Does a Little More Matter When Everyone Is Poor? Household Affluence and the Mental Health of Refugee Children in Jordan: A School-Based Cross-Sectional Study

Tomoki Miyaura[1], **Eizaburo Tanaka**[2]

[1] Department of Economics, University of California San Diego · [2] Center for Research on Counseling and Support Services, The University of Tokyo

Background

- About 3 in 10 adult refugees have post-traumatic stress disorder and 3 in 10 have depression (Blackmore et al., 2020).
- Poor economic conditions after displacement have been linked to worse mental health, but the evidence comes mostly from adults and from comparing displaced with non-displaced people (Porter & Haslam, 2005).
- Many refugee communities are uniformly poor. Whether small economic differences within them matter for children is unknown (Scharpf et al., 2021).

Research question In Jordan, is household affluence associated with children's depression and anxiety, independent of trauma, and is the link stronger among uniformly poor refugee children?
Hypothesis Children in less affluent households have more depressive and anxiety symptoms, especially refugee children.

Methods

Design School-based cross-sectional study using a national survey in Jordan, Dec 2022–Apr 2023 (Khader et al., 2024). Parents reported for grades 3–6 and students for grades 7–12.

Participants Of 8,000 students surveyed, 6,275 had complete affluence and SDQ data. After excluding 183 with missing or other nationality and 35 with missing age or sex, 6,057 children were analyzed.

Variable	Measure
Exposure	Family Affluence Scale III (FAS), 0–13: cars, own bedroom, holidays abroad, computers, dishwasher, bathrooms
Primary outcomes	Revised Child Anxiety and Depression Scale (RCADS): depression and anxiety T-scores
Secondary outcome	Strengths and Difficulties Questionnaire (SDQ): total and emotional, conduct, hyperactivity and peer problems
Other exposures	Monthly income, parental work, income source, food or clothing deprivation (sensitivity analyses)

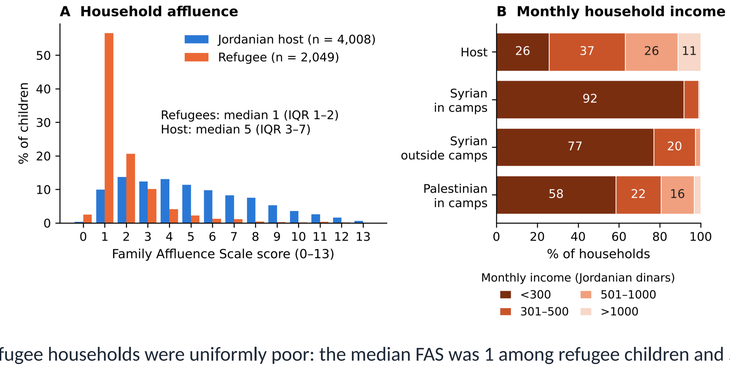
Analysis Linear regression with robust standard errors, adjusted for covariates chosen in advance (age, sex, group, parental education and marital status, household size, health history, traumatic events, post-traumatic stress symptoms, recent stress). Three steps: (1) all children; (2) a FAS × refugee interaction; (3) host and refugee children separately.

How to read the results β = difference in score per 1-point higher FAS. Negative = fewer symptoms in better-off homes. A 95% confidence interval (CI) that excludes 0 is statistically reliable.

Results

1. Participants: refugee homes were uniformly poor

Group	n	Age, mean	Girls, %	Grades 7–12, %	FAS, median (IQR)
Jordanian host	4,008	12.4	58.7	55.4	5 (3–7)
All refugees	2,049	12.3	55.6	44.3	1 (1–2)
Syrian, in camps	746	12.8	47.5	46.9	1 (1–2)
Syrian, outside camps	1,141	12.2	60.3	43.1	1 (1–2)
Palestinian, in camps	162	11.5	60.5	40.7	2 (1–4)



Refugee households were uniformly poor: the median FAS was 1 among refugee children and 5 among host children, and 81% of refugee households earned under 300 dinars a month.

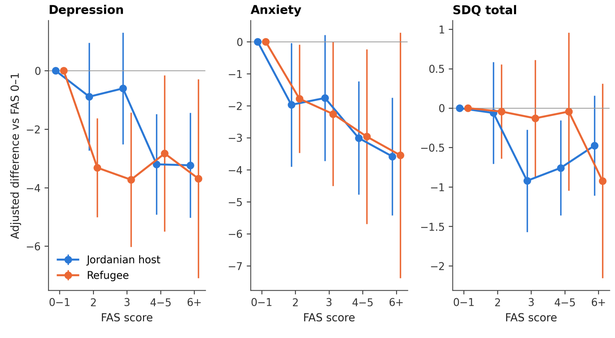
2. Poorer homes, more depression and anxiety

In all 6,057 children, each 1-point higher FAS meant lower depression (β −0.37, 95% CI −0.54 to −0.20) and anxiety (−0.34, −0.51 to −0.17) after adjustment. The link with depression was steeper in refugee children:

Outcome	Refugees β (95% CI)	Host β (95% CI)	p*
Depression (primary)	−0.78 (−1.20, −0.36)	−0.31 (−0.50, −0.12)	0.007
Anxiety (primary)	−0.66 (−1.13, −0.18)	−0.28 (−0.47, −0.10)	0.086
SDQ total (secondary)	−0.12 (−0.27, 0.04)	−0.02 (−0.09, 0.05)	0.099
Emotional symptoms	−0.08 (−0.15, −0.02)	−0.03 (−0.06, −0.01)	0.024

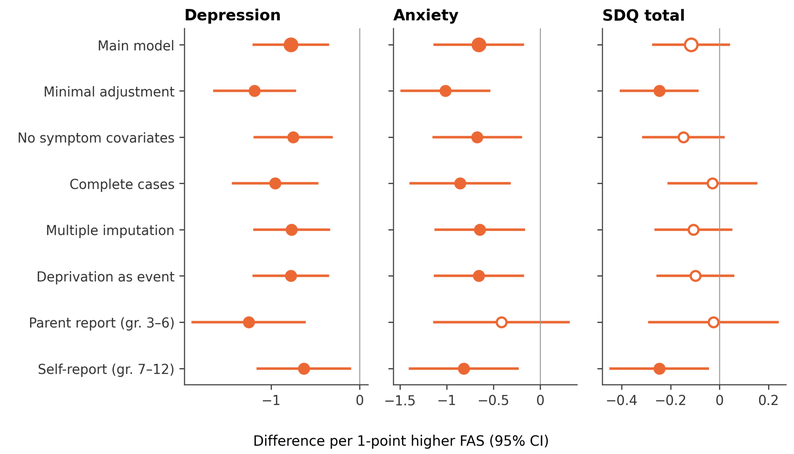
* p for the FAS × refugee interaction term in all children (difference in slope between refugee and host children). Other SDQ subscales (conduct, hyperactivity, peer problems) were not linked to FAS.

3. Small steps at the bottom mattered most



A score of 2 rather than 0–1 (often one more bathroom or a computer) meant −3.32 depression points in refugee children, but only −0.89 in host children.

4. Findings held across models and indicators



Refugee children. Filled = p < 0.05. Also unchanged with school-clustered standard errors.

Other indicators of economic position pointed the same way among refugee children, most clearly income and lacking food or clothes:

Indicator (refugee children)	Depression β (95% CI)	Anxiety β (95% CI)
Income (per category)	−2.42 (−3.68, −1.15)	−2.77 (−4.08, −1.45)
Ever lacked food or clothes	5.44 (3.78, 7.10)	3.84 (2.21, 5.47)
A parent working	−1.69 (−3.10, −0.27)	−0.92 (−2.34, 0.49)
No income (vs work)	2.19 (0.43, 3.95)	1.06 (−0.69, 2.80)
Mainly aid (vs work)	1.25 (−0.59, 3.09)	−0.37 (−2.24, 1.50)

Summary

- **Even in uniform poverty, refugee children in relatively poorer households had more depressive and anxiety symptoms, independent of trauma.**
- For depression, the link was steeper among refugee than host children.
- The link was emotional, not behavioral; the FAS reached its floor in refugee homes, so estimates are likely conservative.
- Limitations: cross-sectional design; children in school only.

References

Blackmore R, et al. PLOS Med 2020;17:e1003337 · Khader Y, et al. Front Public Health 2024;12:1409158 · Porter M, Haslam N. JAMA 2005;294:602–612 · Scharpf F, et al. Clin Psychol Rev 2021;83:101930

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