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Advancing an individual-community health nexus: Survey, visual, and narrative meanings of mental and physical health for Arab emerging adults

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Keywords

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1. Introduction

As of 2019, there are at least 3.6 million Arab Americans in the United States (Arab American Institute, 2019). Arab individuals typically identify their heritage with one or more of the 22 Arab League countries and speak Arabic. Arab Americans are individuals who reside in the United States, have Arab heritage, and may or may not speak Arabic themselves (Elmaghraby et al., 2022; Hashem et al., 2020). Arabs and Arab Americans are at risk for discrimination, stereotyping, and varied disparities in physical and mental health likely deriving from structural violence (inequities and injustices embedded in social systems) and infrastructural determinants of health (historical and political frameworks and their lasting impact on ill-health) (Abboud et al., 2019a; N. N. Abuelezam and El-Sayed, 2021; Dubal et al., 2021a; Farmer, 1996; Kira et al., 2014). In addition, Arab and Arab American adolescents and young adults are at higher risk for mental ill-health, diabetes, and tobacco use (N. N. Abuelezam et al., 2018; N. N. Abuelezam and El-Sayed, 2021; S. R. Ahmed et al., 2011; Al-Faouri et al., 2005; Weglicki et al., 2007).

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CRediT authorship contribution statement

Delaney J. Glass: Conceptualization, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Visualization, Writing – original draft, Writing – review & editing. **Zainab al-Tameemi:** Conceptualization, Project administration, Resources, Writing – review & editing. **Stephanie Farquhar:** Conceptualization, Methodology, Supervision, Writing – review & editing.

Declaration of competing interest

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Self-rated health is a very strong predictor of wellbeing in adolescents (Cavallo et al., 2015) and mortality (Bombak, 2013). A systematic review from 2020 showed that among 6 studies of Arab American SRH, prevalence of fair to poor SRH ranged from 4.1 to 41%, with greater likelihoods of poor SRH explained by disadvantaged socioeconomic status, speaking Arabic, being an older Arab immigrant, or being a woman (Albqoor et al., 2020). While it has been suggested that acculturative stress and discrimination promote poor self-rated health, some do not find this relationship (Suleiman et al., 2021). Heterogeneous findings may be explained by the fact that people identifying as Arab or Arab American have varied experiences with structural violence such as racialization, discrimination, socioeconomic challenges, and immigration experiences. This variation likely influences individual experiences of ambient structural violence and how health is perceived or reported. Some epidemiological research and in-depth interview studies on self-rated health find that greater heritage identity decreases the odds of poor SRH (Suleiman et al., 2021) and that SRH is determined by psychological wellbeing and the presence or absence of physical conditions (Abdulrahim and Ajrouch, 2010). Although a reliable measure of overall health and mortality in general, it is not well understood why SRH is a universal and robust predictor of mortality (Jylhä, 2009). For Arabs and Arab Americans, less is known about the logics individuals apply to understand their own health. Varied findings regarding SRH for Arab Americans may be aided by qualitatively informed methods which seek to understand how individuals arrive at conclusions about their own health and what health means to them. Recognizing that states of health commonly proxied through SRH are not merely physical, and that mental health is also biological (Levinson and Kaplan, 2014; Sancilio et al., 2017; Syme and Hagen, 2020) more multi-method research is needed to understand gradients of both physical and mental ill-health experience, especially using methods which prioritize voices underrepresented in research (J. Krieger et al., 2002; Miled, 2020).

The need to demonstrate person-centered experiences of health for Arab and Arab American emerging adults—both physical and mental—is evermore essential given that a majority of mental health disorders arise in the adolescent to young adult age ranges of 10–25 years old (Copeland et al., 2011; Uhlhaas et al., 2023). While self-rated health may generally be higher in adolescence and young adulthood (youth protective effects) and decline with age (Cavallo et al., 2015), Arab and Arab American emerging adults are often made to cope with the harms of racialization and securitization of their identities and physical bodies as they come into adulthood in the United States (Finn et al., 2018). Experiences of stigma and discrimination have been shown to influence well-being (Brewis et al., 2011), ethnic identity formation, and self-concept for Arabs and Arab Americans, in some ways similar to other minoritized and historically excluded communities (Tabbah, 2021). Furthermore, it is imperative to contend with the needs and perspectives of Arab and Arab American emerging adults who have distinct physical and mental health needs, challenges, and perspectives which may have been previously overlooked through epidemiological investigation of SRH or due to Arabs and Arab American's varied visibility as minorities (K. K. N. Ahmed, 1998, 1998; Tabbah, 2021).

To further explore perspectives about self-rated physical and mental health, we asked the following questions: 1) What does the mental and physical health landscape look like for Arab and Arab American young people? 2) How do they arrive at understandings of what

it means to be healthy or unhealthy? What are salient connections between individual and community-health for Arab and Arab American young people? And 3) How can we apply what we have learned to improve health for this community? We explored these questions using a mixture of online semi-structured surveys (n = 25) and visual ethnography through PhotoVoice (n = 4) among Arab or Arab American emerging adults ages 18–25 who live in Western Washington State.

1.1. Theory

This study was informed by a framework of embodiment and The Theory of Minority Stress. Understanding what health means to individuals and communities through time and space (Edu, 2022, 2023) has been informed by frameworks of *embodiment*. Public health and anthropological models of embodiment suggest social experiences like structural violence are embedded in biological and health outcomes (Gravlee, 2009, 2020; Hertzman and Boyce, 2010; N. Krieger, 2005; Louvel and Soulier, 2022; Walters et al., 2011). These models have traditionally focused on understanding how *local biologies* (Lock, 1993; Lock and Kaufert, 2001) are produced through culturally contextualized social and physical environments. Models of embodiment have typically identified health (and the potential for intervention) within bodies themselves (Béhague, 2020; Harris, 2023) which "prioritizes body-focused orientations to health …" (Yates-Doerr, 2017, p. 150–151) effectively "foreclosing orientations to health less concerned with bodies" (Yates-Doerr, 2017, p. 150–151). Critical medical anthropologists have put forward social-relational definitions of health which recognize health as being more expansive than just the body (Louvel and Soulier, 2022). Instead, 'the' body is considered *multiple*: as individual, social, and political (Holmes, 2023; Scheper-Hughes and Lock, 1987).

Social-relational models of health are necessary to connect individuals across time, generations, and places allowing community-based knowledge to direct the meanings of and action upon which health is understood (Schultz et al., 2016; Yates-Doerr, 2017, 2020). This type of innovative thinking about health and by proxy, embodiment, are especially pivotal for communities with varied experiences living in diaspora (in the case of first- or second-generation Arabs) and establishment of community identities across generations (in the case of Arab Americans).

To better ascertain social-relational forms of embodiment and health we draw from Minority Stress Theory. Minority Stress Theory originally integrated epistemologies from public health, psychology, and social welfare to explain disadvantaged mental health and psychological outcomes among sexual minority populations (Brooks, 1981; Frost and Meyer, 2023; Meyer, 1995; Meyer and Frost, 2013; Rich et al., 2020) and has been used to understand minoritization and multiple minority stress, identity, and resilience (Bowleg et al., 2003). Minority Stress Theory focuses on ambient socioecologies which create disadvantaged status (e. g., racial/ethnic identity, gender), minority identity, sources of proximal and distal stressors, as well as individual and community-level social supports and their effects on health (Meyer, 2003).

In this study, we focus on three dimensions: identity, coping and social supports, and health outcomes. Prior work using Minority Stress Theory among Arab Americans found

that experiences of racism were associated with greater psychological symptoms among adolescents (S. R. Ahmed et al., 2023). Outside of the U.S., a systematic review of LGBTQ+ Arabs found depression, anxiety, suicidal ideation, and PTSD were common (Hayek et al., 2023). Prior work among Arab Americans suggests experiencing exclusion and discrimination may push or pull Arab youth/young adults towards or away from their ethnic and cultural identities with varied ramifications towards health (Branscombe et al., 1999; Hashem et al., 2020; Tabbah, 2021). A study among Arab American adolescents ages 13–18, showed greater sociocultural adversity was positively associated with psychological distress, whereas greater cultural resources (e.g., religious support, ethnic identity, religious coping) buffered against effects of sociocultural adversity (S. R. Ahmed et al., 2011). Other research drawing on photo elicitation highlights the importance of community connection and identity as well. A PhotoVoice project in the Arab American National Museum highlighted the positive effects of art therapy on PTSD symptoms, anxiety, and somatic symptoms for recently resettled Arab adolescent refugees (Feen-Calligan et al., 2023). Moreover, another study using thematic analysis and PhotoVoice, found that first and second generation Arab adolescents are able to enact positive change via their sense of agency combined with their experiences and awareness of community connection and structural challenges (Smith-Appelson et al., 2023). Therefore, we believe attention to identity, community, and health outcomes (self-rated health) may yield a broader vision of what health means beyond physical bodies alone for minoritized populations such as Arabs and Arab Americans.

1.2. Arab and Arab American health in Washington

In Washington State, there are an estimated 40,000 individuals of Arab origin living in 35 out of 39 counties, primarily of Moroccan, Sudanese, Egyptian, Iraqi, and Somali descent (Bureau, 2017; Washington, 2019). The population of Arab origin individuals in Washington State is comparatively greater than other U.S. states, however comparatively lower than states with very large ethnic enclaves in Michigan, New York, Texas, and California. With few exceptions (Hasan, 2020; Singh, 2002; Widner and Chicoine, 2011; Witteborn, 2004), there is very little epidemiological or anthropological research centering Arab or Arab American health in Washington State. This may be due structural violence of racialization and simultaneous erasure through the lack appropriate identifiers for population-based studies, leaving Arabs and Arab Americans as an “invisible minority” (Abdulrahim and Baker, 2009; N. Abuelezam, 2018; Hashem et al., 2020). Many Arabs and Arab Americans living in Washington State immigrated in waves, particularly from The Gulf War in 1991, The U.S. Invasion of Iraq in 2003 , and the Syrian Civil War 2011-present as well as various protracted conflicts in other nation-states. Many such conflicts and their resulting refugee flows encompass a complex *system* and *infrastructure* (Arar and FitzGerald, 2022). Colonial violence of forced displacement and border drawing, neoliberalism, austerity, systems of debt (specifically, IMF loans), and U. S. interventionism are examples of infrastructural determinants of health which have direct and downstream impacts on Arabs and Arab Americans.

Our motivation was to understand Arab and Arab American physical and mental health. In the Seattle area, the Iraqi Arab Health Board of Washington (IAHB) has been mobilizing

on-the-ground support for the Arab and Arabic-speaking community. They were founded by two Iraqi individuals and their efforts are focused on building capacity for health promotion, awareness, and equity for Arabs and Arab Americans in Washington State. Working with the IAHB, one of our broader study goals was to establish formal institutional research ties with a community organization doing the everyday work of connecting individuals to community resources and promoting wellbeing and health for Arabs.

2. Materials and methods

2.1. Research team and reflexivity

DG is a Ph.D. (Biological Anthropology) candidate and MPH (Epidemiology – Maternal and Child Health) in departments of Anthropology and Epidemiology. She is a Muslim convert who speaks Arabic and does human biological and social research in multiple global, and U.S. based populations, with expertise in qualitative and quantitative methods. ZT is an MD and MPH, the founder of the Iraqi Arab Health Board of Washington and expert in health equity, refugee health, and health services. SF is a Professor of Health Systems and Population Health, PhD (Health Education and Health Behavior), and the Director of the Community-Oriented Public Health Practice Program with over two decades of experience in community-based research.

2.2. Participant selection

Individuals identifying as Arab or Arab American, ages 18–25, who live in Western Washington were recruited to participate in the survey, the PhotoVoice portion of this research, or both. We used convenience sampling and invited participation from those who were interested in helping to identify unique physical and mental health needs of the Arab and Arab Americans. We recruited individuals into our study at community events, on social media, and through email listservs at organizations serving the Arab community at large. Twenty-five participants completed the online survey, and four participants took part in the PhotoVoice portion. PhotoVoice participants received a $100 Visa gift card after completion of the study. Survey participants did not receive compensation for their participation.

2.3. Data collection

2.3.1. Survey—Survey participants took a 15-min survey we created, online through The REDCap (Wright, 2016)—a secure online platform for surveys and databases—between December 2022–February 2023. Sociodemographic information included: self-identified gender, ethnicity, age, and educational level. We asked about SES using the following question: *"If you had a large, unexpected bill (utilities, medical) that came up next month, would you have to do any of the following?"* Wherein participants answered "yes" or "no" if any of the following applied to them: having to borrow money, use a credit card or go into debt, or choose between paying rent and the unexpected bill (See Open Science Framework repository in Data Availability below for a link to the full survey). Participants included information about their immigration histories such as where they were born, where they spent their childhood/teen years, and where their parents were born. We included these questions because identification as Arab or Arab American may vary based on tenure in the United States and we did not want to make assumptions about their status. Additionally,

there is little state, county, or city-level data on Arabs living in Washington State and self-rated health may be influenced by relative immigration and acculturation experience (N. N. Abuelezam et al., 2019).

We asked participants to complete their Self-Rated Physical and Mental Health on a scale ranging from *Very Poor* to *Excellent*. Self-rated health is a valid and reliable measure of perceived health that has been linked with multiple population health outcomes such as chronic stress, illness, and mortality (Bombak, 2013). We gave participants an opportunity to describe any physical or mental challenges using open-ended response boxes. We were interested in learning how participants make assessments about their health. Health is shaped by individuals and within networks, communities, and populations (N. Krieger, 2005; Michalski et al., 2020; Niewöhner and Lock, 2018). We asked a close-ended question about signs or indicators participants use most frequently when considering their own health status and to whom they compare their health status to (affirming one or more sentiments presented). We created a question which asked them to select all Health Indicators they rely on when rating their own health which included: *my body size, my body shape, how I feel physically, how I feel emotionally, bloodwork or physical check-ups from a doctor's office, how physically active I am, what or how much I eat, or none of these signs and indicators*. As we suspected self-rated health may vary based on comparisons to individuals in proximal and distant networks (Carrieri, 2012; Hewlett, 2021; Sayag and Kavé, 2022), we created a question which asked to whom participants compare their health statuses. We call this measure Individual-Social Health Comparison, which included: *my past health, my best friends, peers/classmates, my parents, my siblings, my extended family members, people on social media I know, people on social media I don't know, or famous figures/celebrities*, or the option to leave blank. Given that participants were late adolescents or young adults, it was important to understand how they rated their health in comparison to their same-aged peers (Cavallo et al., 2015). For Self-Rated Health Compared to Peers we adapted a question from an existing self-rated health scale (Eriksson et al., 2001). Participants rated their mental/physical health on a scale from *Much Worse* to *Much Better* compared to their same-aged peers.

Lastly, we asked several open-ended questions about religiosity, connection to Arab heritage and identity, and health needs as prior research has established connections between these factors. We were also motivated to ask these questions because members of the Arab community discussed the potential influence of religiosity and connection to Arab culture on mental health during informal conversations with interlocutors within the Iraqi Arab Health Board of Washington (Abdel-Khalek, 2019; Abouhala et al., 2021; N. Abuelezam, 2018; Goforth et al., 2014). Regarding Religiosity, we asked participants if they were religious (why or why not). We asked about Connectedness to Arab Identity to better understand proximity to Arab identity (language, heritage, cultural practices) and potential connections between identity and health (See Data Availability).

2.3.2. PhotoVoice—PhotoVoice participants were enrolled December 2022–January 2023 if they met the age requirement, identified as Arab, and wanted to participate. They participated in PhotoVoice meetings in February 2023. PhotoVoice is an intensive research method requiring significant participant effort across consecutive weeks. Six people

originally expressed interest in participating, and four people completed the PhotoVoice component. Four participants participated in all three meetings. While some PhotoVoice participants may have taken the survey, there was no way to establish a connection between their survey and PhotoVoice data as unique identifiers were not collected. PhotoVoice is a community-based participatory research method which enables participants to respond to research questions through taking their own photos and to magnify their own experience in writing, reflecting on what their photos represent to them (Sutton-Brown, 2014). PhotoVoice as a method intertwines ethnographic methods, experiential knowledge, visual representation, and dialogue and it is particularly appropriate in settings where population groups have been silenced, erased, or suppressed in social, political, or economic realms (Sutton-Brown, 2014). PhotoVoice opens opportunities for participants to make recommendations to stakeholders involved in research, policy, or population health decisions (Miled, 2020; Necheles et al., 2007; Strack et al., 2004). Two PhotoVoice meetings took place in person and the third and final meeting took place online on Zoom, a platform for video conferencing. Participants were asked to respond to the below prompts to guide their photo-taking process:

"How does health look and feel?"

"What does health mean to me?"

"What weighs on my mind or heart?"

"What makes me feel seen?"

"What is the relationship between my community and my health?"

"Do my health and my identities interact?"

Before responding to prompts, participants were given instructions and an opportunity to discuss the process of taking photos and visual ethics (See Data Availability). Participants were not given a limit of photos or prompts but were asked to answer at least two prompts and take 1–4 photos per prompt. Participants used their mobile cellular devices to take photos but were given the option of being provided a disposable camera on an as-needed basis. During the first PhotoVoice session participants completed informed consent forms, learned about the PhotoVoice method, and reviewed the PhotoVoice assignments in a written document (See Data Availability). PhotoVoice participants used the two weeks in between the first and second meeting to take photos (responding to prompts) with their cellphones. At the second meeting participants shared photos and developed summaries of what the photos represented. During this meeting, participants reflected on their photo taking experience (*Was it difficult? Did you learn something in the process?*) and were given time to write out summaries of their photos with guiding questions given by [name redacted for anonymity]: *What is happening in this photo? What prompt was I responding to? What is being conveyed in this photo? What do I want others to know?* The final meeting took place online with the Iraqi Arab Health Board of Washington where participants shared their photos and writings and made formal recommendations to the IAHB for considerations as they develop a youth-focused health promotion program within their organization.

2.3.3. Data analysis—Survey data from 25 non-identifiable participants were cleaned and analyzed in program R [Version 4.2.3]. We ran frequencies and summary statistics on all survey data. For open-ended survey items, we narratively analyzed the responses rather than following a strict thematic analysis protocol (Butina, 2015). PhotoVoice data, including photos and participant summaries, from four participants were organized by the PhotoVoice prompts described above. PhotoVoice participants were not asked to disclose their sociodemographic information and were referred to by pseudonyms. All PhotoVoice participants decided which photos and narratives to use at the meeting with the IAHB and which to include in peer reviewed publications. [name redacted for anonymity] made selections of photos that expressed a broad range of experiences depicting life in the United States and abroad which highlighted the social and geographic positionality of Arabs in Western WA. Photo narratives that were longer and more detailed were prioritized although DG aimed to balance the photo selection to reflect all participant experiences.

DG narratively analyzed the photos and summaries of the photo experiences by placing photos in categories according to the original prompts, then re-categorizing into macro-categories of *individual-community health, identity-community health, feeling seen*, and *the weight of health*. These categories, while not established via thematic analysis protocols, can be interpreted as broad themes which represent participants' narrative experience. Following this, she read through all the summaries accompanying each photo, the open-ended survey results from other participants, and considered the narratives of both the survey and PhotoVoice together. We used triangulation (Fielding, 2012; Flick, 2004) of survey and PhotoVoice results to assess overlapping ideas which aided in our development of overarching themes. We used triangulation to identify where there may have been divergences or independent ideas emerging from each respective method. For both survey and PhotoVoice, we did not adopt a Grounded Theory framework and used narrative analysis to understand participant experience, sometimes drawing out themes that were emphasized by participants to offer a more cohesive vision of participant experience.

2.3.4. Ethics—The University of Washington Internal Review Board formally determined this study (STUDY00016814) was exempt from continued human subjects review (category 2iii). Informed written consent was still obtained from all participants. PhotoVoice participants were made aware in the consent process that using photos of themselves would make them identifiable and PhotoVoice participants made the final decision about how their photos would be used, including use in this publication. All participant PhotoVoice data is referred to using pseudonyms.

3. Results

3.1. Survey

3.1.1. Participant sociodemographic Characteristics—The survey we implemented aimed to understand how Arab and Arab American emerging adults rate their physical and mental health and to get a more cohesive understanding the health 'landscape' for this community. More specifically, it was meant to measure self-rated health and factors that influence individual logics about health (e.g., health comparators). A total

of 25 individuals completed the survey out of 37 who consented but did not continue to fill out any of the survey. We do not know why 12 individuals chose not to take the survey after consenting, although we suspect it may have been due to the nature of taking it online (opening a tab and then getting distracted) or perhaps potential participants decided against taking it after seeing the initial questions. The median age of survey participants in the study was 21 years old (range18–33). While we only recruited individuals 18–25 years old, we retained survey responses and analyzed data from the few individuals who self-identified their age as older on the survey to maximize the available data given by a limited number of participants. Less than half of the participants elaborated on their self-identified ethnicity beyond identifying as Arab. Among those who did, participants reported “Middle Eastern”, “West Asian”, “Iraqi”, “Egyptian/Malaysian”, “Arab-Jordanian”, “Palestinian”, and “Arab American”. Every participant who responded noted that their parents were not born in the United States, but about half of the participants lived in the United States as a child or teenager.

Ten participants identified as women, six identified as men, and one as genderqueer; eight did not identify their gender. Of those who responded to the education question, over half reported having either an associate or bachelor’s degree and the other half of participants reported a mix of Ph.D./Professional degrees, some college, or high school only. Among 15 participants who responded to a question about socioeconomic status, 20% (n = 3) chose an affirmative response indicating that if they had an unexpected medical or utility bill they would have to borrow money from friends or family, take out a loan or debt, or choose between the bill and paying their rent whereas 80% (n = 12) reported they would not have to do any of those things (See Table 1). Overall, our sample may have been more representative of individuals who have more advantaged socioeconomic status and higher educational attainment, and evenly distributed among individuals who were born in the United States versus born outside of the United States.

3.1.2. Physical and mental health challenges: Nuances beyond self-rated health—Despite most participants reporting their physical health as “Good”, half of the participants (rating their overall health as poor, good, or excellent) reported in an open-ended format a myriad of physical health challenges including: weight gain/loss impacting physical and mental health, physical exhaustion from employment which requires standing, extreme pre-menstrual symptoms, anemia, irritable bowel syndrome, low physical energy, nausea, body aches, high blood pressure/heart rate, frequent respiratory infections, and autoimmune conditions. About 24% of participants rated their mental health as poor (Fig. 1), and when asked them to expand on mental health challenges (regardless of self-rated mental health), participants wrote in responses which included the following: coping with anxiety and depression, lack of resources on a community level and living in a high stress environment, low self-esteem, lack of support from family members, long work and school days, poor sleep quality, gender and body dysphoria, PTSD, ADHD, recovering from trauma and abuse, suicidal ideation, social pressure, and isolation. These findings collectively highlight the breadth of issues impacting this group of participants and gives a more nuanced perspective about what individuals refer to when they speak about mental health issues facing the Arab community. While the range of challenges was wide, there was a dual

emphasis on both a perceived lack of support and a desire for community support for better health. This underscores the importance of health as relational concept.

3.1.3. Embedded health: Reference points and comparisons—All survey participants answered questions about what they use as comparators or reference points when assessing their self-rated health, with affirmative answers ranging from two to 14 per participant. We found participants look towards how they feel physically and emotionally (80–84%), followed by their physical activity as the predominant reference points for their own physical health. Participants also identified bloodwork from a doctor (60%), what they eat (52%), and their body size or shape (each 40%) as influencing their health status (Table 2). We call this "Embedded Health" which underscores the idea that self-rated health relies on numerous factors and is informed by participants own appraisals (how they feel) as well as social appraisals of health (perception of their body, blood work by a doctor).

We also aimed to understand connections between self-rated health and sociality. For emerging adults, we were concerned with ratings in comparison to peers and to whom individuals compared themselves to when rating their own health. When participants (n = 18) were asked how they would rate their physical health compared to same-aged peers, 33% of participants rated their health as a little better than their peers, 30% rated their health as about the same, 30% as a little worse, and less than 10% rated their physical health as much worse than their peers. Compared to their same-aged peers (n = 14), 14% rated their mental health as a little better than their peers, 30% rated it as about the same as their peers, 21% as much better, and 35% as much worse.

Survey participants were asked about to whom they compare themselves to when they consider their own self-rated health. Twenty-one participants answered these sets of questions, with the number of affirmative responses per individual ranging from one to eight people, signifying some individuals use more or fewer comparators than others which may speak to participants own sense of self confidence or their reliance on their peers to make sense of their own health. Participants overwhelmingly reported that they compare their health to their own past health status (90%) meaning that their current health status may be lower if their perception of their prior health status was greater. This was followed by peers or classmates (50%) and people they see on social media who they do not know personally (50%). An appreciable proportion of participants also reported that they compare their health to their family members (primarily siblings and parents), best friends, and people on social media they do know or famous figures (Table 3).

3.2. PhotoVoice

Through informal conversation and context provided in their narratives and photos, all PhotoVoice participants (n = 4) were between 18 and 25 years old, identified as Arab, and were from or had family heritage in Syria, Palestine, Egypt, and Lebanon. There were two women, one non-binary, and one man who participated. Three major themes were identified as representing participant experiences and expanded upon below: *Mental Health Challenges in Diaspora, Leading a Healthful Life*, and *Individual- Community Health Nexus*.

3.3. Mental health challenges in diaspora

PhotoVoice participants related their experiences of separation and being in diasporic communities to their health outcomes, which further highlighted the complexity of mental health issues shown in the survey results. Some participants expressed how being forced or choosing to leave their community challenged their mental health, whether it was metaphorically leaving a part of their identity or being physically separated. For example, Arwa (pseudonym) explained:

> "As a queer ex-Muslim woman, growing up in West Asia made me feel incredibly isolated and detached from my culture … It took a lot of therapy and soul-searching … to find a way to love my identity as an Arab despite all the hurts that I've experienced as a direct result of living in an Arab country … Being away from home makes it harder to connect to my roots, but it's also made it safer to explore my sexuality, gender identity, and spirituality (Fig. 2)."

Arwas experience speaks to the challenges of identity formation and mental health within community settings. While "communities" are broadly discussed as helpful, some community ties and affinities may also be harmful and stigmatizing. Despite being far from home, Arwas experience of being in diaspora has positively allowed for a reappraisal of other aspects of their identity and health. In a way, Arwa is redefining what it means to be a queer Arab person. This was emphasized by the photos Arwa took which implied self-protection and care. Moreover, Arwas experience suggests coping is flexibly called upon to make sense of identity experiences, contributing to the importance of coping within a Theory of Minority Stress (Bjorkman and Malterud, 2012). In a similar vein, Lena discussed her experience with mental ill-health as a result of being in diaspora, emphasizing a greater longing for being back home out of care and concern for those who were not able to leave. In both cases, experiences of mental health in diaspora speak to (but of course, cannot *speak for*) the unique positionality of Arabs in Washington and in the United States who have heterogeneous feelings about and connections to communities locally and abroad. Moreover, the narrative experiences of Lena and Arwa suggest that health is overwhelmingly social, relational, and geopolitical.

Lena (pseudonym) described living in Washington:

> "I feel like I don't deserve to be in a safe place when my family and friends are stuck behind. This picture represents freedom during the revolution that happened in Lebanon. Some people volunteered and painted on a famous old building … The meaning behind this was to give hope to everybody that was still living there, so now this place is a place of peace and hope … It will always be weighing on my heart because I was one of the people that left at one point; rather than staying there just like everybody else having the same limited opportunities as them (Fig. 3)."

3.4. Leading a Healthful Life

Focusing less on the *embeddedness* and social-relational modes of health suggested by some PhotoVoice and survey results, some PhotoVoice participants emphasized individual choices which may lead to a healthful life. For example, Alaa (pseudonym) noted:

> "When I think of health I think of preventive health and following healthy lifestyle choices as they can have a huge direct and indirect impact on improving physical or mental health …"

(Fig. 4)

Alaa dedicated several photos related to this theme that made central culturally important foods and physical fitness depicted through photos from Qatar (Figs. 4 and 5). Alternatively, Farah (pseudonym) discussed outdoor recreation as a mode of physical health that she often participates in with friends in Washington. For example, she states:

> "… As someone who derives pleasure from communing with nature, hiking is one of my favorite pastimes through which I can immerse myself in the organic beauty of the outdoors."

(Fig. 6)

3.5. Individual-community health nexus

Despite some recognition of individual choices to promote health, a dominant narrative thread in the PhotoVoice component of the study was the idea of an *individual-community health nexus* which fluidly connects individual concepts of health and wellbeing to that of the communities they are embedded in. We view this nexus as definitionally flexible, but underscores health as a social-relational process. For example, one participant dwelled on the meaning of social connection saying:

> "Social networks play an important role in obtaining better mental and physical health outcomes."

This was represented through Alaa's photo which depicts Muslims gathering at a mosque he had recently visited in Qatar (Fig. 7). This suggests that religion is important for his sense of community and that the Muslim communities he is a part of are both individual (following a spiritual path) and also communal (participating in shared understanding, ritual, meaning, and social commitments). His photo choice reflects his experience as a Palestinian in diaspora finding support among family and friends who have been forcibly displaced to other countries. In this way, the community health nexus is global for some participants.

On the other hand, Arwa reflected on the critical support of local social ties when hearing about a crisis in Syria and being left to cope from a distance. Arwa represented this by taking time to decompress with animal emotional supports:

> "… Being Syrian, I'm often bombarded with news of one humanitarian crisis after another from my home, and the mental toll it takes can be unmanageable at times. Having a support system that both gives me space to grieve as well as helps me get out of my head is the only way I can cope effectively."

(Fig. 8)

Reliance on friends, kin, religious communities, and non-specific community members both locally and in varied countries is foundational to the individual-community health nexus for Arabs and Arab Americans in this study. The individual-community health nexus is expanded and contracted as needed to meet the physical and health needs of individuals

and this model of social-relational health may be particularly salient for marginalized youth and emerging adults. For example, Lena expanded on her experience volunteering with a local organization making prayer beads (tasbih) that would be part of gift baskets for newly arriving immigrants and refugees.

> "I had volunteered with an organization, and we made free baskets for them. So that we could show them that they are appreciated and welcomed … I receive joy when I help others, and somehow the universe gives that back to me in one way or another."

(Fig. 9)

Farah also emphasized the individual-community health nexus for example she remarked:

> "This photograph was captured in Sharm El Sheikh, Egypt, during a family vacation by the coast … Visiting my home country and spending quality time with my family can have a significant positive impact on my mental and physical well-being, effectively aligning and intertwining my sense of identity with my overall health"

(Fig. 10)

The *individual-community health nexus* is also apparent in the survey results giving greater depth to the concept of health that emanates from individual and community experience. Most of the survey participants grew up in the United States, whereas all survey participants' parents were not born in the United States suggesting the nexus between individuals and communities is necessarily expanded globally for those in this study and impacted by connection to Arab heritage and culture. About half of all participants (survey and PhotoVoice) were not born but did grow up in the United States which also suggests that highly established local Arab community identity and support may continue to be strengthened over time. In this way, participants in this study have found ways to create their own sense of culture and heritage. Survey participants were asked about how well connected they feel to the Arab community in Western Washington and of the 60% who responded (n = 15), most said that they felt connected the Arab community primarily through speaking or learning Arabic, watching Arabic and Arab produced TV and films, and engaging in activities with other Arabs. Some participants emphasized the joy they feel from taking pride in their identities and their appreciation for the steps their families took to preserve their ability to identify with their Arab heritage. For example, in an open-ended survey response a survey participant emphasized:

> "My family also raised us connected to our Jordanian culture, like the food we eat and the dialect we speak and the clothes and the cultural jokes."

Others de-emphasized this connection. For example, some participants reported they are not fluent in Arabic and do not feel very connected to other Arabs, but still choose to stay connected in ways that feel meaningful to them (e.g., attending group events on occasion). Despite conflicting notions of connection to the Arab community more broadly, participants reported feeling supported by parents, siblings, cousins, mental health resources (e.g., therapy), and local groups that serve the Muslim community at large. This should be

noted with the caveat that Arabs and Arab Americans have numerous religious affiliations, but our study may have been more representative of Muslim and agnostic experiences.

In discussing the survey and PhotoVoice results with the IAHB, the board members affirmed many of the participants experiences and they were able to relate to numerous mental health struggles as asylee's and migrants themselves. This shared understanding of health is a strength for community partners seeking to improve community outcomes for Arabs and Arab Americans. The IAHB board members reiterated their interests in providing greater support for Arab and Arab American young adults in their community through continuation of their programs on mental health awareness.

4. Discussion

Our study used three categories of the Minority Stress Theory including identity, coping, and social supports to better understand the logics individuals apply when they rate their physical and mental health. We find that self-rated health is informed by several factors or logics which individuals apply to their own appraisals of health and wellbeing. Participants use a variety of reference points and comparisons to their past selves, appraisals of their own bodies, and others in their social networks to understand their own health and states of 'un-health.' In this way, 'unhealth' may be provisionally defined as states of physical or mental challenge that are taxing on individuals in in relation to their own experiences of latent structural or infrastructural determinants (Dubal et al., 2021b) or in the way they interact with or are affected by their proximal and distant communities (Michalski et al., 2020). A previous qualitative interview study among Arab immigrants in Michigan found that self-rated health depended on presence or absence of physical conditions and psychological wellbeing highlighting themes such as "pulling away from extremes" (Abdulrahim and Ajrouch, 2010) when self-rating their health. In our survey results we found that while extremes were not necessarily represented for self-rated physical health, extremes in both physical and mental health were shown by participants in open-ended survey questions following questions about self-rated health. The breadth of mental and physical health challenges presented provides a more dynamic understanding of health for these participants.

Our PhotoVoice and open-ended survey findings suggest health is social and relational, underscoring the necessity of thinking about health beyond appraisals of and about the body itself. We suggest health is understood as a social-relational process—what we refer to as an *individual-community health nexus*—represented by participants qualitative experiences. Community affinities are not entirely positive towards health for some participants and the social-relational impacts on health may vary based on layers of personal and collective identity or multiple marginalization. Participants dwell on *mental health challenges in diaspora* that are indicative of complex geographical, temporal, and personal ties to negotiating their experiences as Arabs and Arab Americans living in the United States. For example, some participants alluded to the advantages and disadvantages of living in diaspora. In the open-ended survey responses, some expressed ambiguity towards their connection to Arab identity, languages, and cultures, whereas through triangulation with PhotoVoice, we found richer, more complex understandings of health and connections

between health and community identity. This contributes to new understanding of health as relational and brings forward the role of community and identity in consideration of self-rated health for minoritized individuals (Walls et al., 2022).

Both in narrative and metaphor, PhotoVoice participants bring into focus individualized realities (e.g., striving for a healthful life, focusing photos with a first-person perspective) and emphasize multiple layers of an *individual-community health nexus* through the photographs they chose which depict both distant and proximal kin, friends, and others who are integral to physical and mental forms of health (e.g., Figs. 4 and 7). This nexus is temporally and geographically extended in part due to the participants' experiences as Arabs from Palestine, Syria, Lebanon, and Egypt living in diaspora communities. Future research may consider implementing methodologies which ask participants about their own social and health histories while also placing them in context of their communities and historical process and events that may be influencing their life course trajectories. Research among First Nations Peoples and Native Americans on 'historicizing health inequities' (Mohammed, 2010) to better understand social determinants of health as well as investing in models of health which include resilience and survivance (Wilbur and Gone, 2023) are potent examples of future directions to integrate with Theory of Minority Stress and social-relational models of health.

Prior epidemiological and population based studies have shown that Arab Americans and Arab immigrant/refugees have a higher risk of poor mental health (N. N. Abuelezam and El-Sayed, 2021; Pampati et al., 2018) and may face poor physical health outcomes from a variety of factors including discrimination and structural violence which may be exerted both from the geopolitical circumstances that created their diasporic experiences to begin with, as well as forms of systemic oppression and racism through everyday encounters (Abboud et al., 2019b; N. N. Abuelezam et al., 2017, 2018). Our study findings show both incongruity and congruity with prior findings on poor health and structural violence.

Contrary to other studies, participants rated their physical health as good or above. This may reflect protective aspects of younger age towards physical health or selection bias. Survey participants were on the whole, college-educated and relatively well connected to resources, which limits our ability to understand gradation in socioeconomic positioning, racialization, and other sociodemographic factors in this study and how they may be influencing self-rated physical health vulnerabilities.

On the other hand, our findings are congruent with many studies showing disadvantaged self-rated mental health, which may reflect age and developmental-related vulnerabilities to mental ill-health (Uhlhaas et al., 2023) in combination with having experiences of displacement, fractured community ties, and the stressors of minoritization and racialization. Overall, our findings support the view that Arabs and Arab Americans living in the United States cope with structural violence and risks to poor health, but there is also heterogeneity in health status and perspectives about health among and within Arab communities. This contributes to understanding individual and collective experiences of trauma and stress affecting marginalized communities under the Theory of Minority Stress. At the same time, many participants in our study emphasized methods of coping and integration of cultural

resources within a *individual-community health nexus* which can be used to positively influence health and wellbeing for adversity impacted Arabs and Arab Americans. We suggest social-relational processes of health are both in *flux* (e.g., through separation, migration, varied connection to Arab heritage and identity) and *flexible* (e.g., reliance on multiple global networks, comparison to peers and family and connection with them). This became evident through the photos Lena, Arwa, Alaa, and Farah took from natural areas and personal spaces in Western Washington, as well as from the time they spent in other countries (Qatar, Egypt, Lebanon), and the narratives they arrived at about their experiences. This adds value to still limited understandings of subjective and self-rated health in minoritized communities (Kuehne et al., 2015).

4.1. Applications to emerging adult and adolescent empowerment

PhotoVoice findings about the tensions of living in diaspora as a first or second generation person, are concurrent with research in other minoritized immigrant groups in global contexts (Amoah et al., 2020; Caxaj and Gill, 2017) centering the Duboisian notion of *double--consciousness* (Abdul-Jabbar, 2015; Du Bois, 1903). The *individual-community health nexus* provides a starting point for strengths-based approaches to Arab and Arab American emerging adult health. The results of this study are being used to inform a youth and young adult focused health promotion program in coordination with the IAHB in the future and also provides an entry point for future research on social-relational models of health which prioritize strengths-based and community-based approaches. Specifically, results from our work suggest that directing resources towards mental health awareness in English and Arabic and recruiting multi-generational families to foster positive identity development are concrete next steps within the implementation of an Arab youth empowerment program. Additionally, our work reifies that many participants would benefit from access to public green spaces which will be prioritized and targeted for youth wellbeing within the IAHB program. Beyond the implementation of a youth intervention program, policy change is likely to have a far-reaching impact. Increased access to mental healthcare and public green space access, would benefit from expanded government public investment in infrastructure and recreation, as well as development of universal healthcare in the United States (Andrade et al., 2015; Verguet et al., 2021). Beyond this, policies which prioritize swift family reunification and immigration policies are also likely to positively impact the overall health of Arabs and Arab Americans.

In order to increase the effectiveness of youth empowerment programs, an honest appraisal of social and economic investment in hidden and excluded communities is necessary beyond the interests of individual researchers alone. The seeming lack of relationship between research institutions and Arab and Arab American community members in Washington State and other areas of the United States only compounds harms of erasure and continues to be a problem in addressing health equity and potential disparities for Arabs and Arab Americans (Awad et al., 2022). Through our multi-method, interdisciplinary approach from anthropology and public health, our study collectively highlights the importance of thoughtfully designed studies to promote understanding of health for minoritized communities of emerging adults. Community and evidence-based interventions targeting

youth empowerment and positive identity formation in culmination with elucidating specific health needs, will be powerful tools to counteract potential health inequities.

4.2. Limitations

While our study had many strengths, there were some limitations. We used convenience sampling for our survey which has numerous limitations to generalizability because it requires someone be online, use a device, and find out about the survey through an online platform (Barratt et al., 2015). Beyond sampling method, sample size considerations for survey methods and qualitative ethnographic methods such as PhotoVoice are fundamentally different. *A priori* sample expectations are not always appropriate as the intention of PhotoVoice is not necessarily generalizability as is the case with quantitative methods (Baker and Edwards, 2012; Hennink and Kaiser, 2022). It was a major challenge to recruit survey participants. There are several potential explanations for this limitation. First, the IAHB reported that they have witnessed a decrease in in-person attendance to community events (such as a health fair the authors volunteered at) hosted after the COVID-19 pandemic and shut down of 2020 as compared to prior years. We also noticed many community-clinics and other organizations that we assumed may be serving the Arab community had very little information or ties to this community in the Greater Seattle area, possibly due to focusing on current waves of immigration from other countries. We made informal observations in conversations with community members who expressed that there is a real lack of trust and relationship building between researchers and the Arab community writ large. Despite this, we believe our study may help carve new paths in a positive direction by offering a foundation for future research and trust building.

In addition, our sample may have been biased towards individuals with higher SES and education. While we did attempt to do outreach at community colleges and in organizations working in lower income neighborhoods our survey results are not representative of all Arabs and Arab Americans living in Washington State or the U.S. more broadly in terms of demographic heterogeneity. Overall, eight participants chose not to disclose their gender, education, or immigration experiences and ten chose not to disclose religious affinities or answer the SES question. While we are uncertain as to why, it may be due to sensitivity towards demographic questions because of historical exclusion and government surveillance of Arab communities. To improve, future research should include building trust and long term relationships with existing community partners and engaging in participatory methods with power dynamics in mind (Pincock and Jones, 2020) prior to the implementation of survey methods where sensitive demographic questions may be asked. We also acknowledge that some questions may have been weak constructs of experience. For example, the religiosity question was an open-ended question, and this may have been a limitation in gaining insight into religious practice, affinity, and linkage between religious practice and health.

5. Conclusion

Social science research prioritizing Arab emerging adults living in a multitude of contexts is necessary to advance population and individual health equity. Through exploration of

what health means within this study of Arab and Arab American emerging adults, we highlight that engaging in mixed methods, community-based research with youth and young adults is one way to begin to illuminate health inequities and the importance of social-relational models of health for historically excluded groups. Our survey results suggest there are nuances about what health means beyond self-rated health alone and that self-rated health fails to capture the complexity, contextual variation, and changes in health that individuals face. Participants in this study have reference points for their own physical and mental health—what we are calling *Embedded Health*—that exist within them (how they feel), outside of them (from doctors, social media, perceptions of appearance), and in the context of community ties (comparisons to close and distant others). While on the whole participants rated their health as good, there are also multi-faceted physical and mental health challenges participants encounter. The PhotoVoice portion of our project further highlights latent impacts of structural violence and infrastructural determinants of health, in particular displacement histories that are both a source of hardship and strength for the participants. Overall, themes of *embedded health, the individual-community health nexus*, and *mental health challenges in diaspora* are likely applicable to many population groups facing similar circumstances. Beyond this, our findings may be relevant to major migration contexts outside of the United States for those with Arab heritage (Arar, 2021).

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Data Availability

Data used in this analysis are confidential. Survey instruments and PhotoVoice protocols are available on Open Science Framework: https://osf.io/gjmfv/.

References

Abboud S, Chebli P, Rabelais E, 2019a. The contested whiteness of Arab identity in the United States: implications for health disparities research. Am. J. Publ. Health 109 (11), 1580–1583. 10.2105/AJPH.2019.305285.

Abboud S, Chebli P, Rabelais E, 2019b. The contested whiteness of Arab identity in the United States: implications for health disparities research. Am. J. Publ. Health 109 (11), 1580–1583. 10.2105/AJPH.2019.305285.

Abdel-Khalek AM, 2019. Religiosity and Subjective Well-Being in the Arab Context. Cambridge Scholars Publishing.

Abdul-Jabbar W. Kh, 2015. Internalized Arab diasporic identity: revisiting the duboisian double-consciousness. Contemp. Arab Aff 8 (1), 54–64.

Abdulrahim S, Ajrouch K, 2010. Social and cultural meanings of self-rated health: Arab immigrants in the United States. Qual. Health Res 20 (9), 1229–1240. 10.1177/1049732310371104. [PubMed: 20463360]

Abdulrahim S, Baker W, 2009. Differences in self-rated health by immigrant status and language preference among Arab Americans in the Detroit Metropolitan Area. Soc. Sci. Med 68 (12), 2097–2103. 10.1016/j.socscimed.2009.04.017. [PubMed: 19446941]

Abouhala S, Hamidaddin A, Taye M, Glass DJ, Zanial N, Hammood F, Allouch F, Abuelezam NN, 2021. A national survey assessing COVID-19 vaccine hesitancy among Arab Americans. J. Racial Ethnic Health Disparities 1–9.

Abuelezam N, 2018. The Health of Arab Americans in the United States: an Updated Review.

Abuelezam NN, El-Sayed AM, 2021. Objective and subjective poor mental health indicators among Arab Americans in Michigan: a population-based study. Ethn. Health 26 (2), 225–234. [PubMed: 29972030]

Abuelezam NN, El-Sayed AM, Galea S, 2017. Arab American health in a racially charged U.S. Am. J. Prev. Med 52 (6), 810–812. 10.1016/j.amepre.2017.02.021. [PubMed: 28413143]

Abuelezam NN, El-Sayed AM, Galea S, 2018. The health of Arab Americans in the United States: an updated comprehensive literature review. Front. Public Health 6. 10.3389/fpubh.2018.00262.

Abuelezam NN, El-Sayed AM, Galea S, 2019. Relevance of the “immigrant health paradox” for the health of Arab Americans in California. Am. J. Publ. Health 109 (12), 1733–1738. 10.2105/AJPH.2019.305308.

Ahmed KKN, 1998. Voices from within the Invisible Minority: A Phenomenological Study of School and Social Experiences of Arab-American Students. State University of New York at Buffalo, https://search.proquest.com/openview/32eb4ca18c70a9e3c48ac55dd4bd4cfe/1?pq-origsite=gscholar&cbl=18750&diss=y&casa_token=WymiK9U3cZwAAAAA:46CjhrfSxgMzSN62dWl7xq6eArldzWlCBrIFSmxBUbCpK9D4z-8cW2HmvlpDeTW0sv9-VJyvDNU.

Ahmed SR, Kia-Keating M, Tsai KH, 2011. A structural model of racial discrimination, acculturative stress, and cultural resources among Arab American adolescents. Am. J. Community Psychol 48 (3), 181–192. [PubMed: 21287262]

Ahmed SR, Serpas DG, Chavira DA, Myers HF, 2023. A structural model examining racism, stress, and psychological symptoms among Arab American adolescents. Cult. Divers Ethnic Minor. Psychol 29 (2), 152–162. 10.1037/cdp0000550.

Albqoor MA, Chen JL, Weiss S, Waters C, Choi J, 2020. Self-rated health of Middle Eastern immigrants in the US: a national study. Publ. Health 180, 64–73.

Al-Faouri I, Weglicki L, Rice V, Kulwicki A, Jamil H, Baker O, Al-Omran H, Dakroub M, 2005. L. Culturally sensitive smoking cessation intervention program redesign for Arab-American youth. Ethn. Dis 15, S1–S62.

Amoah PA, Koduah AO, Anaduaka US, Addae EA, Gwenzi GD, Amankwaa A, 2020. Psychological wellbeing in diaspora space: a study of African economic migrants in Hong Kong. Asian Ethn. 21 (4), 542–559.

de Andrade LOM, Filho AP, Solar O, Rígoli F, de Salazar LM, Serrate PC-F, Ribeiro KG, Koller TS, Cruz FNB, Atun R, 2015. Social determinants of health, universal health coverage, and sustainable development: case studies from Latin American countries. Lancet 385 (9975), 1343–1351. 10.1016/S0140-6736(14)61494-X. [PubMed: 25458716]

Arab American Institute, 2019. Demographics. https://www.aaiusa.org/demographics.

Arar R, 2021. Understanding refugees. In: The Societies of the Middle East and North Africa. Routledge, pp. 229–258. https://www.taylorfrancis.com/chapters/edit/10.4324/9781003052784-10/understanding-refugees-rawan-arar.

Arar R, FitzGerald DS, 2022. The Refugee System: A Sociological Approach. John Wiley & Sons. https://books.google.com/books?hl=en&lr=&id=fbWREAAAQBAJ&oi=fnd&pg=PT9&dq=arar+refugee+system&ots=j9lQHjPwFu&sig=_8W819TwA8Yi1AQQ_cbdbi41cXk.

Awad GH, Abuelezam NN, Ajrouch KJ, Stiffler MJ, 2022. Lack of Arab or Middle Eastern and North African health data undermines assessment of health disparities. Am. J. Publ. Health 112 (2), 209–212.

Baker SE, Edwards R, 2012. How Many Qualitative Interviews Is Enough. http://eprints.ncrm.ac.uk/2273/4/how_many_interviews.pdf.

Barratt MJ, Ferris JA, Lenton S, 2015. Hidden populations, online purposive sampling, and external validity: taking off the blindfold. Field Methods 27 (1), 3–21.

Béhague DP, 2020. Birth Cohorts, Biosocial Theory, and the Politics of Developmental Disruption. Birth.

Bjorkman M, Malterud K, 2012. Lesbian women coping with challenges of minority stress: a qualitative study. Scand. J. Publ. Health 40 (3), 239–244. 10.1177/1403494812443608.

Bombak A, 2013. Self-rated health and public health: a critical perspective. Front. Public Health 1. https://www.frontiersin.org/articles/10.3389/fpubh.2013.00015.

Bowleg L, Huang J, Brooks K, Black A, Burkholder G, 2003. Triple jeopardy and beyond: multiple minority stress and resilience among black lesbians. J. Lesb. Stud 7 (4), 87–108. 10.1300/J155v07n04_06.

Branscombe NR, Schmitt MT, Harvey RD, 1999. Perceiving pervasive discrimination among African Americans: implications for group identification and well-being. J. Pers. Soc. Psychol 77 (1), 135.

Brewis AA, Wutich A, Falletta-Cowden A, Rodriguez-Soto I, 2011. Body norms and fat stigma in global perspective. Curr. Anthropol 52 (2), 269–276.

Brooks VR, 1981. Minority Stress and Lesbian Women. (No Title). https://cir.nii.ac.jp/crid/1130282271372632320.

Bureau UC, 2017. American Community Survey 5-year Estimates (2013-2017.

Butina M, 2015. A narrative approach to qualitative inquiry. Clin. Lab. Sci 28 (3), 190–196.

Carried V, 2012. Social comparison and subjective well-being: does the health of others matter? Bull. Econ. Res 64 (1), 31–55. 10.1111/j.1467-8586.2011.00393.x. [PubMed: 22299192]

Cavallo F, Dalmasso P, Ottová-Jordan V, Brooks F, Mazur J, Välimaa R, Gobina I, Gaspar de Matos M, Raven-Sieberer U, the Positive Health Focus Group, 2015. Trends in self-rated health in European and North-American adolescents from 2002 to 2010 in 32 countries. Eur. J. Publ. Health 25 (Suppl. 1_2), 13–15. 10.1093/eurpub/ckv011.

Caxaj CS, Gill NK, 2017. Belonging and mental wellbeing among a rural Indian-Canadian diaspora: navigating tensions in “finding a space of our own.”. Qual. Health Res 27 (8), 1119–1132. [PubMed: 27179022]

Copeland W, Shanahan L, Costello EJ, Angold A, 2011. Cumulative prevalence of psychiatric disorders by young adulthood: a prospective cohort analysis from the Great Smoky Mountains Study. J. Am. Acad. Child Adolesc. Psychiatr 50 (3), 252–261.

Du Bois WEB, 1903. The Souls of Black Folk: Essays and Sketches. AC McClurg & Company.

Dubal SB, Samra SS, Janeway HH, 2021a. Beyond border health: infrastructural violence and the health of border abolition. Soc. Sci. Med 279, 113967. [PubMed: 34010780]

Dubal SB, Samra SS, Janeway HH, 2021b. Beyond border health: infrastructural violence and the health of border abolition. Soc. Sci. Med 279, 113967. [PubMed: 34010780]

Edu UF, 2023. Anthropological knowledge under redaction: meditations on race, health, and aesthetics. Med. Anthropol. Q 10.1111/maq.12793. *n/a* (n/a).

Edu UF, 2022. Are You Sure You Want Health Equity? the Inaugural Sam Dubal Memorial Lecture on Racial Justice in Global Health. University of Washington.

Elmaghraby R, Daas M, Elnajjar A, Elkady R, 2022. Cultural Considerations in Working with Arab American Youth. Child and Adolescent Psychiatric Clinics.

Eriksson I, Undén A-L, Elofsson S, 2001. Self-rated health. Comparisons between three different measures. Results from a population study. Int. J. Epidemiol 30 (2), 326–333. 10.1093/ije/30.2.326. [PubMed: 11369738]

Farmer P, 1996. On suffering and structural violence: a view from below. Daedalus 125 (1), 261–283.

Feen-Calligan H, Grasser LR, Nasser S, Sniderman D, Javanbakht A, 2023. Photovoice techniques and art therapy approaches with refugee and immigrant adolescents. Arts Psychother. 83, 102005 10.1016/j.aip.2023.102005. [PubMed: 37006325]

Fielding NG, 2012. Triangulation and mixed methods designs: data integration with new research technologies. J. Mix. Methods Res 6 (2), 124–136.

Finn M, Hennebry J, Momani B, 2018. Canadian Arab youth at the border: cultural dissociation, fear management, and disciplining practices in securitized spaces. J. Int. Migrat. Integrat 19 (3), 667–682. 10.1007/s12134-018-0559-z.

Flick U, 2004. Triangulation in qualitative research. A Companion Qual. Res 3, 178–183.

Frost DM, Meyer IH, 2023. Minority stress theory: application, critique, and continued relevance. Curr. Opin. Psychol, 101579 [PubMed: 37270877]

Goforth AN, Oka ER, Leong FT, Denis DJ, 2014. Acculturation, acculturative stress, religiosity and psychological adjustment among Muslim Arab American adolescents. J. Muslim Ment. Health 8 (2).

Gravlee CC, 2009. How race becomes biology: embodiment of social inequality. Am. J. Phys. Anthropol 139 (1), 47–57. 10.1002/ajpa.20983. [PubMed: 19226645]

Gravlee CC, 2020. Systemic racism, chronic health inequities, and COVID-19: a syndemic in the making? Am. J. Hum. Biol 32 (5).

Harris A, 2023. Making measuring bodies. Sci. Technol. Hum. Val 48 (1), 115–138. 10.1177/01622439211041159.

Hasan R, 2020. Cultural Resilience in Diasporic Communities: the Case of the Arab Community in Greater Seattle Area. University of Washington.

Hashem H, Bennett A, Awad GH, 2020. Arab American youth: considerations for mental health and community engagement. Community Ment. Health Engag. Racially Divers. Popul 133–159.

Hayek SE, Kassir G, Cherro M, Mourad M, Soueidy M, Zrour C, Khoury B, 2023. Mental health of LGBTQ individuals who are Arab or of an Arab descent: a systematic review. J. Homosex 70 (11), 2439–2461. 10.1080/00918369.2022.2060624. [PubMed: 35499284]

Hennink M, Kaiser BN, 2022. Sample sizes for saturation in qualitative research: a systematic review of empirical tests. Soc. Sci. Med 292, 114523. [PubMed: 34785096]

Hertzman C, Boyce T, 2010. How experience gets under the skin to create gradients in developmental health. Annu. Rev. Publ. Health 31 (1), 329–347. 10.1146/annurev.publhealth.012809.103538.

Hewlett B, 2021. Social learning and innovation in adolescence: a comparative study of Aka and Chabu hunter-gatherers of Central and Eastern Africa. Hum. Nat 32 (1), 239–278. [PubMed: 33881734]

Holmes SM, 2023. Fresh Fruit, Broken Bodies: Migrant Farmworkers in the United States. Univ of California Press.

Jylhä M, 2009. What is self-rated health and why does it predict mortality? Towards a unified conceptual model. Soc. Sci. Med 69 (3), 307–316. 10.1016/j.socscimed.2009.05.013. [PubMed: 19520474]

Kira IA, Amer MM, Wrobel NH, 2014. Arab refugees: trauma, resilience, and recovery. In: Nassar-McMillan SC, Ajrouch KJ, Hakim-Larson J (Eds.), Biopsychosocial Perspectives on Arab Americans: Culture, Development, and Health. Springer US, pp. 175–195. 10.1007/978-1-4614-8238-3_9.

Krieger J, Allen C, Cheadle A, Ciske S, Schier JK, Senturia K, Sullivan M, 2002. Using community-based participatory research to address social determinants of health: lessons learned from Seattle Partners for Healthy Communities. Health Educ. Behav 29 (3), 361–382. [PubMed: 12038744]

Krieger N, 2005. Embodiment: a conceptual glossary for epidemiology. J. Epidemiol. Community Health 59 (5), 350–355. 10.1136/jech.2004.024562. [PubMed: 15831681]

Kuehne A, Huschke S, Bullinger M, 2015. Subjective health of undocumented migrants in Germany – a mixed methods approach. BMC Publ. Health 15 (1), 926. 10.1186/s12889-015-2268-2.

Levinson D, Kaplan G, 2014. What does self rated mental health represent. J. Public Health Res 3 (3), 287. 10.4081/jphr.2014.287 jphr.2014. [PubMed: 25553310]

Lock M, 1993. Cultivating the body: anthropology and epistemologies of bodily practice and knowledge. Annu. Rev. Anthropol 22 (1), 133–155. 10.1146/annurev.an.22.100193.001025.

Lock M, Kaufert P, 2001. Menopause, local biologies, and cultures of aging. Am. J. Hum. Biol 13 (4), 494–504. [PubMed: 11400220]

Louvel S, Soulier A, 2022. Biological embedding vs. embodiment of social experiences: how these two concepts form distinct thought styles around the social production of health inequalities. Soc. Sci. Med 314, 115470. [PubMed: 36327636]

Meyer IH, 1995. Minority stress and mental health in gay men. J. Health Soc. Behav 38–56. [PubMed: 7738327]

Meyer IH, 2003. Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: conceptual issues and research evidence. Psychol. Bull 129 (5), 674–697. 10.1037/0033-2909.129.5.674. [PubMed: 12956539]

Meyer IH, Frost DM, 2013. Minority Stress and the Health of Sexual Minorities. https://psycnet.apa.org/record/2012-32754-018?fbclid=IwAR1VEV_u7htVFNGV_a_huxb6Kh7luQUB33TS0Ezzqo34wMrRpgkvHVeAKTk.

Michalski CA, Diemert LM, Helliwell JF, Goel V, Rosella LC, 2020. Relationship between sense of community belonging and self-rated health across life stages. SSM - Population Health 12, 100676. 10.1016/j.ssmph.2020.100676. [PubMed: 33134474]

Miled N, 2020. Can the displaced speak? Muslim refugee girls negotiating identity, home and belonging through Photovoice. Wom. Stud. Int. Forum 81, 102381.

Mohammed S, 2010. Historicizing health inequities: healing the vestiges of residential schooling. Indigen. Pol. J 21 (3). http://www.indigenouspolicy.org/index.php/ipj/article/view/17.

Necheles JW, Chung EQ, Hawes-Dawson J, Ryan GW, La'Shield BW, Holmes HN, Wells KB, Vaiana ME, Schuster MA, 2007. The Teen Photovoice Project: a pilot study to promote health through advocacy. Prog. Community Health Partnersh.: Res. Edu. Action 1 (3), 221.

Niewöhner J, Lock M, 2018. Situating local biologies: anthropological perspectives on environment/human entanglements. BioSocieties 13 (4), 681–697.

Pampati S, Alattar Z, Cordoba E, Tariq M, Mendes de Leon C, 2018. Mental health outcomes among Arab refugees, immigrants, and U.S. born Arab Americans in Southeast Michigan: a cross-sectional study. BMC Psychiatr. 18 (1), 379. 10.1186/s12888-018-1948-8.

Pincock K, Jones N, 2020. Challenging power dynamics and eliciting marginalized adolescent voices through qualitative methods. Int. J. Qual. Methods 19, 1609406920958895.

Rich AJ, Salway T, Scheim A, Poteat T, 2020. Sexual minority stress theory: remembering and honoring the work of Virginia brooks. LGBT Health 7 (3), 124–127. 10.1089/lgbt.2019.0223. [PubMed: 32053038]

Sancilio A, Eggerman M, Panter-Brick C, 2017. Biocultural research in global mental health: mapping idioms of distress onto blood pressure in a population survey. Am. J. Hum. Biol 29 (1), e22899 10.1002/ajhb.22899.

Sayag M, Kavé G, 2022. The effects of social comparisons on subjective age and self-rated health. Ageing Soc. 42 (9), 2140–2153. 10.1017/S0144686X20002056.

Scheper-Hughes N, Lock MM, 1987. The mindful body: a prolegomenon to future work in medical anthropology. Med. Anthropol. Q 1 (1), 6–41. 10.1525/maq.1987.1.1.02a00020.

Schultz K, Walters KL, Beltran R, Stroud S, Johnson-Jennings M, 2016. "I'm stronger than I thought": Native women reconnecting to body, health, and place. Health Place 40, 21–28. 10.1016/j.healthplace.2016.05.001. [PubMed: 27164432]

Singh A, 2002. We are Not the Enemy": Hate Crimes against Arabs, Muslims, and Those. In: Perceived to Be Arab or Muslim after September 11, vol. 14. Human Rights Watch.

Smith-Appelson J, Belgrade A, Saleem N, Ali A, Seff I, Stark L, 2023. "Hope for a better tomorrow": using photovoice to understand how Arab adolescents enact critical consciousness. J. Community Psychol 51 (7), 2537–2562. 10.1002/jcop.23031. [PubMed: 36961413]

Strack RW, Magill C, McDonagh K, 2004. Engaging youth through photovoice. Health Promot. Pract 5 (1), 49–58. [PubMed: 14965435]

Suleiman A-RM, Javanbakht A, Whitfield KE, 2021. The effect of stress and acculturation on the self-rated health of Arab Americans. J. Family Community Med 28 (3), 175–180. 10.4103/jfcm.jfcm_150_21. [PubMed: 34703377]

Sutton-Brown CA, 2014. Photovoice: a methodological guide. Photogr. Cult 7 (2), 169–185.

Syme KL, Hagen EH, 2020. Mental health is biological health: why tackling “diseases of the mind” is an imperative for biological anthropology in the 21st century. Am. J. Phys. Anthropol 171 (S70), 87–117. 10.1002/ajpa.23965. [PubMed: 31762015]

Tabbah R, 2021. Discrimination and developmental processes: bridging the research gap with adolescents of Arab descent in America. Adolescent Res. Rev 6 (1), 1–13. 10.1007/s40894-019-00125-x.

Uhlhaas PJ, Davey CG, Mehta UM, Shah J, Torous J, Allen NB, Avenevoli S, Bella-Awusah T, Chanen A, Chen EYH, Correll CU, Do KQ, Fisher HL, Frangou S, Hickie IB, Keshavan MS, Konrad K, Lee FS, Liu CH, et al. , 2023. Towards a youth mental health paradigm: a perspective and roadmap. Mol. Psychiatr 10.1038/s41380-023-02202-z, 1–11.

Verguet S, Hailu A, Eregata GT, Memirie ST, Johansson KA, Norheim OF, 2021. Toward universal health coverage in the post-COVID-19 era. Nat. Med 27 (3), 380–387. [PubMed: 33723458]

Walls M, Hautala D, Cole A, Kosobuski L, Weiss N, Hill K, Ozhaawashkodewe’iganiikwe Williams S, 2022. Socio-cultural integration and holistic health among Indigenous young adults. BMC Publ. Health 22 (1), 1002. 10.1186/s12889-022-13395-3.

Walters KL, Mohammed SA, Evans-Campbell T, Beltrán RE, Chae DH, Duran B, 2011. Bodies DON’T just TELL stories, they TELL histories: embodiment of historical trauma among American Indians and Alaska Natives1. Du. Bois Rev.: Soc. Sci. Res. Race 8 (1), 179.

Washington, 2019. Yalla Count Me In! https://yallacountmein.org/states/washington.

Weglicki LS, Templin T, Hammad A, Jamil H, Abou-Mediene S, Farroukh M, Rice VH, 2007. Tobacco use patterns among high school students: do Arab American youth differ? Ethn. Dis 17 (2), 22.

Widner D, Chicoine S, 2011. It’s all in the name: employment discrimination against Arab Americans 1. Socio. Forum 26 (4), 806–823.

Wilbur RE, Gone JP, 2023. Beyond resilience: a scoping review of Indigenous survivance in the health literature. Dev. Psychopathol 1–15.

Witteborn S, 2004. Of being an Arab woman before and after September 11: the enactment of communal identities in talk. Howard J. Commun 15 (2), 83–98.

Wright A, 2016. REDCap: a tool for the electronic capture of research data. J. Electron. Resour. Med. Libr 13 (4), 197–201.

Yates-Doerr E, 2017. Counting bodies? On future engagements with science studies in medical anthropology. Anthropol. Med 24 (2), 142–158. 10.1080/13648470.2017.1317194. [PubMed: 28721738]

Yates-Doerr E, 2020. Reworking the social determinants of health: responding to material-semiotic indeterminacy in public health interventions. Med. Anthropol. Q 34 (3), 378–397. 10.1111/maq.12586. [PubMed: 32592209]

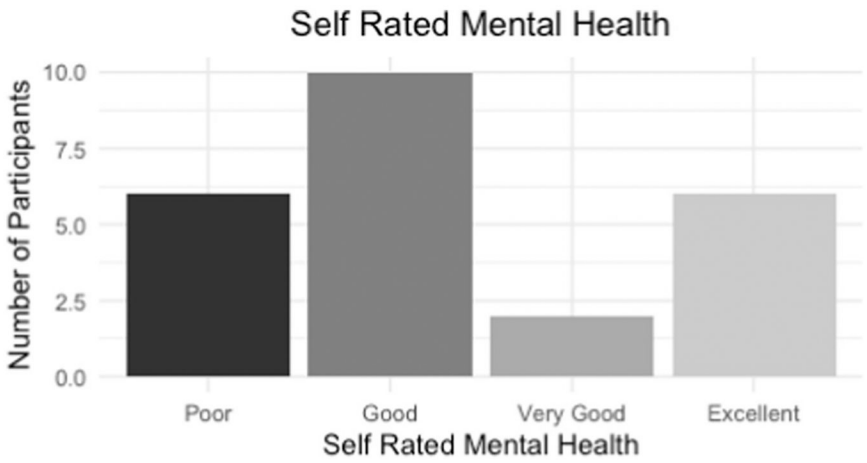

Fig. 1.
Self rated mental health.

Fig. 2.
Meditation space and altar by Arwa.

Fig. 3.
Building in Lebanon by Lena.

Fig. 4.
Foul (beans), falafel, flatbread, salad, eggs, and other food on a table surrounded by people by Alaa.

Fig. 5.
Man playing sports on a beach by Alaa.

Fig. 6.
A hiking trail by Farah.

Fig. 7.
People outside of a mosque by Alaa.

Fig. 8.
Cat at a friend’s house by Arwa.

Fig. 9.
Lena holding tasbih (prayer beads).

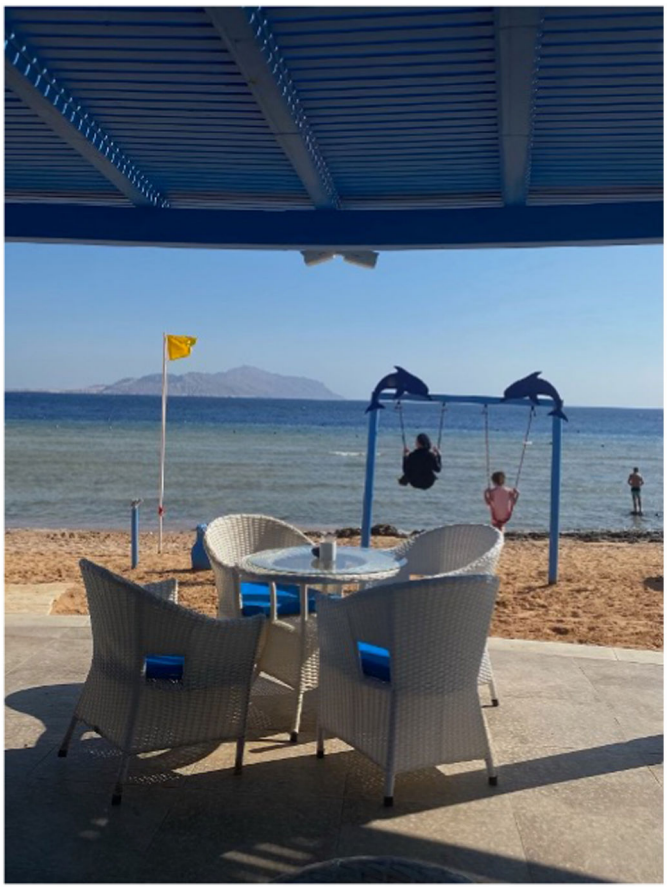

Fig. 10.
Sharm El skeikh by farah.

Table 1

Participant sociodemographic characteristics.

Factor	N (25)	n/N (%) or Median (IQR)
Age	25	21 (3)
Gender	17	10 (59%)
Woman		6 (35%)
Man		1(6%)
Genderqueer		
Education	17	1 (6%)
High School		6 (35%)
Some College/Associates		6 (35%)
Bachelors		4 (24%)
Professional Degrees		
SES	15	3 (20%)
Would have to ask for money or take on debt		12 (80%)
Would not have to ask for money or take on debt		
Born in U.S.	17	8 (47%)
Grew up U.S.	17	7 (41%)
Religious	15	12 (80%)

Table 2

Reference points for self-rated health.

How Self-Rated Health is Assessed	
What signs/indicators do you use most frequently when you think about your own health status?	Proportion of participants (n = 25)choosing affirmative response, n (%)
My body shape	10 (40%)
My body size	10 (40%)
My bloodwork from a doctor	15 (60%)
How I feel physically	21 (84%)
How I feel emotionally	20 (80%)
My physical activity	17 (68%)
What I eat	13 (52%)

Table 3

Health comparisons to known and unknown others.

Self-Rated Health and Comparisons to Others	
When you think about your own self-rated health, who do you compare yourself to?	Proportion of participants (n = 21) choosing affirmative responses, n (%)
My past health	19 (90%)
My best friends	8 (38%)
My peers or classmates	10 (50%)
My parents	6 (28%)
My siblings	9 (43%)
My extended family members	4 (19%)
People on social media who I know	6 (28%)
People on social media who I don't know	10 (50%)
Celebrities or popular figures	6 (28%)