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## ONLINE APPENDIX

# Discrimination, narratives and family history: An experiment with Jordanian host and Syrian refugee children 

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## Additional Tables and Figures

Table A.1: Comparing children's characteristics in the $\mathbf{1 3}$ double-shift schools in which we ran our experiment to the children's characteristics in the set of all $\mathbf{5 0}$ double-shift schools in which Integrated International is working for UNICEF

|  | Whole UNICEF <br> Sample | Sampled Children <br> (this Study) | Difference | (p-value) |
| :--- | :---: | :---: | :---: | :---: |
| Time going to that school <br> (yrs) | 2.45 | 2.39 | 0.06 | 0.14 |
| Number of out-group friends | 1.01 | 1.01 | 0.00 | 1.00 |
| Out-group friends at school | 0.22 | 0.26 | -0.03 | 0.14 |
| $(=1)$ |  |  |  |  |
| Child is a boy (=1) | 0.41 | 0.46 | -0.05 | 0.04 |
| Household Size | 5.77 | 5.96 | -0.19 | 0.07 |
| Smartphone ownership $(=1)$ | 0.89 | 0.89 | 0.00 | 0.90 |
| Number of observations | 2286 | 456 |  |  |

Table A.2: Comparing teachers' responses to the program implemented by Integrated
International - separately for our 13 double-shift schools and the whole set of all 50 double-shift schools in which Integrated International is working for UNICEF

|  | All Teachers <br> (UNICEF Sample) | Teachers at <br> Sampled Schools <br> (this Study) | Difference | (p-value) |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Number of conducted <br> MEMTA sessions | 9.75 | 9.13 | 0.62 | 0.48 |
| Effectiveness of the sessions <br> in addressing social cohesion <br> (scale from -2 (very <br> ineffective) to 2 (very <br> effective)) | 1.59 | 1.54 | 0.04 | 0.68 |
| Mood: Positive changes <br> observed (=1) | 0.96 | 0.91 | 0.05 | 0.15 |
| Behavior: Positive changes <br> observed (=1) | 0.95 | 0.96 | -0.01 | 0.81 |
| Participation in classroom: <br> Positive changes observed <br> (=1) | 0.99 | 0.98 | 0.01 | 0.78 |
| Confidence: Positive <br> changes observed (=1) | 0.97 | 0.98 | 0.01 | 0.54 |
| Cooperation: Positive <br> changes observed (=1) <br> Motivation to read: Positive <br> changes observed (=1) | 0.97 | 0.98 | -0.01 | 0.73 |
| Number of observations | 191 | 46 | -0.00 | 0.86 |

Notes: This table shows that teachers in our sample of double-shift schools were statistically indistinguishable from the whole universe of teachers in their responses to questions about the program implemented by Integrated International.

Table A.3: Summary statistics for children and their parents, covering demographic information, socio-economic characteristics, and information about contact with the out-group

|  | [1] Fu | mple | Summary Statistics <br> [2] Jordanian Children/Parents |  | [3] Syrian Children/Parents |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \hline \text { Mean } \\ \text { (SD) } \\ \hline \end{gathered}$ | Obs. | $\begin{gathered} \text { Mean } \\ \text { (SD) } \\ \hline \end{gathered}$ | Obs. | $\begin{gathered} \text { Mean } \\ \text { (SD) } \\ \hline \end{gathered}$ | Obs. |
| Demographic Information |  |  |  |  |  |  |
| Child is a boy $(=1)$ | $\begin{gathered} 0.46 \\ (0.50) \end{gathered}$ | 456 | $\begin{gathered} 0.43 \\ (0.50) \end{gathered}$ | 224 | $\begin{gathered} 0.48 \\ (0.50) \end{gathered}$ | 232 |
| Surveyed parent is male ( $=1$ ) | 0.49 | 395 | 0.45 | 187 | 0.51 | 208 |
|  | (0.50) |  | (0.50) |  | (0.50) |  |
| Number of children in the household | 4.62 | 395 | 4.47 | 187 | 4.75 | 208 |
|  | (1.63) |  | (1.70) |  | (1.56) |  |
| Socio-Economic Characteristics |  |  |  |  |  |  |
| Avg. income in governorate ${ }^{\text {a }}$ | 0.67 | 395 | 0.67 | 187 | 0.67 | 208 |
|  | (0.01) |  | (0.01) |  | (0.01) |  |
| Parental Education |  |  |  |  |  |  |
| - Bachelor | 0.17 | 395 | 0.30 | 187 | 0.06 | 208 |
|  | (0.38) |  | (0.46) |  | (0.24) |  |
| - High school, vocational training or higher education | $0.29$ | 395 | $0.39$ | 187 | $\begin{gathered} 0.21 \\ (0.41) \end{gathered}$ | 208 |
|  | (0.45) |  | (0.49) |  | (0.41) |  |
| - Illiterate | 0.04 | 395 | 0.00 | 187 | 0.07 | 208 |
|  | (0.19) |  | (0.00) |  | (0.26) |  |
| - Literate but incomplete high school | 0.50 | 395 | 0.32 | 187 | 0.66 | 208 |
|  | (0.50) |  | (0.47) |  | (0.48) |  |
| Smartphone ownership (=1) | 0.90 | 395 | 0.90 | 187 | 0.89 | 208 |
|  | (0.30) |  | (0.30) |  | (0.31) |  |
| Have books at home (=1) | 0.42 | 395 | 0.59 | 187 | 0.26 | 208 |
|  | (0.49) |  | (0.49) |  | (0.44) |  |
| Contact Variables |  |  |  |  |  |  |
| Time going to that school (yrs) | 2.39 | 456 | 2.42 | 224 | 2.35 | 232 |
|  | (0.82) |  | (0.92) |  | (0.70) |  |
| Number of out-group friends | 1.08 | 456 | 0.61 | 224 | 1.53 | 232 |
|  | (2.38) |  | (1.29) |  | (3.02) |  |
| Out-group friends at school (=1) | 0.26 | 456 | 0.23 | 224 | 0.28 | 232 |
|  | (0.44) |  | (0.42) |  | (0.45) |  |
| Having Syrian relatives (=1) |  |  | 0.04 | 178 |  |  |
|  |  |  | (0.21) |  |  |  |
| Having Palestinian roots (=1) |  |  | 0.48 | 178 |  |  |
|  |  |  | (0.50) |  |  |  |
| Time in Jordan (yrs) ${ }^{\text {b }}$ |  |  |  |  | 6.11 | 175 |
|  |  |  |  |  | (0.83) |  |
| Distance from origin to Amman (in 100km) |  |  |  |  | 2.42 | 183 |
|  |  |  |  |  | (1.66) |  |
| Having Jordanian relatives (=1) |  |  |  |  | 0.22 | 184 |
|  |  |  |  |  | (0.42) |  |

[^1]Table A.4: Covariates of out-group discrimination (full model from columns [2] and [4] of Table 3)

|  | Dependent variable: Out-Group Discrimination - Composite Index |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | [2] Jordanian Children Morning Shift |  | [4] Syrian Children Afternoon Shift |  |
| Time going to that school (yrs) | 0.047 | (0.092) | -0.144 | (0.095) |
| Out-group friends at school (=1) | -0.020 | (0.214) | 0.077 | (0.189) |
| Number of out-group friends | 0.057 | (0.125) | -0.038 | (0.038) |
| Out-group friends at school (=1) $x$ Number of out-group friends | -0.051 | (0.134) | 0.043 | (0.053) |
| Having Syrian relatives ( $=1$ ) | -0.712* | (0.356) |  |  |
| Having Palestinian roots (=1) | $-0.337^{*}$ | (0.174) |  |  |
| Having Jordanian relatives (=1) |  |  | -0.183 | (0.257) |
| Distance from origin to Amman (in 100 km ) |  |  | -0.050 | (0.055) |
| Time in Jordan (yrs) |  |  | -0.023 | (0.084) |
| Jordanians morally obliged to help | 0.022 | (0.035) | 0.096 *** | (0.032) |
| Jordan has done enough | -0.035 | (0.050) | -0.117* | (0.065) |
| Rental prices increased | 0.068** | (0.029) | 0.026 | (0.057) |
| Jobs more difficult to find | -0.031 | (0.027) | $-0.076^{* *}$ | (0.030) |
| Child is a boy (=1) | 0.162 | (0.146) | -0.151 | (0.177) |
| Number of children in the household | 0.011 | (0.036) | -0.004 | (0.050) |
| Surveyed parent is male ( $=1$ ) | 0.012 | (0.142) | -0.129 | (0.190) |
| Avg. income in governorate | -1.480 | (6.082) | -4.252 | (9.089) |
| Parental education |  |  |  |  |
| Bachelor | -0.194 | (0.189) | -0.687*** | (0.205) |
| High school, vocational training, higher education | -0.395** | (0.179) | -0.216 | (0.190) |
| Illiterate |  |  | -0.292 | (0.268) |
| Smartphone ownership (=1) | -0.179 | (0.229) | -0.197 | (0.236) |
| Have books at home (=1) | -0.216 | (0.140) | 0.059 | (0.186) |
| Constant | 1.634 | (3.978) | 4.893 | (6.280) |
| R^2 | 0.12 |  | 0.11 |  |
| Observations ${ }^{\text {a }}$ | 178 |  | 174 |  |

Cluster-robust standard errors (clustered at the class level) in parentheses; reference category for education is 'Literate but incomplete high school' and 'Number of out-group friends' is mean centralized.
${ }^{\text {a }}$ : Nine parents did not indicate either whether they had Syrian relatives or Palestinian roots. For some parents of children in the afternoon shift, we do not have information on their origin in Syria and whether they have relatives in Jordan. Moreover, we have excluded 9 observations from the afternoon shift that reported an arrival time in Jordan before outbreak of the war.

* p < .1, ** p < .05, *** p $<.01$

Figure A.1: Relationship between out-group discrimination derived from tasks 1 and 2 (vertical axis) and out-group discrimination derived from task 3 (horizontal axis)


Notes: On the vertical axis, we plot the measure of out-group discrimination obtained from task 1 and task 2, while on the horizontal axis, we plot the measure obtained from task 3 . Summing these two measures together provides the composite measure that we use in, e.g., Table 3. The size of the dots indicates the relative number of observations.

Figure A.2: Distribution of choices in tasks 1-3, conditional on shift (morning or afternoon) and on recipient's group memberships


Notes: Comparing Jordanian children (morning shift on the left) to Syrian children (afternoon shift, on the right) with a Kolmogorov-Smirnov-test shows no significant differences in any of the three panels.

Figure A.3: Distribution of responses to questions discussed in Table 2


[^2]Figure A.4: Geographical location of our sample of 50 double-shift school


## Experimental Instructions

## Sample Version of the Instructions (Morning Shift, First Sharing Task with Morning Shift, No Salience of Group Identity)

General instructions for the enumerator are italicized.
[(Sub-)Headings and information that are not to be read out loud are written in brackets.] Hello, my name is XY. The participation in this game is voluntary. I will explain to you how it works and then ask you if you want to participate - is that fine for you? (If the child wants to hear the instructions, go on with instructions; if the child wants to stop already, then bring the child back to the classroom and enter its decision into the tablet computer).

In the four games we will play today, you will get some gifts. Depending on your decisions, other children will also get some gifts. I will place the gifts in these envelopes later (show the three envelopes; one for the participant, one for a child from the same shift, and one for a child from the other shift); and you will get your gifts at the end of the shift; but I will explain all the details to you later. Now let me first write your name on the envelope in which I will store your gifts (write participant's name + father's name + family name + grade + ' $M$ '/' ' (depending on shift) on his / her envelope; also, label other envelopes with ' $M$ ' and ' $A$ ', but do not talk about the meaning of the ' $M$ ' and ' $A$ ' yet). One gift I will place in the envelope right now; this is what you can keep, irrespectively of whether you participate or not (put big toy into the envelope).

## [Game 1]

In this game, you can earn gifts. This is the gift you can receive in this game (show participant the gift for the first game). You will receive your gifts after this shift. I will give you more details later.
[The partner]
In the first part of this game, you can send gifts to another child who attends school in your shift at your own school. The other child is randomly selected from another class. Your partner is a child of about your age and does not know who you are.
[The Game]
The first part of the game works as follows: (place the first card (labelled 'Card 1-green: Games 1 and 2') on the table and place the grey and green playing pieces on them) On this card you can see your partner (point to the partner's playing piece). As I have told you before, you may earn gifts in this game. But only you will get five gifts at the beginning (five gifts for
the first game are placed in front of the grey playing piece corresponding to the participating child), which you can share with your partner. Your partner does not get any gifts that she or he can share with you. Therefore, you will not receive any gifts from your partner, as they have nothing to share with you. You have to decide how many gifts you want to take for yourself and how many gifts you want to send to your partner. That means you have to decide whether you would like to send ZERO, ONE, TWO, THREE, FOUR, or FIVE of your gifts to your partner, who attends school in the same shift as you do (the morning shift) (when listing the possibilities of decision-making, use the gifts to illustrate). If you want to send TWO gifts, for example, then please move two of the gifts towards your partner (move two gifts towards the other playing piece). In that case, you would part with two gifts (two gifts from the own (grey) playing piece are pushed away towards the middle), and your partner would receive those two gifts (now place the two gifts next to the other playing piece). You will keep three gifts. Can you tell me what happens if you would like to send FOUR gifts to your partner? (reallocate the gifts to the original allocation; the participant has to explain: (i) participant sends four gifts away; (ii) partner gets four gifts; (iii) participant keeps one gift) And what happens if you send nothing? (the participant has to explain: (i) participant sends no gift away; (ii) partner gets nothing; (iii) participant keeps all five gifts)

Your partner really exists and will receive the gifts at the end of this shift; therefore, I have an envelope for your partner here as well (show the corresponding partner's envelope). We will put your gifts in an envelope that you will receive at the end of the shift.
[Understanding]
Now let's see what you can still remember. Could you please repeat the rules concerning the gifts in your own words, what can you do with them, and what happens? (Participant has to repeat: (i) the participant can send between zero and five gifts to the partner; (ii) the partner receives those gifts, the participant will keep the remaining gifts and not receive any gifts from the partner; if the participant does not repeat all the points alone, then ask questions) Can you please repeat in your own words when and how you will get your gifts today? (Participant has to repeat: (i) the participant gets the gifts in the envelope labelled with his / her name after the shift; (ii) the partner also gets gifts in the corresponding envelope).

Do you also remember who your partner is? (The following points have to be repeated: (i) the partner is randomly selected; (ii) the partner attends school in the same shift (the morning shift), but in another class; (iii) The partner is represented by a green playing piece; (iv) the partner is about the same age as the participant; (v) the participant receives no other
information on the partners; (vi) the partners do not know the identity of the child; if the participant does not repeat all the points alone, then ask questions).
[Consent]
Okay, now tell me: Do you want to participate? (If child wants to participate, go on with the instructions; if child does not want to participate, then bring the child back to the classroom and enter its decision appropriately into the tablet).

## [The Decision]

Good, then you can make your decision (point at the card on the table). Remember that your partner attends school in the same shift as you do (the morning shift). It is very important that your decisions are secret. Your partner will not know that it was you who was deciding in this game; they will just receive the envelope. The decision is your secret. Now please take as much time as you need for your decision. I will turn around in the meantime so that you are not disturbed. Call me when you are ready (when the participant calls, turn towards the participant).
[After the decision]
(After the decision, the enumerator will check whether the child has taken a valid decision. If something is wrong, ask participant to correct. Enter decision into the tablet computer (this is Game 1) and place the gifts in the appropriate envelope: gifts allocated to the participant go into the envelope labelled with his / her name, and gifts allocated to the partner go into an unused envelope for either the morning or the afternoon shift, depending on when the partner attends school).

Thank you for your decision. Now I have a question. How many gifts do you think your partner would send you, if he or she had received five gifts from us to play the game you just played? (Enter answer into the tablet computer (this is Game 1))

## [Game 2]

Okay, now let's play another game.
[The partner]
The game works exactly as before. The only difference is that you will now play with another partner and that you can earn different gifts. Now you can earn those gifts (show participant gift for the second game). First we need another playing card (place the other playing card for Game 1/Game 2 (labelled 'Card 1-blue: Games 1 and 2') on the table, and place the grey and blue playing pieces on them). The partner you are now playing with (point at the partner's playing piece) is a child who attends school in the other shift, i.e., the afternoon shift, and we
use a blue playing piece for her / him. As before, your partner is randomly selected and does not know who you are.
[The game]
Ok, and do you remember the rules of the game? (If participant is unsure or hesitates, ask if anything should be explained again or quickly repeat: (i) the participant can send between zero and five gifts to the partner; (ii) the partner receives those gifts, while the participant will keep the remaining gifts and not receive any gifts from the partner).

As before, your partner really exists and will receive the gifts at the end of this shift; therefore, I also have an envelope for this partner here (show the envelope for the corresponding partner) [Understanding]

And can you repeat who your partner is?
(The following point has to be repeated: the partner attends school in the other shift, i.e., the afternoon shift, and is represented by a blue playing piece; if the participant does not understand the point alone, then ask questions).
[Decision]
Good, then you can make your decision. Remember that your partner is attending the other shift, i.e., the afternoon shift, and that it is very important that your decisions are secret. Your partner will not know that it was you who was deciding in this game; they will just receive the envelope. The decision is your secret. Now please take as much time as you need for your decision. I will turn around in the meantime so that you are not disturbed. Call me when you are ready (when the participant calls, turn towards the participant).
[After the decision]
(After the decision the enumerator will check whether the child has taken a valid decision. If something is wrong, ask participant to correct. Enter decision into the tablet computer (this is Game 2) and place the gifts in the appropriate envelope: gifts allocated to the participant go into the envelope labelled with his / her name, and gifts allocated to the partner go into an unused envelope for either the morning or the afternoon shift, depending on when the partner attends school).

Thank you for your decision. Now I again have a question. How many gifts do you think your partner in this second part would send to you, if she or he had received gifts from us to play the game you just played? (Enter answer into the tablet computer (this is Game 2))

## [Game 3]

Now let's play another game. In this game, you distribute gifts between two other children, but you cannot keep any of those gifts for yourself. Because this is a challenging task, you receive
five of those gifts yourself - irrespectively of how you distribute the gifts between your partners (show participant the gifts for the third game). Look, I am placing the five gifts into your envelope now. [Place five gifts into the envelope with the participant's name written on it] [The partners]

We have the same two partners from the last two games, the one from your shift, and the one from the other shift (place the second card (labelled 'Card 2: Game 3') on the table):

Here is the green playing piece, and here is the blue playing piece (the playing pieces are placed in front of the participant on the second card).

As before, the green playing piece (point to the green playing piece) is for your partner from before who attends school in your shift, i.e., the morning shift, and the blue playing piece (point to the blue playing piece) is for your partner from before who attends school in the other shift, i.e., the afternoon shift.
[The game]
The game works as follows:
On this card, you can see a green playing piece for the partner from your shift and a blue playing piece for the partner from the other shift (point to the green and blue playing pieces). This means that you are now deciding for your green and blue partners. Five gifts (five gifts are placed between the green playing piece and the blue playing piece) have to be distributed between your green and your blue partners.

The distribution of gifts works exactly as before, only that you now distribute gifts between your green and your blue partner.
[Understanding]
Okay, so can you please repeat what you will get in this game, what you have to do, and what that means to your partners? (The following points have to be repeated:
(i) the child will earn five gifts for taking a decision on behalf of the others, that is, (ii) distributing the five gifts between them; (iii) the recipients of the gifts that the participant distributes will be other children).

And do you still remember who your partners are? (If participant is unsure or hesitates, repeat the following points:
(i) the partner with the green playing piece attends school in the same shift, i.e., the morning shift;
(ii) the partner with the blue playing piece attends school in the other shift, i.e., the afternoon shift
[Decision]

Now you can make your decisions (point at the card on the table with the green and blue playing pieces). Remember that your green partner (point to the green playing piece) attends school in your shift, i.e., the morning shift, and that your blue partner (point to the blue playing piece) attends school in the other shift, i.e., the afternoon shift. It is very important that your decisions are secret. Your partners will not know that it was you who was deciding in this game; they will just receive the envelopes. The decision is your secret.

Please take as much time as you need for your decisions. I will turn around in the meantime so that you are not disturbed. Call me when you are ready (when the participant calls, turn towards the participant).
[After the decision]
(After the decision, the enumerator will check whether the child has taken a valid decision. If something is wrong, ask participant to correct. Enter decision into the tablet computer (this is Game 3) and put the gifts in the appropriate envelope: gifts allocated to each partner into their envelopes that have been used for them before).

Thank you for your decision.


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[^1]:    ${ }^{\text {a }}$ : Normalized Gross National Income/Household Wealth on the governorate (subnational) level according to the Subnational Human Development Index (Smits and Permanyer, 2019).
    ${ }^{\text {b }}$ : For "Time in Jordan", 9 observations from families that have arrived before the outbreak of the war in 2011 are not considered.

[^2]:    Notes: Agreement with statement coded from 1 (totally disagree) to 10 (totally agree).

