This policy brief presents an update on the state of food security and the gender gap in food insecurity in the Middle East and North Africa (MENA) region during the COVID-19 pandemic using findings from a large-scale phone survey in 10 MENA countries, conducted by the World Values Survey (WVS) Association. The survey interviewed 12,366 respondents, distributed almost equally across Algeria, Palestine, Iran, Iraq, Jordan, Lebanon, Morocco, Saudi Arabia, Tunisia, and Egypt.

Key Findings
1. In all countries, but one, more than 70% of individuals reported experiences of not being able to afford food.
2. Women are disproportionately affected by food insecurity, with a higher likelihood of sacrificing food within the family.
3. Experiences of female heads do not necessarily reflect the experiences of females in male-headed households.
4. Gender attitudes permeate unequal experiences of food insecurity between men and women.
5. Consequences of food insecurity include lower well-being and a higher incidence of gender-based violence.

Context
Recent crises of the COVID-19 pandemic and current rapid inflation expose fault lines in the sustainability and affordability of food supply. Low- and middle-income countries are especially at risk. The recent MENA Economic Update (April 2023) has highlighted the issue of rising food price inflation, particularly for the poor, and the pathways through which this exacerbates food insecurity and child malnutrition, resulting in long-run effects. MENA has one of the highest prevalence of severely food insecure people in the world, comparable to South Asia (18 percent) and behind Sub-Saharan Africa (22 percent); more than double the prevalence in East Asia & Pacific (7 percent). Child malnutrition is

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2. Food insecurity is usually measured and defined using FAO’s Food Insecurity Experience Scale (FIES). Questions in the World Values Survey hint at food insecurity, but they may not capture the extent of food insecurity consistent with FAO’s definition.
not just an immediate concern but lowers education/learning outcomes, health outcomes, and earnings well into adulthood. These effects may also be intergenerational.4

However, due to a lack of sex-disaggregated data, few studies could speak to the unequal impacts of food insecurity by gender. Sex-disaggregation is almost exclusively limited to the contrast between female- and male-headed households. Previous studies have highlighted the inadequacy of this comparison.5 The composition of female-headed households—which usually lacks a male income earner due to migration, widowhood, or divorce—is uniquely different from male-headed households. Further, scarcity is often experienced differently by different members of the same household, where due to gender norms, women and girls tend to get lower priority in food consumption during economic crises. As highlighted in the MENA Economic Update, mothers play a crucial role given that the long-term effects occur through child malnutrition. Thus, the differential effects by gender are important.

What did we do?

We use a novel survey collected in collaboration with the World Values Survey (WVS) amidst the COVID-19 pandemic in 2021 to analyze the gender differences in experiences of food insecurity by women and men. World Values Surveys are cross-sectional surveys that assess individual attitudes and values, such as cultural values; attitudes and beliefs towards gender, family, and religion; attitudes and experience of poverty; education, health, and security; social tolerance and trust; and attitudes towards multilateral institutions. In addition to the standard WVS modules, this round includes questions related to COVID-19, such as perceptions of COVID-19 effects on the respondent, of their family, and in the community. The survey covers 10 countries in the Middle East and North Africa (MENA) region: Algeria, Palestine, Iran, Iraq, Jordan, Lebanon, Morocco, Saudi Arabia, Tunisia, and Egypt. A total of 12,366 adult respondents (aged 18+) were interviewed via phone between March and June 2021.6 The survey is representative at the national level.7

Importantly, given the individual focus of WVS, this survey offers a rare perspective on the individual experiences of women and men inside the household.

To explore how gender attitudes permeate experiences of food insecurity, we construct an index of “Attitudes toward Gender Equality” from 11 questions in the survey. For more details on the construction of this index, please refer to Chaudhury, El-Shal, and Halim (2023; henceforth, referred to as CEH 2023).

What did we find?

The impact of the COVID-19 pandemic on food security in MENA communities has been devastating, with high-income countries being no exception. More than three quarters (77 percent) of respondents in 10 MENA countries reported an increase in the number of families not affording to buy enough food to eat in their community since the beginning of the COVID-19 pandemic in March 2020. The largest increase was reported in Lebanon (88 percent of respondents), followed by Iraq (87 percent), Tunisia (83 percent), Iran (83 percent), Morocco (82 percent), Jordan (80 percent), Palestine (76 percent), Egypt (74 percent), and Algeria (70 percent). In March 2021, communities continued to struggle as many people had lost their jobs or their ability to earn income, and some had lost their businesses. Even in high-income countries such as Saudi Arabia, a little less than half of the respondents (46 percent) reported an increase in the number of families unable to afford enough food to eat since the beginning of the pandemic. Female respondents tend to report more of an increase in the number of families unable to afford to buy enough food to eat in their community since the beginning of the pandemic, except for Iran. The most significant gender differences in responses are observed in Algeria, Egypt, and Saudi Arabia (Figure 1). This could be associated with the pattern that women tend to be in charge of food purchases, and may be more aware of the community’s inability to purchase as much food since the pandemic.


6 There are slight differences in the interview timeframe. For example, in Lebanon, the survey was concluded in a week (April 2–8), while it took two months to finish the survey in Iran (April 14–June 19). All 10 country surveys started in a similar timeframe, between March 28 and April 17.

7 Stratified random sampling was used to minimize selection bias. However, it is worth noting that the response rate varies across countries, from a low of 8 percent in Iran to a high of 79 percent in Lebanon and Morocco.
The COVID-19 pandemic unevenly impacted women’s food security in MENA: women often eat less, sacrificing for their families. The WVS does not distinguish individual vs. family experiences of food scarcity. The best indicator to capture individual vulnerabilities inside the household is the likelihood of sacrificing individual food consumption for other household members. With the exception of Lebanon and Palestine, larger shares of female respondents (than of male respondents) reported that they ate less sometimes or often in the 10 months preceding the survey to make sure other family members had enough to eat (Figure 2). The most significant gender differences are observed in Egypt and Tunisia. In Egypt, more than half of female respondents (52 percent) reported eating less compared to 42 percent of male respondents. In Tunisia, female respondents are 9 ppts more likely to report eating less than their male counterparts. Regression estimates on all 10 MENA countries suggest that, on average, women are about 2 ppts and 4 ppts more likely to say they have sometimes or often eaten less for the sake of other family members, respectively (CEH 2023).

The COVID-19 pandemic unevenly impacted women’s food security in MENA: women often eat less, sacrificing for their families.
Women experience greater disadvantages inside the household than across male- and female-headed households. Due to social norms, the patriarch of household is more often considered as the head of household than the matriarch. Female-headed households often represent a minority share of households without a patriarch, due to divorce, widowhood, or migration. In our sample, 7 out of 10 households are male-headed. In addition, there are more women in male-headed households (44 percent) than female-headed households (29 percent). Estimates of gender-differentiated impacts on food insecurity that rely on comparison between male and female-headed households are problematic for two reasons. First, it misrepresents the experience of the average female in the population. Further, it could miss out on additional disadvantages, which are often greater in magnitude, that women inside the household face relative to other male household members. Female-headed households are around 2 ppts more likely to sacrifice food consumption than male-headed households (2.6 ppts and 2.2 ppts among male and female respondents, respectively). However, this gap is smaller in comparison to the gap between male and female respondents within the household. In male-headed households, female respondents are 5.8 ppts more likely to sacrifice food, while in female-headed households, female respondents are 5.5 ppts more likely to sacrifice food than male respondents.

Women experience greater disadvantages inside the household than across male- and female-headed households.

Panel A.
Due to gender norms, households are more commonly considered as male-headed than female-headed

Panel B.
Gender gap in the likelihood of sacrificing food consumption is greater within household than between households

Attitudes to gender equality permeate household behaviors toward female food insecurity. In all 10 countries, male respondents tend to share slightly more traditional gender roles (less gender equal) than female respondents. Regression estimates controlling for the gender of the respondent, an index for gender-equitable values, and

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8 The gender-equitable values index takes a simple average of 11 ordinal questions on attitudes and values towards equality between men and women. All 11 questions have a Likert scale (1-4) ranging from “Strongly Disagree” to “Strongly Agree”. We reverse the order on some of the questions to ensure that larger values consistently point to more equal gender values and attitudes. The list of questions includes: (i) safety perceptions of public transport for women and girls, (ii) relative importance of university education for boys vs. girls, (iii) perception of business performance by the gender of executives, (iv) role of men as money earners and women as caregivers, (v) women studying and working in STEM field areas, (vi) rights of men vs. women to jobs when jobs are scarce, (vii) girls/women engaging in income generation activities outside the house, (viii) societal scrutiny faced by married women who work outside of home and returns after 5 PM, (ix) possibility of adult females to work (or start own business) to help their families recover after the Corona pandemic, (x) pre-school children suffer if their mothers work, and (xi) stigma against women putting their children at childcare centers to work.
the interaction between the two confirm the previous finding that women are more likely to sacrifice food than men (Figure 4). Moreover, it indicates that higher levels of gender-equitable values and attitudes are associated with a significantly lower likelihood of food insecurity. Interestingly, higher gender-equitable values and attitudes appear to mitigate the negative effects of being a woman on her or her family's food insecurity. This suggests that gender values are correlated with the allocation of resources, including food, and therefore, women's disadvantages (relative to men) inside the household.

Food insecurity is linked to increased risks of domestic violence against women. In all countries, except Algeria, respondents reporting food insecurity are more likely to report heightened risks of domestic violence against women in their community since the beginning of COVID-19 (Figure 5). The relationship between domestic violence and food insecurity might run in both directions. On one hand, economic hardships and food scarcity could heighten stress levels within the household, which increases the likelihood of verbal and physical arguments. On the other hand, sacrificing women's food consumption could be a manifestation of domestic violence. While this analysis is not able to establish a causal relationship in either direction, the pattern suggests a close correlation between the two factors, which may underscore the long-term impacts of a food crisis, especially among women.

9 A similar pattern is observed among migrant communities in Indonesia at the onset of the COVID-19 pandemic. Food insecurity is one of the strongest predictors of exposure to gender-based violence (Halim, Can, and Perova 2020).
Government response and state aids were inadequate in protecting households from food insecurity during the COVID-19 crisis. On average, only 13 percent of respondents reported receiving additional income from state aid, which pales in comparison to the 70 percent of respondents who reported increased risks of food insecurity. Regression estimates reveal that perceptions of adequate government response in curbing the spread of the COVID-19 pandemic are not associated with lower food insecurity nor have it mitigated household income decline. In addition, while male respondents and female-headed households relying on state aid are more likely to be food insecure, state aid has not managed to mitigate the negative effect of household income decline on food security. Only in two countries did state aid have a significant mitigating effect: Saudi Arabia and Tunisia. Interestingly, in both countries, state aid was associated with a reduced negative effect of household income decline on the food security state of female-headed households in particular. Saudi Arabia provided the strongest income support for households, replacing 50 percent or more of lost salary. As for Tunisia, the World Bank estimates are consistent with previous findings that those who received emergency government support in Tunisia were 15 ppts less likely to be unable to buy their typical amount of food due to price increases than those who did not receive support, and that no similar associations were detected in Egypt, Jordan, nor Morocco. The effectiveness of state aid in Tunisia may be justified by its early and strong economic support in general—providing a comprehensive package of more than just income support. One hypothesis to be examined in further work is that the design and targeting of state aid in Tunisia may have been more efficient than the rest of the MENA countries.

Women are more reliant on state aid and relatives as a coping strategy than men, with the latter significantly reducing risks to food security during COVID-19. On average, female respondents are more likely to rely on state aid and relatives as compared to males who were more likely to rely on their own business, bank loans, and savings. Around 18 percent of female respondents reported help from relatives, a key informal social safety net, as the income source their family used to live during COVID-19 days in 2021 compared to 14 percent of male respondents. Taking money out of savings is another coping strategy in a time of shock. Around 31 percent of male respondents reported savings as the income source their family used to live during COVID-19 compared to 30 percent of female respondents. This pattern may be due to the fact that women in MENA lack access to credits and savings compared to men. Regression estimates on all 10 MENA countries suggest that help from relatives significantly mitigated the effect of income decline since COVID-19 on food security for both men and women (and for male-headed households). Savings reduced risks to food security for women but not for men (and male-headed households) (CEH 2023).

Government response and state aids were inadequate in protecting households from food insecurity during the COVID-19 crisis.

10 The regression estimates food insecurity on household experiencing income decline, respondent perception of the adequacy of the government’s response in curbing the spread of COVID-19, and the interaction between the two, in addition to household and individual characteristics.

11 However, it is possible that households pool resources such that while male and female household members seek assistance from different sources, they both benefit from the assistance (equally or unequally).
Insights for policy

Persistent food insecurity in MENA post COVID-19 and the global ramifications of the ongoing war in Ukraine will have serious gendered implications on domestic violence, wellbeing, and aspirations. Using machine learning projections, the prevalence of food insecurity in MENA is estimated to be 17.6 percent, predicting that almost one in five people in MENA are likely to be food insecure in 2023. Given that in most MENA countries, women experience higher levels of food insecurity, food price inflation will further exacerbate gender disparities. Negative shocks can not only have immediate effects on domestic violence against women, wellbeing, and aspirations, but also multi-generational effects on development outcomes in education, health, and income—among other areas.

Policymakers should calibrate and prioritize responses such as expanding cash and in-kind transfer programs where beneficiaries are predominantly women and agriculture programs where there is potential to boost food production/ availability and increase female economic empowerment. Our results suggest a few implications for policy:

1. Rapid welfare monitoring, such as through phone surveys, should be adapted to ensure individual representation of men and women in the population. Many women reside in male-headed households, and their vulnerabilities are not captured by surveys that could only contrast male and female-headed households.

2. The expansion of adaptive social protection programs should pay attention to the needs of women in male-headed households. These women are often not well-targeted by social protection programs because of the preconceived notions that female-headed households are the “only” vulnerable group.

3. Expanding access to credits and savings to women can help build their resilience to negative economic shocks. In the absence of state aid or financial services to smooth consumption, women may resort to negative coping mechanisms such as reducing their food consumption for other household members.

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