Mass Displacement of older adults: A health equity imperative

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WORLD

Earthquake death toll tops 35,000 as the number of survivors found drops to a handful in devastated Turkey and Syria

Over the weekend, more than a week after the temblors, emergency workers rescued a girl and a woman in Hatay.

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LIVE WORLD

Miracle rescues a week after historic earthquakes in Turkey, Syria; death toll surpasses 36,000: Live updates

John Bacon and Jorge L. Ortiz USA TODAY

Updated 3:35 p.m. ET Feb. 13, 2023

Biden administration proposes Mena category to US census

New inclusion would transform how people of Middle Eastern or North African descent are counted in statistics across the US

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Displacement & Health Research Center

The Displacement and Health Research Center focuses on studying displacement as a social determinant of health. As forced migration increases at unprecedented rates globally due to conflict, climate change, and raised inequalities, the rates of forced displacement are at all-time high. It is critical to understand the impacts of these trajectories on various health outcomes. Our research centers on equity to guide clinical and public health intervention development and guides policies related to displaced populations. Our lab is the first-of-its-kind at UC San Diego to be composed of refugee, first-generation, immigrant, and other under-represented trainees diversifying the next generation of scientists in health research. We believe in the ethos of "Nothing About Us Without Us" to guide our work and research questions. Our trainees will be future physicians, public health professionals, academics, and social justice advocates devoted to bettering the lives of displaced populations worldwide.

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What is Displacement?

displacement noun

Save Word

dis·place·ment | \ (ˌ)dis-ˈplā-smənt, di-ˈsplā- \

Definition of *displacement*

1 : the act or process of displacing : the state of being displaced
// a storm that caused the *displacement* of thousands of people

2 a *physics* : the volume or weight of a fluid (such as water) displaced (see DISPLACE sense 2a) by a floating body (such as a ship) of equal weight

b : the difference between the initial position of something (such as a body or geometric figure) and any later position

c *mechanical engineering* : the volume displaced by a piston (as in a pump or an engine) in a single stroke

also, automotive vehicles : the total volume so displaced by all the pistons in an internal combustion engine

Eviction

Homelessness

Statelessness

incarceration

Pandemics

conflict

Climate Change

TABLE 2—Population Estimates (n = 1304) for Disaster Preparedness Indicators: Health and Retirement Study, United States, 2010

Disaster Preparedness Indicator	Total No. (%)	Age Group, %			Gender, %		Race/Ethnicity, %		
		50-64 Years	65-79 Years	≥ 80 Years	Female	Male	White	Black	Other
1. Has a smoke detector at home	1155 (94.6)	95.6	93.7	93.8	94.3	94.9	94.7	93.6	95.1
2. Has a smoke or fire detector that has been tested in the past year	1005 (87.3)	88.0	86.6	86.6	87.8	86.6	87.1	90.3	84.2
3. Participated or registered in disaster preparation program	405 (34.3)	39.2*	31.3*	26.3*	37.1	31.2	34.4	33.6	34.1
4. Has an emergency evacuation plan	281 (23.6)	24.2	24.4	18.6	24.6	22.3	22.5	28.9	33.7
5. Knows specific location of a shelter in community	517 (43.2)	46.5*	42.6*	32.9*	41.5	45.2	42.4	49.6	45.7
6. Uses medical devices that need electricity	181 (14.2)	14.6	14.3	12.3	13.8	14.6	14.0	14.6	18.1
7. Has a 3-d supply emergency kit	771 (62.7)	61.3	64.6	61.8	59.2**	66.8**	64.3***	51.9***	55.2***
8. Registered for disaster help	142 (10.1)	8.4	11.8	10.3	11.0	9.0	8.7***	19.9***	14.7***
9. Aware of programs or organizations that prepare for possibility of disasters	277 (27.2)	30.0	26.0	20.1	28.1	26.2	26.5	36.2	20.1
10. Able to receive communications (e.g., battery-operated radio)	871 (71.0)	71.9*	72.8*	61.7*	69.2	73.1	71.2	70.8	66.0
11. Can perform immediate exit in case of emergency without help from another person	1108 (91.5)	92.8	91.0	88.4	91.1	92.0	91.9	88.0	92.0
12. Reason for slow exit is health or mobility limitation	58 (49.9)	25.1*	63.5*	76.0*	53.6	45.3	46.9	69.8	47.7
13. Has multiple exits in case of blockage	1177 (96.5)	97.3	96.3	94.3	96.1	97.0	96.5	96.3	96.9
14. Knows people who live within 50 miles who could provide shelter and transportation in case of disaster	1126 (92.4)	93.3	91.5	91.5	92.4	92.3	93.1	89.7	81.8
15. A doctor or health professional discussed what to do in case of natural disaster	72 (4.9)	4.1	6.4	3.1	6.0	3.6	4.5	7.3	10.1
16. Has experience in helping others in the event of disasters	424 (34.9)	38.8*	33.0*	27.0*	36.5	33.2	34.0	35.7	54.3
17. Hearing impairment prevents hearing warning sirens	83 (6.7)	5.1	6.7	12.7	3.2	3.5	6.8	4.8	10.3
18. Has natural gas used in place of residence	696(57.5)	58.8	56.8	54.8	57.0	58.0	56.6***	57.7***	76.6***
19. Has natural gas supply and knows how to turn it off	454 (66.3)	66.5*	69.9*	52.3*	46.2**	88.8**	65.8	70.3	65.8
20. Household member(s) has a car and drives	1124 (93.0)	94.7*	93.9*	83.9*	91.6	94.5	94.5***	83.2***	83.4***
21. Household member(s) doesn't have a car but can secure transportation to evacuate in case of disaster	74 (75.2)	78.2	70.2	77.7	78.5	69.6	79.0	67.9	66.6

*$P \leq .05$: deficit significantly increases as age increases; **$P \leq .05$: deficit significantly different by gender; ***$P \leq .05$: difference or deficit significantly different for the following items and ethnicity: item 7, Black vs White; item 8: Black vs White; item 18: Black vs other and White vs other; item 20: Black vs White and other vs White.

	Community residence			
	Mobile homes (n = 344)	Other residence (n = 7265)	Unadjusted p-value[a]	Adjusted p-value[b]
Shopping for groceries[e]	71 (20.6)	1635 (23.0)	0.32	0.86
Managing money[e]	53 (15.4)	1183 (16.6)	0.56	0.75
Making hot meals[e]	46 (13.4)	1044 (14.7)	0.51	0.89
Managing medications[e]	45 (13.1)	909 (12.8)	0.86	0.30
Using telephone[e]	25 (7.3)	616 (8.7)	0.37	0.71
Difficulties with health or functioning				
Difficulty hearing despite using hearing aid	17 (5.0)	265 (3.7)	0.22	0.10
Difficulty seeing despite using glasses or contacts or vision aids	28 (8.3)	514 (7.1)	0.37	0.16
Difficulty swallowing or chewing food	47 (13.7)	693 (9.5)	0.012	0.006
Difficulty speaking or in making oneself understood	24 (7.0)	501 (6.9)	0.96	0.72
Cognitive assessments				
Self-rated memory			0.092	0.07
Excellent	45 (13.7)	819 (12.2)		
Very good	85 (25.9)	2125 (31.7)		
Good	134 (40.9)	2382 (35.6)		
Fair/Poor	64 (19.5)	1368 (20.4)		
Changes in thinking or memory interfere with daily activities (more than once a week)	60 (30.3)	1421 (37.9)	0.21	0.33
Date and day of week incorrect	89 (26.3)	1642 (23.5)	0.24	0.052
Word recall score (immediate and delayed)			0.33	0.007
Low (0–6)	135 (40.8)	2446 (36.5)		
Medium (7–9)	106 (32.0)	2102 (31.3)		
High (10–20)	90 (27.2)	2160 (32.2)		
Clock-drawing test score[f]			0.33	0.47
0–1	15 (4.6)	389 (5.9)		
2–5	311 (95.4)	6203 (94.1)		
Naming president (first and last names)			0.034	0.01
Correct	141 (82.9)	3760 (88.3)		
Incorrect	29 (17.1)	496 (11.7)		

Table 2 History of mental illness in younger and older prisoners (n = 8574)

Mental disorders from the ICD9 and DSM	Younger n = 7107	Older n = 1467	All n = 8574	OR (95% CI)[a] Reference = older
Mental illness (DSM and ICD9)	3448 (48.5)	645 (44.0)	4093 (47.7)	1.3 (1.2–1.5)
Mental illness (DSM)	3222 (45.3)	570 (38.9)	3792 (44.2)	1.4 (1.3–1.6)
Mental illness (ICD9 only)	226 (3.2)	75 (5.1)	301 (3.5)	0.7 (0.5–0.9)
Serious mental illness[b] (DSM and ICD9)	2048 (28.8)	404 (27.5)	2452 (28.6)	1.1 (0.99–1.3)
Serious mental illness (DSM)	1976 (27.8)	386 (26.3)	2362 (27.5)	1.1 (1.0–1.3)
Serious mental illness (ICD9 only)	72 (1.0)	18 (1.2)	90 (1.0)	ne
Substance use[c] (DSM and ICD9)	1928 (27.1)	312 (21.3)	2240 (26.1)	1.5 (1.3–1.7)
Substance use (DSM)	1791 (25.2)	286 (19.5)	2077 (24.2)	1.5 (1.3–1.7)
Substance use (ICD9 only)	137(1.9)	26 (1.8)	163 (1.9)	1.2 (0.8–1.8)
Depression, major depressive disorders	1267 (17.8)	294 (20.0)	1561 (18.2)	0.9 (0.8–1.1)
Anxiety, general anxiety, panic disorders	1222 (17.2)	193 (13.2)	1415 (16.5)	1.5 (1.3–1.8)
Personality disorders	824 (11.6)	135 (9.2)	959 (11.2)	1.3 (1.1–1.6)
Psychosis, psychotic disorders	664 (9.3)	97 (6.6)	761 (8.9)	1.5 (1.2–1.9)
Developmental disabilities	677 (9.5)	45 (3.1)	722 (8.4)	3.5 (2.6–4.8)
Bipolar	579 (8.2)	65 (4.4)	644 (7.5)	2.1 (1.6–2.7)
Post-Traumatic Stress Disorder	459 (6.5)	79 (5.4)	538 (6.3)	1.2 (0.9–1.5)
Schizophrenia	177 (2.5)	77 (5.3)	254 (3.0)	0.5 (0.4–0.6)
Impulse control disorders	160 (2.3)	10 (0.7)	170 (2.0)	3.6 (1.9–6.9)
Dysthymia, neurotic depression	132 (1.9)	45 (3.1)	177 (2.1)	ne
Dementia	29 (0.4)	24 (1.6)	53 (0.6)	ne
Sleep, movement and eating disorders	24 (0.3)	2 (0.1)	26 (0.3)	ne
Sexual disorders, paraphelias	11 (0.2)	3 (0.2)	14 (0.2)	ne
Pervasive developmental disorders	7 (0.1)	0 (0.0)	7 (0.1)	ne
Somatization disorders	0 (0.0)	1 (0.1)	1 (0.0)	ne

DSM The Diagnostic and Statistical Manual of Mental Disorders, *ICD9* The International Classification of Diseases, 9th Revision, *ne* not estimable, sample size too small. *CI* confidence interval

[a]Odds Ratios and 95% CI are from logistic regression models adjusting for sex and race/ethnicity. If the (95% CI) includes 1.0, the odds ratio is not statistically significant

[b]Serious mental illness includes bipolar disorders, dementia/organic disorders, depression and major depressive disorders, dysthymia/neurotic depression, psychosis/psychotic disorders, schizophrenia, and substance use disorders

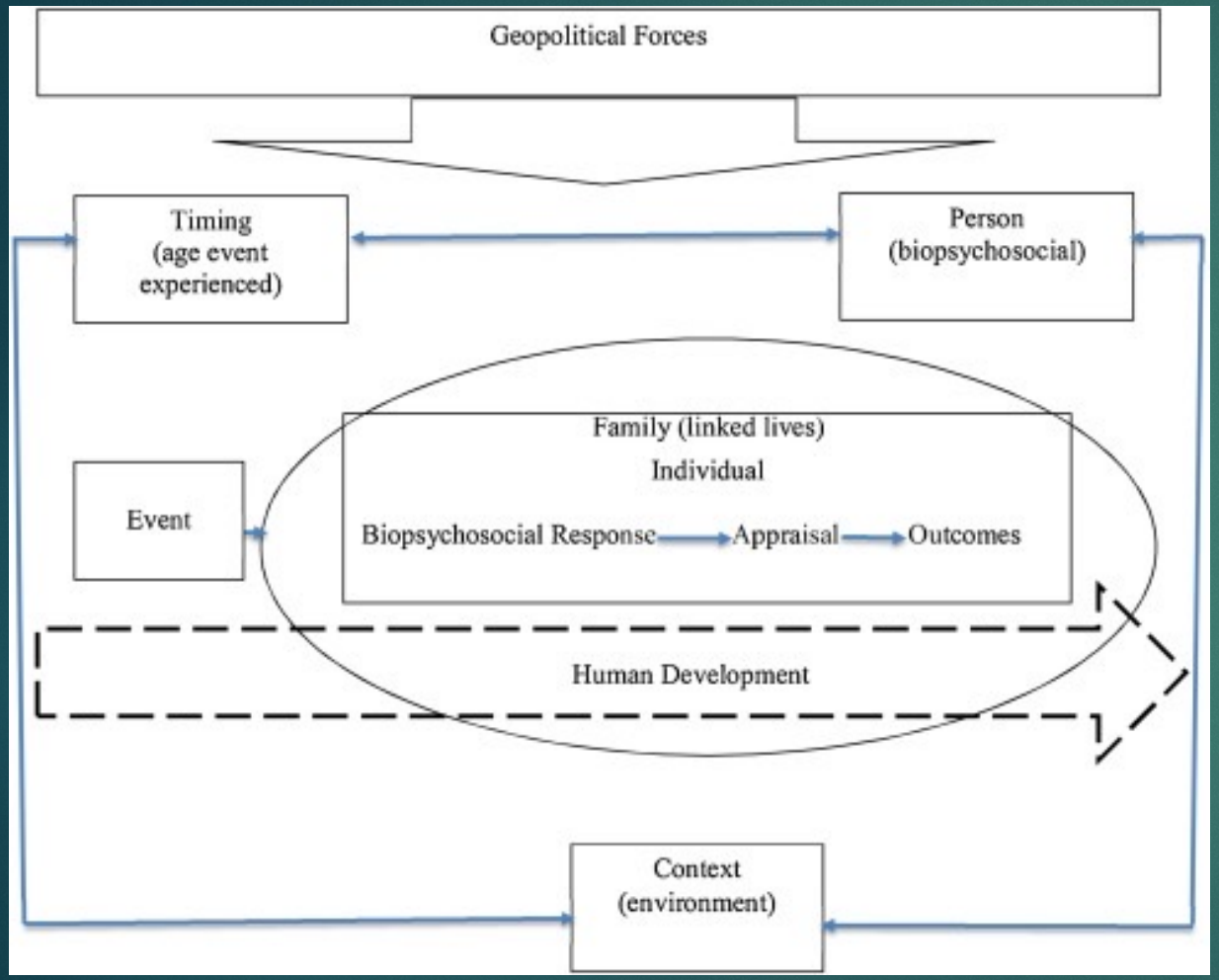
[c]Substance use includes alcohol-induced persisting amnestic disorder, cannabis-induced psychotic disorder, with hallucinations, other (or unknown) substance-induced psychotic disorder with hallucinations, phencyclidine-induced psychotic disorder, with hallucinations, psychotic disorder NOS, substance-induced, alcohol dependence, opioid dependence, sedative/hypnotic/anxiolytic dependence, cocaine dependence, cannabis dependence, amphetamine dependence, other polysubstance abuse, methamphetamine dependence, hallucinogen dependence, inhalant dependence, polysubstance dependence, other (or unknown) dependence, phencyclidine dependence

Amid rising xenophobic attacks in South Africa, UNHCR ramps up aid for refugees, calls for urgent action

This is a summary of what was said by UNHCR spokesperson Charlie Yaxley – whom quoted text may be attributed – at today's press briefing at the Palais de Nations in Geneva.

20 September 2019 | Español | Français

MECHANISMS OF GLOBAL FORCED MIGRATION



Ajrouch et al.: A lifespan developmental science perspective on trauma experiences in refugee situations

LANGUAGE MATTERS: MIGRATION

MIGRANT

A 'migrant' is a generic term for anyone moving to another country with the intention to stay for a minimum period of time (i.e. it excludes tourists and business visitors). It includes both permanent and temporary migrants with a valid residence permit or visa, asylum seekers, and undocumented migrants who do not belong to any of the three mentioned groups.

ASYLUM SEEKER

'Asylum seekers' are persons who have formally submitted a request for asylum but have not yet completed the asylum procedure, i.e. whose request for asylum is pending. If people remain after being denied such status they become undocumented migrants.

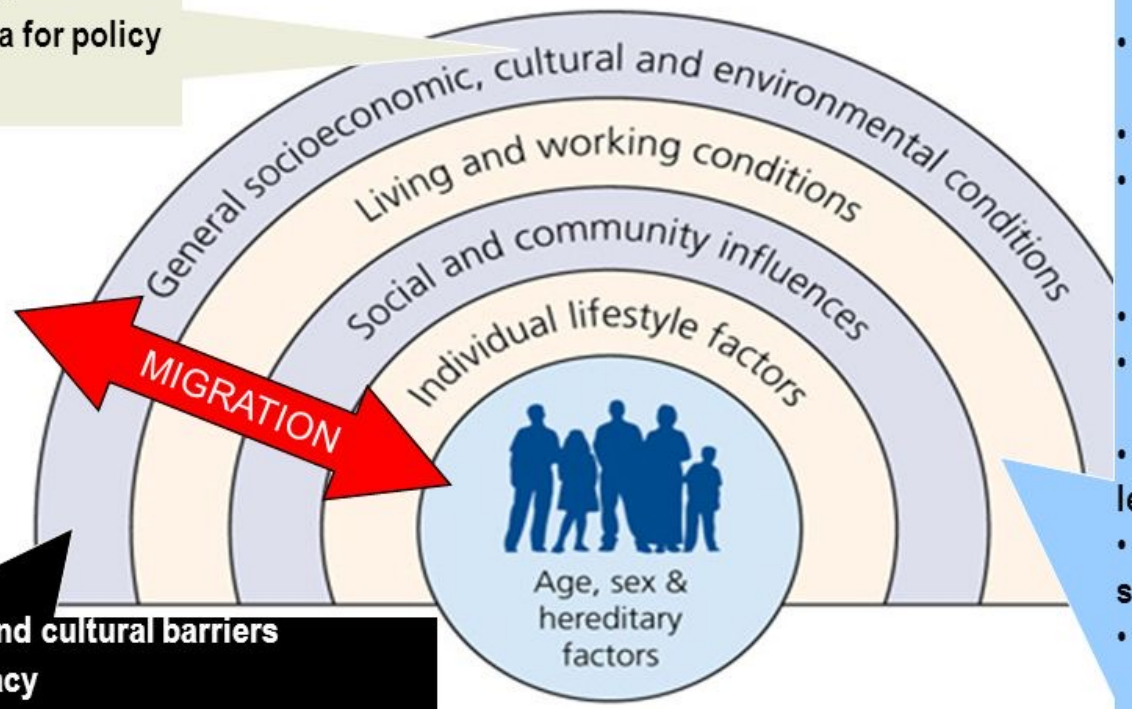
REFUGEE

A 'refugee' refers to persons who have completed the asylum procedure with a positive outcome and have been granted protection by obtaining refugee status.

Illustrations: Shutterstock

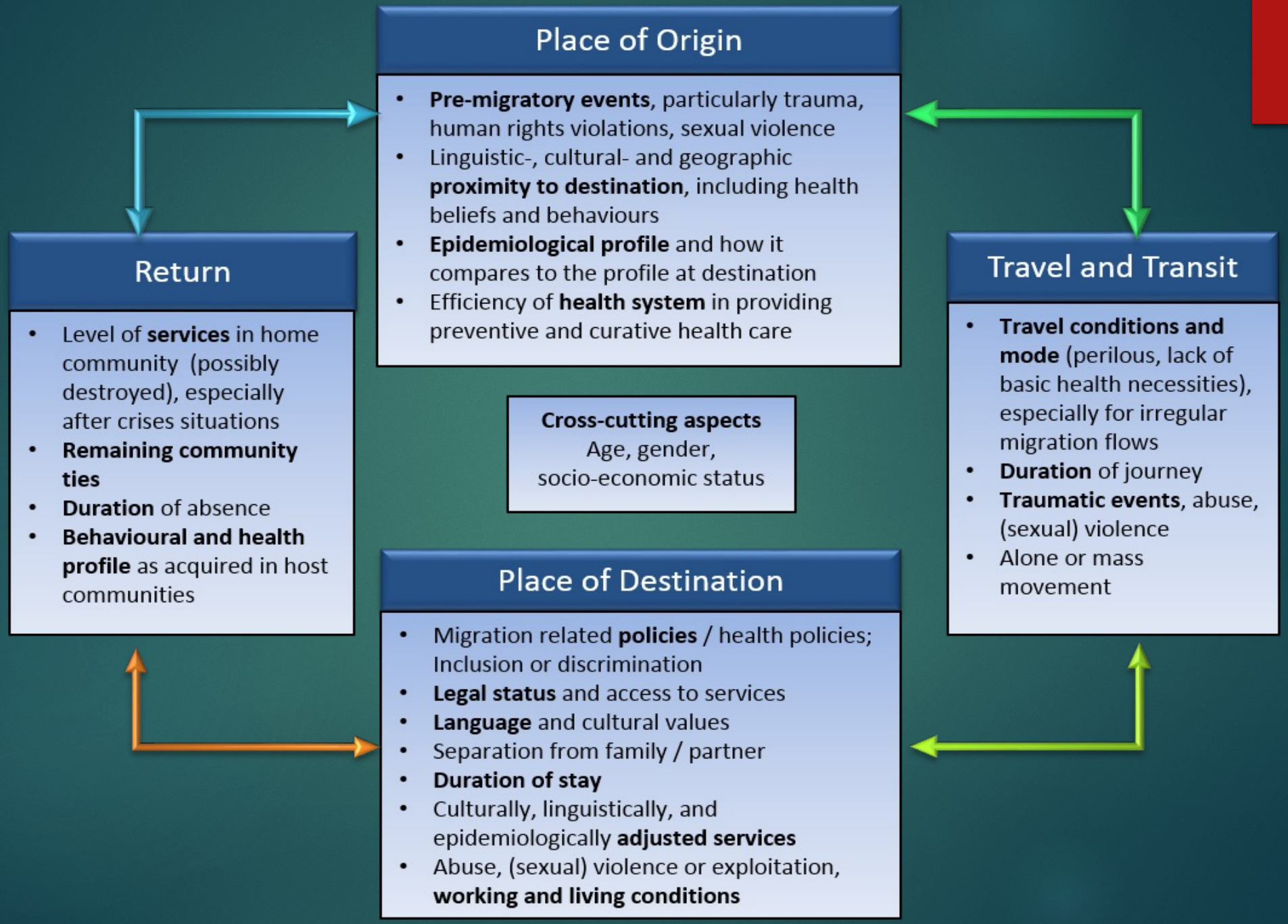
Migration as a Social Determinant of Health

- Policy and strategy across sectors
- Availability of strategic data for policy change

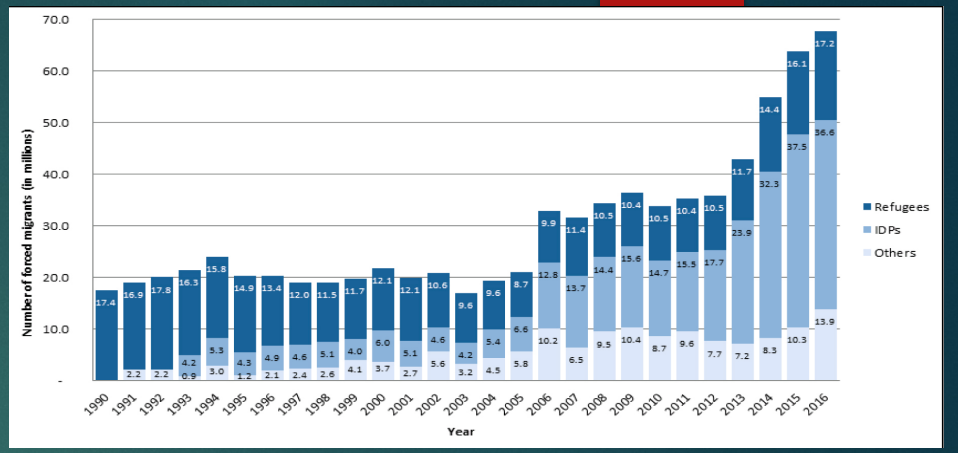


- Lack of targeted health information
- Gender norms
- Service availability, location, hours of operation
- Safety & security
- Relationship with "host" community
- Community leadership
- Sensitivity of services
- Living and working conditions
- Stigma, xenophobia, social exclusion

- Language and cultural barriers
- Health literacy
- Immigration status
- Health-seeking behaviours
- service access barriers


Place of Origin
Pre-migratory events, particularly trauma, human rights violations, sexual violence
Linguistic-, cultural- and geographic proximity to destination, including health beliefs and behaviours
Epidemiological profile and how it compares to the profile at destination
Efficiency of health system in providing preventive and curative health care
Return
Level of services in home community (possibly destroyed), especially after crises situations
Remaining community ties
Duration of absence
Behavioural and health profile as acquired in host communities
Travel and Transit
Travel conditions and mode (perilous, lack of basic health necessities), especially for irregular migration flows
Duration of journey
Traumatic events, abuse, (sexual) violence
Alone or mass movement
Cross-cutting aspects
Age, gender, socio-economic status
Place of Destination
Migration related policies / health policies; Inclusion or discrimination
Legal status and access to services
Language and cultural values
Separation from family / partner
Duration of stay
Culturally, linguistically, and epidemiologically adjusted services
Abuse, (sexual) violence or exploitation, working and living conditions

Forced Migration: Global problem and escalating



- **82** Million individuals forcibly displaced due to conflict or persecution
- **1 every 2 seconds is being forcibly displaced due to conflicts or natural disasters**
- In LMICs hosting countries: 8.5%- 20% of refugees and asylum seekers are "older people"
- Average refugee stay in camps is 15-20 years

Older migrants

- Older refugees and migrants:
  a) Recent arrivals
  b) Aging refugees (employed in precarious and/or service sector employment, with possible health consequences in old age)

- Particularly vulnerable groups, including asylum seekers and migrants in irregular situations (ICE detention centers, migrant shelters)

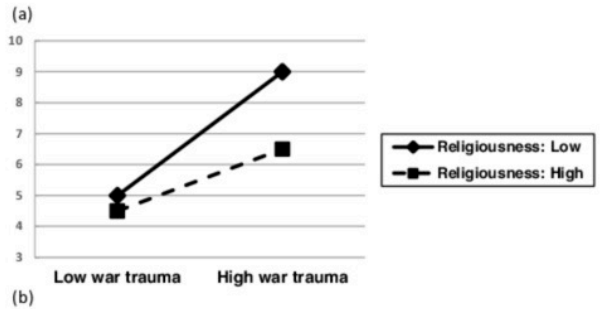
Challenges and opportunities

- Low income
- Language and cultural barriers
- Loss of social networks, loneliness
- Loss of social status
- Mental/physical trauma
- Asset: transmitters of culture, skills and crafts imp in preserving traditions and dignity of the displaced, resilience can help strengthen communities and can contribute to positive and peace-building interactions with local host communities
- Difficulty in conducting research: gaining trust over time, IRBs, funding options

- “UNHCR mandate: providing support to established services to enhance their capacity to provide culturally and linguistically responsive programmes to older refugees (e.g. bilingual staff, technical support).
- The success of these approaches is highly dependent on effective partnerships between refugee agencies, refugee communities and established services and programs for older persons in the receiving community.

Research on Older Refugees comes mostly from Europe and Canada

Figure 1. Association between (a) war trauma and PTSD symptoms, and (b) war trauma and somatization symptoms, according to religiousness.



Mental health among older refugees: the role of trauma discrimination, and religiousness

Mulki Mölsä, Saija Kuittinen, Marja Tiilikainen, Marja-Liisa Honkasalo & **Raija-Leena Punamäki**

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ABSTRACT

Objectives: The aim of this study was to examine, first, how past traumatic stress and present acculturation indices, and discrimination are associated with mental health; and, second, whether religiousness can buffer the mental health from negative impacts of war trauma.

Method: Participants were 128 older (50–80 years) Somali refugees living in Finland. They reported experiences of war trauma and childhood adversities, and filled-in questionnaires of perceived ethnic discrimination, religiousness (beliefs, attendance, and observance of Islamic faith), and symptoms of posttraumatic stress disorder (PTSD), depressive (BDI-21), psychological distress (GHQ-12), and somatization (SCL-90).

Results: Symptom-specific regression models showed that newly arrived refugees with non-permanent legal status and severe exposures to war trauma, childhood adversity, and discrimination endorsed greater PTSD symptoms, while only war trauma and discrimination were associated with depressive symptoms. Results confirmed that high religiousness could play a buffering role among older Somalis, as exposure to severe war trauma was not associated with high levels of PTSD or somatization symptoms among highly religious refugees.

Conclusion: Health care should consider both unique past and present vulnerabilities and resources when treating refugees, and everyday discrimination and racism should be regarded as health risks.

Refugees as a unique population

- Neurotrophic growth factor (BDNF) and nerve growth factor (NGF); neurotrophins measure neuroplasticity index

- Higher levels of biomarkers of neuroplasticity correlated with worse mental health and higher blood lead levels.

	All refugees (n = 64)	Iraqi (n = 24)	Syrian (n = 40)
Demographics			
Age (years); Mean (SD)	37.63 (11.78)	36.46 (12.16)	38.33 (11.64)
Gender; n (%)			
Females	31 (48.4)	12 (50)	19 (47.5)
Males	33 (51.6)	12 (50)	21 (52.5)
Self-reported exposures; Mean (SD)			
Pre-displacement trauma (possible scale range 0 to 39); (α = .87)	12.09 (6.02)	10.74 (4.80)	12.88 (6.54)
Pre-displacement environmental exposure (0 to 36); (α = .76)	2.72 (4.39)	3.58 (5.09)	2.20 (3.88)
Neuroplasticity biomarkers (pg/ml); Mean (SD)			
Brain-derived neurotrophic factor	1918.51 (1641.51)	1541.29 (1394.41)	2078.83 (1727.15)
Neurotrophic growth factor	80.07 (72.39)	70.89 (70.37)	83.97 (73.77)
Neuroplasticity index	1998.58 (1697.17)	1612.18 (1459.64)	2162.80 (1780.20)
Heavy metals concentration (ppb); Mean (SD)			
Lead	0.64 (1.46)	0.54 (1.03)	0.69 (1.68)
Cobalt	0.01 (0.00)	0.01 (0.01)	0.01 (0.00)
Manganese	0.12 (0.08)	**0.08 (0.05)**	**0.14 (0.09)** **
Nickel	0.11 (0.11)	0.11 (0.02)	0.12 (0.13)
Arsenic	0.02 (0.01)	0.02 (0.02)	0.01 (0.01)
Cadmium	0.02 (0.02)	0.01 (0.02)	0.02 (0.01)
Mental health symptoms; Mean (SD)			
Depression (0–21); (α = .86)	6.31 (4.35)	**4.75 (3.79)**	**7.25 (4.44)** *
Anxiety (0–63); (α = .92)	13.02 (11.30)	**8.79 (8.15)**	**15.55 (12.23)** *
Post-traumatic stress disorder (17–85); (α = .82)	33.95 (12.41)	30.62 (12.88)	35.95 (11.83)
Mental health score; 1 (excellent) to 5 (poor)	3.00 (1.11)	**2.38 (1.10)**	**3.38 (0.95)** ***

*p<0.05
**p<0.01
***p<0.001; boldface indicates significant differences b/w Iraqi and Syrian refugees; SD, standard deviation; ppb, parts per billion; pg/ml, picograms per milliliter; α, Cronbach's alpha

https://doi.org/10.1371/journal.pone.0230030.t001

Arnetz BB, Sudan S, Arnetz JE, Yamin JB, Lumley MA, et al. (2020) Dysfunctional neuroplasticity in newly arrived Middle Eastern refugees in the U.S.: Association with environmental exposures and mental health symptoms. PLOS ONE

Research in developing countries:

Jordan, top refugee hosting country in the world

Research in the developed countries:

San Diego, USA

Second Largest refugee resettlement city in the US

- Health needs of older Syrian Refugees in Jordan (Sasakawa Peace Foundation-Japan)
- Mental health Performance on Cognition(GBHI, Alzheimer's Association)

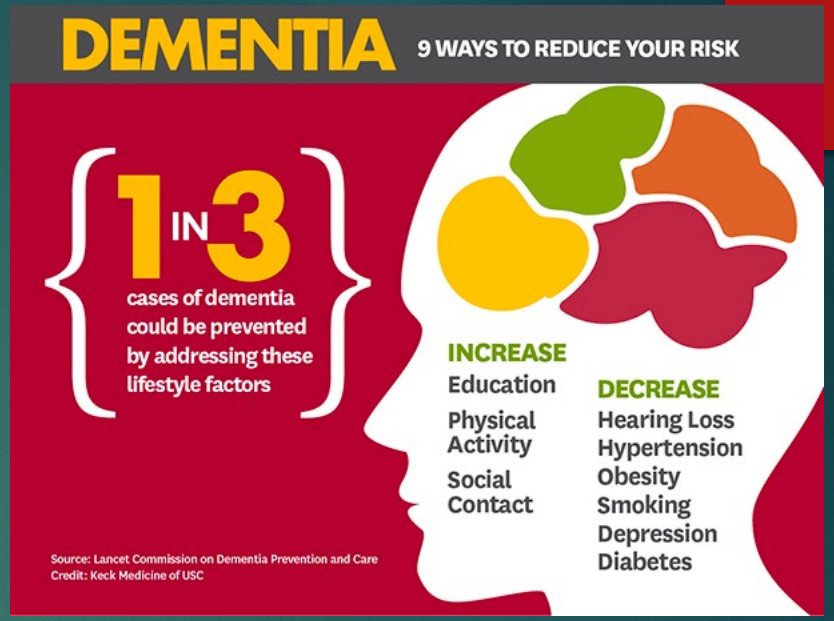
- Hypertension self-management in older refugees (NHLBI)
- Barriers to dementia care and assessment (ADRCMAR-NIA)
- Climate displacement and brain health: RWJF

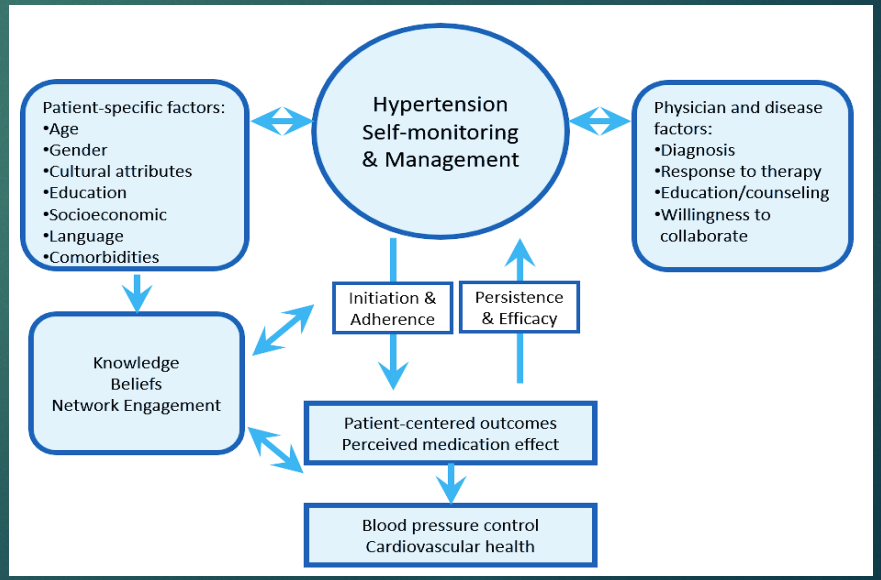
Current research projects at UCSD on aging refugees?

Research in San Diego

- AD-RCMAR pilot grant: Barriers to cognitive aging and assessment in Arab refugees in San Diego

- NHLBI pilot K23: Self-management of hypertension in older refugees in San Diego





Self-management of hypertension

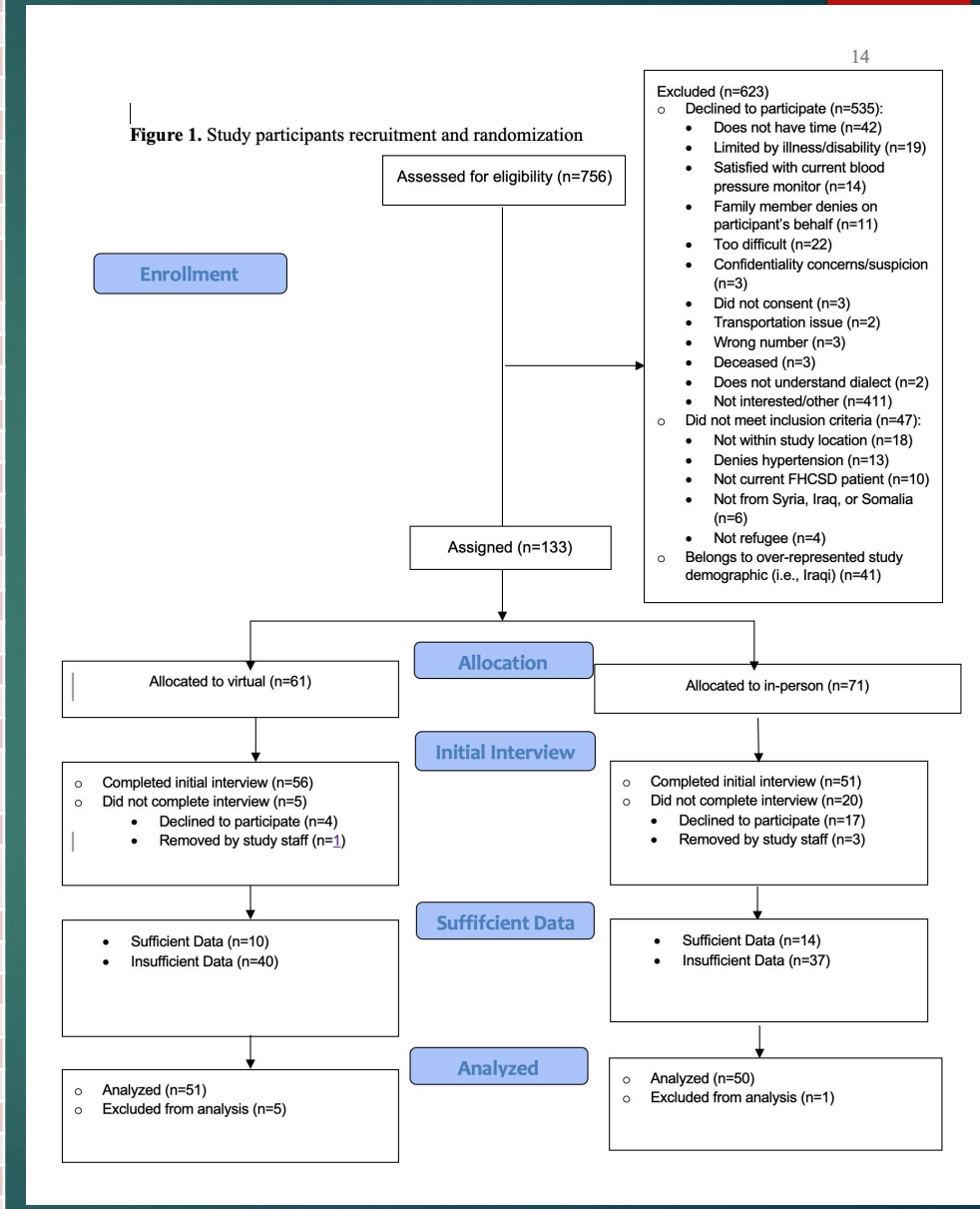
- Aim1 : Understand the knowledge, attitudes and behaviors related to hypertension self-management in refugees

- Aim 2: Conduct a protocol of hypertension self-management in refugees.

  - Hypothesis: In 2 groups of Iraqi and Somali refugees (n=80), 50% or more will be able to accurately monitor their own BP at home; record their BP readings; average their weekly BP values; and make appropriate hypothetical decisions about **self-titration of antihypertensive medications over a 4 week period**.

- Aim 3: Identify factors affecting the feasibility and acceptability of hypertension self-management in refugees

Age, Mean (years) (SD)	67 (9.8)
Range	38-87
Gender, F (%)	53 (49)
Country of origin:	
Syria	23 (21)
Iraq	86 (79)
Years living in the US, Mean (SD)	9.7 (5.8)
Marital status, Married (%)	91 (83)
Has kids (%)	107 (98)
Number of children, Mean (SD)	2.6 (1.1)
Number of family members living in the same house, 5 or more	36 (33)
Employed, Yes (%)	15 (14)
Annual household income	
Less than $15,000	66 (61)
$15,001-$25,000	32 (29)
$25001 and above	11 (10)
Education level	
Less than high school	43 (39)
High school	26 (24)
Vocational certificate	16 (15)
College graduate or higher	24 (22)
Able to read and write Arabic, Yes (%)	98 (91)
Able to read and write English, Yes (%)	37 (35)
Healthcare insurance, Yes (%)	107 (100)
Have a smartphone, Yes (%)	107 (100)
Are you feeling more forgetful than before, Yes (%)	89 (83%)
BMI, Mean (SD)	32 (6)
Years since hypertension diagnosis, Mean (SD)	5.25 (2.53)
SBP mm Hg, Mean (SD)	128 (16)
DBP mm Hg, Mean (SD)	76 (8)
Hypertension stage 2, N (%)	36 (34)
Creatinine, Mean (SD)	0.898 (0.3)
CKD Mean (SD)	11 (12)
GFR Mean (SD)	83 (18)
Cancer, Yes (%)	10 (10)
Diabetes, Yes (%)	38 (38)
Chronic Heart failure, Yes (%)	11 (11)
COPD, Yes (%)	3 (3)
Hyperlipidemia, Yes (%)	10 (10)
Hypertriglyceridemia, Yes (%)	28 (26)



Community-based interventions do work!

Shave and a checkup: Health interventions at the barbershop

(Pixabay)

By Chloe Reichel

March 21, 2018

Black men tend to have less frequent contact with physicians or other health care providers than black women and white men and women, according to statistics from the U.S. Centers for Disease Control and Prevention. They experience disparities in many areas of health, including in relative likelihood of contracting HIV and in mortality rates for most cancers.

Table 2. Primary and Secondary Blood-Pressure Outcomes.*

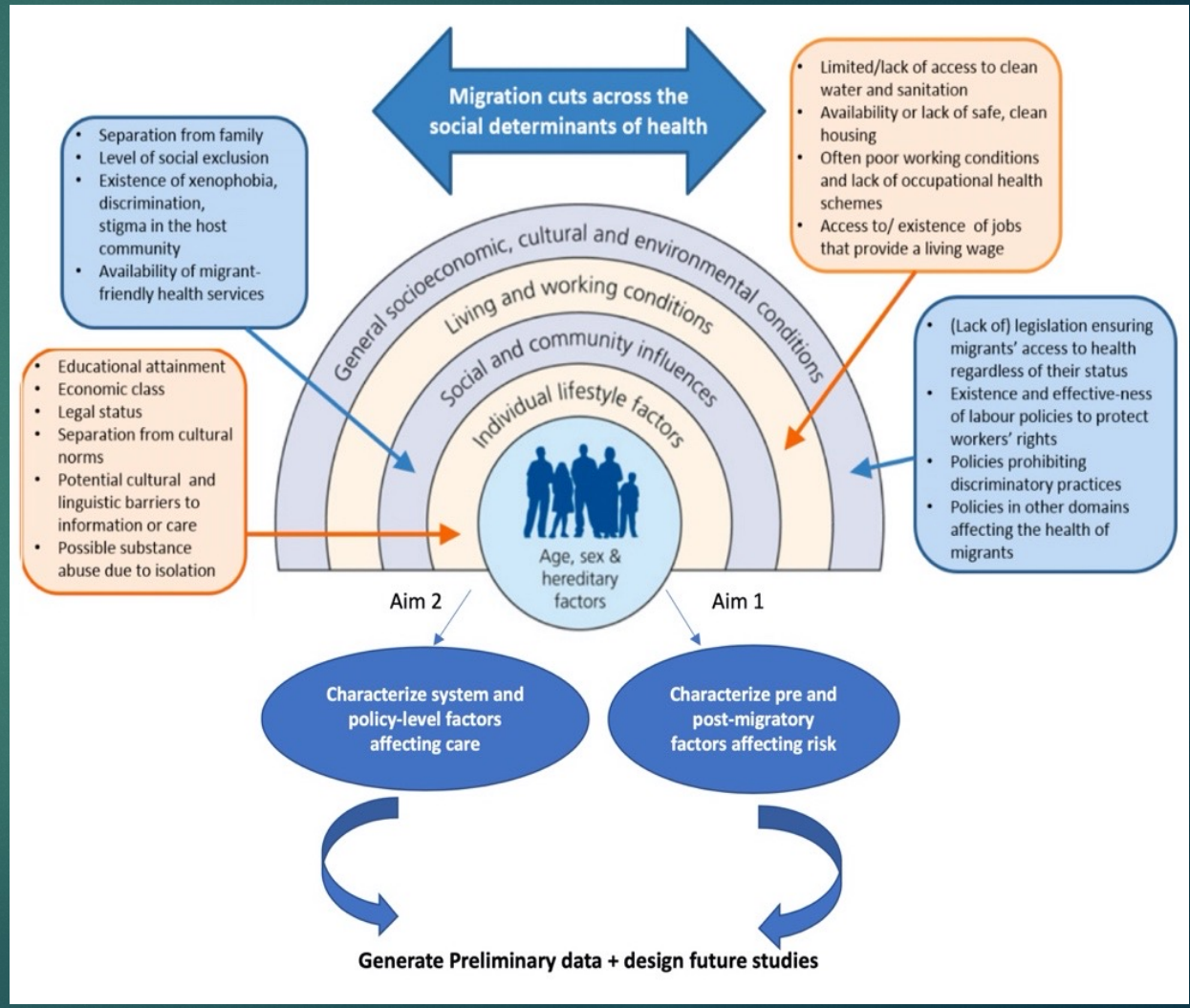
Outcome	Intervention Group (N=132)	Control Group (N=171)	Intervention Effect	P Value†
Blood pressure				
Systolic blood pressure — mm Hg‡				
At baseline	152.8±10.3	154.6±12.0		
At 6 mo	125.8±11.0	145.4±15.2		
Change	−27.0±13.7	−9.3±16.0	−21.6 (−28.4 to −14.7)§	<0.001
Diastolic blood pressure — mm Hg				
At baseline	92.2±11.5	89.8±11.2		
At 6 mo	74.7±8.3	85.5±12.0		
Change	−17.5±11.0	−4.3±11.8	−14.9 (−19.6 to −10.3)§	<0.001
Hypertension control at 6 mo — no. (%)				
Blood pressure <140/90 mm Hg	118 (89.4)	55 (32.2)	3.4 (2.5 to 4.6)¶	<0.001
Blood pressure <135/85 mm Hg	109 (82.6)	32 (18.7)	5.5 (2.6 to 11.7)¶	<0.001
Blood pressure <130/80 mm Hg	84 (63.6)	20 (11.7)	5.7 (2.5 to 12.8)¶	<0.001

* Plus–minus values are means ±SD.
† For systolic blood pressure and diastolic blood pressure, P values were calculated from linear mixed-effects models with random intercepts for clusters. The estimated intervention effect was controlled for baseline systolic or diastolic blood pressure, routine doctor, and high cholesterol level. For hypertension control at 6 months, P values were calculated from generalized estimating equations with a compound symmetry working correlation to account for cluster effects. The estimated intervention effect was controlled for baseline systolic blood pressure, routine doctor, and high cholesterol level.
‡ The prespecified primary outcome was the change in systolic blood pressure from baseline to 6 months. The intraclass correlation coefficient from the linear mixed-effects model for change in systolic blood pressure was 0.05. Degrees of freedom for the estimated intervention effect=276.
§ Shown is the difference in mean change in blood pressure and 95% confidence interval.
¶ Shown is the relative risk and 95% confidence interval.

Barriers to cognitive assessment and care in Arab refugees

- Aim 1: Explore refugees' perceptions of factors affecting cognitive aging in older Arab refugees in San Diego

- Aim 2: Determine system-level factors affecting identification, and management of dementia in Arab refugees living in San Diego



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How Can We Help You?

The UCSF Memory and Aging Center provides diagnosis and care for patients and their families with cognitive problems. If you have concerns, talk to your doctor about a referral.

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Tala Al-Rousan, MD, MPH

ATLANTIC FELLOW AT GBHI
UCSF MEMORY AND AGING CENTER

tala.rousan@gbhi.org
Professional Profile
Home Country: Jordan
Field of Employment: Global Health
Key Areas: aging, public health, disparities in health, epidemiology

Tala investigates social and public health issues related to equity in brain health. She is interested in understanding the aging process of the brain by doing research in resource-limited settings. She brings extensive experience designing epidemiological studies that address questions related to understanding and mitigating disparities among marginalized populations, especially older ones. She has focused on studying the general and neuropsychiatric health of prisoners, frail older adults, persons with disabilities, older women, racial minorities, immigrants and refugees.

During her GBHI fellowship, she will expand these evaluations and research endeavors. She hopes to create a network of experts in brain health to reduce disease burden and use a public health lens to assess aging in the Middle East and North African region. She will investigate how the stress resulting from war and displacement affects rates of dementia in a group of refugees in the Middle East. Tala has an affiliation with the Harvard Humanitarian Initiative and relationships with different donors from the Middle East and other parts of the world who are interested in the plight of refugee health. She aspires to explore different extramural funding resources through collaborations created within and through GBHI. The interprofessional mentoring and collaborative environment at GBHI fosters her skills to translate the latest scientific research into social change.

> "The world's refugee crisis is a public health crisis. A better understanding of the effects of forced migration on brain health can improve the lives of millions of displaced adults.

Bio: Tala Al-Rousan received her master's degree in public health from Iowa University and her

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FOR SOCIAL EQUITY
The University of Melbourne

FOR HEALTH EQUITY IN SOUTH AFRICA
TEKANO

FOR HEALTH EQUITY IN SOUTHEAST ASIA
The Equity Initiative | CMB

FOR HEALTH EQUITY
Health Workforce Institute, The George Washington University

Atlantic *Institute*
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Over the next two decades, the network of Atlantic Fellows will grow to thousands. As of ~~late 2018~~, there are ~~237~~ fellows from ~~64~~ countries.

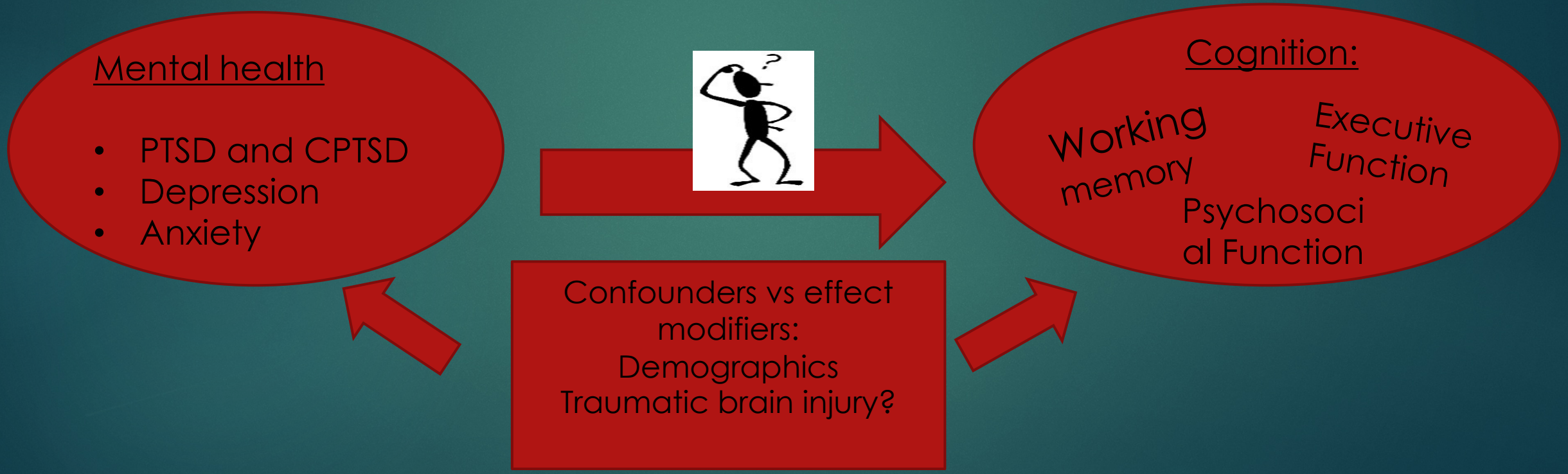
Research in Jordan

Older refugees in Jordan

- Health issues: Healthcare access, medications, loss of caregivers, discrimination, social isolation, chronic conditions, LTBI, mental trauma
- Prevalence of mental illness: 20-55%
- Mental health performance on cognition: ??
- Refugees +50 years old: 10-15
- 93% of refugees live below the poverty line
- Lack of national data

Research project: Aims

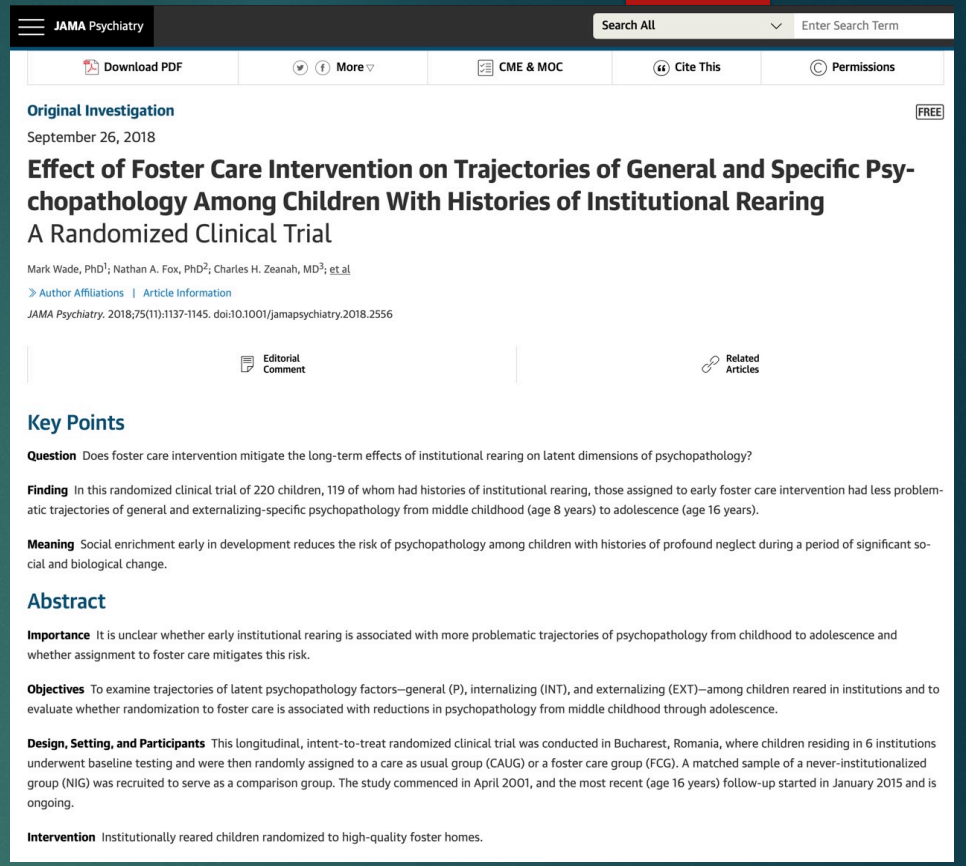
1. Examine the correlation between mental health and cognitive functioning in older refugees



Aims…

2. Isolate the effect of encampment on cognition:

- Syrian refugees living inside camps
- Syrian refugees living in urban settings
- Jordanians controls



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Original Investigation FREE

September 26, 2018

Effect of Foster Care Intervention on Trajectories of General and Specific Psychopathology Among Children With Histories of Institutional Rearing

A Randomized Clinical Trial

Mark Wade, PhD[1]; Nathan A. Fox, PhD[2]; Charles H. Zeanah, MD[3]; et al

» Author Affiliations | Article Information

JAMA Psychiatry. 2018;75(11):1137-1145. doi:10.1001/jamapsychiatry.2018.2556

Editorial Comment | Related Articles

Key Points

Question Does foster care intervention mitigate the long-term effects of institutional rearing on latent dimensions of psychopathology?

Finding In this randomized clinical trial of 220 children, 119 of whom had histories of institutional rearing, those assigned to early foster care intervention had less problematic trajectories of general and externalizing-specific psychopathology from middle childhood (age 8 years) to adolescence (age 16 years).

Meaning Social enrichment early in development reduces the risk of psychopathology among children with histories of profound neglect during a period of significant social and biological change.

Abstract

Importance It is unclear whether early institutional rearing is associated with more problematic trajectories of psychopathology from childhood to adolescence and whether assignment to foster care mitigates this risk.

Objectives To examine trajectories of latent psychopathology factors—general (P), internalizing (INT), and externalizing (EXT)—among children reared in institutions and to evaluate whether randomization to foster care is associated with reductions in psychopathology from middle childhood through adolescence.

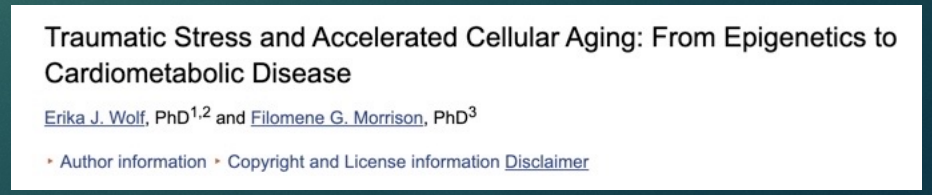
Design, Setting, and Participants This longitudinal, intent-to-treat randomized clinical trial was conducted in Bucharest, Romania, where children residing in 6 institutions underwent baseline testing and were then randomly assigned to a care as usual group (CAUG) or a foster care group (FCG). A matched sample of a never-institutionalized group (NIG) was recruited to serve as a comparison group. The study commenced in April 2001, and the most recent (age 16 years) follow-up started in January 2015 and is ongoing.

Intervention Institutionally reared children randomized to high-quality foster homes.

PLoS One. 2017 Apr 14;12(4):e0175837. doi: 10.1371/journal.pone.0175837. eCollection 2017.

Do people who experience incarceration age more quickly? Exploratory analyses using retrospective cohort data on mortality from Ontario, Canada.

Kouyoumdjian FG[1,2,3], Andreev EM[4], Borschmann R[5,6,7], Kinner SA[5,6,8,9,10], McConnon A[1].



Traumatic Stress and Accelerated Cellular Aging: From Epigenetics to Cardiometabolic Disease

Erika J. Wolf, PhD[1,2] and Filomene G. Morrison, PhD[3]

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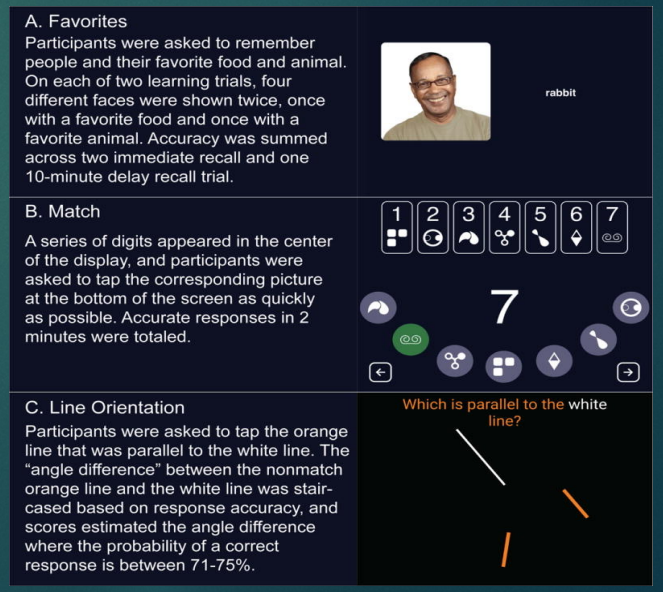
Aims…

3. Find a tipping point in camp where mental health trauma affects cognition, stratified by:

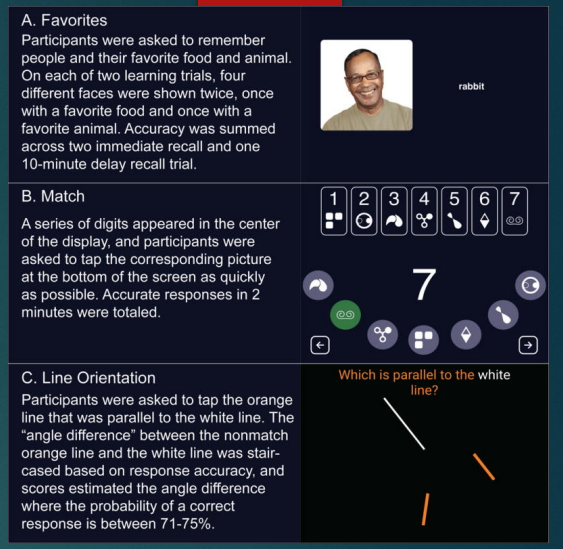
    - Years since displacement (dose-effect relationship)
    - Age groups
    - Gender

Assessing Cognitive Function

- Problems:
  - No single test can collectively assess all aspects of cognitive functioning in this vulnerable group
  - MoCA: Ordinal outcome, No granularity in identifying small changes in CI
  - TabCAT: Validation in progress
- Suggested solutions:
  - Use a mixture of tools that include: MoCA test, TabCAT (if possible), CBT, LFS, ADLs, IADLs
  - Create and compare a composite score



TabCAT: Tablet based Congnitive Assessment Tool



- A software platform developed at UCSF for the administration of clinical and research tools and for the secure storage of, and access to, the data collected.
- The variety of tools available on TabCAT includes cognitive tests of executive function (including NIH EXAMINER subtests), memory, visuospatial skills and socioemotional functions, as well as symptom questionnaires.
- Most tests are available in multiple languages including Arabic
- User friendly, brief, clinical utility, automated instant scoring and storage, ability to detect mild cognitive impairment, test multiple function, can be used in low-literacy and SES

JOURNAL ARTICLE EDITOR'S CHOICE

Migration and Cognitive Health Disparities: The Arab American and Refugee Case FREE

Tala Al-Rousan, MD, MPH ✉, Lily Kamalyan, MA, Alissa Bernstein Sideman, PhD, MPH, MA, Bruce Miller, MD, Rawan AlHeresh, PhD, Alison Moore, MD, MPH, María J Marquine, PhD, Grigoris Argeros, PhD, Kristine J Ajrouch, PhD

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https://doi.org/10.1093/geronb/gbac129
Published: 15 September 2022 **Article history** ▾

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Abstract

Objectives

This study investigates whether the year of arrival to the United States (U.S.) and birthplace relate to postmigration cognitive difficulties among foreign- and U.S.-born Arab Americans in later life.

Methods

We analyzed 19 years (2000–2019) of data from the American Community Survey Public Use Microdata Samples (weighted N = 393,501; ages ≥ 50 years). Cognitive difficulty was based on self-reported data, and weighted means, percentages, adjusted prevalence estimates, and adjusted odds ratio were calculated.

Results

Controlling only for demographics, foreign-born Arabs reported higher odds of cognitive difficulty compared to U.S.-born Arabs across all arrival cohorts (p < .001). After accounting for economic and integration factors, those who arrived between 1991 and 2000 had higher odds (odds ratio [OR] = 1.06, 95% confidence interval [CI] =1.00, 1.19, p < .01), while those who arrived after 2001 had lower odds (OR = 0.87, 95% CI = 0.78, 0.97, p < .001) of cognitive difficulty. Lacking English proficiency (OR = 1.90, 95% CI = 1.82, 1.98, p < .001) was related to higher odds, whereas not being a U.S. citizen was significantly associated with lower odds (OR = 0.89, 95% CI = 0.52, 0.94, p < .001) of cognitive difficulty. Yet, results varied by birthplace. Migrants born in Iraq consistently reported the highest odds of cognitive difficulty across all arrival cohorts.

Discussion

Migration history and birthplace may be important factors explaining cognitive disparities among the diverse group of Arab migrants and Arab Americans. Future research examining mechanisms underlying these associations and the impact of migration on cognitive health is needed to address cognitive disparities in migrants.

Keywords: Alzheimers disease, Health disparities, Migration, Minority aging

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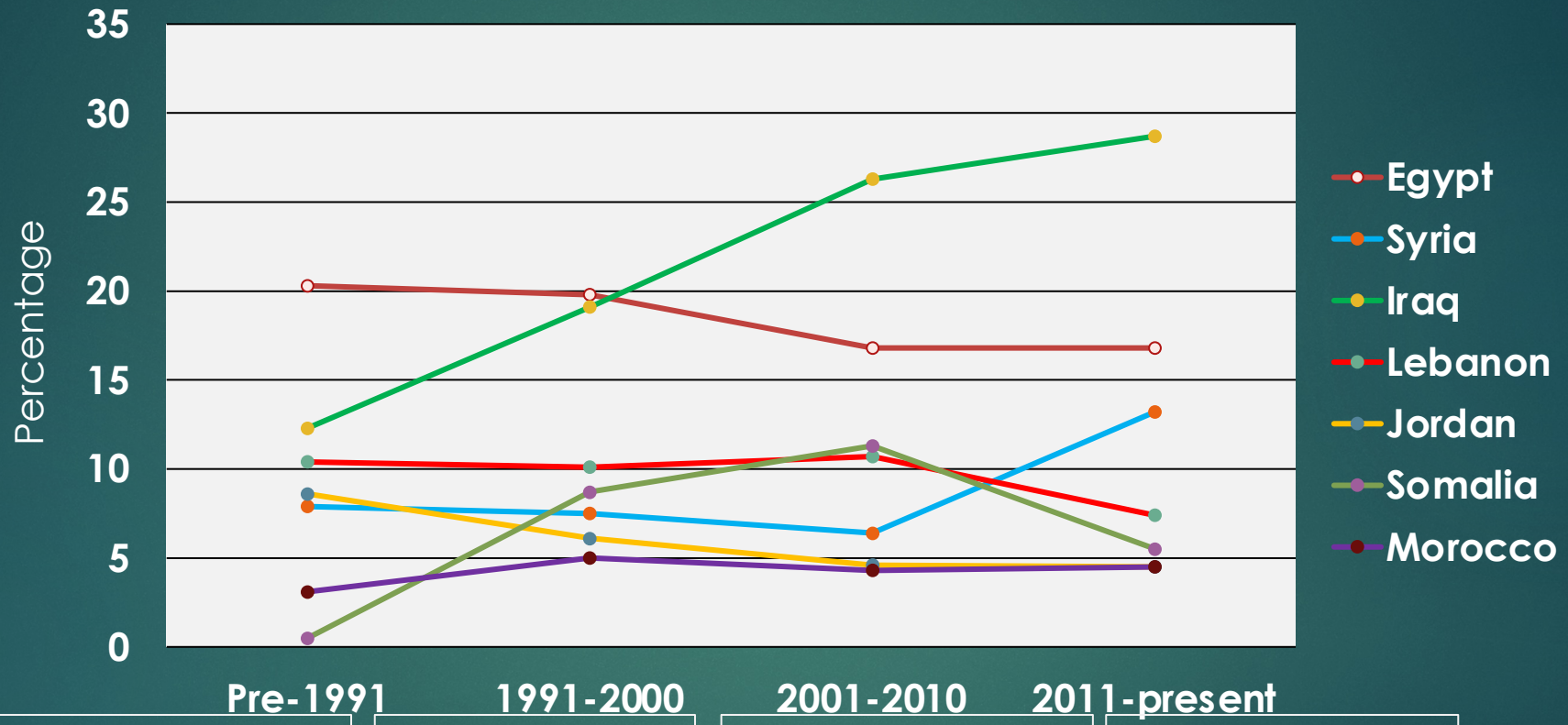
Birthplace by arrival cohort

Figure 1. Birthplace by arrival cohort among Arab-Americans, ages 50+



Pre-1991	1991-2000	2001-2010	2011-present
• 1965 Immigration act lifted restrictions • Regional turmoil caused by Arab-Israel conflict, Lebanese civil war, and Iraq-Iran War	• US involvement increases • 199 Gulf War in Iraq • Increase in religious fundamentalism	• 9/11 terrorist attacks • US Patriot Act restrict immigration • US invades Iraq • Events leading up to Arab Spring	• Arab Spring regime changes • Syrian Civil War • ”Muslim ban”

Collaborating organizations

San Diego Refugee Forum

Zaatari Camp, Jordan. Largest refugee camp in the Middle East

Future Directions

- Create a longitudinal panel study of aging refugees and migrants in San Diego and Jordan (refugees AND vulnerable migrants)
- Study risk factors, cognitive markers (stress, cognition, imaging biomarkers /Amyloid and tau and potentially other biomarkers) to understand cognitive aging in vulnerable migrants (Collaborate with UCSF AD Neuroimaging Initiative)
- Life-course approach to dementia care, more implementation research, policy-informing on equity for older migrants

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Thank You

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