



How Do Gender Norms Shape Education and Domestic Work Outcomes? The Case of Syrian Refugee Adolescents in Jordan

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Abstract Forced displacement has disrupted Syrian refugees' lives and exposed them to new communities and norms. This paper assesses how gender norms shape the lives of Syrian refugee adolescent girls in Jordan, using nationally representative data. Factor analysis is used to summarize a variety of beliefs and behavioral aspects of norms: gender role attitudes, justification of domestic violence, decision making, and mobility. The paper compares these outcomes by sex, nationality, and for adolescents versus adults. It complements the data on individual beliefs and behaviors with family and community beliefs and behaviors as proxies for others' expectations and behaviors. The paper then examines how own, family, and community gender norms relate to two key adolescent outcomes: domestic work and enrollment in school. The findings show that while gender role attitudes are similar across generations and nationalities, Syrian adolescent girls are particularly restricted in their mobility. Nonetheless, they have similar educational outcomes as boys and, after accounting for differences in socioeconomic status, as Jordanian girls. While gender inequality in domestic work is substantial, higher levels of own and mother's decision making predict lower domestic workloads, illustrating the linkages between different dimensions of gender norms and social and economic outcomes.

Keywords: Gender norms; Refugees; Education; Care work; Syrians; Jordan

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1 Introduction

Social norms, the shared behavioral ‘rules’ that define what members of a society do or believe should be done, often are gender-related (Bicchieri, 2006; Cislighi & Heise, 2016). Gender-related social norms (gender norms) play a major role in the bifurcation of boys’ and girls’ lives during adolescence, a phenomenon that is universal but also context-specific (Hill & Lynch, 1983; Lloyd, 2005). As children grow, in contexts such as the Syrian Arab Republic and Jordan, boys’ spheres expand into the public space, while girls become increasingly restricted to the home (Kabbani & Kamel, 2007; Kavar, 1997). This restriction of girls’ agency and mobility has adverse consequences for their ability to accumulate human capital, build social networks, and engage in livelihood activities, and increases their risk for early marriage (Mensch, Bruce, & Greene, 1998). Inequitable gender norms are thus at the root of a host of adolescent and subsequent adult gender inequities (Harper, Marcus, George, D’Angelo, & Samman, 2020; United Nations Development Program (UNDP), 2020).

Conflict and displacement can further harm human capital and well-being (Diwakar, 2015; Fiala, 2015; Justino, 2013; Saing & Kazianga, 2020; Singh & Shemyakina, 2016), with complex gendered effects of conflict (Buvinic, Das Gupta, & Shemyakina, 2014; Justino, Cardona, Mitchell, & Müller, 2012; Saad & Fallah, 2020). For example, young women exposed to greater levels of conflict in Punjab (India) experienced greater educational losses than young men (Singh & Shemyakina, 2016). Yet in Iraq, conflict had greater adverse effects on boys’ education than girls’ education (Diwakar, 2015). However, the literature that examines how conflict and displacement interact with gender norms to mediate impacts on outcomes is relatively limited. Focusing on adolescent Syrian refugees in Jordan, this paper provides insights into the normative roots of gender disparities and their interactions with displacement, during the important and under-researched phase of adolescence.

Displacement can result in exposure to new host community norms as well as to new economic and social realities, which may change gender norms (El-Masri, Harvey, & Garwood, 2013; Jabbar & Zaza, 2016). For instance, displacement can exacerbate the contraction of girls’ mobility as parents and guardians attempt to protect them in an inherently more insecure environment. Changes in norms can in turn shape adolescent outcomes, such as education. While past research has explored gender norms in the context of displacement (Bermudez, Yu, Lu, et al., 2019; Sommer, Muñoz-Laboy, Williams, et al., 2018; Stark, Asghar, Meyer, et al., 2017), there has been limited research on nationally representative data and less exploration of how gender norms and displacement intersect with the life course and specifically social and economic outcomes in adolescence. This paper contributes to understanding the interaction between gender norms, displacement, and gendered adolescent outcomes.

In order to understand how conflict and displacement interact with gender norms and gendered education and domestic work outcomes, we use data from the Jordan Labor Market Panel Survey of 2016 that over-sampled Syrian refugees. We use factor analysis to summarize a variety of beliefs and behavioral aspects of norms: gender role attitudes, justification of domestic violence, decision-making, and mobility. We compare these outcomes by sex, nationality, and for adolescents versus adults. We complement our data on individual beliefs and behaviors with family and community beliefs and behaviors as proxies for others’ expectations and behaviors. We then examine how own, family, and community gender norms relate to two key adolescent outcomes: domestic work and enrollment in school.

We find that gender role attitudes are similar across generations, which has troubling implications for making progress on gender equity. While gender role attitudes are similar across

nationalities, Syrian adolescent girls are particularly restricted in their mobility. Nonetheless, they have similar educational outcomes as boys and, after accounting for differences in socioeconomic status, as Jordanian girls as well. While gender inequality in domestic work is substantial, higher levels of own and mother's decision-making predict lower domestic workloads, underlining the important linkages between different dimensions of gender norms and social and economic outcomes.

2 Context, Theory, and Evidence

2.1 Empirical Evidence on Gender, Displacement, and Adolescence

2.1.1 Gender and adolescence

Adolescence is the stage when boys' and girls' lives become strongly gender-differentiated, particularly in socially conservative settings (Basu, Zuo, Lou, Acharya, & Lundgren, 2017; Mensch, Bruce, & Greene, 1998). In contexts with strong male breadwinner/female homemaker norms, such as the Middle East and North Africa (MENA), these norms are already internalized by adolescence (Brady, Assaad, Ibrahim, et al., 2007; Hoodfar, 1997; Kavar, 1997; Mensch, Ibrahim, Lee, & el-Gibaly, 2003). Although gender norms are strongly rooted in local cultures, gender norms in adolescence depend on a variety of individual and contextual factors (Kågesten, Gibbs, Blum, et al., 2016; Lloyd, 2005; Mensch, Ibrahim, Lee, & el-Gibaly, 2003).

2.1.2 Gender and displacement in adolescence

There is a sizeable literature about gendered outcomes among refugees, including adolescents (DeJong, Sbeity, Schlecht, et al., 2017; Sieverding, Krafft, Berri, & Keo, 2020; Sieverding, Krafft, Berri, Keo, & Sharpless, 2018), which often discusses but rarely tests or quantifies the role of gender norms. The literature on how gender norms affect adolescent refugees, especially girls, focuses primarily on health, mental health, and violence rather than on economic or social outcomes (Bermudez, Yu, Lu, et al., 2019; Sommer, Muñoz-Laboy, Williams, et al., 2018; Stark, Asghar, Meyer, et al., 2017). This is where we make a contribution with our examination of the relationship between gender norms and adolescent social and economic outcomes, specifically domestic work and schooling, among Syrian refugee adolescents in Jordan.

2.2 Conceptual Frameworks

This work seeks to understand how gender norms relate to education and domestic work among Syrian refugee adolescents in Jordan. Norms about how groups behave or ought to behave have both normative (what people think they should do) and empirical (what they actually do) components (Cislaghi & Heise, 2016; Gauri, Rahman, & Sen, 2019). Norms also have individual (personal) components as well as social (community) components that relate to the beliefs and behaviors of other members of a social group (Bicchieri, 2006; Cislaghi & Heise, 2016; Gauri, Rahman, & Sen, 2019). There are therefore four key components to norms:

1. Personal (individual) beliefs (in the case of gender, these are gender role attitudes)
2. Personal (individual) behaviors (gendered behaviors)
3. Normative expectations: beliefs about what others believe (about gender)
4. Empirical expectations: beliefs about what others do (others' gendered behaviors)

The dividing lines between attitudes, behaviors, and other (downstream) social and economic outcomes are somewhat subjective, but roughly align with what people believe, how they act, and what they achieve. Gender norms play an important role in inequality and shifting those

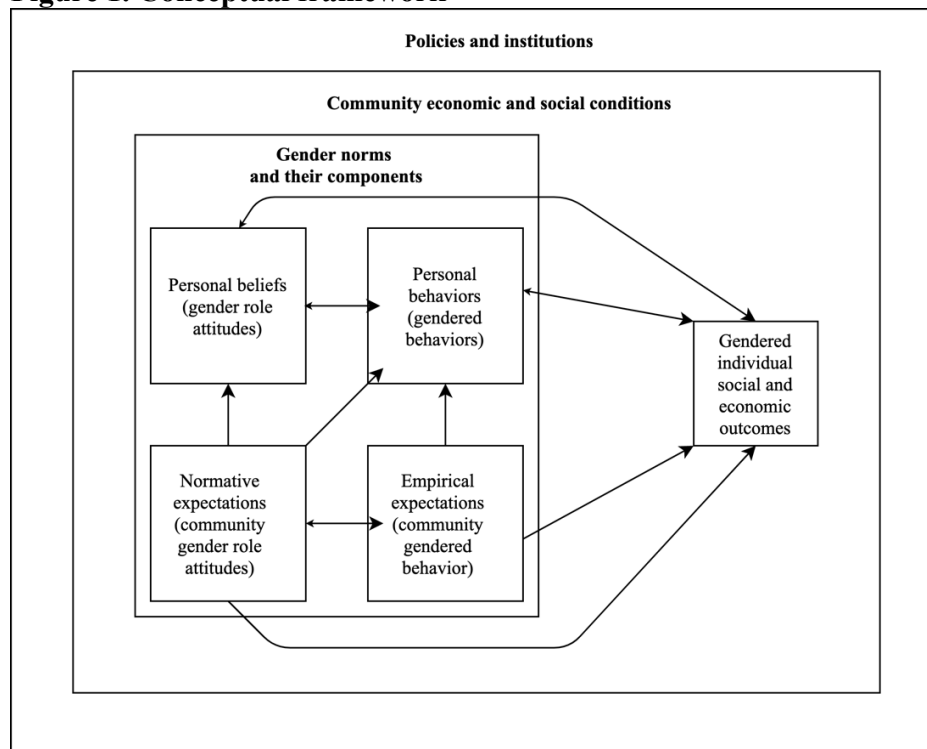
norms can be critical to addressing gender inequality (Harper, Marcus, George, D'Angelo, & Samman, 2020; Jayachandran, 2019; United Nations Development Program (UNDP), 2020).

Drawing on the literature (Bicchieri, 2006; Cislighi & Heise, 2016; Gauri, Rahman, & Sen, 2019; Kabeer, 1999; Kågesten, Gibbs, Blum, et al., 2016), we developed the conceptual framework in Figure 1 to link gender norms to gender inequality in individual social and economic outcomes. Empirically distinguishing these constructs is particularly challenging. For example, is women's disproportionate role in caregiving a gendered behavior or a gendered outcome? When it subsequently limits their ability to work outside the home, it is a behavior that mediates other outcomes, but could also be considered an outcome in its own right. There can also potentially be reverse causality (denoted in the diagram by smaller arrows). For example, while gender norms can shape individuals' educational outcomes, education can also shape personal beliefs, including gender role attitudes.

Gender role attitudes and gendered behaviors have individual and community components (Cislighi & Heise, 2016; Gauri, Rahman, & Sen, 2019). In line with the literature (and our data) we therefore include community-level (including specifically family-level, as a key reference group) gender role attitudes as a proxy for normative expectations in our framework. We likewise include community-level (and specifically family-level) gendered behaviors as a proxy for empirical expectations.

Gender role attitudes, behaviors, and individual outcomes are also shaped by the social and economic context. Policies and institutions influence gender role attitudes, gendered behaviors, and gendered outcomes (Harper, Marcus, George, D'Angelo, & Samman, 2020; United Nations Development Program (UNDP), 2020). As conceptualized in our framework, displacement could lead to sudden shifts in the social, economic, policy and institutional context, as well as changes in community norms.

Figure 1. Conceptual framework



Source: Authors' creation.

2.3 Hypotheses

Drawing on this conceptual framework, we organize our hypotheses about Syrian refugee adolescent girls in Jordan in terms of patterns of gender role attitudes and gendered behavior (how these vary across groups) and the relationship between gender role attitudes, gendered behavior, and gendered school and domestic work outcomes in adolescence.

2.3.1 *Patterns of gender role attitudes and gendered behavior*

H1: Gender role attitudes and gendered behaviors differ across generations (adults vs. adolescents, among Syrians, among Jordanians). We expect adolescents will have more equitable gender role attitudes, but less mobility and decision-making power than adults.

H2: Gender role attitudes differ by sex (among Syrian and Jordanian adolescents, among Syrian and Jordanian adults). We expect that women will have more equitable gender role attitudes than men.

H3: Gender role attitudes and gendered behaviors vary between Syrian refugees and the Jordanian host community (among female and male adolescents, among female and male adults). We expect Syrian refugees will have less equitable gender role attitudes and less mobility and decision-making power than Jordanians, given both the composition of the displaced and experiences of conflict and displacement.

2.3.2 *How gender role attitudes and gendered behaviors predict gendered outcomes*

H4: Gender role attitudes and gendered behaviors predict gendered school enrollment and domestic work outcomes in adolescence. We expect that more equitable gender role attitudes, more decision-making power, and more mobility will lead to better outcomes and more equitable outcomes for girls.

H5: Own, mother, father, and community gender role attitudes and behaviors will have distinct effects on gendered school enrollment and domestic work outcomes. We expect more equitable own gender role attitudes and behaviors, as well as those of both parents, and those at the community level will improve equity in outcomes, although the size of relationships may vary.

2.4 *The Context of Syrian Refugees in Jordan*

Jordan has long been a country of refuge, starting with Palestinian refugees in 1948 and more recently Syrians fleeing the Syrian civil war that erupted in 2011 (Turner, 2016). The majority of Syrian refugees in Jordan arrived in 2013 (Krafft, Sieverding, Salemi, & Keo, 2019). The Syrians who fled to Jordan came from communities within Syria that were relatively less educated, had higher rates of early marriage, and higher fertility prior to the conflict (Sieverding & Calderon-Mejia, 2020; Sieverding, Krafft, Berri, & Keo, 2020; Stave & Hillesund, 2015). Syrian households in Jordan frequently had family members who were dead or absent, particularly adult men (Hanmer, Rubiano, Santamaria, & Arango, 2020; Krafft, Sieverding, Salemi, & Keo, 2019). Syrian women often had limited empowerment in Syria prior to the conflict (CARE, 2020). Although joint decision-making was common for married women in Syria prior to the conflict, the husband having sole decision-making power was much more common than for the wife. For example, 27% of husbands took the decision on family planning alone, while only 5% of wives made this decision alone (PAPFAM, 2011). Gender norms among Syrian refugees in Jordan emphasize girls' futures as housewives (International Rescue Committee, 2015).

Although refugees often passed through official camps, the vast majority (87%) resided in host communities (Krafft, Sieverding, Salemi, & Keo, 2019). Exact numbers of refugees are uncertain, with more than 650,000 refugees registered with UNHCR and estimates of 1.3 million Syrians enumerated in the 2015 Jordan Population Census (Krafft, Razzaz, Keo, & Assaad, 2019). Estimates all agree that the Syrian population is disproportionately made up of children and youth (Krafft, Razzaz, Keo, & Assaad, 2019; Krafft, Sieverding, Salemi, & Keo, 2019).

Key milestones of childhood, adolescence, and adulthood were majorly disrupted by conflict and displacement. While drivers of educational decision-making shifted with their new social and economic reality, Syrian enrollment and educational attainment recovered to pre-conflict levels (but not to Jordan's higher levels) once in Jordan (Sieverding, Krafft, Berri, Keo, & Sharpless, 2018). While Syrian refugees in Jordan faced a number of challenges, such as documentation (Norwegian Refugee Council, 2016), in enrolling in schools, the Ministry of Education was notably supportive of refugee enrollments (Sieverding, Krafft, Berri, Keo, & Sharpless, 2018).

Early marriage rates, although high (18%), remained relatively stable, in part due to the shifting dynamics of economic and social pressures towards girls' earlier marriages being countered by the difficulties young men faced in being economically ready for marriage (Sieverding, Krafft, Berri, & Keo, 2020). Although work permits allow Syrians to work legally in a number of (but not all) sectors, their employment rates remained low; 36% for men and 2% for women as of 2017 (Assaad, Krafft, & Keo, 2019).⁴ Syrians are primarily competing with other migrant workers (e.g., Egyptians) for jobs in agriculture, manufacturing, and construction (Fallah, Krafft, & Wahba, 2019; Malaeb & Wahba, 2018).

Adolescent Syrian refugee girls face a number of unique challenges, but there has been relatively little research and particularly very little representative research that focuses on or even disaggregates out this age group to fully understand those challenges (Presler-Marshall, Gercama, & Jones, 2017). Although not necessarily representative, key themes emerge from the research with adolescents. For example, while Syrian refugee girls perceive their contexts of refuge to be substantially safer than Syria was, they are concerned about sexual harassment (International Rescue Committee, 2015; Roupetz, Bartels, Michael, et al., 2020). Adolescents and their parents or guardians place a high value on girls' virtue and reputation. Furthermore, girls worried that being the victim of harassment might lead to reductions in their mobility or access to education (Garbern, Helal, Michael, Turgeon, & Bartels, 2020; International Rescue Committee, 2015). Even though male harassment is the problem, female restrictions are how the problem is normatively addressed (rather than changing male behavior). In a mixed methods study of Syrian refugees in Lebanon, men exposed to specific vignettes tended to consider Syrian girls as under-protected, and while in some cases women and girls agreed, girls and women also often perceived girls as over-protected (Bartels, Michael, Roupetz, et al., 2018).

As a result, while adolescent boys in Jordan steadily gained mobility as they aged, girls' mobility diminished over the course of adolescence (Jones, Baird, Presler-Marshall, et al., 2019). Indeed, girls were 23% less likely to leave home each day and 44% less likely to leave their community each week than boys, as well as 43% less likely to have a mobile phone in one survey of Jordanian, Syrian, and Palestinian adolescents (Presler-Marshall, Jones, Baird, & Malachowska, 2019). In part due to mobility limitations and concerns about harassment, girls lacked safe spaces to socialize outside their homes (UNFPA, 2015).

⁴ In contrast, 55% of Jordanian men and 11% of Jordanian women are employed (Assaad, Krafft, & Keo, 2019).

Adolescent girls also noted limited decision-making power in some cases, although family dynamics, such as absent fathers, meant decision-making sometimes devolved to brothers (International Rescue Committee, 2015). Decision-making differences between girls and boys were much smaller than differences in mobility in one survey of Jordanian, Syrian, and Palestinian adolescents (Presler-Marshall, Jones, Baird, & Malachowska, 2019). Adolescent girls' decision-making scores were only 7% lower than boys' (Jones, Baird, Presler-Marshall, et al., 2019). In an interesting contrast, adult Syrian women may have gained decision-making power in contexts of displacement, presumably due to the higher likelihood of adult males being absent (CARE, 2020).

3 Data and Methods

3.1 Survey Data and Sample

We use data from the 2016 Jordan Labor Market Panel Survey (JLMPS) (OAMDI, 2018). The JLMPS 2016 was fielded from December 2016 to April 2017 (Krafft & Assaad, 2018). Since Syrians mostly arrived in Jordan around 2013 and the border closed in 2015, the Syrian refugees in our sample had typically been in Jordan for several years (Krafft, Sieverding, Salemi, & Keo, 2019). Given ongoing conflict in Syria, prospects for the return of Syrian refugees were at the time (and continue to be) poor (UNHCR, 2017).

The 2016 JLMPS is a nationally representative survey and includes a sizeable sample of Syrian adolescents; we define adolescents per the United Nations definition as persons aged 10-19 (UNICEF, 2021). As a household survey with data on all individuals in the household and a cluster sample, the JLMPS also provides data on adolescents' families and communities. The JLMPS 2016 intentionally over-sampled neighborhoods with a high share of non-Jordanians in the 2015 Population Census to ensure an adequate sample of Syrians (Krafft & Assaad, 2018).

The survey overall sampled 33,450 individuals, including 2,918 Syrians. Since our analysis samples are often comparing Syrians and Jordanians as well as examining different age groups, we provide a summary of the sample sizes of various sub-groups by age, sex, and nationality (Table 1). Although Syrians were over-sampled, when breaking down into detailed sub-groups, the sample sizes are moderate, for example, 273 Syrian female adolescents (aged 10-19). Palestinians are the third largest group in Jordan by nationality, and we include them as Jordanians (part of the host community) in our data given their longstanding presence in Jordan.⁵ We exclude other nationalities, since they are primarily adult male migrant workers, for example, Egyptians (David, El-Mallakh, & Wahba, 2019; Malaeb & Wahba, 2019).

Table 1. Sample sizes for different sub-groups, by nationality

Group	Number of Jordanian individuals	Number of Syrian individuals
Male adolescents (aged 10-19)	3,082	364
Female adolescents (aged 10-19)	2,878	273
Adult men (20+)	8,140	548
Adult women (20+)	8,174	647

Source: Authors' calculations based on JLMPS 2016

Notes: Adolescents restricted to those in their natal household

⁵ Most individuals of Palestinian origin in Jordan (specifically those originating from the West Bank) have Jordanian citizenship and are thus classified as Jordanian, another reason to combine the two groups.

3.2 *Measuring Gender Role Attitudes and Gendered Behavior*

Measuring complex constructs, such as gender norms, is challenging, and the best approach to take is hotly debated in the literature (Ballon & Yalonetzky, 2018; Lomazzi, 2018). We are limited by the measures available in the JLMPS, which include questions on (1) gender role attitudes (gender equity) and (2) justification of domestic violence against women. We have two measures of gendered behavior: (3) involvement in decision-making and (4) mobility. We undertake factor analyses on the multitude of questions for each of these four dimensions, in order to create metrics of the underlying constructs. We provide details on the specific questions in the appendix and details of the factor analysis in a supplemental online appendix.⁶

3.3 *Testing Hypotheses about Gender Role Attitudes and Gendered Behavior*

To test our hypotheses about patterns of gender role attitudes and gendered behaviors, we estimate various ordinary least squares (OLS) models where each of the four factors is a dependent variable in turn. We estimate these for the various sub-groups mentioned in our hypotheses. Our analyses with the factors as the dependent variable are restricted to individuals with non-missing data on the dependent variable, ages 15-59. All our models use sampling weights as well as clustered standard errors at the community level. We estimate models both without and with control variables (discussed below) to estimate both the raw differences and the differences after accounting for covariates.

3.4 *Gendered Education and Domestic Work Outcomes*

We focus on two key aspects of adolescent life as critical and potentially gendered outcomes that may be further affected by conflict, displacement, and norms. Focusing on adolescents 10-19 who are in their natal household, we examine:

- Hours of domestic (subsistence and unpaid care) work per week (tobit model)
- Current enrollment in school (logit model)

Current enrollment in school is based on a question ‘Do (or did) you go to school?’ with the response of ‘studying at present’ used as enrolled and never been or have been to school in the past as not enrolled. The hours of domestic (subsistence and unpaid care) work per week are a continuous variable calculated based on series of questions on whether (and if so, how many hours and minutes) individuals engaged in a series of activities in the past seven days: (1) agriculture activities for own household consumption, (2) raising poultry/livestock for own household consumption, (3) producing ghee/butter/cheese for own household consumption, (4) cooking, (5) washing dishes, (6) laundry and ironing, (7) cleaning the house, (8) helping in construction work for the household, (9) collecting firewood or other fuel, (10) shopping for food, clothing, household items, (11) caring for the sick or elderly (while not doing other chores), and (12) taking care of children (while not doing other chores).

We are interested in how these outcomes vary between girls and boys among Syrians, and between Jordanians and Syrians among girls. We therefore estimate separate models for Syrians (to compare boys and girls) and for girls (to compare Syrians and Jordanians). As with gender role attitudes and gendered behaviors, we first estimate models without controls to describe differences in outcomes. We then add controls as described below.

⁶ Available at www.carolinekrafft.com/publications

3.5 Controls

Since we are attempting to understand how pre-determined variables impact gender role attitudes and gendered behaviors, and how these in turn affect outcomes, we adopt a relatively parsimonious set of controls. Controls always include key household characteristics: mother's education, father's education, father's employment status when the respondent was 15 (or currently if younger than 15; all available even if parent not in the household), and household wealth decile.

Since community context is important, we include a community-level socio-economic factor, based on the community-level average wealth score, community-level wealth inequality (measured in standard deviations), the share of women (aged 20-59) with a secondary education or above, the share of men (aged 20-59) with a secondary education or above, the share of the adult population (aged 20-59) with formal employment, and crowding (persons per room). We factor these variables to create a single index due both to their multicollinearity and the limited degrees of freedom our sample allows. We also control for distance to the nearest primary school (in minutes) and whether the location is urban, rural, or an official refugee camp as two other key contextual variables. These controls capture pre-determined familial and community background that may influence outcomes.

Our models for enrollment and domestic work outcomes among adolescents include controls for age centered at age 10 and its square, interacted with sex when comparing girls and boys. Models also include the key covariates of nationality, age group (adolescents versus adults), and sex, depending on which subgroups and comparisons are being undertaken. We run models for the raw difference with just the key covariates as our 'no controls' model and then compare differences with these controls.

In a subsequent model we include own, mother, mother minus father,⁷ and average community gender role attitudes⁸ and gendered behaviors. Because own attitudes and behaviors are available only for ages 15+, we estimate models for enrollment and domestic work outcomes setting the own gender role attitudes of 10-14-year-olds at the mean for their sex and nationality among adolescents to include all adolescents in the model without driving the coefficients. We include the justification of domestic violence and gendered behaviors variables only in the models focused on girls since they are not asked of boys. If the mother or father is absent from the household, we use the highest ranked (within the household roster) female (for mother) or male (for father) member. If there is no male or female in the household, we substitute in the community-level mean.⁹

4 Results

4.1 Patterns of Gender Role Attitudes and Gendered Behaviors

We begin with formal statistical tests of our hypotheses about patterns of gender role attitudes and gendered behaviors. We present in the body coefficient plots for the various hypotheses for models including controls and the appendix includes illustrative descriptives. The online supplemental appendix includes detailed results of the models both with and without

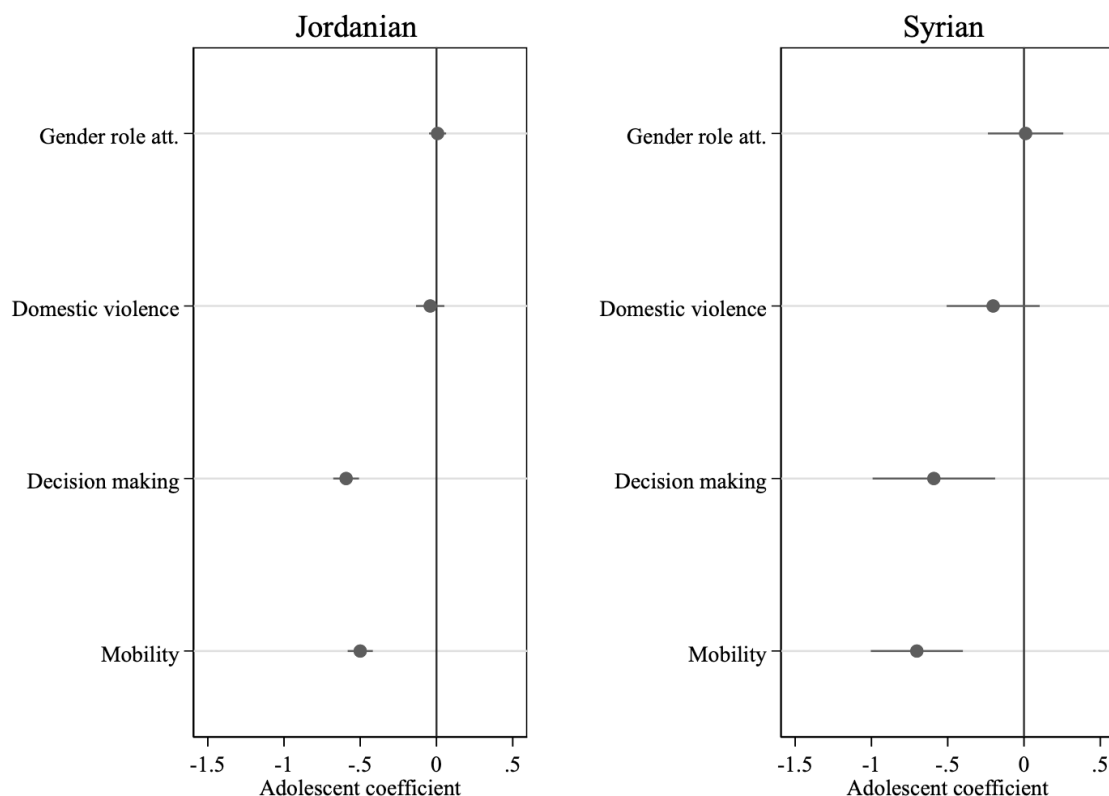
⁷ We use this difference both to address multi-collinearity and to understand the role of having a relatively more gender equitable mother versus father.

⁸ Among adolescents in our sample, the correlation of own gender role attitudes with mother's is 0.58, and with father's is 0.49. The correlation between mother and father is 0.46 and the correlation between own and mother minus father is -0.03. The correlation between own and community gender role attitudes is 0.41.

⁹ Among adolescents in our sample, approximately 13 percent of fathers' factors and approximately 4 percent of mothers' factors were missing and replaced.

controls.¹⁰ Figure 2 tests our first hypothesis, that gender role attitudes and gendered behaviors differ across generations, for adults versus adolescents, among Syrians and among Jordanians. The various factors, namely gender role attitudes, justification of domestic violence, decision-making, and mobility, are the dependent variables. The pure attitudinal factors, gender role attitudes (men and women) and justification of domestic violence (available for women only), do not show significant differences for adolescents compared to adults for Jordanians or Syrians. In contrast, the gendered behaviors, decision-making and mobility, which are available for women only, do show significant differences between adolescents and adults for both Jordanians and Syrians. The results indicate that the decision-making and mobility factors are between 0.5 and 0.7 standard deviations lower for adolescents compared to adults for the two nationality groups we consider.

Figure 2. Difference between adolescents and adults (adolescent coefficient, adults omitted reference category) in gender role attitudes, justification of domestic violence, decision-making, and mobility, by nationality



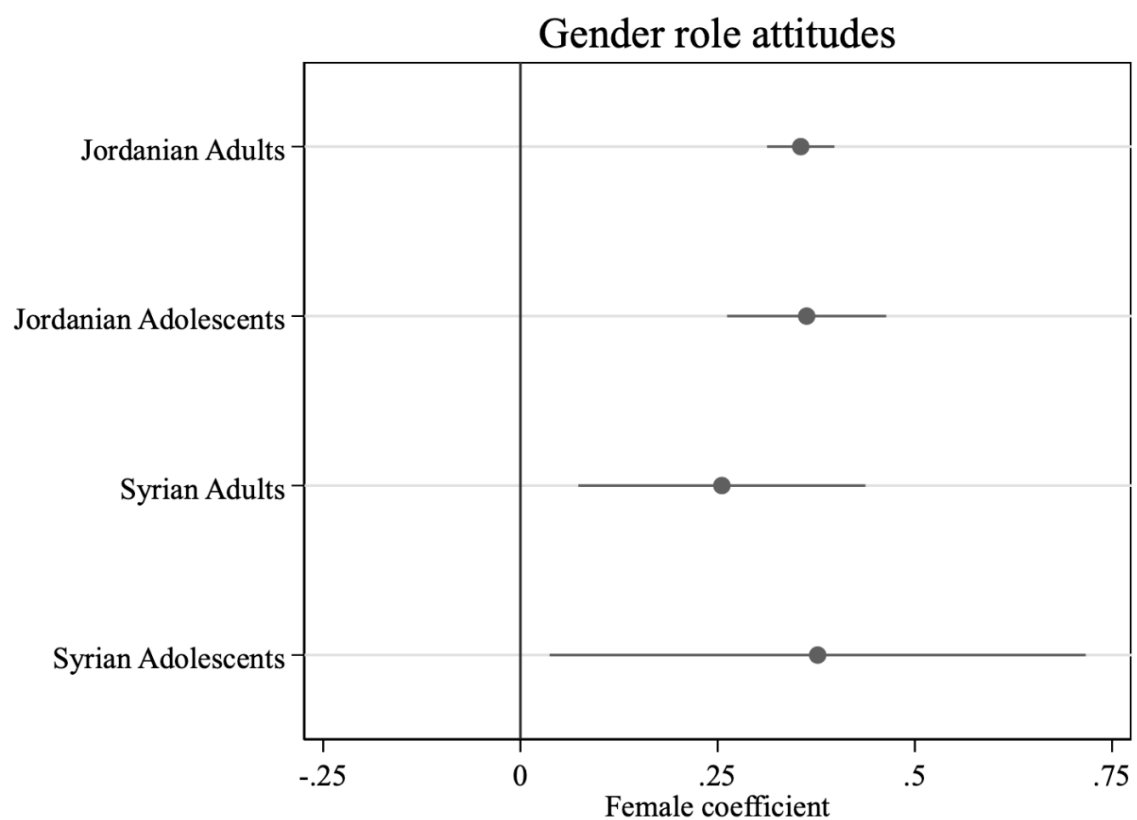
Source: Authors' calculations based on JLMPS 2016

Notes: Bars indicate 95% confidence intervals. Domestic violence, decision making, and mobility are available for women only. Models include controls, see online supplemental appendix Table A12 and Table A13.

¹⁰ Available at www.carolinekrafft.com/publications

We next turn to the question of whether gender role attitudes differ by sex; we cannot test this for justification of domestic violence or gendered behaviors since they are only available for women. We examine gender differences in gender role attitudes among Syrian and Jordanian adolescents, as well as among Syrian and Jordanian adults in Figure 3. There are significant differences for all groups. Coefficients range from 0.26 to 0.38, meaning female adolescents or adults have more equitable gender role attitudes than their male counterparts by approximately one third of a standard deviation.

Figure 3. Difference between females and males (female coefficient, males omitted reference category) in gender role attitudes, by nationality and adolescence

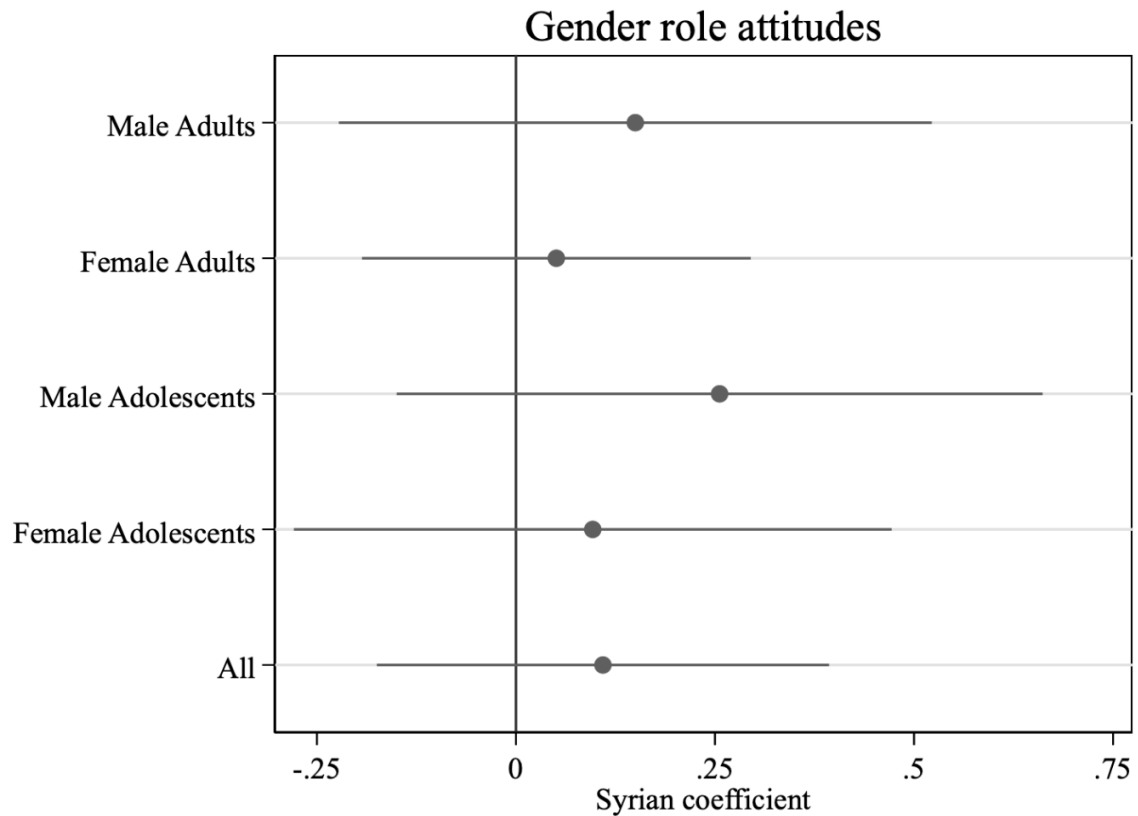


Source: Authors' calculations based on JLMPS 2016

Notes: Bars indicate 95% confidence intervals. Models include controls, see online supplemental appendix Table A14.

We subsequently examine whether gender role attitudes and gendered behaviors vary between Syrian refugees and the Jordanian host community among female and male adolescents and adults. In Figure 4 we examine differences between Syrians and Jordanians in gender role attitudes, which are available for both sexes. We find that there are no significant differences and coefficients tend to be small for all subgroups as well as overall, suggesting that the gender role attitudes that Syrians and Jordanians express are similar overall and within subgroups.

Figure 4. Difference between Syrians and Jordanians (Syrian coefficient, Jordanians omitted reference category) in gender role attitudes, by sex and adolescence



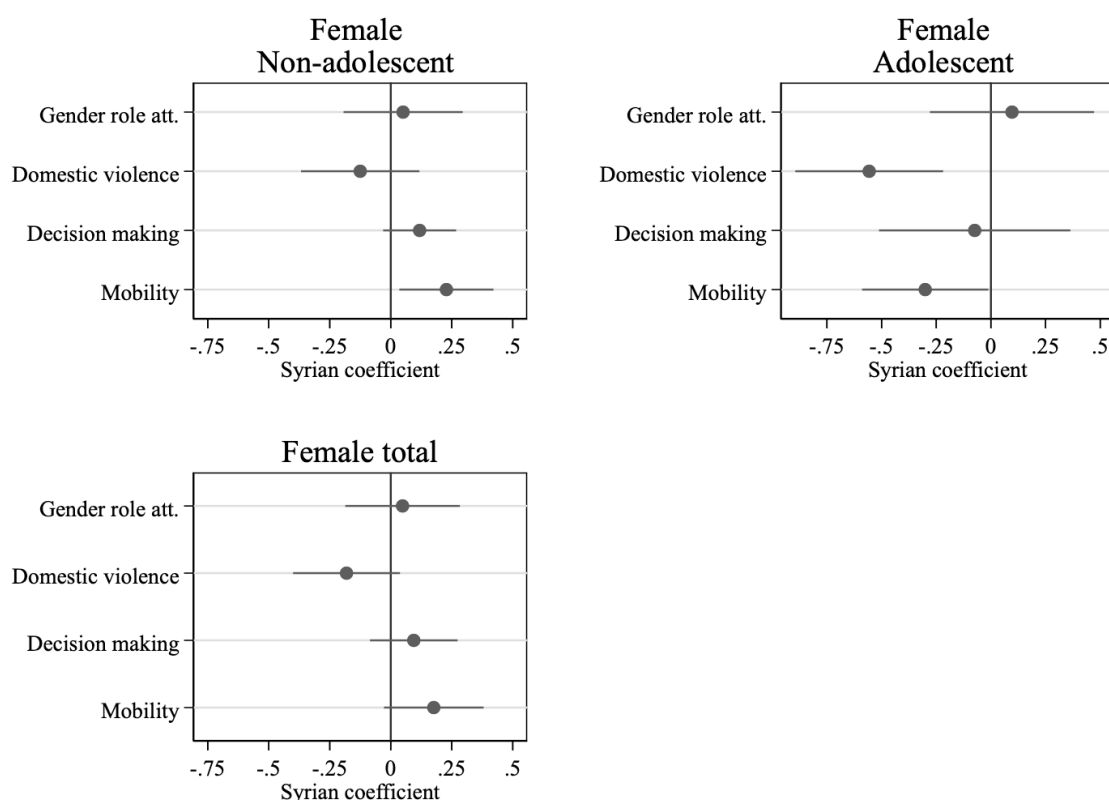
Source: Authors' calculations based on JLMPS 2016

Notes: Bars indicate 95% confidence intervals. Models include controls, see online supplemental appendix Table A15.

In Figure 5 we examine differences in justification of domestic violence, mobility, and decision-making between Syrians and Jordanians among female adolescents and adults, separately and jointly. While there are no significant differences when the two age groups are pooled together, disaggregating adolescents from adults shows important differences, particularly among adolescents. Syrian adolescents are significantly less likely to justify domestic violence than Jordanian adolescents (by more than half a standard deviation). However, they are also significantly less mobile than their Jordanian counterparts (by a third of a standard deviation). Adult Syrian women are actually more mobile than their Jordanian counterparts, which may be 'de facto' empowerment because of the absence of men. We undertook additional analyses adding a control for 'female-headed household' to the model. Female-headed households had more mobility, and after controlling for female-headed households the mobility difference between adult Syrian and Jordanian women (the Syrian coefficient) became insignificant. The lower likelihood of justifying domestic violence among Syrian adolescents is difficult to interpret; these may represent more progressive gender role attitudes, reactions to experiences of violence, or the positive impact of humanitarian programming efforts to prevent

violence.¹¹ The lower mobility is concerning for the well-being of Syrian refugee adolescent girls, a point we explore when we examine gendered enrollment and domestic work outcomes in what follows.

Figure 5. Difference between Syrians and Jordanians (Syrian coefficient, Jordanians omitted reference category) in gender role attitudes, justification of domestic violence, decision-making, and mobility, by adolescence, women



Source: Authors' calculations based on JLMPS 2016

Notes: Bars indicate 95% confidence intervals. Models include controls, see online supplemental appendix Table A16, Table A17, and Table A18.

4.2 Domestic Work Outcomes

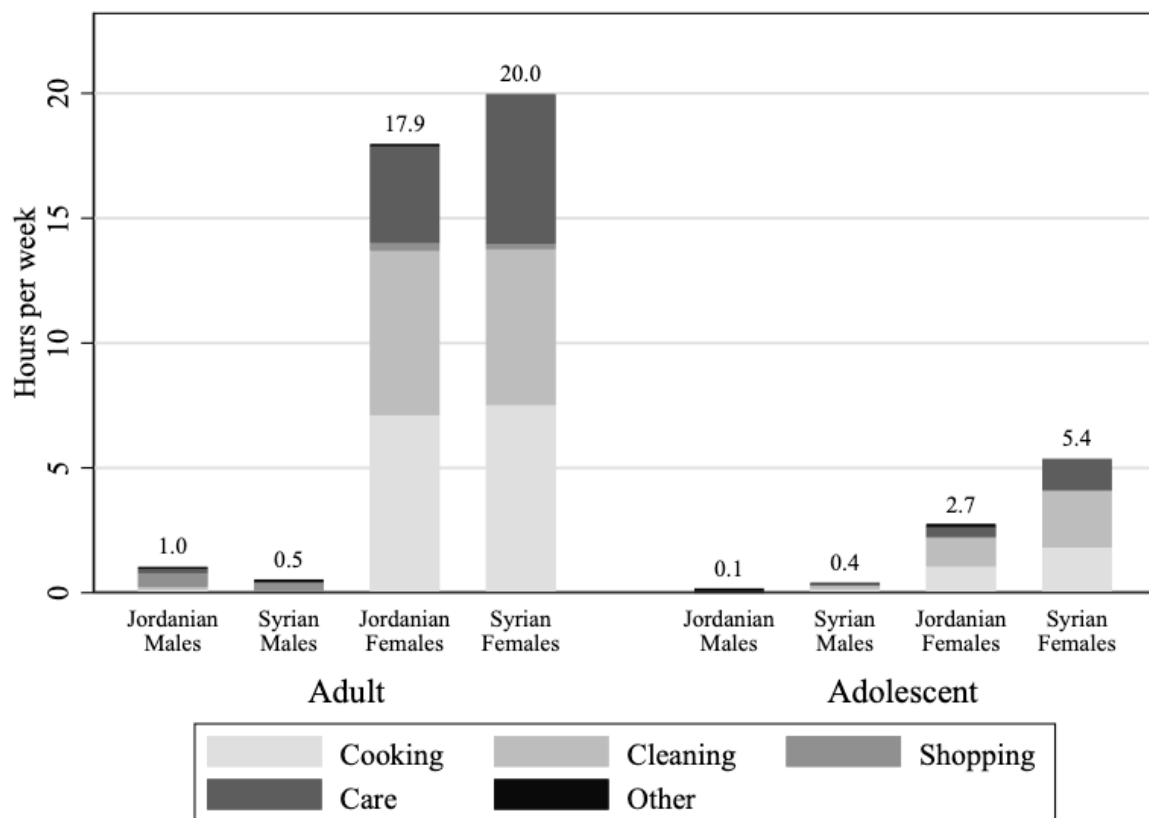
4.2.1 Descriptive patterns of domestic work

In this section, we focus on domestic work outcomes. We first present descriptive patterns of gendered domestic work outcomes (Figure 6). On average, women and adolescent girls do the vast majority of domestic work, while men and boys do close to no domestic work. Syrian adult women perform 20 hours of domestic work per week, on average, compared to Syrian men's contribution of about 0.5 hours per week. Syrian women (20 hours) and girls (5

¹¹ There have been a number of efforts to reduce gender-based violence in Jordan, including efforts specifically targeting Syrian refugees as well as awareness-raising more broadly (Gausman, Othman, Dababneh, et al., 2020).

hours) perform more domestic work than Jordanian women (18 hours) and girls (3 hours). The difference in their outcomes is primarily due to Syrian women performing more care work, which may be related to larger family sizes (Sieverding, Berri, & Abdulrahim, 2019).

Figure 6. Average number of hours of domestic work performed each week by sex, nationality, and adolescence



Source: Authors' calculations based on JLMPS 2016

4.2.2 Multivariate results on domestic work

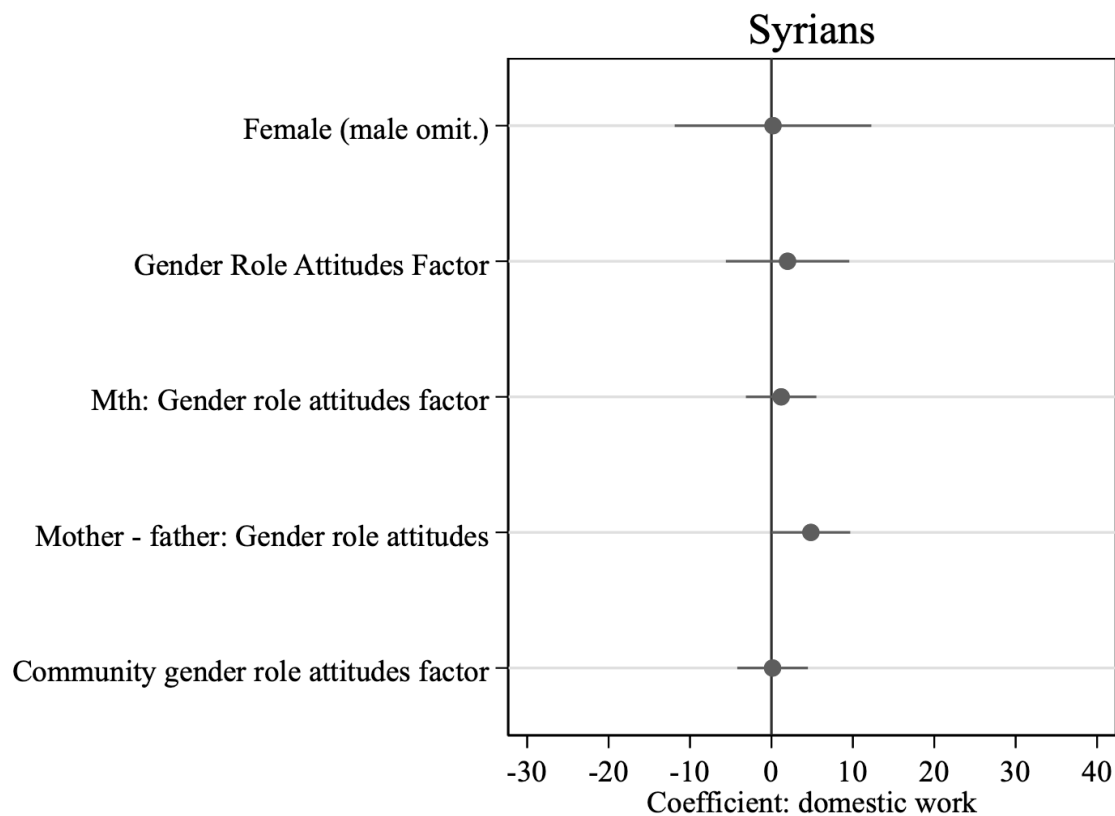
We now focus on adolescents (aged 10-19) and compare Syrian girls to Syrian boys and then Syrian girls to Jordanian girls in terms of a tobit model for hours of domestic work. We present models in the following sequence (1) 'no controls' for the raw difference, (2) adding controls, (3) adding gender role attitudes, (4) adding justification of domestic violence and gendered behaviors (girls only), and (5) adding interactions between sex or nationality (as applicable) and gender role attitudes and gendered behavior. We only retain and present interactions where the set of interactions was jointly significant. Full regression models are presented in Table 2 and we present the sex or nationality and gender role attitudes/gendered behavior coefficients in plots (Figure 7, Figure 8).

The raw difference (no controls model) between Syrian and Jordanian adolescent girls in terms of hours of domestic work is significant and amounts to about 2.7 hours per week as shown in Figure 6. Among Syrian adolescents, girls do significantly more domestic work per

week than boys. When adding the controls, for the reference individual (at age 10), there are no significant differences between girls and boys, but the sex-age interactions, although insignificant, suggest diverging domestic workloads as adolescents age. The rise in domestic workload with age is corroborated by the significance of the quadratic terms for age when estimating among girls. There are not many differences in terms of parents' background. Syrian adolescents in camps and with higher levels of cluster socio-economic status do significantly lower domestic work (there may be less domestic work to do in such contexts).

For the key covariates of interest, we examine first the models adding gender role attitudes among Syrians. Since interactions between gender and gender role attitudes were not significant, we present only the models with the main effect in Table 2 and Figure 7. The only significant result is in terms of the mother minus father gender role attitudes. When mothers have more equitable gender role attitudes than fathers among Syrians, children do more domestic work.

Figure 7. Coefficients for sex and gender role attitudes, domestic hours of work per week model, Syrian adolescents



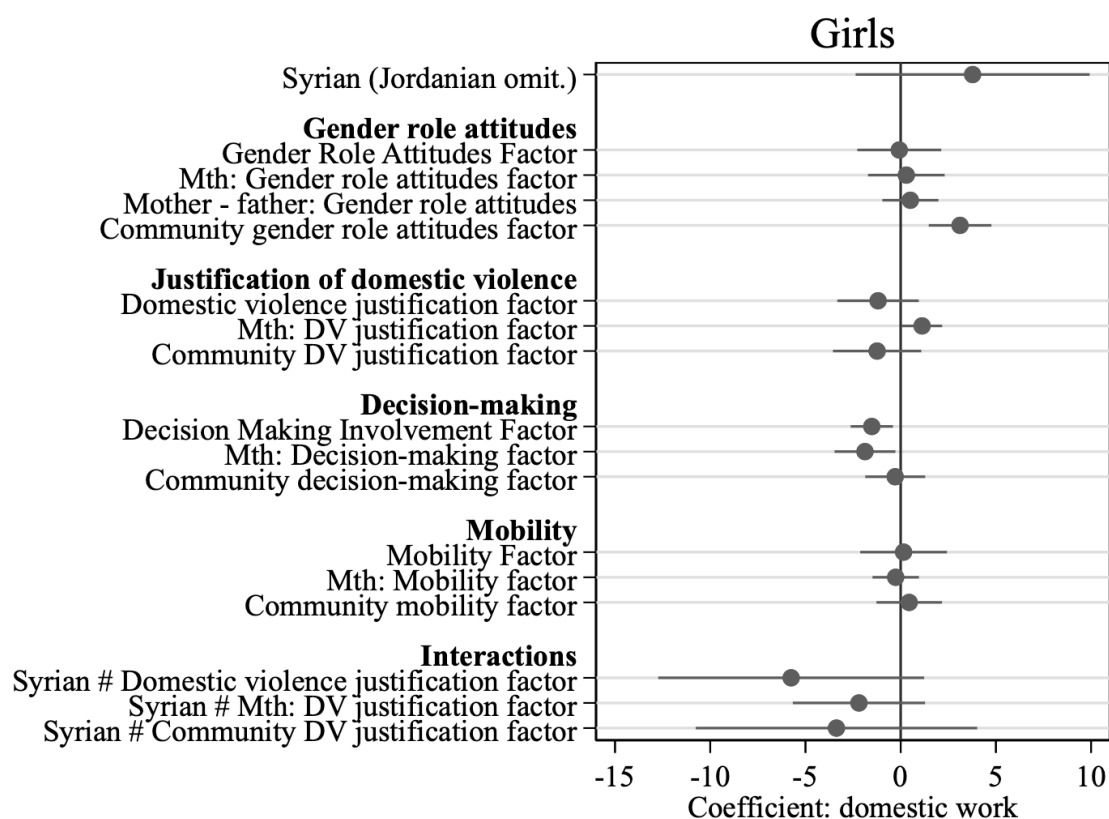
Source: Authors' calculations, see Table 2 '+GRA' model for details.

We next turn to the results for girls. We focus on the results of the model with the gender role attitudes, gendered behaviors, and significant interactions ('+Int.' model) and present the main effects and retained interactions in Figure 8. Interestingly, when the community has more equitable gender role attitudes, girls undertake more domestic work. This somewhat counter-

intuitive result could be related to the fact that, in a conservative social context, when women engage in non-traditional roles (for instance, employment), they face strong pressure to perform domestic roles as well if not better (Hoodfar, 1997). Although adolescent girls are not engaged in employment, a performative double shift (e.g., dutifulness in doing the dishes to get permission to visit friends) may be occurring.

When girls themselves have greater decision-making power, they engage in less domestic work. Likewise, when girls' mothers have greater decision-making power, girls engage in less domestic work. In both scenarios, the domestic work that girls do not perform is picked up by their mothers. Girls' own decision-making power and mothers' decision-making power have no effect on men's domestic work hours. An additional curious result is that when girls' mothers have higher justification of domestic violence, girls engage in significantly more domestic work. However, this result is driven by the Jordanians; although individually insignificant, the domestic violence justification and Syrian interactions go in the opposite direction and are jointly significant.

Figure 8. Coefficients for Syrian and gender role attitudes, gendered behaviors, and significant interactions, domestic hours of work per week model, female adolescents



Source: Authors' calculations, see Table 2 '+Int.' model for details.

Table 2. Tobit model of hours of domestic work for (1) adolescent girls (aged 10 to 19) and (2) Syrians, without and with controls

	No controls		+Controls		+GRA		+GB		+Int.
	Girls	Syrians	Girls	Syrians	Girls	Syrians	Girls	Girls	
Syrian (Jordanian omit.)	6.980** (2.579)		7.962** (2.517)		7.226** (2.373)		6.861** (2.351)	3.778 (3.134)	
Female (male omit.)		17.631*** (4.263)		-3.182 (8.010)		0.195 (6.152)		(2.351)	(3.134)
Age minus 10				4.970** (0.814)	4.843*** (0.793)	1.133 (1.907)	4.821*** (0.780)	4.773*** (0.770)	
(Age minus 10) squared				-0.306*** (0.079)	-0.293*** (0.076)	-0.100 (0.210)	-0.299*** (0.072)	-0.297*** (0.071)	
Female # Age minus 10				7.395 (4.875)		6.304 (4.142)			
Female # (Age minus 10) squared				-0.468 (0.468)		-0.387 (0.405)			
Mother's ed (illit. omit.):									
Mth: Read & Write			0.232 (2.592)	-3.517 (4.169)	0.314 (2.488)	-2.764 (4.669)	0.836 (2.278)	0.834 (2.192)	
Mth: Basic			-1.669 (2.598)	-6.030 (3.486)	-1.794 (2.527)	-2.434 (4.303)	-1.185 (2.334)	-0.975 (2.274)	
Mth: Secondary			-7.241** (2.752)	-8.132 (4.560)	-7.322** (2.636)	-5.714 (4.252)	-6.241* (2.454)	-6.206** (2.406)	
Mth: Higher Ed.			-1.323 (2.402)	12.010 (9.784)	-1.484 (2.411)	14.014 (11.282)	-0.934 (2.319)	-0.866 (2.252)	
Father's ed: illit. omit.									
Fth: Read & Write			0.649 (2.752)	6.619 (4.685)	0.106 (2.818)	0.603 (4.202)	0.529 (2.522)	0.411 (2.542)	
Fth: Basic			1.466 (3.027)	6.745 (4.823)	0.513 (2.865)	2.506 (6.232)	1.360 (2.412)	1.245 (2.298)	
Fth: Secondary			0.699 (3.430)	16.724** (5.463)	0.035 (3.356)	12.628*** (3.741)	0.480 (3.010)	0.234 (2.953)	
Fth: Higher Ed.			-1.292 (3.343)	2.858 (5.781)	-1.704 (3.289)	-0.554 (6.301)	-1.008 (2.853)	-1.154 (2.755)	
Household wealth deciles (1 (poorest) omit.):									
2nd decile			-0.274 (5.311)	2.732 (5.342)	1.706 (5.056)	2.504 (5.151)	0.678 (5.069)	-0.076 (5.140)	
3rd decile			-7.376 (5.744)	-0.216 (6.732)	-5.208 (5.489)	-0.081 (7.497)	-5.773 (5.360)	-6.282 (5.384)	

	No controls Girls	No controls Syrians	+Controls Girls	+Controls Syrians	+GRA Girls	+GRA Syrians	+GB Girls	+Int. Girls
4th decile	-7.424 (5.543)	-1.379 (6.477)	-5.587 (5.407)	-0.636 (6.086)	-6.209 (5.423)	-6.465 (5.381)		
5th decile	-4.657 (5.532)	2.674 (6.102)	-2.513 (5.345)	2.857 (5.503)	-3.476 (5.233)	-3.871 (5.273)		
6th decile	-0.201 (5.404)	-66.506*** (17.709)	1.181 (5.268)	-57.401*** (15.631)	0.635 (5.156)	0.393 (5.137)		
7th decile	2.477 (5.218)	11.334 (6.429)	4.712 (5.145)	12.769* (6.427)	4.038 (5.042)	4.192 (5.049)		
8th decile	6.139 (5.417)		7.344 (5.383)		6.520 (5.269)	6.315 (5.235)		
9th decile	0.621 (5.255)	-85.951*** (21.060)	2.193 (5.146)	-89.278*** (21.189)	1.549 (5.051)	1.340 (5.035)		
10th decile	-0.515 (5.505)	-55.279** (17.977)	1.112 (5.433)	-48.623* (19.638)	0.545 (5.324)	0.433 (5.295)		
Father's emp status (wage worker omit.):								
Fth: Employer	-0.997 (3.036)	-5.283 (4.296)	-1.264 (3.055)	-5.641 (3.850)	-0.950 (3.033)	-1.179 (3.006)		
Fth: Self-employed	-1.282 (2.090)	0.484 (6.087)	-1.281 (2.040)	-6.514 (5.814)	-1.087 (2.020)	-1.126 (2.005)		
Fth: Non-employed	0.199 (1.222)	-6.006 (3.939)	0.139 (1.203)	-6.804 (4.256)	0.478 (1.040)	0.382 (1.057)		
Geography (urban omit.):								
Rural	5.376* (2.384)	6.445 (4.786)	4.050 (2.086)	6.902 (5.380)	4.024* (1.994)	4.085* (1.993)		
Camps	-9.212 (7.600)	-19.121* (8.390)	-11.379 (6.689)	-29.587** (10.448)	-10.367 (6.979)	-8.182 (7.181)		
Cluster level socio-economic status factor	-2.406 (1.514)	-9.426* (3.862)	-4.379** (1.564)	-13.823** (4.347)	-3.975* (1.558)	-3.886* (1.559)		
Cluster level average distance from primary school (in minutes)	-0.374 (0.311)	0.198 (0.517)	-0.116 (0.293)	-0.567 (0.864)	-0.121 (0.276)	-0.125 (0.275)		
Gender Role Attitudes Factor			0.153 (1.172)	1.987 (3.861)	-0.047 (1.146)	-0.072 (1.125)		
Mth: Gender role attitudes factor			-0.107 (1.014)	1.196 (2.206)	0.334 (1.031)	0.298 (1.027)		

	No controls Girls	No controls Syrians	+Controls Girls	+Controls Syrians	+GRA Girls	+GRA Syrians	+GB Girls	+Int. Girls
Mother - father: Gender role attitudes					0.742	4.849*	0.477	0.511
Community gender role attitudes factor					(0.735) 3.364***	(2.463) 0.146	(0.745) 3.109***	(0.752) 3.120***
Domestic Violence justification Factor					(0.852)	(2.210)	(0.832) -1.106	(0.840) -1.185
Mth: DV justification factor							(1.089) 1.004	(1.091) 1.125*
Community DV justification factor							(0.516) -1.495	(0.539) -1.236
Decision Making Involvement Factor							(1.167) -1.575**	(1.184) -1.515**
Mth: Decision-making factor							(0.606) -1.817*	(0.567) -1.873*
Community decision-making factor							(0.821) -0.296	(0.816) -0.286
Mobility factor							(0.799) 0.079	(0.803) 0.155
Mth: Mobility factor							(1.184) -0.315	(1.163) -0.260
Community mobility factor							(0.613) 0.350	(0.622) 0.449
Syrian # DV justification factor							(0.867) 0.449	(0.878) 0.449
Syrian # Mth: DV justification factor								-5.749 (3.561)
Syrian # Community DV justification factor								-2.190 (1.771)
Constant	-13.030*** (2.032)	-22.695*** (5.755)	-20.269** (6.815)	-27.648* (11.796)	-24.013*** (6.912)	-22.880 (12.122)	-24.459*** (6.636)	-23.758*** (6.730)

	No controls Girls	No controls Syrians	+Controls Girls	+Controls Syrians	+GRA Girls	+GRA Syrians	+GB Girls	+Int. Girls
N obs.	3151	637	3054	613	3054	613	3054	3054
Pseudo R-sq.	.00551	.0741	.0638	.189	.0721	.206	.0779	.0788

Source: Authors' calculations based on JLMPS 2016

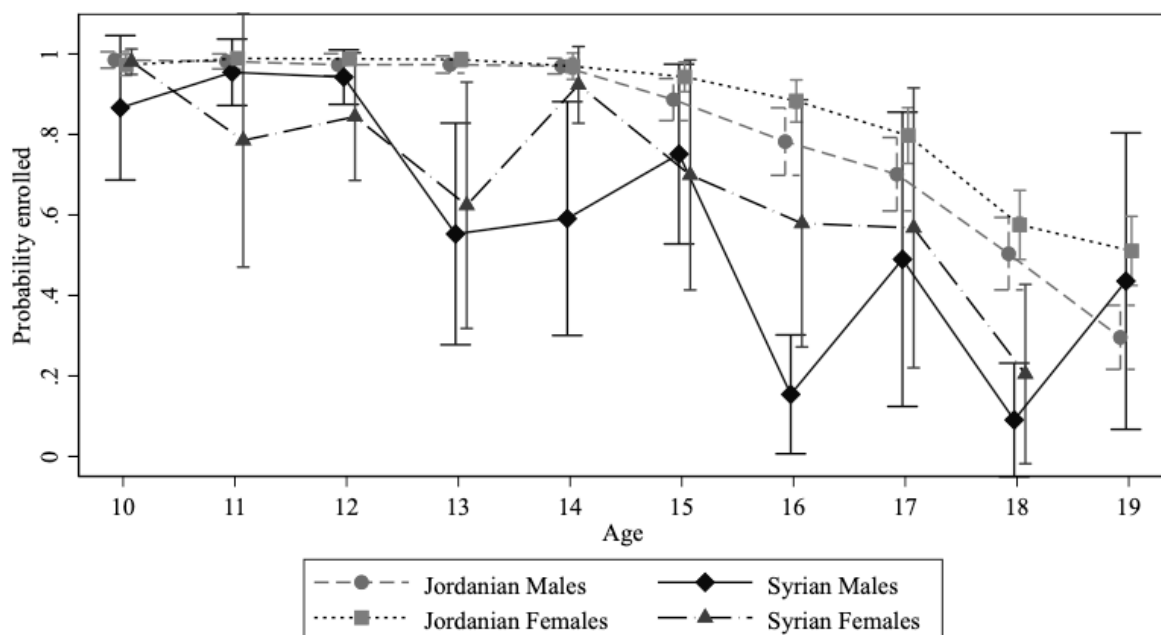
Notes: *p<0.05; **p<0.01; ***p<0.001

4.3 School Enrollment Outcomes

4.3.1 Descriptive patterns of school enrollment

In this section, we turn to school enrollment outcomes. We first present descriptive patterns of enrollment (Figure 9). Syrians and Jordanians have similar school enrollment rates at ages 10 to 12, and then diverge. Syrians drop out at earlier ages than Jordanians, diverging particularly between ages 13 and 16. The differences between Syrian boys and girls are generally not significant. The differences by nationality are likely partially attributable to socioeconomic status, as we discuss below.

Figure 9. School enrollment by age, sex, and nationality



Source: Authors' calculations based on JLMPS 2016.

Notes: Bars denote 95% confidence intervals.

4.3.2 Multivariate models of school enrollment

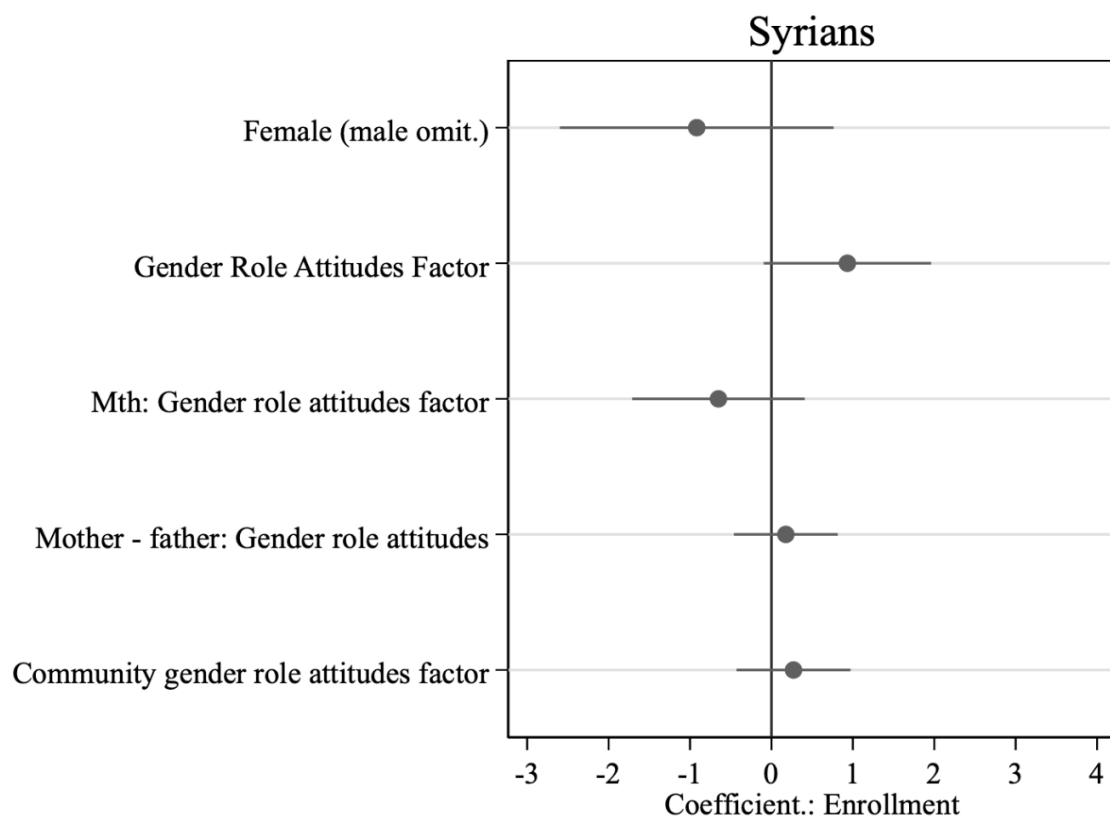
We compare adolescent (aged 10-19) Syrian girls to Syrian boys and then Syrian girls to Jordanian girls in terms of multivariate models of enrollment (logit-Table 3). We present models in the same sequence as for domestic work and again only retain and present interactions where the set of interactions was jointly significant. Full regression models are presented in Table 3 and we present the sex or nationality and gender role attitudes/gendered behavior coefficients in plots (Figure 10, Figure 11).

There are substantial raw differences in attainment and enrollment between Syrian girls and Jordanian girls, but there are no significant differences between boys and girls among Syrian adolescents. If anything, girls are more likely to be enrolled and to progress in school, which may relate to boys having to drop out of school to act as breadwinners (Sieverding, Krafft, Berri, Keo, & Sharpless, 2018). After adding controls, the differences between Syrian and Jordanian

girls become smaller and insignificant. Maternal and paternal education, as well as father's employment status and household wealth, play a role in predicting enrollment, with the expected patterns for inter-generational transmission of socio-economic status. Thus, differences in parental education and paternal employment status between Syrians and Jordanian girls explain most of the raw differences observed.

We turn in Figure 10 to coefficients from the model among Syrians comparing girls and boys and including gender role attitudes. As was the case for domestic work, interactions were not significant and are, therefore, not presented. Among Syrians, none of the gender role attitudes factors is a significant predictor of enrollment.

Figure 10. Coefficients for sex and gender role attitudes, school enrollment model, Syrian adolescents

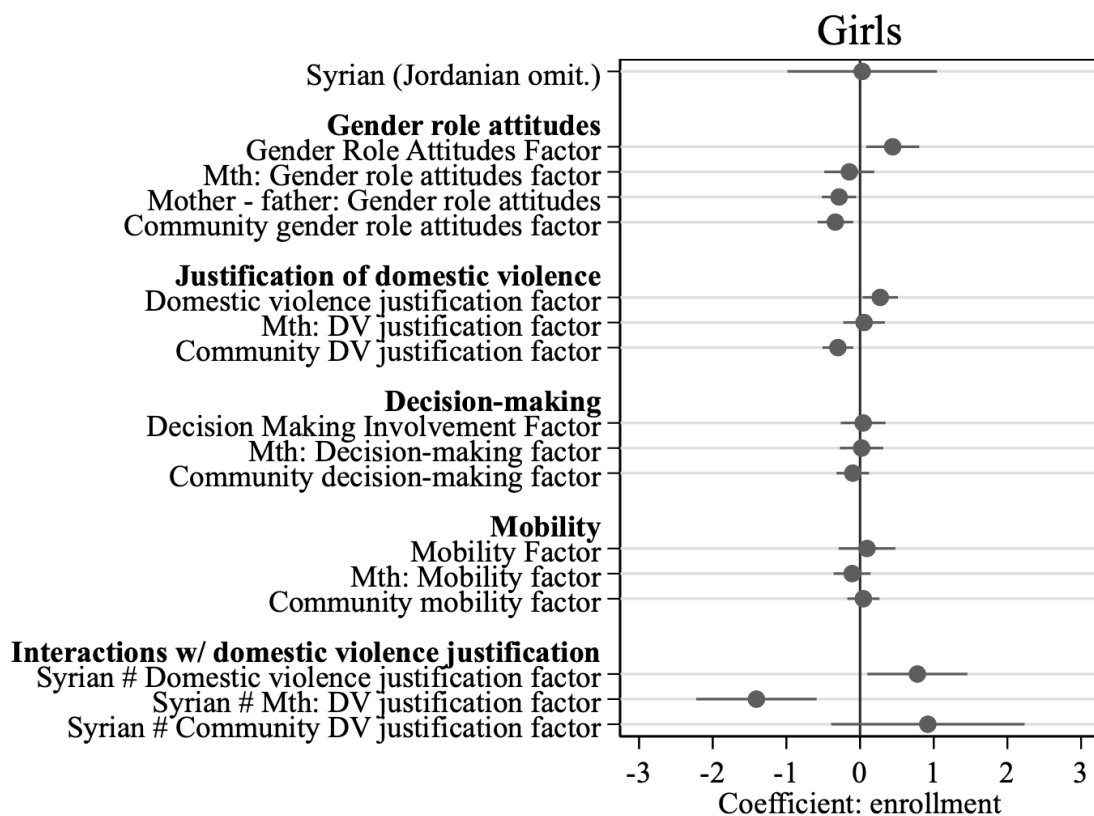


Source: Authors' calculations, see Table 3 '+GRA' model for details.

In Figure 11 we focus on girls and present coefficients for the model with the significant interactions, which again were for domestic violence. In this full model, there is no significant difference between Syrians and Jordanians in enrollment. More equitable own gender role attitudes predict significantly higher enrollment in school (odds ratio of 1.6 for a one standard deviation increase in own gender role attitudes). This may, however, be a case of reverse causality, with girls who remain in school longer developing more equitable attitudes. Although the mother's attitude is not a significant predictor of enrollment, the difference between the mother's and father's is; a one standard deviation increase in this gap decreases enrollment (odds

ratio 0.8). Thus, less gender equitable fathers predict lower school enrollment for girls. Counter-intuitively, more equitable community gender role attitudes predict lower enrollment as well. Also counter-intuitively, girls who justify domestic violence are more likely to be in school, although those who live in communities with higher justification of domestic violence are less likely to be in school. The result on own justification is even stronger for Syrians (significant interaction) but the community effect washed out given the interaction. For Syrians, a mother with a higher level of domestic violence justification predicts lower enrollment.

Figure 11. Coefficients for Syrian and gender role attitudes, gendered behaviors, and significant interactions, school enrollment model, female adolescents



Source: Authors' calculations, see Table 3 '+Int.' model for details.

Table 3. Logit models for school enrollment (odds ratios) for (1) adolescent girls (aged 10 to 19) and (2) Syrians, without and with controls

	No controls Girls	No controls Syrians	+Controls Girls	+Controls Syrians	+GRA Girls	+GRA Syrians	+GB Girls	+Int. Girls
Syrian	0.352*** (0.100)		0.543 (0.224)		0.606 (0.239)	0.400 (0.343)	0.605 (0.238)	1.030 (0.533)
Female		1.656 (0.485)		0.461 (0.413)		0.400 (0.343)		
Age minus 10			1.097 (0.183)	0.369*** (0.122)	1.146 (0.195)	0.326*** (0.102)	1.155 (0.184)	1.073 (0.171)
(Age minus 10) squared			0.934*** (0.014)	1.028 (0.032)	0.929*** (0.015)	1.042 (0.030)	0.926*** (0.014)	0.932*** (0.014)
Female # Age minus 10				2.274 (1.059)		2.420* (0.989)		
Female # (Age minus 10) squared				0.930 (0.047)		0.924 (0.041)		
Mother's ed (illit. omit.):								
Mth: Read & Write			0.836 (0.301)	1.142 (0.469)	0.895 (0.316)	1.523 (0.577)	0.938 (0.343)	0.978 (0.361)
Mth: Basic			1.996 (0.836)	0.973 (1.105)	2.046 (0.861)	1.018 (1.073)	2.145 (0.914)	2.279 (0.976)
Mth: Secondary			2.146* (0.819)	8.756 (22.105)	2.450* (0.974)	9.070 (23.038)	2.940** (1.230)	3.146** (1.352)
Mth: Higher Ed.			2.231 (1.313)		2.420 (1.447)		2.516 (1.631)	2.642 (1.730)
Father's ed: illit. omit.								
Fth: Read & Write			1.195 (0.370)	2.023 (0.979)	1.406 (0.423)	1.449 (1.153)	1.517 (0.533)	1.674 (0.579)
Fth: Basic			2.726*** (0.990)	4.607 (4.428)	3.256*** (1.271)	3.428 (4.304)	3.546*** (1.324)	3.713*** (1.377)
Fth: Secondary			5.352*** (2.236)	29.271* (45.634)	6.222*** (2.493)	16.095 (24.298)	6.985*** (2.634)	6.632*** (2.800)
Fth: Higher Ed.			9.843*** (4.580)	14.585** (14.703)	10.502*** (5.052)	12.860** (12.261)	11.464*** (5.721)	11.573*** (5.766)
Household wealth deciles (1 (poorest) omit.):								
2nd decile			1.036 (0.569)	2.283 (2.184)	0.804 (0.442)	1.629 (1.329)	0.704 (0.379)	0.839 (0.482)
3rd decile			2.521 (1.714)	18.843* (26.992)	2.062 (1.354)	9.699* (10.720)	1.809 (1.104)	1.922 (1.179)

	No controls Girls	No controls Syrians	+Controls Girls	+Controls Syrians	+GRA Girls	+GRA Syrians	+GB Girls	+Int. Girls
4th decile	2.250 (1.611)	0.524 (0.662)	1.805 (1.261)	0.300 (0.398)	1.747 (1.094)	2.733 (1.739)		
5th decile	2.684 (1.738)	2.691 (3.978)	2.143 (1.415)	1.256 (1.491)	1.914 (1.141)	2.371 (1.447)		
6th decile	2.833 (2.301)		2.440 (1.983)		2.436 (1.955)	3.169 (2.655)		
7th decile	6.996** (5.040)		5.812* (4.153)		4.938* (3.203)	6.017** (4.032)		
8th decile	2.414 (1.824)		2.071 (1.502)		1.991 (1.390)	2.719 (1.881)		
9th decile	6.550* (5.110)		5.264* (3.931)		5.167* (3.558)	6.792** (4.684)		
10th decile	3.375 (3.166)		2.769 (2.486)		2.502 (2.098)	3.478 (2.757)		
Father's emp status (wage worker omit.):								
Fth: Employer	2.667 (1.366)	25.370* (34.100)	2.598* (1.265)	38.039* (58.067)	2.475 (1.250)	2.498 (1.250)		
Fth: Self-employed	1.982 (0.955)	0.388 (0.319)	2.217 (1.127)	0.402 (0.306)	2.025 (1.062)	1.731 (0.935)		
Fth: Non-employed	1.094 (0.293)	0.790 (0.482)	1.126 (0.300)	0.699 (0.516)	1.133 (0.281)	1.034 (0.253)		
Geography (urban omit.):								
Rural	1.938* (0.548)	0.277 (0.438)	1.982* (0.589)	0.194 (0.298)	2.256* (0.726)	2.181* (0.676)		
Camps	6.764* (5.309)	9.553 (16.653)	7.408* (6.316)	4.710 (7.252)	8.435* (7.199)	7.496* (7.001)		
Cluster level socio-economic status factor	1.697* (0.421)	1.287 (0.589)	1.986** (0.492)	1.112 (0.466)	2.096** (0.547)	1.982** (0.526)		
Cluster level average distance from primary school (in minutes)	1.000 (0.039)	0.947 (0.125)	0.989 (0.038)	0.889 (0.102)	0.998 (0.037)	1.004 (0.035)		
Gender Role Attitudes Factor					1.573** (0.236)	1.557* (0.285)		
Mth: Gender role attitudes factor					0.766 (0.148)	0.864 (0.150)		

	No controls Girls	No controls Syrians	+Controls Girls	+Controls Syrians	+GRA Girls	+GRA Syrians	+GB Girls	+Int. Girls
Mother - father: Gender role attitudes					0.764*	1.194	0.741**	0.752*
Community gender role attitudes factor					(0.085) 0.759*	(0.389) 1.312	(0.085) 0.718**	(0.090) 0.715**
Domestic violence justification factor					(0.088)	(0.469)	(0.086) 1.545**	(0.088) 1.315*
Mth: DV justification factor							(0.221) 0.805	(0.161) 1.056
Community DV justification factor							(0.131) 0.779*	(0.152) 0.740**
Decision Making Involvement Factor							(0.087) 1.044	(0.079) 1.043
Mth: Decision-making factor							(0.183) 1.116	(0.162) 1.022
Community decision-making factor							(0.155) 0.909	(0.154) 0.906
Mobility Factor							(0.117) 1.163	(0.102) 1.100
Mth: Mobility factor							(0.228) 0.854	(0.217) 0.898
Community mobility factor							(0.110) 1.075	(0.115) 1.046
Syrian # Domestic violence justification factor							(0.128) 2.177*	(0.116) 2.177*
Syrian # Mth: DV justification factor							(0.755) 0.245***	(0.755) 0.245***
Syrian # Community DV justification factor							(0.102) 2.510	(0.102) 2.510
N obs.	3151	637	3054	591	3054	591	3054	3054
Pseudo R-sq.	.025	.0101	.385	.382	.399	.402	.41	.423

Source: Authors' calculations based on JLMPS 2016

Notes: *p<0.05; **p<0.01; ***p<0.001

5 Discussion and Conclusions

5.1 *Discussion of Findings*

This paper examined how gender role attitudes and gendered behaviors differ by sex, across adolescents and adults and in the Syrian refugee community and the Jordanian host community. We then analyzed how domestic work and school enrollment are associated with own gender role attitudes and behaviors, along with those of parents, and those of surrounding communities (proxies for normative expectations and empirical expectations). We compared these outcomes across Syrian boys and girls and across Syrian girls and Jordanian girls.

Our findings reveal that women and girls hold more equitable gender role attitudes than their male counterparts, but that there are no significant differences between Syrians and Jordanians in gender role attitudes. There are no significant differences between adolescents and adults in gender role attitudes or justification of domestic violence. Although there is individual variation, gender role attitudes more often than not support gender equality. Indeed, gender parity in education is the norm among Syrians and Jordanians. While our results show there is theoretical support for men engaging in domestic work and women in market work, gender equity in these workloads has not been achieved and indeed more nuanced analyses of specific attitudes suggest support is highly conditioned (e.g. on ‘acceptable’ employment conditions for women) (Gauri, Rahman, & Sen, 2019).

We find that adolescent girls have substantially less decision-making power and less mobility than adult women. Syrian adolescent girls are particularly constrained in terms of mobility compared to their Jordanian counterparts, probably a reflection of the higher real and perceived risks they face in the public space (Garbern, Helal, Michael, Turgeon, & Bartels, 2020; International Rescue Committee, 2015; Roupetz, Bartels, Michael, et al., 2020). Interestingly, they also are less likely to justify domestic violence compared to their Jordanian counterparts.

Gendered enrollment and domestic work outcomes depend on own, parental, and community level gender role attitudes and gendered behaviors in complex ways. We find, for instance, that the domestic responsibilities of adolescents (both boys and girls) increase significantly when the father has less equitable gender role attitudes than the mother. Interestingly, these effects do not occur when focusing solely on girls, whose own and maternal decision-making powers are important predictors of reduced domestic work, with the mothers rather than boys or fathers picking up the difference. While Syrian girls have heavier raw domestic work burdens than their Jordanian counterparts, these burdens depend on household and community level gender role attitudes and gendered behaviors in complex ways. Own and household level gender role attitudes do not seem to affect girls’ domestic work burdens in significant ways, but girls who live in communities that are more gender equitable do more domestic work. Yet adolescents who live in higher-socioeconomic status communities, and among Syrians, in camps, do less domestic work.

Syrian girls have a positive although insignificant advantage relative to Syrian boys in terms of enrollment, possibly reflecting the pull of the labor market on boys. More progressive gender role attitudes are associated with high enrollment for girls, which may reflect reverse causality. Syrian girls are significantly less likely to be enrolled than their Jordanian counterparts. However, these large raw differences are greatly attenuated once parental and community characteristics capturing socio-economic status are accounted for. More gender equitable gender role attitudes on the part of the father increases girls’ school enrollment and attainment. As in the case of domestic work, justification of domestic violence associations are complex and difficult to interpret.

5.2 Limitations and Areas for Future Research and Data Collection

Creating specialized but representative surveys targeting displaced populations is an important area for future research. Retrospective data on exposure to conflict is particularly important to capture in such surveys. Although the JLMPS 2016 data we use are nationally representative of the Syrians in Jordan, the results do not necessarily generalize to the Syrians displaced to other host communities; the Syrians who sought refuge in Jordan are different from those in other countries and the national population pre-conflict on a variety of dimensions (Sieverding & Calderon-Mejia, 2020; Sieverding, Krafft, Berri, Keo, & Sharpless, 2018; Stave & Hillesund, 2015).

While the data over-sampled Syrians, when examining specific subgroups (such as female Syrian adolescents), the sample sizes were limited, which reduced the power of our analyses. Specialized surveys would be an important route to enable gender- and age-disaggregated analyses. Longitudinal surveys are particularly important for understanding how gender norms and their components may change over time in response to conflict and displacement. We were unable to distinguish between the age and cohort effects inherent in the age groups we compare because we only have a single point in time.

Unfortunately, the JLMPS 2016 did not ask justification of domestic violence, decision-making, or mobility questions of men or boys, an important limitation of our analyses. Surveys should ask gender norms questions to all individuals, including men and boys, not just women and girls. Large samples with adequate representation of key sub-groups are critical for researching how gender norms relate to social and economic characteristics across the life course. Starting with the Egypt Labor Market Panel Survey 2018, the LMPS series has asked these questions of everyone (Krafft, Assaad, & Rahman, 2019). While we were able to capture community-level gender role attitudes and gendered behaviors as important proxies of normative expectations and empirical expectations components of gender norms, we were unable to measure these attitudes and behaviors in schools or workplaces. While logistically challenging, collecting these measures in schools and workplaces could be very valuable.

In addition to increasing the coverage of gender norms questions, there is an important and emerging research and data collection agenda around truly measuring norms. Data and research on norms are beginning to better distinguish between social empirical expectations, expectations of how other people behave, and social normative expectations, expectations about what other people think one should do (Bicchieri, 2017; Gauri, Rahman, & Sen, 2019). These measures are related but distinct from personal behavior (what you do) and personal normative beliefs (what you believe) (Gauri, Rahman, & Sen, 2019). In the JLMPS 2016 we were able to measure personal normative beliefs about gender (gender role attitudes and justification of domestic violence) and personal, gendered behavior (decision-making and mobility). We used cluster-level personal beliefs and behaviors as proxies for social normative expectations and social empirical expectations, but truly eliciting social normative and empirical expectations is an important area for future research. Disconnects between perceptions and realities of norms can play a particularly important role in gender inequality (Bursztyn, Gonzalez, & Yanagizawa-Drott, 2020). Mixed-methods research will also be particularly important to developing better measures of gender norms (Jayachandran, Biradavolu, & Cooper, 2021).

Some of the interesting but puzzling findings in our work relate to the justification of domestic violence. This variable may be picking up not just attitudes towards domestic violence, but also experiences with violence, exposure to humanitarian programming, or attitudes towards

sexual harassment more so than violence. Syrians were more likely to justify domestic violence when living in camps or in areas with higher local socioeconomic status. These findings, in particular, are an important area for future research to distinguish these and other potential interpretations. Indeed, our paper is limited by only being able to identify associations, not causal relationships. Future work on gender norms and displacement that develops and deploys stronger identification strategies, whether quasi-experiments or randomized controlled trials, is much needed.

5.3 Policy and Programmatic Implications

Our findings underscore the importance of considering adolescent refugee girls as a distinct group that may have divergent outcomes and face unique challenges. For example, while Syrian adult women had higher mobility relative to Jordanian adult women, Syrian adolescent girls were much more restricted than adult women – or Jordanian adolescent girls. Thus, research, programming, and policy needs to be not only gender-sensitive but also consider how gender intersects with the life course in complex ways for refugees. Girls' limited mobility presents a particular challenge in terms of ability to access safe spaces, ability to connect to friends and social networks, ability to seek sexual and reproductive health services, and other forms of social exclusion.

Programming that encourages safe mobility and access to safe spaces where girls can build social networks may be particularly important. Makani Centers in Jordan, a UNICEF program, provide space and educational, psychosocial, life and jobs skills programming. The centers offer the advantage of programming designed for adolescents. Importantly, they offer free transport and alternating days for boys and girls as well, addressing key constraints on adolescents' mobility (Abu Hamad, Jones, Samuels, et al., 2017). Makani Centers provide activity and socialization, relative to alternatives such as staying home and watching TV (Abu Hamad, Jones, Samuels, et al., 2017). Where Makani Centers are not yet available, claiming safe spaces and time for adolescent girls in existing (but often male-dominated) spaces – such as youth centers – can be an effective approach (Brady, Assaad, Ibrahim, et al., 2007; Sieverding & Elbadawy, 2016).

Our findings underscore the value of considering community and familial gender norms, not just those of adolescent girls themselves. Adolescent girls' own gender norms were not key drivers of outcomes; this result may be due to their lack of agency. Yet family and community gender norms did have important associations with adolescent refugee girls' outcomes. Men's and boys' gender norms and their norms in comparison to women and girls are critically important to understand in order to ultimately shift norms, but such research has only recently begun in MENA (El Feki, Heilman, & Barker, 2017). Notably, as we found for Syrians and Jordanians, in many MENA countries, younger men's views are similar to those of older men, which may be a key constraint to progress on gender equity. Yet there is a substantial fraction of men with gender-equitable views and factors such as education may contribute to increases in egalitarianism (El Feki, Heilman, & Barker, 2017). Schools are an important site to engage for programs working to change gender norms across generations (Dhar, Jain, & Jayachandran, 2018; Levy, Darmstadt, Ashby, et al., 2020). Thus, programs designed to empower girls may need to engage with their families and communities. In socially conservative settings such as Jordan and for Syrian refugees, families and communities may act as gatekeepers.

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Appendix

6 Variables underlying factors

In this section we present details on the questions and variables underlying the different factors. We then present descriptive patterns of responses to the underlying variables by age group, sex, and nationality.

6.1 Variables

6.1.1 Gender role attitudes

Questions were asked of all individuals aged 15+ about their gender role attitudes. The questions were first used in the Egypt Labor Market Panel Survey (ELMPS) 2006 and subsequently in other LMPSSs, including JLMPS 2010. There were ten questions on a Likert scale ((1) strongly disagree, (2) disagree, (3) neutral, (4) agree, (5) strongly agree), specifically:

1. A woman's place is not only in the household, but she should also be allowed to work
2. The husband should help his working wife raise their children
3. The husband should help his working wife with household chores
4. Girls should go to school to prepare for jobs, not just to make them good mothers and housewives
5. A woman who works outside the home cannot be a good mother
6. For a woman's financial autonomy, she must work and have earnings
7. A woman's work interferes with her ability to keep a good relationship with her husband
8. Women should continue to obtain leadership positions in society
9. Boys and girls should get the same amount of schooling
10. Boys and girls should be treated equally

We coded responses when creating the factor so that attitudes were all coded towards higher gender equity, meaning we reverse-coded attitudes five and seven.

Questions were also asked about justification of domestic violence. The questions are similar to the standard justification of domestic violence series in Demographic and Health Surveys. These specific questions were used in the ELMPS 2006 and subsequently in other LMPSSs, including JLMPS 2010. Specifically, women¹² aged 15-59 were asked whether the husband has the right to hit or punish his wife in the following situations:

1. If she burns the food
2. If she neglects her children
3. If she argues with him
4. If she talks to other men
5. If she wastes his money
6. If she refuses to have sex with him

Responses were yes (1) or no (0).

¹² Unfortunately, these questions and gendered behavior questions were not asked of men in JLMPS 2016, but they were asked of men starting in the Egypt Labor Market Panel Survey 2018 (Krafft, Assaad, & Rahman, 2019).

6.1.2 Gendered behaviors

Survey questions asking who makes specific household decisions were adapted from measures of women's empowerment originally developed for Bangladesh (Hashemi & Schuler, 1993). The decision-making and justification of domestic violence items in the JLMPS are similar to questions in the Jordan Population and Family Health Survey (JPFHS), Jordan's version of the Demographic and Health Survey (DHS) (Department of Statistics (Jordan) & ICF, 2019). Women and girls aged 15-59 were asked a series of questions on who has the final say on various decisions, specifically:

1. Purchasing major household items
2. Household purchases for daily needs
3. Visits to family, friends, or relatives
4. Types of daily food
5. Going to the doctor for treatment
6. Buying personal clothes

Response options were different for married and unmarried individuals. We recoded the data to capture any involvement in a decision as a one. This might mean making the decision oneself, in conjunction with parents if unmarried, or in conjunction with a spouse if married. Some researchers assign higher numeric values to independent decision-making than joint decision-making (Asaolu, Alaofè, Gunn, et al., 2018; Ashraf, Karlan, & Yin, 2010; Feldman, Zaslavsky, Ezzati, Peterson, & Mitchell, 2009; Peterman, Schwab, Roy, Hidrobo, & Gilligan, 2021). However, that sole decision-making is preferable to joint decision-making or that it indicates higher levels of women's empowerment is not supported by any empirically tested theory, especially in the linear increments used. In the context of forced displacement, sole decision-making by Syrian refugee women could indicate that a woman's husband is deceased or otherwise absent, which we do not assume reflects empowerment or gender equity. Married women were asked additional questions specifically about decision-making for children, but we did not include those variables in our analyses, since they were not applicable for unmarried women.

Women and girls aged 15-59 were also asked about their mobility to the following destinations:

1. Local market
2. Doctor for treatment
3. Home of relatives, friends, or neighbors

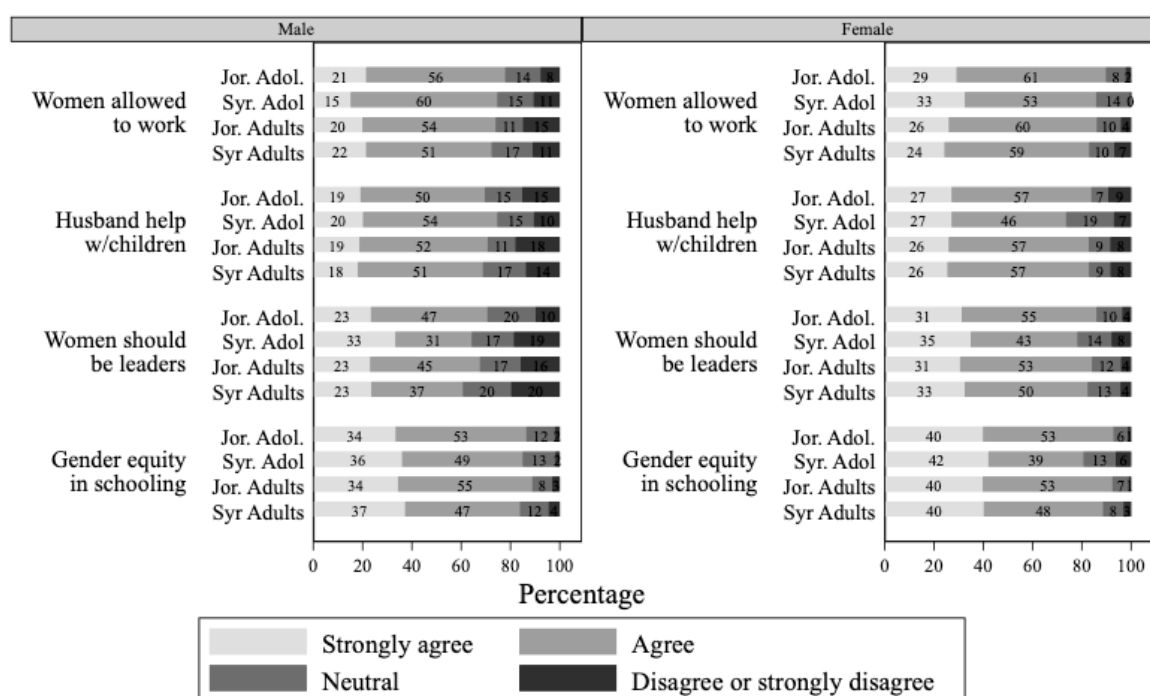
These questions were first used in ELMPS 2006, and subsequently in other LMPSs including JLMPS 2010. An additional question asking about bringing children to the doctor was not included in our analyses, since it was not applicable for unmarried women. Response options were transformed into an ordered variable: (0) cannot go alone (1) can go alone with permission (2) can go alone without permission or after informing others. Originally, without permission or after informing others were separate categories, but they lack a clear order in terms of mobility or empowerment.

6.2 Patterns of gender role attitudes and gendered behavior

6.2.1 Gender role attitudes

We present a few descriptive results in terms of patterns of gender role attitudes. Figure A12 displays the distribution of attitudes about four illustrative statements by sex, age group (adolescent and adult), and nationality. It is important to note that any differences across age groups could be due to age or cohort effects; since our data are from a single point in time these cannot be disentangled. A substantial majority of individuals agreed or strongly agreed with gender equitable attitudes across groups. Attitudes are generally quite consistent across age groups and nationalities. Overall, attitudes at least theoretically support women's work, domestic roles for husbands, women's leadership, and gender equity in education.

Figure A12. Gender role attitudes by sex, age group and nationality (percentage)



Source: Authors' calculations based on JLMPS 2016

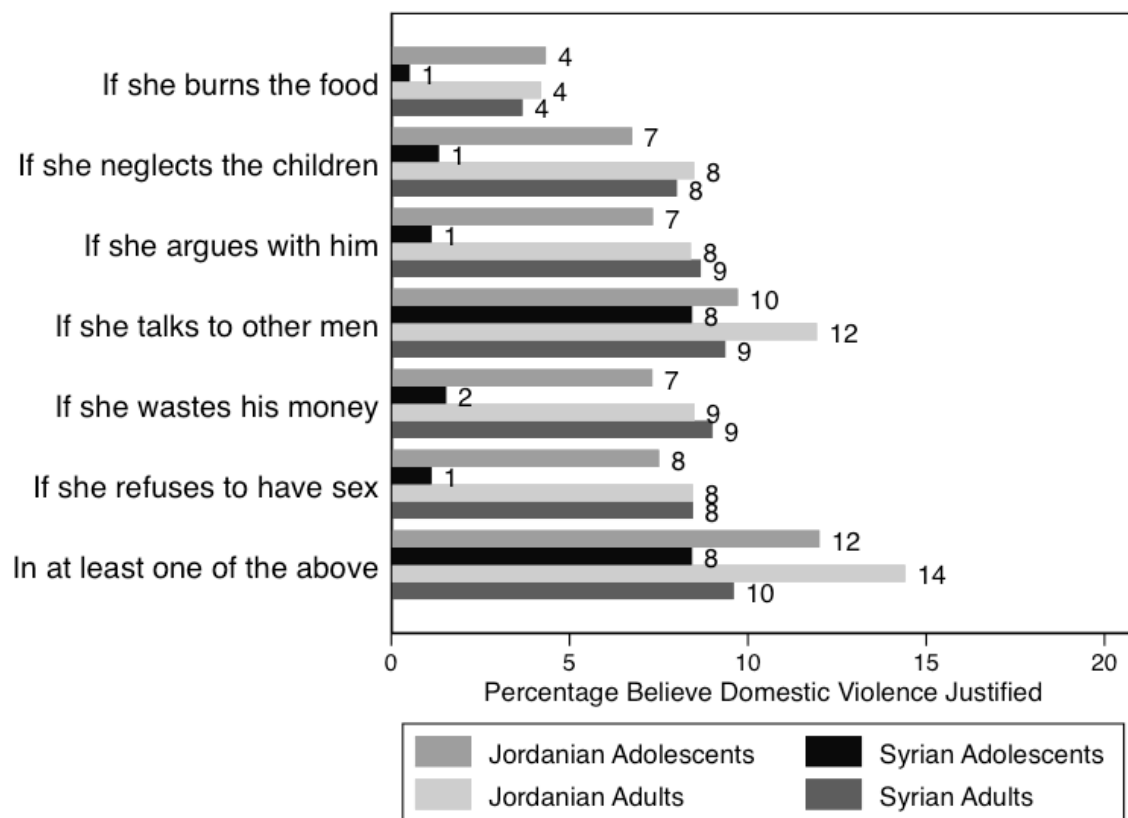
6.2.2 Attitudes about when domestic violence is justified

Figure A13 shows the percentage of women who believe domestic violence is justified in each of a variety of situations, by nationality and age group.¹³ Both Syrian and Jordanian women and girls believe that the least justified situation is if a woman burns food, and that the most justified is if she talks to other men. Syrian adolescent girls notably believe domestic violence is justified across situations only 1%-2% of the time, with the exception of if she talks to other men (8%). Other groups (Syrian adult women and both age groups of Jordanians) have similar

¹³ A number of the items overlap with those asked in the Jordan Population and Family Health Survey, Jordan's version of the Demographic and Health Survey. Results for overlapping items are quite similar (Department of Statistics (Jordan) & ICF, 2019).

attitudes towards domestic violence, finding it justified in additional situations but with low rates overall (10%-14% for any situation).

Figure A13. Percentage of women agreeing domestic violence is justified by situation, age group, and nationality



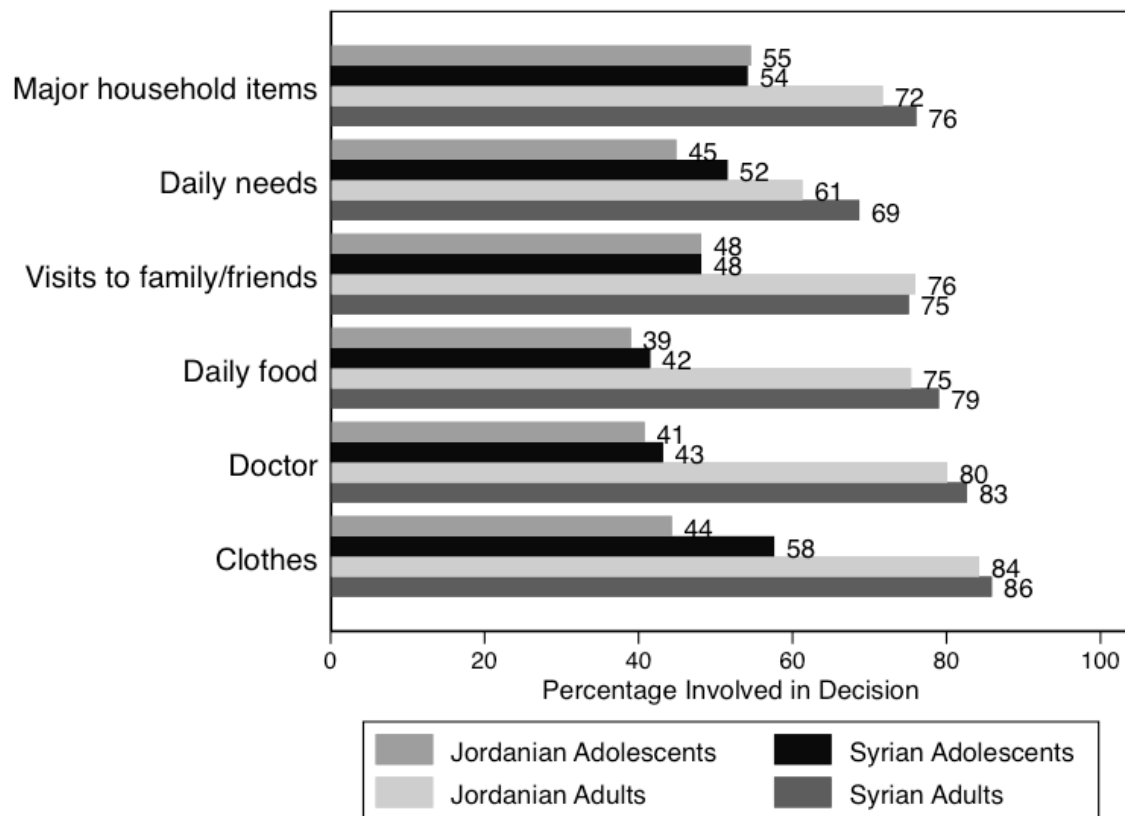
Source: Authors' calculations based on JLMPS 2016

6.2.3 Decision making

Figure A14 shows the percentage of respondents who are involved in six household decisions among women by nationality, and age group (adolescent and adult). Adolescent girls have substantially less decision-making power than adult women. For example, in decisions about major household items, adolescent girls were involved in decision making 54%-55% of the time, compared to 72%-76% of the time for adult women.¹⁴ Syrian adult women often had slightly more decision-making involvement, but this may be driven by a more frequent absence of adult males among Syrian households.

¹⁴ These levels of Syrian adult women's involvement in decisions are similar to those for married women in Syria in the 2009 Pan Arab Family Health Survey, which asked about decision making for items such as work and family planning (PAPFAM, 2011).

Figure A14. Percentage involved in decision making by nationality and age group, women aged 15-59

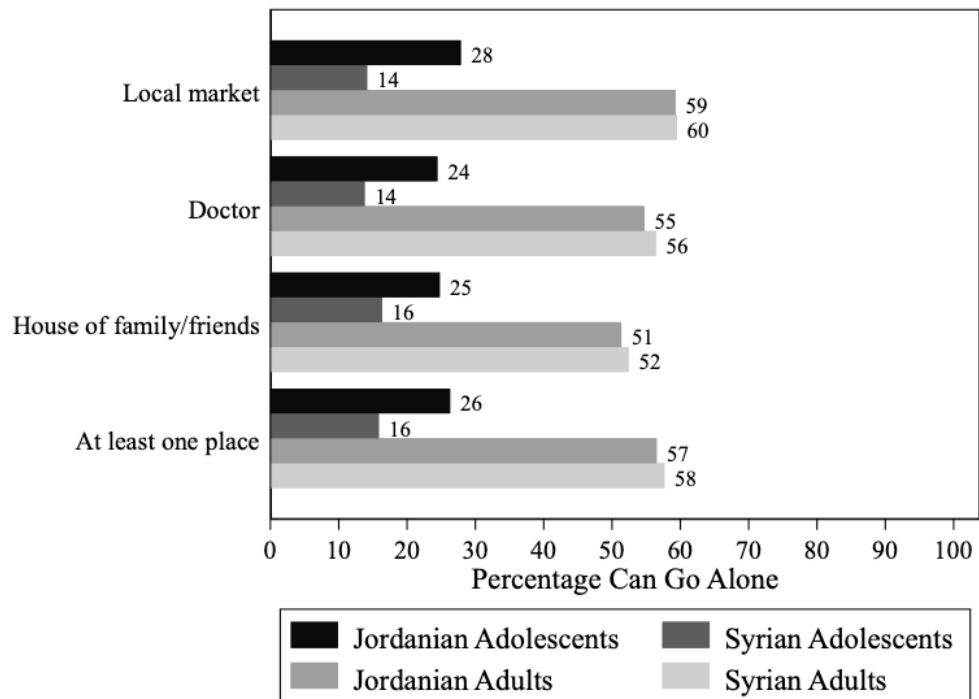


Source: Authors' calculations based on JLMPS 2016

6.2.4 Mobility

Figure A15 shows the percentage of women who can go alone to each of three places, and to any one of the places, by nationality and age group (adolescent and adult). About half of adult women cannot go alone to each place with or without permission. Syrian and Jordanian adult women have nearly identical levels of mobility. Adolescent girls have much less mobility than adult women, particularly among Syrians. Only 16% of Syrian adolescent girls can go to at least one of the places listed alone, compared to 26% of Jordanian adolescent girls. Their low levels of mobility are likely related to the heightened vulnerability to violence they experience.

Figure A15. Mobility (percentage going alone) by nationality and age, women aged 15-59



Source: Authors' calculations based on JLMPS 2016