COVID-19 Knowledge, Attitudes and Practices (KAP) Survey
May (Round 2) and June (Round 3) 2020
Northwest Syria Analysis

CONTEXT

As of 21 August 2020, 4,845 samples have been tested and 59 people have tested positive for COVID-19 in Northwest Syria (NWS). Reports indicate that there could be one death as a result of COVID-19 as of August 20th, but this remains to be verified.[1] Contact tracing is continuing for all positive cases and health partners are focusing on additional preventative measures. COVID-19 cases in NWS may rise in the coming weeks, given an incubation period of up to 14 days for the disease after exposure. Precautions against a potential spread of the virus have been scaled up in response to identified cases, including restrictions on movements, gatherings, commercial activities, and in-person education services.[1]

The Humanitarian Needs Assessment Programme's (HNAP) 26 August 2020 COVID-19 Rapid Assessment showed that all total curfews, partial curfews, and community lockdowns had ended in almost all areas controlled by non-state and Turkish-backed armed forces (NSAG & TBAF). According to the report, public spaces remain open and accessible in most communities (86%), while awareness campaigns were in place in a majority of communities in only 16 of 44 assessed sub-districts. Temperature checks were in place in 26 sub-districts and distribution of soap/disinfectant/masks were available in 27 sub-districts. 82% of assessed communities lack testing provision for COVID-19, and 68% lack space in health facilities to monitor suspected cases of the virus.[2]

In April 2020, REACH began a series of monthly knowledge, attitudes, and practices (KAP) surveys with the goal of informing the communications response to the threat of COVID-19 in northwest Syria. REACH observed high levels of COVID-19 knowledge among survey respondents in the first round of data collection, which was conducted in late April as communication efforts and curfews were well under way.

Greater wariness of COVID-19 was seen among attitudes and practices responses, especially among female respondents. In the second and third rounds of data collection, which were conducted in late May and late June respectively, knowledge remained high while attitudes and practices had shifted to less cautious in relation to COVID-19 among both female and male respondents.[3]

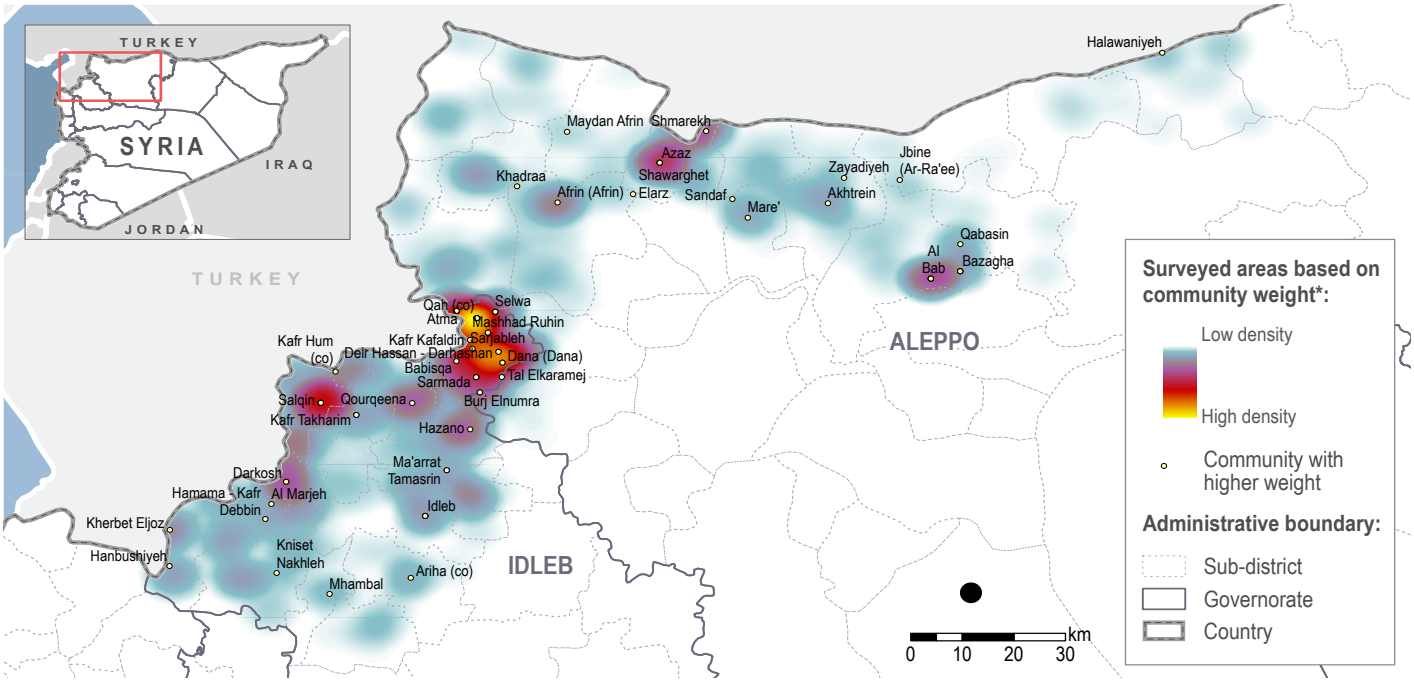
Descriptive statistics for all three survey rounds are available here, and include each specific KAP indicator, disaggregated by governorate, sex, and rural/urban population. The present factsheet is the second in-depth analysis of changes in knowledge, attitudes, and practices over time and among cohorts of respondents in northwest Syria, comparing data collection rounds 2 and 3.

METHODOLOGY

REACH conducted a second KAP survey in northwest Syria from 17-22 May 2020. A total of 819 individual interviews were collected using non-probability sampling (Aleppo: 335 interviews; Idleb: 484 interviews) in the second round. An in-depth explanation of the methodology of this survey can be found here.

The third round of data collection was conducted from 21-23 June 2020 with the same individuals surveyed in the second round of data collection. Of the 819 second round respondents, the sample reduced to 790 respondents in the third round due to loss to follow up and data quality issues related to uncertainty that the same respondents were interviewed for each round (Aleppo: 330 interviews; Idleb: 460 interviews). As in the second round of data collection, the sample was calibrated against an existing household survey to increase its representativeness. More information about the particulars of this calibration can be found in Appendix B at the end of this factsheet.

HEAT MAP OF WEIGHTED SURVEY AREAS



* This heat map displays the relative density of surveys, using a color scheme ranging from cool (low density) to hot (high density). For this heat map, a weight generated from a generalized regression estimator was applied, and densities represent the weighted survey population. Applying a weight means that survey responses were adjusted to match the proportions of a pre-existing, representative dataset so that the survey more accurately represents the population of interest.

METHODOLOGY (cont.)

Results are framed through a Risk Communication and Community Engagement (RCCE) action plan which was developed by the United Nations Children's Fund (UNICEF) for the northwest Syria COVID-19 response. The action plan includes source, message, channels, and target audience to guide messaging campaigns in northwest Syria. This action plan was examined to see where KAP survey data could inform messaging efforts, and as such messages are presented with corresponding analysis results.

LIMITATIONS

Due to the methodology used, findings are not statistically representative and should only be considered as indicative of the situation in assessed areas. The rapidly evolving context in the assessed areas, especially with regards to the COVID-19 situation, also means that findings are only indicative of the situation at the time the data was collected (17-22 May for round 2; 21-23 June for round 3).

RESULTS BY RCCE ACTION PLAN MESSAGE[4]

Message: Wash your hands frequently.

• Recommendation: Target men with messaging about the importance of washing hands. Explore reasons why men's hand washing practice is decreasing, and ensure there is access to appropriate hand washing facilities.

• The proportion of overall respondents who mentioned hand washing as a measure to limit the spread of COVID-19 increased by 3 percentage points between rounds 2 and 3 (from 70% to 73%).

• The proportion of respondents who reported hand washing more than normal decreased by 12 percentage points in northwest Syria between rounds 2 and 3 (from 66% to 54%). However, the proportion of respoodents who reported handwashing as a preventive measure increased between rounds; for women it increased from 73% to 77%, while for men it increased at a lower rate from 68% to 70%.

Message: Maintain social distancing.

• Recommendation: Focus messaging on preventive measures to reduce transmission in public spaces, and should target men (e.g. wear a mask when you leave, maintain distance with other people even when out, and avoid large social gatherings).

• Significant decreases in social distancing practices were observed more frequently among men than women. While women were observing social distancing practices more strictly than men from the beginning of the pandemic.

• Social distancing practices reported remain low, and continued to decrease between rounds 2 and 3.

- The proportion of respondents who said they had greeted someone physically in the last week increased from 85% to 92%;
- The proportion of respondents who said they had left the house increased from 89% to 93%; and,
- The proportion of respondents who said they tried to keep two meters from others when outside decreased from 15% to 12%.

• Men changed their social distancing practices the most. For example, the proportion of men reporting attendance at a large social gathering the week prior to data collection increased from 43% to 80%; the proportion of women reporting attendance at a large locial gathering increased at a lower rate from 16% to 31% in the same period.

• There was a significant difference in the proportion of respondents from urban and rural settings reporting that they attended a social gathering. There was a 33 percentage point increase between rounds 2 and 3 in urban settings, while in rural settings, there was an 18 percentage point increase over rounds.

Message: If you have fever, cough, and difficulty breathing, share information with your health provider and seek medical assistance.

• Recommendation: Increase messaging around the possibility of asymptomatic viral infections.

• The proportion of respondents with knowledge of whether COVID-19 symptoms will always manifest remained split between rounds 2 and 3. In round 3, 55% of respondents said all people with COVID-19 show some symptoms (compared with 51% in round 2).

• Knowledge of COVID-19 symptoms remained high between rounds. Roughly 88% of respondents identified both cough and fever as symptoms in both rounds 2 and 3. The proportion of respondents knowing about less common symptoms like aches and pains also increased between rounds.

• Recommendation: Maintain messaging efforts on identifying potential symptoms, and expand awareness of the necessity of contacting a medical professional if symptoms should manifest.

• All survey cohorts reported decreases in whether they would go to the hospital (except Aleppo), and similar decreases in the proportion of respondents who said they would go to the clinic, if they or someone in their family contracted COVID-19. The only exception was among women who said they would go to a clinic.

• Respondents in Idleb were less likely than respondents in Aleppo to say they would call a doctor if they or someone in their family contracted COVID-19.

Message: Continue breast feeding normally.

• Recommendation: Target messaging about breasmilk amongst urban women.

• Few respondents (round 2: 18%; round 3: 16%) think that COVID-19 can be transmitted through breastmilk.

• The proportion of respondents who thought that COVID-19 can be transmitted through breastmilk decreased overall between rounds by 2 percentage points. However, urban respondents named breastmilk as means of virus transmission at a higher proportion across rounds than other cohorts (from 5% to 9%).

Message: People can contract COVID-19 by touching contaminated surfaces or objects.

• Recommendation: Continue messaging on different sources of COVID-19 transmission, with an emphasis on transmission through contaminated surfaces.

• Knowledge that COVID-19 can be transmitted from contact with an

infected object does not substantially differ among populations, and knowledge about this is increasing.

• Still, only 62% of respondents report this knowledge, so messaging should continue.

• 42% of respondents reported disinfecting or cleaning surfaces as a method of COVID-19 prevention, an increase from round 2 by 6 percentage points.

Message: Stigma can be heightened by insufficient knowledge about how COVID-19 is transmitted and treated, and how to prevent infection.

• Recommendation: Highlight messaging on how the virus can also spread through contact with infected surfaces, and not just through contact with infected persons. Emphasize mask wearing and hand washing as preventive measures

• Based on the survey, the group most likely to face discrimination related to COVID-19 is COVID-positive persons, indicating insufficient knowledge of COVID-19 trasmission.

• Many respondents reported that COVID-19 can be transmitted through the air (round 3: 87%), and this did not change substantially between rounds. However, all cohorts demonstrated few social distancing protocols.

• Wearing a face mask as a prevention method was mentioned by 73% of the respondents in round 3 (2 percentage points more than in round 2); wearing gloves was mentioned by 55% (5 percentage points more than in round 2); and washing hands was mentioned by 73% (3 percentagbe points more than in round 2).

Message: Addressing myths can lead to the takeup of proven preventative measures

• Recommendation: Rural populations should be targeted with messaging about the most common myths, such as drinking boiled herbs and exposing oneself to the sun.

• The most popular myth people had heard for transmission prevention was drinking boiled herbs such as anise (reported by 54% of respondents), followed by exposing oneself to sun or high temperatures (reported by 39% of respondents). Rural respondents were also more likely to have heard that exposing oneself to sun or high temperatures prevents the spread of COVID-19.

ADDITIONAL INFORMATION

Maintain use of social media; build trust between health workers and communities

• Recommendation: As resources permit, increase contact of populations with health workers to help increase trust around COVID-19 messaging.

• Social media is widely used as a source of information, but is generally less trusted than health workers.

• Social media is the most frequently mentioned source of information (90%), followed by family/friends (71%) and health workers at health facilities (43%).[4] The proportion of respondents mentioning television as a source of information significantly decreased between rounds: from 24% to 1%, and radio increased from 26% to 36%.

Men are less likely to follow preventative behavior

• Recommendation: Target men with messaging on preventive behavior via social media.

• There is a reported increase in the use of social media among men, and a decrease in men's preventative behaviors as described earlier.

• The proportion of men reporting social media as a source of information increased (90% in round 2 and 93% in round 3), and also increased by 2 percentage points as a trusted source of information.

• The proportion of men reporting to have attended a large social gathering the week prior to data collection increased by 37 perentage points, while the proportion of men who said they were not worried about COVID-19 increased from 23% to 43%.

Respondents are less worried about COVID-19.

• Recommendation: Provide intensive messaging on the severity of COVID-19

• Most people did not perceive a change in the likelihood of contracting COVID-19 between data collection rounds, but they were less worried than they were when surveyed in round 2.

• Each round of the survey finds respondents are less worried about contracting COVID-19 than in previous rounds. The proportion who said they were somewhat worried (personally) decreased from 31% to 19%, and the proportion who said they were not worried at all increased from 20% to 29% (personally), and from 18% to 25% for their family.

• Over half of respondents in both rounds (round 2: 51%; round 3: 55%) thought that all carriers of COVID-19 show symptoms.

FACTORS INFLUENCING SOCIAL DISTANCING - VIGNETTE EXPERIMENT

Scenarios measure perceptions of respondents in response to different hypothetical situations. As such, they should be interpreted as perceptions only, and not as certain outcomes. The following messages are based on the results of the vignette scenarios, which are hypothetical situations introduced in the methodology section above and further described in Appendix B below.

Key findings for risk and behavior change communication:

• Encouraging everyone to wear their masks increases the likelihood that more people will abide by mask-wearing regulations. When people see their neighbours wearing masks, they are more likely to wear a mask themselves. Mandating mask wearing through a fine and at business premises also encourages people to wear mask.

• People are less likely to leave the house if they think they are getting a cold or falling sick.

• Young people were the most likely to wear masks and leave their house, regardless of the proposed scenario. Overall, age was a more important determinant of movement than gender.

Scenario 1

Scenario 1 asked respondents about the likelihood that individuals would wear a mask based on different contexts in the next week, varying age (24 years old vs. 58 years old) and gender (male / female). The contexts were: required by authorities under a fine, worn by the majority of neighbours, and required by business owners upon entering their premises. A sample scenario went as follows: "Imagine that a woman is 24 years old and owns a mask, how likely is she to wear it next time she leaves the house if it was required by authorities under a fine? Within the space of a week, how likely is she to leave her house to visit family or friends?"

Results

The model suggests that young people are one percentage point more likely than older people to wear a mask across all contexts. When looking at gender, women were more likely by three percentage points than men to wear a mask across contexts.

Compared to a scenario in which masks were worn by the majority of neighbours, a person was 18 percentage points more likely to wear a mask if required by authorities under a fine. People were 15 percentage points more likely to wear a mask if required by business owners than if worn by neighbours and three percentage points more likely to wear a mask if required by authorities than if it was required by businesses on their premises.

Average marginal effects (AME) indicated that people were 18 percentage points more likely to wear a mask if worn by neighbours (p value: 0.00; 95% CI: -0.24, -0.12). The effect of other contexts (required to wear a mask under a fine and required by business owners on their premises) was not substantially different when comparing one context to the other.

Therefore, results from the experiment show that a context in which neighbours are wearing a mask is more likely than other contexts in influencing the behavior of people considering whether or not to wear a mask.

Scenario 2

Scenario 2 looked at the likelihood that individuals would leave their house in the next week based on the status of their health (healthy, or feel like they are getting a cold), age (22 years old / 47 years old), and gender (male / female). A sample scenario went as follows: "Imagine that A man is 47. He feels like he might be getting a cold. During the week, how likely is he to leave the house to visit family or friends?"

Results

The model suggests that younger people are two percentage points more likely than older people to leave the house in the next week, regardless of the status of their health.

The feeling of catching a cold deterred people from leaving their house by 40 percentage points more than if they were healthy. Average marginal effects indicated that the likelihood that someone would leave their house if they had a cold was 41 percentage points less than if they were healthy (p value: 0.00; CI: -0.46, -0.35).

More information on modeling methodology is available in Appendix B; summary probability and average marginal effect tables for both vignettes can be found in Appendix A.

Endnotes

The complete northwest Syria KAP dataset is available here.

1. OCHA. Syrian Arab Republic: Recent Development in Northwest Syria Situation Report No.19. 21 August 2020 https://reliefweb.int/sites/reliefweb.int/files/resources/nw_syria_sitrep19_21aug2020.pdf
2. Humanitarian Needs Assessment Programme. COVID-19 Rapid Assessment: Non-State & Turkish-Backed Armed Forces Controlled Areas. 26 August 2020.
3. REACH, COVID-19 Knowledge, Attitudes and Practices (KAP) Survey Northwest Syria Descriptive Statistics - Rounds 2 and 3 Factsheet, https://www.reachresourcecentre.info/country/syria/cycle/28886/%23cycle-28886/
4. Respondents could select multiple answers so total may be greater than 100%.

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Appendix A - Results Tables

Vignette 1

Table 1: Model Predicted Probabilities - Vignette 1

Gender	Age	Context	Probability
Male	Younger	Required by authorities under a fine	.9092927
Female	Younger	Required by authorities under a fine	.927677
Male	Younger	Worn by the majority of neighbours	.7073552
Female	Younger	Worn by the majority of neighbours	.7556699
Male	Younger	Required by business owners upon entering their premises	.904808
Female	Younger	Required by business owners upon entering their premises	.9240252
Male	Older	Required by authorities under a fine	.9049213
Female	Older	Required by authorities under a fine	.9241176
Male	Older	Worn by the majority of neighbours	.7180917
Female	Older	Worn by the majority of neighbours	.7652221
Male	Older	Required by business owners upon entering their premises	.856644
Female	Older	Required by business owners upon entering their premises	.8843416

Table 2: Average Marginal Effects - Vignette 1

Factor	AME	SE	z	p	Lower	Upper
Age -older vs. younger	-.0120395	.0252743	-0.48	0.634	-.0615761	.037497
Context -Worn by neighbours	-.1800818	.0317321	-5.68	0.000	-.2422756	-.11788
Context -Required by businesses	-.0240252	.0262504	-0.92	0.360	-.0754751	.027424
Gender - female vs. male	.0304083	.0251306	1.21	0.226	-.0188468	.079663

Table 3: Average Predicted Probabilities - Vignette 1

Factor	Probability
Gender	
Male	.8305863
Female	.8609946
Age	
Younger	.850906
Older	.8388665
Context	
Required by authorities under a fine	.9164108
Worn by the majority of neighbours	.7363291
Required by business owners upon entering their premises	.8923857

Vignette 2

Table 1: Model Predicted Probabilities - Vignette 2

Gender	Age	Condition	Probability
Male	Younger	Good health	.9482387
Male	Older	Good health	.9470579
Male	Younger	Cold	.5841148
Male	Older	Cold	.5428215
Female	Younger	Good health	.9365167
Female	Older	Good health	.9350868
Female	Younger	Cold	.5307399
Female	Older	Cold	.4887853

Table 2: Average Marginal Effects - Vignette 2

Factor	AME	SE	z	p	Lower	Upper
Age - older vs. younger	-.020517	.0274122	-0.75	0.454	-.074244	.033210
Condition- good health vs. cold	-.405584	.0282641	-14.35	0.000	-.4609806	-.350187
Gender - female vs. male	-.0317857	.0273599	-1.16	0.245	-.0854101	.021838

Table 3: Predicted Probabilities - Vignette 2

Factor	Probability
Gender	
Male	.7651164
Female	.7333306
Age	
Younger	.7588013
Older	.7382843
Condition	
Perfect Health	.9416476
Cold	.5360636

Appendix B - Methodology

Calibration Methodology

Respondents for the survey were recruited through a non probability sample. The survey was then calibrated using a generalized regression estimator. Calibration increases the weight of some respondents and decreases the weight of other respondents in reference to a pre-existing, representative dataset so that the survey more accurately represents the population of interest.

The survey was calibrated on four variables: gender, age, governorate, and community size. Several other variables, namely shelter status and number of household members working, were considered but the survey proportions for these variables were judged acceptable.

Three categories for age were utilized: 18 – 34, 35 – 59, and 60 and older. Communities were categorized as large (> 20,000 inhabitants), medium (20,000 – 2,000 inhabitants), and small (<2,000 inhabitants). Estimates for gender and age were taken from an unpublished representative survey for NWS. Population estimates were taken from HNAP's February Mobility and Needs Monitoring, which is availble upon request from HNAP.

After calibration, the survey proportions for the calibration variables (gender, age, governorate, and community size) exactly matched the estimated population proportions. Proportions were also compared to several benchmark variables: proportions for marital status and displacement status (internally displaced person (IDP) vs. host community) were within three percentage points of population estimates and proportions for chronic illness were within five percentage points. The code for the calibration is available upon request.[1]

1. For background information on using generalized regression estimators to calibrate survey data see Thomas Lumley, Complex Surveys: A Guide to Analysis Using R, p. 135 – 65. For an overview of approaches to weighing nonprobability samples see Carina Cornesse et.al., "A Review of Conceptual Approaches and Empirical Evidence on Probability and Nonprobability Sample Survey Research," Journal of Survey Statistics and Methodology, February 2020, p. 4–36. For a less technical introduction see Andrew Mercer, Arnold Lau, and Courtney Kennedy, "For Weighing Online Opt-in Samples, What Matters Most?" Pew Research Center, January 2018.

Analysis Methodology

Similar to the survey in round 2, an experimental section of vignettes was also included. Vignettes are very short, hypothetical scenarios which were presented to respondents to gauge their responses to various COVID-19 situations. Each respondent was randomly assigned to answer one scenario for two different types of vignettes.

For comparability, only respondents with complete surveys available for both rounds 2 and 3 were included in the analysis (total: 790). Analysis was conducted using proportion tests of significance between weighted samples for each round. Regressions were also run looking at significant predictors for outcomes. These statistical tests were considered exploratory and contextual; while the results informed the factsheet, they are not presented numerically. Because the vignettes section of the survey was a randomized experiment, these results are presented as a series of regressions and average marginal effects.

Factorial survey experiments (vignette experiments) are a well-established method of inferring causal relationships between factors (expressed as variations in vignettes) and respondents perceptions or judgments. In a context where respondents' answers are likely to be influenced by social desirability bias (i.e. respondents might be tempted to over-report their likelihood of practicing social distancing), factorial experiments minimize bias by inquiring about the action of a hypothetical individual instead of the action of the respondent.[2]

The results of the factorial survey experiments were estimated with logistic regression models. The independent variables for vignette 1 were gender of the character in the vignette (female vs. male), source of information telling people not to leave their houses (official on television vs. Whatsapp message from NGO vs. in-person visit from NGO worker), and age of the character in the vignette (older, i.e. 50+ years old in the vignette vs. younger, i.e. younger than 30 years old in the vignette). The independent variables for vignette 2 were gender of the character in the vignette (female vs. male), type of curfew in the vignette (no curfew vs. flexible curfew vs. strict curfew), and age of the character in the vignette (older, i.e. 55 years old in the vignette vs. younger, i.e. 25 yrs old in the vignette). The dependent variable in both vignettes was the respondent's response as to how likely the character was to leave the house to visit family/friends within the space of a week. Responses were binned into very likely/likely vs. neutral/unlikely/very unlikely. Logistic regressions represent the log odds that the respondent selected very likely/likely as their response compared to the log odds that the respondent selected neutral, unlikely, or very unlikely as their response, controlling for each independent variable.

The average marginal effects (AME) were then estimated for all independent variables. For a binary, independent variable such as gender, the AME approximates the difference between the average predicted probability for all combinations of independent variables that include female (e.g. predicted probability for 25 yr. old female in a scenario where there is no curfew, predicted probability for 55 yr. old female in a scenario where there is a flexible curfew, etc.) and the average predicted probability for all combinations of independent variables that include male.

Logistic regressions fitted for data collected by two separate data collection teams working on NES and one data collection team in NWS to ensure that results were comparable. Receiver operating characteristic (ROC) curves were examined for all logistic regressions and area under the curve (AUC) was calculated. Goodness-of-fit testing was also conducted, and logistic regressions with interactions for all independent variables were examined, but the inclusion of interactions had no significant effect on AME.

2. Ulf Liebe et. al provide an overview of the use of factorial experiments in development contexts in "Using Factorial Survey Experiments to Measure Attitudes, Social Norms, and Fairness Concerns in Developing Countries," Sociological Methods & Research, October 2017. For an example from the Syrian context, see The World Bank's "The Mobility of Displaced Syrians: An Economic and Social Analysis" pages 221 – 225.