); [Asian Development Bank, 2020, 10](#)).

⁴Of note, as married women in Nepal are perceived to have left their family of origin and joined that of their husband, when a husband migrates his wife falls under the control of her parents-in-law ([Sharma, 1986](#)).

Research Design

Data Description

Surveys were conducted between February 9, 2019 and April 1, 2019. Study participants were randomly selected in the targeted study locations in Nepal to be representative of eight districts clustered around Kathmandu in the Central Development Region, which is one of seven provinces in Nepal: Sarlahi, Dolakha, Sidhupalchok, Kavrepalanchok, Bhaktapur, Dhading, Makwanpur, and Chitwan.⁵ The survey consists of 2,011 individuals, uniformly distributed across the eight targeted districts. The sampling distribution by district is displayed in Table 1. The survey was conducted as part of a longitudinal study that involved three rounds of data collection. The initial sample was representative of two regions in Nepal, the Central Development Region and the Mid-Western Region. In each of ten districts, eight Village Development Committees (VDCs) were selected, as well as two wards within each VDC, for a total number of 160 research sites. Wards that had fewer than 100 households at the time, as well as those that were not primarily Nepali speaking, were excluded from the selection process. Wards within a VDC were then selected, being mindful to avoid, when possible, two wards that share a border. Individuals were recruited in Round 1 to achieve gender balance and age balance with respect to a youth and non-youth population (half being between 13-24 years old; and half being 25+ years old). The second and third rounds of the survey targeted all respondents who participated in Round 1 of the study in the Central Development Region, which translates to 8 of the 10 original study districts.

The survey employed tablets using the SurveyToGo offline data collection survey platform. The questionnaire took approximately 1.5 hours to complete. The relative deprivation experiment and women’s empowerment narrative experiments were embedded in the survey, and randomization was automated at the individual level by the SurveyToGo program.⁶

⁵Nepal is divided into 75 districts.

⁶More information regarding the sampling plan for Rounds 1 and 2 of the dataset can be found here: <https://www.iie.org/Research-and-Insights/Publications/DFG-Vanderbilt-Publication>.

Table 1: Sample Distribution by District

District	Frequency	Percent
Sarlahi	198	12.60
Dolakha	198	12.60
Sindhupalchok	192	12.21
Kavrepalanchok	209	13.30
Bhaktapur	157	9.99
Dhading	198	12.60
Makwanpur	207	13.17
Chitwan	213	13.55
Total	1,572	100.00

Relative Deprivation Prime

In order to assess the effects of relative deprivation, we leverage a relative poverty prime that [Mo \(2012, 2018\)](#) first employed to study the effects of perceived inequality on political and economic behavior. The prime was originally developed by [Haisley, Mostafa and Loewenstein \(2008\)](#) to study the decision to participate in lotteries. [Mo \(2012, 2018\)](#) introduced a variation on that prime to study the effects of feeling relatively poor on attitudes and behavior which [Healy, Kosec and Mo \(2017\)](#) and [Fair et al. \(2018\)](#) replicated in Pakistan, and which [Kosec et al. \(2021\)](#) replicated in Papua New Guinea.

About half of respondents were randomly assigned to receive a priming question inducing them to feel relatively poor, and thus perceive the income distribution to be wider than it actually is. Hereafter, we refer to this group as the “relative poverty prime” group. The remainder of the respondents received an alternative priming question, designed to frame their household’s income neutrally and make them perceive the income distribution to be narrower compared to the treatment group. Hereafter, we refer to this group as the “no poverty prime” group. To operationalize the prime, we ask all respondents the following question: “Income is the amount of cash income you earn from all agricultural and non-agricultural activities, the cash value of any crops you produced, and money you receive from governmental or non-governmental programs. How much income did your family earn last month?” We then randomly assign respondents to receive one of the following two sets of response options and ask them to locate their household’s monthly income (shown in [Table 2](#)).

Table 2: Relative Poverty Prime

<i>Response Option</i>	<i>No Poverty Prime</i>	<i>Relative Poverty Prime</i>
1	Less than NRS 3,000	Less than NRS 25,000
2	NRS 3,000 – 6,000	NRS 25,000 – 50,000
3	NRS 6,000 – 9,000	NRS 50,000 – 100,000
4	NRS 9,000 – 12,000	NRS 100,000 – 200,000
5	More than NRS 12,000	More than NRS 200,000

Notice that someone whose family makes NRS 7,000 per month on average would choose response option 3 if assigned to the control condition, whereas the same person would select response option 1 if given the treatment condition. The logic of this prime derives from previous research showing that response options to ordinal or interval questions send cues to respondents about what are normal or typical responses to a question (e.g. [Courneya et al., 2003](#); [Menon, Raghubir and Schwarz, 1997](#); [Rockwood, Sangster and Dillman, 1997](#); [Schwarz et al., 1985](#)). In this case, respondents may assume that the five response options were purposely selected so that response 3 is the modal, or most typical response. As such, receiving the treatment condition (poverty prime) may induce the respondents to feel as if their income is in the bottom part of the income distribution, and see the income distribution to be wider than it actually is. The other half of the respondents, who are assigned to the control condition, will be made to feel that their income is more typical, and that the income distribution is narrower. This is because we selected brackets such that those who receive the relative poverty prime is likely to select response option 1, whereas those who do not receive the relative poverty prime are relatively equally likely to answer with any of the five response options.

Gender Egalitarian Messages & Perceptions of Threat

In addition to the relative poverty prime described above, we introduce a messaging experiment where respondents are randomly assigned to receive one of four sets of messages. The first is the control group, in which respondents are not read any statements; instead, they are immediately asked to respond to questions about their gender attitudes. The second group (which we refer to as the “pure treatment group”) is read a statement that both describes the disadvantages that women face and also underscores that many people want to bring about gender equality. Two additional groups get the same gender narrative as the pure treatment group, in addition to one more sentence. The third condition (which we refer to as the “less

threatening prime”) is designed to make respondents feel that women’s advancement can also benefit men, making gender equality appear less threatening to men. The fourth condition (referred to as the “more threatening prime”) says that many people support employers in Nepal using policies and programs to remove barriers to women’s employment and “level the playing field” with men. This prime could make gender equality seem more threatening to men by evoking a sense of competition. The exact wording of these narratives is described in Table 3.

Table 3: Gender Egalitarian Messages

<i>Condition</i>	<i>Message</i>
Control Condition	No narrative
Pure Treatment Condition	“We are now going to discuss some questions regarding your world view. Note that there are no right or wrong answers, and we value your perspective. Some people say that women are often treated as inferior to men in Nepal, both within the home and by their community. Women are taught to defer to men. They are also taught to put their needs and wishes behind those of others at home and in the workplace, which reduces their self-worth and limits their ability to progress in life. Some people say this standard of behavior should change and women should have the same rights and opportunities as men. They say that women should belong in all places where decisions are being made, and that their involvement will benefit society. They say that girls should grow up being told that they are valuable and powerful and deserving of every chance and opportunity given to men. This is important for a society to advance.”
Less Threatening Treatment Condition	Text in the “pure treatment group” narrative + “They also say that gender equality is good for both men and women in Nepal, as it can ease the economic burden felt by men to support their families, can bring more money and prosperity to the household and community, and removes gender stereotypes that rob men of opportunities to participate in family life.”
More Threatening Treatment Condition	Text in the “pure treatment group” narrative + “They also say that employers in Nepal should level the playing field, and initiate policies and programs that better support women, remove barriers for women, and encourage women to apply for employment.”

Summary of Measures

Outcome Measures

Each of our eight questions was designed to capture perceptions of gender equality and norms pertaining to women’s decision-making authority in the household (i.e., questions relating to

intra-household bargaining).⁷ For each question, respondents were provided with five response options, and for all analyses, we recoded responses to range between 0 and 1 for ease of interpretation. Moreover, all responses were coded such that higher values represented more gender egalitarian viewpoints.⁸

Table 4 provides summary statistics for our individual outcome variables as well as our overall index for married men and women separately. On average, we find that men and women have similar gender attitudes; the mean of the overall index, computed by taking an average of the eight outcome measures, is around 0.62 for both genders. Men are slightly more egalitarian than women in their attitudes about the extent to which women should follow tradition and do what their husband asks, while women are more egalitarian than men for outcomes related to women’s role in decision-making over expenditures and income, and their working outside the home. Perhaps most surprising is that while both genders have quite egalitarian gender attitudes about women making decisions about spending income and working outside the home (outcome value for these are always above 0.89 for both genders), they have very regressive attitudes related to women needing to follow tradition and support their husband’s opinions (outcome values for these are always below 0.37 for both genders).

Demographic Characteristics

Table 5 summarizes demographic characteristics for the married individuals in our main sample for analysis. These individuals comprise 78.2 percent of those surveyed; summary statistics for

⁷(1) In your opinion, to what extent should women and men have equal ability to decide how to spend the money their household earns from farming and other work? [1=A great deal, 2=A lot, 3=Moderately, 4=A little, 5=Not at all]; (2) To what extent do you agree or disagree with the following statement? A good woman always supports her husband’s opinions. [1=Strongly agree, 2=Moderately agree, 3=Neither agree nor disagree, 4=Slightly disagree, 5=Strongly disagree]; (3) To what extent do you agree or disagree with the following statement? Women should be able to work outside the home if they want to. [1=Strongly agree, 2=Moderately agree, 3=Neither agree nor disagree, 4=Slightly disagree, 5=Strongly disagree]; (4) To what extent do you agree or disagree with the following statement? Women and men should have equal control over income their household earns. [1=Strongly agree, 2=Moderately agree, 3=Neither agree nor disagree, 4=Slightly disagree, 5=Strongly disagree]; (5) To what extent do you agree or disagree with the following statement? Men and women should share household chores. [1=Strongly agree, 2=Moderately agree, 3=Neither agree nor disagree, 4=Slightly disagree, 5=Strongly disagree]; (6) To what extent do you agree or disagree with the following statement? Every individual should follow tradition, especially women. [1=Strongly agree, 2=Moderately agree, 3=Neither agree nor disagree, 4=Slightly disagree, 5=Strongly disagree]; and (7) To what extent do you agree or disagree with the following statement? It is important for a woman to do what her husband asks, even if she disagrees with him. [1=Strongly agree, 2=Moderately agree, 3=Neither agree nor disagree, 4=Slightly disagree, 5=Strongly disagree].

⁸In our pre-analysis plan, we included a wider set of measures. Results for all of these measures are presented in the Appendix. Additionally, we registered that we would standardize using the mean and standard deviation in the control group. We instead standardized the items to range between 0 and 1 to allow for ease of interpretation. This deviation from our pre-analysis plan does not change our results.

Table 4: Summary Statistics for Outcome Measures for Married Individuals

	Male			Female		
	N	Mean	SD	N	Mean	SD
<i>Outcome Measures</i>						
Index	732	0.625	0.113	840	0.620	0.111
Expenditures	731	0.614	0.236	837	0.631	0.224
Income	731	0.899	0.163	840	0.914	0.160
Household chores	732	0.950	0.100	840	0.959	0.085
Work outside home	732	0.894	0.170	840	0.932	0.134
Women should follow tradition	730	0.363	0.344	840	0.319	0.334
Do what husband asks	732	0.631	0.363	840	0.543	0.391
Support husband’s opinions	731	0.166	0.245	839	0.187	0.260
Young women should follow traditions	731	0.485	0.285	839	0.482	0.277
<i>Manipulation Check Measures</i>						
Subjective relative economic status	732	4.713	1.590	839	4.959	1.586
Women have same opportunities as men	728	0.477	0.197	839	0.483	0.186

the broader sample of individuals, married and unmarried, can be found in Table A.2. Our focus on married individuals is rooted in our desire to understand intra-household bargaining, and thus we focus on women and men involved in a relationship and at a similar stage in life (e.g., as opposed to comparing an unmarried woman with her father). Individuals in our sample are, on average, 39 years old, have lower secondary education, their household earns 25,360 NPR per month, and their household spends 9,928 NPR per month. Respondents are 53% women, 72.9% identify as Hindus, and 24.3% identify as Buddhists. In terms of ethnicity, 21.8%, 26.8%, 16.0%, and 8.2% identify with the Chhetri, Tamang, Braham, and Newar groups, respectively.

Table 5: Summary Statistics

	N	Mean	SD	Min	Max
Female	1,572	0.534	0.499	0	1
Age	1,572	38.845	12.330	16	69
Educational level	1,568	2.730	1.677	1	7
Religion: Hindu	1,572	0.729	0.445	0	1
Religion: Buddhist	1,572	0.243	0.429	0	1
Ethnicity: Chhetri	1,572	0.218	0.413	0	1
Ethnicity: Tamang	1,572	0.268	0.443	0	1
Ethnicity: Braham	1,572	0.160	0.366	0	1
Ethnicity: Newar	1,572	0.082	0.275	0	1
Number of Children	1,572	0.447	0.910	0	6
Monthly HH income (NPR)	1,572	25,360.190	44,872.360	0	1,000,000
Have enough food to eat	1,572	1.301	0.616	1	3
Monthly HH expenditure (NPR)	1,550	9,927.558	23,915.610	15	900,000

Manipulation Check Measures

The following questions were developed to assess whether the treatments had their intended effects. For the relative poverty prime, we expected that those who were randomized into the treatment group to feel poorer compared to those in the control group. To capture this, we asked all respondents the following question: “In your opinion, compared to others in your community, is your household poorer or richer or neither poorer nor richer?” [1=Much poorer, 2=Moderately poorer, 3=Slightly poorer, 4=Neither poorer nor richer, 5=Slightly richer, 6=Moderately richer, 7=Much richer]. We also expected that respondents who received a gender egalitarian message would be more likely to believe that women in Nepal do not have the same economic and social opportunities as men: “To what extent do women in Nepal have the same economic and social opportunities as men?” [1=A great deal, 2=A lot, 3=Moderately, 4=A little, 5=Not at all]. As done for all outcome measures, we recoded all responses to range from 0 to 1. Summary statistics for these measures are provided in Table 4.

Data and Estimation Strategy

Estimation Strategy

Given our experimental design, we estimated the effect of the relative poverty prime on married individuals’ gender attitudes using ordinary least squares (OLS) regression for all individuals, and then separately for married men and married women:

$$A_i = \alpha + \beta P_i + \sigma \mathbf{X}_i + \phi E_j + \rho V_k + \epsilon_i, \quad (1)$$

where i indexes individuals and P is a binary indicator denoting whether respondent i received the poverty prime. The reference category or base group category in the specification is non-receipt of the poverty prime. X is a vector of individual- and survey-level controls to improve the precision of estimates.⁹ E_j are enumerator fixed effects for enumerator j , V_k are VDC fixed effects for VDC k , and ϵ is the error term. Note that as the study employs an experimental design, we will consider both a specification without any control measures ($\mathbf{X}$, E_j , V_k) as well.

⁹We include control variables that we noted in our pre-analysis plan: gender (but not when conducting analyses by gender), age, education, ethnicity, religious identification (Hindu and Buddhist), number of children, household income, access to food, and household expenditures.

The outcome, A_i , represents individual-level gender attitudes that are expressed as the extent of disagreement or agreement with or general support for statements related to gender norms and women’s appropriate roles in the household and community.

Next, we estimate the effect of being exposed to a women’s empowerment narrative, the effect of the relative poverty prime, and the interactive effects of exposure to a narrative and the relative poverty prime on individuals’ gender attitudes. We again estimate the effects using OLS regression for all married individuals and then separately for married men and married women. We estimate the following empirical specification using

$$A_i = \alpha + \beta P_i + \gamma M_i + \delta P_i M_i + \sigma \mathbf{X}_i + \phi E_j + \rho V_k + \epsilon_i, \quad (2)$$

where i indexes individuals, and M is a binary variable indicating whether the respondent received a women’s empowerment narrative.¹⁰ P is a binary indicator denoting whether respondent i received the poverty prime. The reference category or base group category in the specification is non-receipt of any women’s empowerment message and non-receipt of the poverty prime. The interactions are captured by coefficients δ .

Results

Balance Tests and Manipulation Checks

Before estimating treatment effects, we first conduct balance tests and manipulation checks. When we examine whether demographic characteristics are balanced across our experimental conditions, we observe that the randomization of the deprivation prime worked as designed (see the last column of Table A.1 in Appendix A.1). Gender, age, education level, religion, ethnicity, number of children, household income levels, food security, and household expenditure levels are all statistically indistinguishable across the two experimental conditions.¹¹ We also see balance in observable demographic characteristics across our gender egalitarian message conditions (see

¹⁰This consists of the “pure” women’s empowerment narrative, the “less threatening” women’s empowerment narrative, and the “more threatening” women’s empowerment narrative. We registered in the pre-analysis plan that we will pool the conditions if there is no evidence of each of the messages having differential effects.

¹¹We pre-registered all of the variables that we expected to achieve balance on. Information on respondents’ monthly household income, ethnicity, religion, and educational level are taken from first round of the longitudinal data, as they were not asked again in this round of the data collection effort.

the last columns in Table A.7 and A.8 in Appendix C.

Through two tests, we are able to confirm that our relative deprivation treatment worked as intended. First, we considered whether the relative deprivation prime influenced the income bracket selected by the respondent (ranging from 1 through 5, with higher brackets indicating higher household income). Reassuringly, we observe that those who were primed to feel relatively poor chose a lower income bracket than those who were not primed to feel relatively poor. As Table 6 shows, whether we omit (column 1) or include (column 3) covariates comprised of demographic controls as well as enumerator and VDC fixed effects, the relative deprivation prime translated to the respondent being over two brackets lower in the distribution we provided—a result that is statistically significant in both cases at the 0.01 level. When we flexibly allow the relative deprivation prime to have different impacts according to respondent gender, we find some limited evidence that the prime affects women less than men; this difference is insignificant in a specification not including covariates ($\beta = -0.07$; $p = 0.57$; see column 2) and it is significant in the specification including them ($\beta = -0.21$; $p = 0.06$; see column 4). Overall, however, the magnitude of the interaction term ($\beta = -0.209$) between the relative deprivation prime and gender is small compared to the coefficient on the deprivation prime itself ($\beta = -2.189$), indicating similar impacts across genders.

Table 6: The effect of poverty prime on income bucket selected

Outcome: Income bucket selected				
	(1)	(2)	(3)	(4)
Deprivation Prime	-2.297*** (0.0610)	-2.259*** (0.0911)	-2.300*** (0.0545)	-2.189*** (0.0825)
Women		0.152 (0.109)	0.0269 (0.0612)	0.138 (0.100)
Deprived $\times$ Women		-0.0700 (0.123)		-0.209* (0.109)
Constant	3.808*** (0.0540)	3.726*** (0.0826)	3.391*** (0.400)	3.338*** (0.400)
Covariates	No	No	Yes	Yes
Observations	1540	1540	1517	1517

Notes: Standard errors are in parentheses. * $p < 0.1$, ** $p < .05$, *** $p < .01$

Second, we assess in Table 7 the effect of the relative deprivation prime on a person's subjective sense of relative economic status in their community. As designed, we observe that the

prime translates to a depressed view of one’s relative economic status—specifically, a 16.7 percentage point (pp) decline in our measure of subjective economic status when we do not include covariates ($p = 0.038$; see column 1). This is equivalent to about a 0.105 standard deviation (S.D.) decline.¹² When we do include covariates, there is a 17.9 pp (or 0.112 S.D.) decline in the measure ($p = 0.016$; see column 3). Moreover, whether or not we include covariates, we cannot reject the statement that the prime had the same impact on women than it had on men (in column 2 and column 4, the p -values on the interaction term between the prime and gender are 0.132 and 0.218, respectively).¹³

Table 7: The effect of poverty prime on subjective status

Outcome: Subjective sense of relative economic status				
	(1)	(2)	(3)	(4)
Deprivation Prime	-0.167** (0.0804)	-0.296** (0.117)	-0.179** (0.0743)	-0.278** (0.109)
Women		0.118 (0.118)	0.196** (0.0879)	0.0972 (0.120)
Deprived $\times$ Women		0.243 (0.161)		0.186 (0.151)
Constant	4.933*** (0.0587)	4.870*** (0.0858)	4.343*** (0.579)	4.389*** (0.576)
Covariates	No	No	Yes	Yes
Observations	1571	1571	1545	1545

Notes: Standard errors are in parentheses. * $p < 0.1$, ** $p < .05$, *** $p < .01$

The empowerment narrative, however, did not have the intended effect. None of the messages led to a substantive or statistically significant shift in respondents’ perceptions that women are afforded different economic and social opportunities than men (see bottom panel of Table A.9 in the Online Appendix). When we pool the three treatment conditions together, we still see no substantive or statistically significant shift in responses when looking at all married individuals or married women and married men separately (see top panel of Table A.9 in the Online Appendix). The empowerment narrative, when pooled, leads to a 1.040 pp (or 0.051 S.D.)

¹²Specifically, 0.167 (the coefficient on the deprivation prime for married women and men) is about 10.5% of 1.592 (the S.D. of the relative status measure for married men and women).

¹³Appendix A.2 shows similar effects of the relative deprivation prime on the income bucket selected (Table A.3) and our manipulation check question related to subjective well-being (Table A.4) when we use data on all respondents, rather than only married respondents.

decline in responses among married women and married men when we do not include covariates ($p = 0.334$; see column 1 of the top panel) and a 0.968 pp (or 0.051 S.D.) decline in responses when we include covariates ($p = 0.393$; see column 2 of the top panel). To observe a change in gender attitudes with regards to intra-household bargaining, reduction in a denial that there are inequities is a necessary first step. However, we do not see such a change. Indeed, it is possible that our message was too weak; however, it is noteworthy that people are not responsive to a subtle message regarding how women and men are treated differently in society, whereas people are sensitive to subtle relative deprivation primes. In other words, people are sensitive to some subtle treatments. Moreover, as showcased in a recent study in India, [McKelway \(2021\)](#) finds that an intervention to empower women and encourage households to have women work outside the home that is stronger than the one we used, as she uses a video to display benefits of women's advancement visually rather than through a simple text-based message, is ineffectual. She finds that the video-based treatment does not change broader attitudes about how women need to be afforded more opportunities. It appears that people are generally impervious to nudges to improve gender dynamics between men and women. Given that we do not see evidence of our women's empowerment message increasing recognition that women need to be afforded more rights and opportunities to be equal to men, we expect that the message has no effect on our outcome measures of interest.

Main Effects

As we would expect given the gender egalitarian message did not have the intended effect of increasing concern for women's opportunities, as measured by our manipulation check question described above, we see no effect of any of the gender egalitarian messages on our outcome measures among both married women and men ($\beta = -0.0003 - 0.008$, $p > 0.10$; see columns 3-4 in Table [A.10](#) in the Online Appendix). Moreover, there are no interactive effects of our message and the relative deprivation prime ($\beta = -0.007 - 0.0008$, $p > 0.10$; see columns 7-8 in Table [A.10](#) in the Online Appendix). Given that the effect of the gender egalitarian messages on our outcomes of interest is a precise null, rather than estimating main effects and interactions, we focus on the main effects. In other words, rather than employing Equation (2) that reflects our factorial design, we focus on Equation (1) and simply control for the

receipt of a message (whether we control for receipt of each of the three messages separately or control for receipt of any of the three messages does not matter) to estimate the effect of the relative deprivation prime. Note that when we employ Equation (1) rather than Equation (2), the estimated treatment effect of the relative deprivation prime is an average of the effect when people receive our gender message and the effect when people do not receive our gender message; however, as there is no effect of the gender message, this is a non-issue. The advantage of this empirical strategy is the fact that we obtain a larger number of respondents in both our “control” sample (i.e., those who did not receive the relative deprivation prime) and “treatment” sample (i.e., those who received the relative deprivation prime), which meaningfully shrinks the size of our standard errors.

We find consistent evidence that perceptions of relative deprivation lead women to be in favor of ceding their power to their husband in intra-household bargaining decisions, but have minimal effects on men’s gender attitudes (see the top panel of Figure 1.)¹⁴ Considering our Gender Egalitarian Index, which is a simple mean of the eight sub-components we consider, we observe a 0.0194 unit ($p = 0.008$) decline among married women. This is a rather large effect, reflecting an approximate 0.17 standard deviation (S.D.) decline in the degree to which married women’s gender attitudes are egalitarian. This index is our primary measure of interest for two reasons. First, by focusing on one key outcome, we mitigate against multiple hypothesis testing. Second, an advantage of an averaged measure is that it nets out measurement error associated with any one of the index components (Ansolabehere, Rodden and Snyder, 2008).

Considering each component measure of the index (see the eight other measures below the index in Figure 1), we see that the prime leads women to be statistically significantly less likely to agree: that women and men should have “equal ability to decide how to spend the money their household earns from farming and other work” ($\beta = -0.0287$, $p = 0.062$; hereafter referred to as our “expenditure” measure); that women and men should have “equal control over income their household earns” ($\beta = -0.0304$, $p = 0.007$; hereafter referred to as our “income” measure); that men and women should “share household chores” ($\beta = -0.0172$, $p = 0.005$; hereafter referred to as our “chores” measure); that “women should be able to work outside the home if they

¹⁴We provide results for all respondents, including non-married individuals in Appendix B, Section B.2 (see Table A.6). Of note, all of the results we document below are attenuated by the inclusion of non-married respondents, which is to be expected, given that there is no reason to believe our treatment would have an effect on intra-household bargaining between husband and wife when one is unmarried.

Figure 1: Effects by Gender Among Married Women and Men

(a) Women

(b) Men

Notes. The figures represent regression analysis of each outcome measure on the deprivation prime among (a) married women and (b) married men. Covariates are included in all models. The longer solid dashes (in pink) represent 90 percent confidence intervals; the shorter dotted lines (in purple) represent 95 percent confidence intervals.

want to” ($\beta = -0.0233$, $p = 0.009$; hereafter referred to as our “work” measure); and that “every individual should follow tradition, especially women” ($\beta = -0.0447$, $p = 0.052$; hereafter referred to as our “tradition” measure). The effect sizes for individual index components are moderately large in standard deviation terms. Specifically, they reflect a 0.13 S.D. decline in our expenditure measure, a 0.19 S.D. decline in our income measure, a 0.20 S.D. decline in our share household chores measure, a 0.17 S.D. decline in our work measure, and a 0.13 S.D. decline in our tradition measure. That these effects are all large and similarly-sized suggests that none dominates our overall effects. Consistent with the aforementioned patterns, we also see greater agreement with the sentiment that “it is important for a woman to do what her husband asks, even if she disagrees with him”; however, this effect is not statistically significant at conventional levels ($\beta = -0.0244$, $p = 0.346$; hereafter referred to as our “does what husband asks” measure).

We observe null effects for questions pertaining to whether “a good woman always supports her husband’s opinions” ($\beta = 0.0070$, $p = 0.705$; hereafter referred to as our “supports husband’s opinions” measure) and whether “it is important for young women to abide by traditions, and behave like their mothers’ generation” ($\beta = 0.0039$, $p = 0.835$; hereafter referred to as our “young women follow tradition” measure). It is important to flag that the latter question clearly refers to young women (who may be unmarried), whereas respondents would likely answer the other seven questions with reference to older women (who are in marriages and thus more likely to be weighing in on intra-household decisions). As such, it may be less relevant for our index—though we include it given we pre-specified it as being included in our index.

In contrast, we observe no changes in gender attitudes among men depending on whether or not they received the relative deprivation prime (see the bottom panel of Figure 1). When we consider the index, we estimate a precise null effect ($\beta = 0.0056$; $p = 0.469$). Reassuringly, we observe a null effect for each of the eight component measures as well. Given this pattern, we are not surprised to see that the difference in the observed effect of the prime between women and men for our overall index measure is statistically meaningful ($\beta = -0.0251$; $p = 0.020$; column 1 of Table 8). Further, the difference is also significant for four of the five individual outcomes for which we identified statistically significant impacts of the prime on women (for income (column 3), share household chores (column 4), work (column 5), and tradition (column 6) measures; see

Table 8). In other words, while women shift their gender attitudes to be less gender egalitarian with respect to intra-household bargaining in response to the relative deprivation prime, men’s attitudes do not shift, and we can also statistically reject that impacts on women and men are the same.

Discussion

This study contributes novel experimental evidence from over 1,500 married adults in Nepal on how perceptions of one’s relative economic status influence beliefs regarding gender roles in the household. It uses an established survey treatment called a priming experiment to subtly lead half of respondents to feel that their household’s income is relatively low, which we refer to as experiencing relative deprivation, while others are left feeling relatively neutrally about their household’s income. We focus on married women and men in order to better capture intra-household bargaining that occurs among spouses. We find that increased feelings of relative deprivation make women significantly less likely to support gender egalitarian perspectives. Women decrease their support for women making decisions over household expenditures, having equal control over household income, sharing household chores, and women working outside the home. A message randomly read to some women and designed to spur increased support for women’s empowerment does little to alter beliefs regarding gender roles or to attenuate the effects of the relative deprivation prime. Despite the negative impacts of the relative deprivation prime on women’s gender attitudes, however, we do not find a similar pattern for men.

These results present an interesting contrast with those of [Kosec et al. \(2021\)](#). In Papua New Guinea, these authors—like us—primed half of both men and women to experience increased feelings of relative deprivation. They did not employ any women’s empowerment narratives. They found that some aspects of gender attitudes are sensitive to perceptions of relative poverty. Specifically, feeling that one’s household is relatively poor increases support for women’s paid employment among both men and women. This might be interpreted as evincing a potential upside to feeling relatively poor; at least in low-income and highly gender unequal contexts such as that of PNG, some norm-based constraints limiting women’s labor force opportunities might be relaxed when individuals feel economically worse off. However, they simultaneously find two troubling effects. First, focus group discussions highlighted that support for women’s increased

Table 8: The effect of poverty prime on support for gender egalitarian views among married women and men

	(1) Gender Egalitarian Index	(2) Expend- itures	(3) Income	(4) Chores	(5) Work	(6) Tradition	(7) Does what hus- band asks	(8) Supports husband's opinions	(9) Young wo- men follow traditions
Deprivation Prime	0.00562 (0.00776)	-0.0230 (0.0173)	0.00715 (0.0122)	0.00638 (0.00730)	0.0165 (0.0124)	0.0190 (0.0249)	0.0285 (0.0255)	0.00533 (0.0185)	-0.00847 (0.0206)
Women	0.00980 (0.00844)	0.0111 (0.0178)	0.0238* (0.0135)	0.0174** (0.00685)	0.0553*** (0.0121)	0.0208 (0.0269)	-0.0630** (0.0278)	0.0338 (0.0207)	-0.0166 (0.0218)
Deprived $\times$ Women	-0.0251** (0.0108)	-0.00569 (0.0230)	-0.0376** (0.0169)	-0.0236** (0.00948)	-0.0398*** (0.0153)	-0.0638* (0.0343)	-0.0528 (0.0366)	0.00163 (0.0264)	0.0124 (0.0284)
Constant	0.503*** (0.0379)	0.644*** (0.0664)	0.838*** (0.0622)	0.941*** (0.0296)	0.721*** (0.0678)	0.170 (0.108)	0.329*** (0.123)	0.0566 (0.0828)	0.337*** (0.0914)
Observations	1546	1542	1545	1546	1546	1544	1546	1544	1544

Notes: Covariates are included in all models. Standard errors are in parentheses. * $p < 0.1$, ** $p < .05$, *** $p < .01$

economic participation would not alleviate their unpaid domestic and care work. Instead, feeling relatively poor elicits more support for women “doing it all”—generating income outside the home without reneging on any of their usual household chores. This accords with more recent feminist scholarship showing that increasing women’s economic participation is not by itself empowering. Also, women who experienced feelings of relative poverty believed that they should be more involved in intra-household decision-making. Men, at the same time, did not want to alter the status quo regarding who makes decisions, which suggests that feelings of relative poverty can create conditions ripe for intra-household tension.

What might explain these contrasting findings? Nepal and PNG differ in that Nepal has a higher likelihood of male (as opposed to female) labor supply adjustments in response to worsening economic conditions given the availability of migration—which is male-dominated in Nepal. Thus, where households faced with income shortages in PNG may rely more heavily on women engaging in paid employment, those in Nepal may instead respond with male migration—which is known to be lucrative, but which men may refrain from when possible due to the mental health toll it is often takes (Chen, Kosec and Mueller, 2019). When households deal with income shocks through increased labor supply by women, women may seek additional decision-making authority in the household and adhere less to traditional gender roles. However, when households adjust to income shocks through male migration, women may face increased domestic workloads, be under the thumbs of in-laws, and cede power to avoid within-household conflict.

Overall, the results of both studies underscore the deleterious effects that feelings of relative deprivation can have on women. In PNG, they appear to increase the potential for within-household conflict over decision-making and saddle women with additional work. In the context of Nepal, they appear to lead women to cede decision-making authority to men, possibly due to a perceived increased need to fulfill traditionally female roles in response to either male absence or to prevent conflict or violence.

The results also underscore the necessity of repeating experiments in different country contexts to assess how well the outcome of a study can be expected to apply to other settings (i.e., external validity). Our contrasting findings from performing the same priming experiment in two different country contexts with similar levels of economic and human development showcase the importance of rigorous testing of patterns across multiple country contexts. An

interesting area for future research relates to precisely what are the economic conditions that explain different reactions to the same primes. That is, substantive questions that remain to be analyzed—possibly via studies that provide more variation in the underlying economic conditions of respondents—regarding whether our hypotheses for the reasons that results differ somewhat in PNG vs. Nepal are correct, or whether there are other important explanations for differences in findings.

Our study is not without limitations. More work is needed to understand the extent to which shocks to feelings of relative deprivation achieved by us via a survey experiment are sufficiently similar to shocks perceived from real-world events (e.g., economic decline, job loss, prices changes, natural disasters, etc). There may also be better ways to elicit gender attitudes than simply asking questions—which may be susceptible to a variety of response biases that could generate noise in our outcome variables (e.g., desirability bias, wherein individuals offer the response they think enumerators want to hear). For example, presenting vignettes describing particular real-world scenarios or offering list experiments may result in more thoughtful or truthful replies.

References

- Adhikari, Prakash and Steven Samford. 2013. "The Nepali State and the Dynamics of the Maoist Insurgency." *Studies in Comparative International Development* 48(4):457–481.
- Adhikari, Rojita. 2020. "Bringing an End to Deadly "Menstrual Huts" is proving Difficult in Nepal." *BMJ* 368.
- Andersen, Robert and Tina Fetner. 2008. "Economic Inequality and Intolerance: Attitudes toward Homosexuality in 35 Democracies." *American Journal of Political Science* 52(4):942–958.
- Ansolabehere, Stephen, Jonathan Rodden and James M. Snyder. 2008. "The Strength of Issues: Using Multiple Measures to Gauge Preference Stability, Ideological Constraint, and Issue Voting." *American Political Science Review* 102(2):215–232.
- Asian Development Bank. 2020. "Gender Equality and Social Inclusion Diagnostic of Selected Sectors in Nepal." Asian Development Bank.
- Bendor, Jonathan. 2016. Aspiration-Based Models of Politics. In *Political Psychology*. Psychology Press. Num Pages: 32.
- Chen, Joyce, Katrina Kosec and Valerie Mueller. 2019. "Moving to despair? Migration and well-being in Pakistan." *World Development* 113:186–203.
- Courneya, Kerry S., Lee W. Jones, Ryan E. Rhodes and Chris M. Blanchard. 2003. "Effect of Response Scales on Self-Reported Exercise Frequency." *American Journal of Health Behavior* 27(6):613–622.
- Fair, C. Christine, Rebecca Littman, Neil Malhotra and Jacob N. Shapiro. 2018. "Relative Poverty, Perceived Violence, and Support for Militant Politics: Evidence from Pakistan." *Political Science Research and Methods* 6(1):57–81.
- Grossman-Thompson, Barbara and Dannah Dennis. 2017. "Citizenship in the Name of the Mother: Nationalism, Social Exclusion, and Gender in Contemporary Nepal." *Positions* 25(4):795–820.

- Grossman-Thompson, Barbara H. 2019. "Disposability and Gendered Control in Labor Migration: Limiting Women's Mobility through Cultural and Institutional Norms." *Organization* 26(3):337–354.
- Gurung, Yogendra, Meeta Pradhan and Dhanendra Shakya. 2020. *State of Social Inclusion in Nepal: Caste Ethnicity and Gender Evidence from Nepal Social Inclusion Survey 2018*.
- Hachhethu, Krishna and David N Gellner. 2010. Nepal: Trajectories of Democracy and Restructuring of the State. In *Routledge Handbook of South Asian Politics*. New York: Routledge pp. 147–162.
- Haisley, Emily, Romel Mostafa and George Loewenstein. 2008. "Subjective Relative Income and Lottery Ticket Purchases." *Journal of Behavioral Decision Making* 21(3):283–295.
- Healy, Andrew, Katrina Kosec and Cecilia Hyunjung Mo. 2017. "Economic Development, Mobility, and Political Discontent: An Experimental Test of Tocqueville's Thesis in Pakistan." *American Political Science Review* 111(3):605–621.
- Inglehart, Ronald and Scott C. Flanagan. 1987. "Value Change in Industrial Societies." *American Political Science Review* 81(4):1289–1319.
- International Organisation for Migration. 2019. "Migration in Nepal: A Country Profile 2019."
- Joshi, Madhav. 2013. "Livelihood Coping Mechanisms, Local Intelligence, and the Pattern of Violence During the Maoist Insurgency in Nepal." *Terrorism and Political Violence* 20:820–839.
- Kahneman, Daniel and Amos Tversky. 1979. "Prospect Theory: An Analysis of Decision under Risk." *Econometrica* 47(2):263–291. Publisher: [Wiley, Econometric Society].
- Khatri Chhetri, Binod. 2020a. "Nepal Labour Migration Report 2020." Government of Nepal, Ministry of Labour, Employment and Social Security.
- Khatri Chhetri, Luna. 2020b. "How COVID-19 Worsens Gender Inequality in Nepal." *The Diplomat*.
- Kosec, Katrina, Cecilia Hyunjung Mo, Emily Schmidt and Jie Song. 2021. "Perceptions of Relative Deprivation and Women's Empowerment." *World Development* 138:105218.

- Kunreuther, Laura. 2009. "Between Love and Property: Voice, Sentiment, and Subjectivity in the Reform of Daughter's Inheritance in Nepal." *American Ethnologist* 36(3):545–562.
- Levy, Jack S. 2003. "Applications of Prospect Theory to Political Science." *Synthese* 135(2):215–241.
- Lokshin, Michael and Elena Glinskaya. 2009. "The Effect of Male Migration on Employment Patterns of Women in Nepal." *World Bank Economic Review* 23(3):481–507.
- McKelway, Madeline. 2021. "How Does Women's Employment Affect Household Decision-Making? Experimental Evidence from India." Working Paper.
- Menon, Geeta, Priya Raghubir and Norbert Schwarz. 1997. "How Much Will I Spend? Factors Affecting Consumers' Estimates of Future Expense." *Journal of Consumer Psychology* 6(2):141–164.
- Mo, Cecilia Hyunjung. 2012. Essays in Behavioral Political Economy: The Effects of Affect, Attitudes, and Aspirations PhD thesis PhD Thesis Stanford University: .
- Mo, Cecilia Hyunjung. 2018. "Perceived Relative Deprivation and Risk: An Aspiration-Based Model of Human Trafficking Vulnerability." *Political Behavior* 40(1):247–277.
- Morgan, Jana and Melissa Buice. 2013. "Latin American Attitudes toward Women in Politics: The Influence of Elite Cues, Female Advancement, and Individual Characteristics." *American Political Science Review* 107(4):644–662.
- Pettigrew, Judith and Sara Shneiderman. 2004. "Women and the Maobadi: Ideology and Agency in Nepal's Maoist Movement." The Southasia Trust.
- Phadera, Lokendra. 2019. "Impact of International Migration on Labor Supply in Nepal." *World Bank, Washington, DC* .
- Pradhan, Meeta Sainju. 2011. *Social Exclusion and Social Change: Access to, and Influence of, Community-Based Collective Action Programs in Nepal*. University of Michigan.
- Ravallion, Martin. 2014. "Income inequality in the developing world." *Science* 344(6186):851–855.

- Rockwood, Todd H., Roberta L. Sangster and Don A. Dillman. 1997. "The Effect of Response Categories on Questionnaire Answers." *Sociological Methods and Research* 26(1):118–149.
- Schwarz, N., Hans-Jürgen Hippler, Brigitte Deutsch and F. Strack. 1985. "Response Scales: Effects of Category Range on Reported Behavior and Comparative Judgments." *Public Opinion Quarterly* 49(3):388–395.
- Shah, Saubhagya. 2004. *A Project of Memoreality: Transnational Development and Local Activism Among Rural Women in Nepal*. Cambridge, MA: Harvard University.
- Sharma, Khagendra N. 1986. "Bondages of Nepalese Women." *Community Development Journal* 21(1):62–65.
- World Economic Forum. 2020. The Global Gender Gap Report 2020. World Economic Forum.

Online Appendix:

Ceding Power in Intra-Household Bargaining in Times of Economic Anxiety: An Experimental Study in Nepal

Table of Contents

A	Balance Tests	i
A.1	Balance Test for Married Respondents	i
A.2	Balance Test & Manipulation Checks for All Respondents	i
B	Main Effects by Gender	iii
B.1	Married Respondents	iii
B.2	All Respondents	v
C	Effects of Gender Egalitarian Messages for Married Respondents	vii

A Balance Tests

A.1 Balance Test for Married Respondents

Table A.1: Balance Test

	Control	Deprived	P-value
Female	0.537	0.532	0.847
Age	39.384	38.360	0.100
Educational level	2.725	2.734	0.913
Religion: Hindu	0.723	0.734	0.641
Religion: Buddhist	0.252	0.235	0.413
Ethnicity: Chhetri	0.219	0.216	0.910
Ethnicity: Tamang	0.286	0.252	0.124
Ethnicity: Braham	0.160	0.160	0.995
Ethnicity: Newar	0.078	0.086	0.564
Number of Children	0.409	0.481	0.118
Monthly Household income (NPR)	24813.662	25852.535	0.647
Have enough food to eat	1.286	1.314	0.360
Monthly Household expenditure (NPR)	10642.083	9279.828	0.263
Proportion	0.474	0.526	

Note: The *p-value* noted in the last column is the p-value from a t-test of the differences of the means of each of the listed variables across each treatment arm. What is not listed above is enumerator assignment (23 enumerators total) and VDC assignment (64 VDCs total). There was balance in terms of VDC assignment and enumerator assignment, with the exception of two enumerators.

A.2 Balance Test & Manipulation Checks for All Respondents

In this section, we present results for all individuals, regardless of their marital status. As Table A.2 shows, the randomization of the deprivation prime worked as designed, as we see balance across experimental conditions for a host of demographic characteristics. We observe that the gender, age, religion, ethnicity, household size, marital status, household income levels, and household expenditure levels are all similar in both experimental conditions. In the same table, we also present descriptive statistics of our full sample. Respondents are, on average, 36 years old, have lower secondary education, earn 26,092 NPR per month, and spend 10,019 NPR per month. Of the 2011 respondents, 52% are women, 78.2% are married, 74.6% identify as Hindus, and 22.7% identify as Buddhists. In terms of ethnicity, 22.4%, 25.3%, 15.7%, and 9.4% identify with the Chhetri, Tamang, Braham, and Newar groups, respectively.

Employing a manipulation check question, we are also able to confirm that our treatment worked as intended. Reassuringly, we observe that those who were primed to feel relatively poor viewed their households as being lower in the income distribution than those who were not primed to feel relatively poor. We offered respondents five income bins to pick from, and the relative deprivation prime translated to being over two bins lower in the income distribution ($\beta = 2.4$; $p = 0.000$). This pattern is consistent for male respondents and female respondents (see Table A.3).

When we assess the effect of the relative deprivation prime on a person's subjective sense of relative economic status in their community, our manipulation check question, we observe that the prime translates to a depressed view of their relative economic status. The prime leads to a 15.3 percentage point (pp) decline in our measure of subjective economic status ($p = 0.029$; see

Table A.2: Summary Statistics & Balance Test

	N	Mean	SD	Min	Max	Control	Deprived	P-value
Female	2011	0.520	0.500	0	1	0.520	0.521	0.970
Age	2011	36	14	16	69	36	36	0.226
Educational level	2005	2.908	1.678	1	7	2.925	2.893	0.670
Religion: Hindu	2011	0.746	0.435	0	1	0.732	0.759	0.165
Religion: Buddhist	2011	0.227	0.419	0	1	0.242	0.213	0.125
Ethnicity: Chhetri	2011	0.224	0.417	0	1	0.218	0.229	0.541
Ethnicity: Tamang	2011	0.253	0.435	0	1	0.271	0.236	0.073
Ethnicity: Brahman	2011	0.157	0.364	0	1	0.159	0.156	0.852
Ethnicity: Newar	2011	0.094	0.292	0	1	0.093	0.095	0.927
Number of Children	2011	0.355	0.829	0	6	0.323	0.385	0.092
Household income	2011	26092	42920	0	1000000	25661	26489	0.666
Have enough food to eat	2011	1.276	0.595	1	3	1.271	1.282	0.679
Household expenditure	1963	10019	21621	15	900000	10637	9450	0.224
Married	2011	0.782	0.413	0	1	0.773	0.790	0.355

Note: Not shown above: Of the 23 enumerator and 64 VDC's, there was balance with the exception of 1 VDC and 3 enumerators.

Table A.3: The effect of poverty prime on income bucket selected for all respondents

Outcome: Income bucket selected				
	(1)	(2)	(3)	(4)
Deprivation Prime	-2.400*** (0.0528)	-2.403*** (0.0763)	-2.401*** (0.0469)	-2.342*** (0.0679)
Women		0.0320 (0.0931)	0.00982 (0.0504)	0.0697 (0.0842)
Deprived $\times$ Women		0.00548 (0.106)		-0.114 (0.0925)
Constant	3.923*** (0.0464)	3.907*** (0.0683)	3.530*** (0.376)	3.503*** (0.377)
Covariates	No	No	Yes	Yes
Observations	1963	1963	1914	1914

Notes: Standard errors are in parentheses. * $p < 0.1$, ** $p < .05$, *** $p < .01$

column (1) of Table A.4). We cannot reject that the effect of the prime is the same for women as it is for men (columns 2 and 4).

Table A.4: The effect of poverty prime on subjective status for all respondents

Outcome: Subjective sense of relative economic status				
	(1)	(2)	(3)	(4)
Deprivation Prime	-0.153** (0.0697)	-0.232** (0.0991)	-0.162** (0.0655)	-0.219** (0.0948)
Women		0.0613 (0.101)	0.112 (0.0742)	0.0540 (0.103)
Deprived $\times$ Women		0.152 (0.139)		0.110 (0.132)
Constant	4.961*** (0.0504)	4.929*** (0.0715)	4.441*** (0.520)	4.467*** (0.520)
Covariates	No	No	Yes	Yes
Observations	2010	2010	1957	1957

Notes: Standard errors are in parentheses. * $p < 0.1$, ** $p < .05$, *** $p < .01$

B Main Effects by Gender

B.1 Married Respondents

Table A.5: The effect of poverty prime on support for gender egalitarian views among married women and men

	(1) Index	(2) Expend- itures	(3) Income	(4) Household chores	(5) Work	(6) Follow tradition	(7) What hus- band asks	(8) Husband's opinions	(9) Young women
Women & Men									
Deprivation Prime	-0.00826 (0.00566)	-0.0231** (0.0116)	-0.0157* (0.00810)	-0.00714 (0.00464)	-0.0106 (0.00770)	-0.00896 (0.0172)	-0.000727 (0.0192)	0.00741 (0.0128)	-0.00364 (0.0141)
Constant	0.627*** (0.00415)	0.635*** (0.00826)	0.915*** (0.00556)	0.958*** (0.00324)	0.920*** (0.00544)	0.345*** (0.0126)	0.585*** (0.0139)	0.174*** (0.00943)	0.485*** (0.0101)
Covariates Observations	No 1572	No 1568	No 1571	No 1572	No 1572	No 1570	No 1572	No 1570	No 1570
Deprivation Prime	-0.00773 (0.00524)	-0.0260** (0.0115)	-0.0128 (0.00816)	-0.00618 (0.00473)	-0.00468 (0.00746)	-0.0149 (0.0167)	0.000367 (0.0181)	0.00620 (0.0129)	-0.00189 (0.0137)
Constant	0.509*** (0.0378)	0.646*** (0.0661)	0.847*** (0.0620)	0.947*** (0.0296)	0.731*** (0.0677)	0.186* (0.108)	0.342*** (0.123)	0.0562 (0.0820)	0.334*** (0.0910)
Covariates Observations	Yes 1546	Yes 1542	Yes 1545	Yes 1546	Yes 1546	Yes 1544	Yes 1546	Yes 1544	Yes 1544
Women									
Deprivation Prime	-0.0169** (0.00766)	-0.0296* (0.0155)	-0.0323*** (0.0109)	-0.0179*** (0.00576)	-0.0341*** (0.00899)	-0.0253 (0.0232)	-0.0180 (0.0270)	0.0108 (0.0180)	0.0114 (0.0191)
Constant	0.629*** (0.00565)	0.646*** (0.0111)	0.931*** (0.00664)	0.968*** (0.00339)	0.950*** (0.00501)	0.333*** (0.0175)	0.552*** (0.0195)	0.182*** (0.0132)	0.476*** (0.0137)
Covariates Observations	No 840	No 837	No 840	No 840	No 840	No 840	No 840	No 839	No 839
Deprivation Prime	-0.0223*** (0.00744)	-0.0334** (0.0157)	-0.0325*** (0.0116)	-0.0190*** (0.00630)	-0.0277*** (0.00855)	-0.0469** (0.0238)	-0.0291 (0.0264)	0.00482 (0.0188)	0.00297 (0.0194)
Constant	0.567*** (0.0488)	0.604*** (0.0806)	0.885*** (0.0852)	0.966*** (0.0344)	0.862*** (0.0670)	0.403*** (0.148)	0.254 (0.181)	0.185 (0.126)	0.391*** (0.118)
Covariates Observations	Yes 821	Yes 818	Yes 821	Yes 821	Yes 821	Yes 821	Yes 821	Yes 820	Yes 820
Men									
Deprivation Prime	0.00166 (0.00838)	-0.0155 (0.0174)	0.00364 (0.0121)	0.00534 (0.00745)	0.0167 (0.0127)	0.00951 (0.0255)	0.0182 (0.0269)	0.00371 (0.0182)	-0.0209 (0.0210)
Constant	0.624*** (0.00612)	0.622*** (0.0124)	0.897*** (0.00912)	0.947*** (0.00574)	0.886*** (0.00989)	0.358*** (0.0182)	0.622*** (0.0197)	0.164*** (0.0135)	0.496*** (0.0150)
Covariates Observations	No 732	No 731	No 731	No 732	No 732	No 730	No 732	No 731	No 731
Deprivation Prime	0.00243 (0.00801)	-0.0225 (0.0178)	0.00510 (0.0128)	0.00692 (0.00739)	0.0125 (0.0132)	0.0124 (0.0257)	0.0210 (0.0263)	0.00838 (0.0190)	-0.0188 (0.0211)
Constant	0.426*** (0.0552)	0.724*** (0.102)	0.810*** (0.105)	0.936*** (0.0547)	0.573*** (0.125)	-0.0700 (0.162)	0.333* (0.176)	-0.0466 (0.101)	0.161 (0.143)
Covariates Observations	Yes 725	Yes 724	Yes 724	Yes 725	Yes 725	Yes 723	Yes 725	Yes 724	Yes 724

Notes: Standard errors are in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

B.2 All Respondents

Table A.6: The effect of poverty prime on support for gender egalitarian views among all women and men

	(1) Index	(2) Expend- itures	(3) Income	(4) Household chores	(5) Work	(6) Follow tradition	(7) What hus- band asks	(8) Husband's opinions	(9) Young women
Women & Men									
Deprivation Prime	-0.00764 (0.00517)	-0.0172* (0.0102)	-0.0148** (0.00710)	-0.00646 (0.00424)	-0.00684 (0.00649)	-0.0110 (0.0154)	0.00504 (0.0167)	0.00516 (0.0120)	-0.0114 (0.0125)
Constant	0.639*** (0.00375)	0.635*** (0.00728)	0.913*** (0.00481)	0.957*** (0.00302)	0.922*** (0.00456)	0.370*** (0.0113)	0.615*** (0.0120)	0.197*** (0.00878)	0.508*** (0.00896)
Covariates Observations	No 2011	No 2007	No 2010	No 2011	No 2011	No 2009	No 2011	No 2008	No 2008
Deprivation Prime	-0.00629 (0.00471)	-0.0183* (0.0101)	-0.0143** (0.00713)	-0.00592 (0.00424)	-0.00219 (0.00629)	-0.0125 (0.0150)	0.00899 (0.0155)	0.00667 (0.0120)	-0.00965 (0.0120)
Constant	0.561*** (0.0328)	0.699*** (0.0575)	0.843*** (0.0515)	0.952*** (0.0270)	0.781*** (0.0577)	0.263*** (0.0962)	0.449*** (0.106)	0.109 (0.0764)	0.400*** (0.0794)
Covariates Observations	Yes 1958	Yes 1954	Yes 1957	Yes 1958	Yes 1958	Yes 1956	Yes 1958	Yes 1955	Yes 1955
Women									
Deprivation Prime	-0.0144** (0.00723)	-0.0294** (0.0136)	-0.0231** (0.00960)	-0.0177*** (0.00529)	-0.0268*** (0.00788)	-0.0254 (0.0212)	-0.00721 (0.0241)	0.00835 (0.0172)	0.00688 (0.0172)
Constant	0.642*** (0.00524)	0.651*** (0.00975)	0.926*** (0.00617)	0.969*** (0.00312)	0.949*** (0.00460)	0.361*** (0.0158)	0.585*** (0.0173)	0.206*** (0.0124)	0.494*** (0.0124)
Covariates Observations	No 1046	No 1043	No 1046	No 1046	No 1046	No 1046	No 1046	No 1044	No 1045
Deprivation Prime	-0.0174*** (0.00670)	-0.0286** (0.0139)	-0.0224** (0.00995)	-0.0174*** (0.00543)	-0.0197*** (0.00738)	-0.0428** (0.0213)	-0.0150 (0.0228)	0.000610 (0.0177)	0.00522 (0.0169)
Constant	0.625*** (0.0447)	0.625*** (0.0727)	0.906*** (0.0757)	0.985*** (0.0320)	0.880*** (0.0643)	0.512*** (0.133)	0.394** (0.157)	0.229* (0.124)	0.479*** (0.105)
Covariates Observations	Yes 1013	Yes 1010	Yes 1013	Yes 1013	Yes 1013	Yes 1013	Yes 1013	Yes 1011	Yes 1012
Men									
Deprivation Prime	-0.000308 (0.00740)	-0.00394 (0.0152)	-0.00589 (0.0105)	0.00569 (0.00668)	0.0147 (0.0103)	0.00487 (0.0223)	0.0184 (0.0228)	0.00169 (0.0168)	-0.0311* (0.0183)
Constant	0.636*** (0.00538)	0.618*** (0.0108)	0.898*** (0.00740)	0.944*** (0.00524)	0.892*** (0.00786)	0.380*** (0.0160)	0.647*** (0.0165)	0.188*** (0.0124)	0.522*** (0.0130)
Covariates Observations	No 965	No 964	No 964	No 965	No 965	No 963	No 965	No 964	No 963
Deprivation Prime	0.000762 (0.00696)	-0.00802 (0.0152)	-0.0105 (0.0109)	0.00480 (0.00645)	0.0119 (0.0108)	0.00759 (0.0222)	0.0277 (0.0216)	0.0113 (0.0170)	-0.0329* (0.0187)
Constant	0.518*** (0.0500)	0.781*** (0.0935)	0.817*** (0.0808)	0.943*** (0.0451)	0.693*** (0.100)	0.0388 (0.140)	0.510*** (0.152)	0.0594 (0.0892)	0.300** (0.121)
Covariates Observations	Yes 945	Yes 944	Yes 944	Yes 945	Yes 945	Yes 943	Yes 945	Yes 944	Yes 943

Notes: Standard errors are in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

C Effects of Gender Egalitarian Messages for Married Respondents

Table A.7: Balance Test for Gender Egalitarian Messages Pooled

	No message	Message	P-value
Female	0.552	0.528	0.392
Age	38.656	38.915	0.713
Educational level	2.752	2.721	0.745
Religion: Hindu	0.754	0.720	0.185
Religion: Buddhist	0.209	0.256	0.054
Ethnicity: Chhetri	0.218	0.217	0.979
Ethnicity: Tamang	0.242	0.277	0.157
Ethnicity: Braham	0.180	0.152	0.181
Ethnicity: Newar	0.097	0.077	0.187
Number of Children	0.417	0.458	0.426
Household income	26042.768	25109.719	0.715
Have enough food to eat	1.261	1.316	0.117
Household expenditure	9774.092	9983.303	0.879
Proportion	0.268	0.732	

Note: The *p-value* noted in the last column is the p-value from a t-test of the differences of the means of each of the listed variables across each treatment arm. What is not listed above is enumerator assignment and VDC assignment. Of the 64 VDCs, balance was not achieved for 6 VDCs. Of the 23 enumerators, balance was not achieved for 4 enumerators.

Table A.8: Balance Test for Individual Gender Egalitarian Messages

	No message	Pure	Less threatening	More threatening	P-value
Female	0.552	0.548	0.522	0.513	0.627
Age	38.656	39.462	38.102	39.178	0.435
Educational level	2.752	2.661	2.691	2.812	0.610
Religion: Hindu	0.754	0.732	0.736	0.691	0.242
Religion: Buddhist	0.209	0.247	0.235	0.285	0.085
Ethnicity: Chhetri	0.218	0.229	0.201	0.223	0.815
Ethnicity: Tamang	0.242	0.268	0.261	0.304	0.256
Ethnicity: Braham	0.180	0.171	0.162	0.123	0.136
Ethnicity: Newar	0.097	0.081	0.081	0.068	0.515
Number of Children	0.417	0.470	0.444	0.461	0.850
Household income	26042.768	21896.551	25352.178	28105.025	0.282
Have enough food to eat	1.261	1.364	1.311	1.272	0.082
Household expenditure	9774.092	12187.735	8985.752	8749.202	0.177
Proportion	0.268	0.245	0.244	0.243	

Note: The *p-value* noted in the last column is the p-value from a t-test of the differences of the means of each of the listed variables across each treatment arm. What is not listed above is enumerator assignment and VDC assignment. Of the 23 enumerators and 64 VDCs, balance was achieved with the exception of 3 VDCs and 2 enumerators.

Table A.9: Manipulation check for the gender egalitarian messages among married women and men

Outcome: To what extent do women in Nepal have the same economic and social opportunities as men? (0 “A great deal” → 1 “Not at all”)						
	(1) All	(2) All	(3) Women	(4) Women	(5) Men	(6) Men
Effects of Messages Pooled						
Message	-0.0104 (0.0110)	-0.00968 (0.0114)	-0.0201 (0.0142)	-0.0278* (0.0149)	0.00155 (0.0173)	0.0128 (0.0188)
Constant	0.488*** (0.00947)	0.344*** (0.0585)	0.498*** (0.0120)	0.400*** (0.0728)	0.476*** (0.0151)	0.299*** (0.106)
Covariates	No	Yes	No	Yes	No	Yes
Observations	1567	1541	839	820	728	721
Effects of Individual Messages						
Pure message	-0.00255 (0.0136)	-0.000618 (0.0137)	-0.0169 (0.0180)	-0.0206 (0.0184)	0.0151 (0.0206)	0.0248 (0.0218)
Less threatening	-0.0143 (0.0135)	-0.0126 (0.0140)	-0.0229 (0.0172)	-0.0321* (0.0188)	-0.00366 (0.0212)	0.0119 (0.0233)
More threatening	-0.0144 (0.0137)	-0.0159 (0.0140)	-0.0208 (0.0182)	-0.0313* (0.0186)	-0.00592 (0.0209)	0.00198 (0.0227)
Constant	0.488*** (0.00947)	0.343*** (0.0586)	0.498*** (0.0120)	0.400*** (0.0734)	0.476*** (0.0151)	0.295*** (0.107)
Covariates	No	Yes	No	Yes	No	Yes
Observations	1567	1541	839	820	728	721

Notes. Higher values indicate that respondents do not perceive women to have the same opportunities as men. Standard errors are in parentheses. * $p < 0.1$, ** $p < .05$, *** $p < .01$

Table A.10: The effect of gender egalitarian messages on support for gender egalitarian views among married women and men

Outcome: Gender Egalitarian Index								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Women & Men								
Deprivation Prime	-0.00826 (0.00566)	-0.00745 (0.00525)			-0.00831 (0.00566)	-0.00750 (0.00524)	-0.00674 (0.0108)	-0.00472 (0.0103)
Message			0.00423 (0.00633)	0.00483 (0.00610)	0.00434 (0.00632)	0.00492 (0.00610)	0.00545 (0.00955)	0.00688 (0.00912)
Deprived × Message							-0.00214 (0.0127)	-0.00378 (0.0121)
Constant	0.627*** (0.00415)	0.509*** (0.0378)	0.619*** (0.00539)	0.501*** (0.0377)	0.624*** (0.00630)	0.506*** (0.0380)	0.623*** (0.00826)	0.505*** (0.0383)
Covariates	No	Yes	No	Yes	No	Yes	No	Yes
Observations	1572	1546	1572	1546	1572	1546	1572	1546
Women								
Deprivation Prime	-0.0169** (0.00766)	-0.0220*** (0.00744)			-0.0169** (0.00767)	-0.0220*** (0.00743)	-0.0175 (0.0149)	-0.0198 (0.0153)
Message			0.00242 (0.00867)	-0.000319 (0.00884)	0.00242 (0.00865)	0.000194 (0.00882)	0.00201 (0.0131)	0.00176 (0.0134)
Deprived × Message							0.000781 (0.0174)	-0.00296 (0.0177)
Constant	0.629*** (0.00565)	0.565*** (0.0490)	0.619*** (0.00743)	0.549*** (0.0481)	0.628*** (0.00863)	0.565*** (0.0494)	0.628*** (0.0113)	0.564*** (0.0500)
Covariates	No	Yes	No	Yes	No	Yes	No	Yes
Observations	840	821	840	821	840	821	840	821
Men								
Deprivation Prime	0.00166 (0.00838)	0.00214 (0.00799)			0.00153 (0.00837)	0.00202 (0.00798)	0.00655 (0.0157)	0.00747 (0.0149)
Message			0.00617 (0.00925)	0.00761 (0.00914)	0.00613 (0.00924)	0.00756 (0.00913)	0.00962 (0.0140)	0.0112 (0.0132)
Deprived × Message							-0.00678 (0.0186)	-0.00738 (0.0178)
Constant	0.624*** (0.00612)	0.426*** (0.0555)	0.620*** (0.00783)	0.424*** (0.0551)	0.619*** (0.00921)	0.423*** (0.0552)	0.617*** (0.0121)	0.420*** (0.0559)
Covariates	No	Yes	No	Yes	No	Yes	No	Yes
Observations	732	725	732	725	732	725	732	725

Notes: Standard errors are in parentheses. * p<0.1, ** p<.05, *** p<.01