EARLY-LIFE INCOME INEQUALITY AND ADOLESCENT MENTAL HEALTH AND BULLYING
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Purpose: The negative health and social consequences of income inequality are often attributed to complex psychosocial constructs (e.g., class anxiety or reduced social capital leading to mental illness and violence). However, longitudinal evidence for these pathways is limited by a reliance on small ecological studies and cross-sectional data. The developmental consequences of early-life inequality for subsequent health and victimisation have not been closely investigated, especially in adolescents. The purpose of this study was to test the assumption of temporality in the income inequality hypothesis by retrospectively examining the association between income inequality during infancy and early childhood and mental health and bullying during adolescence.

Methods: From 1994 to 2014, six consecutive survey cycles of the WHO Health Behaviour in School-aged Children (HBSC) study included 425,938 males and 448,265 females (11-15y) in 40 European and North American countries. National Gini indices of income inequality were gathered for every year of life of this sample, spanning a 35-year period (1979-2014), and then linked to self-reports of psychosomatic symptoms, life satisfaction, and involvement in bullying (i.e., bullying others, being bullied, or both). These associations were tested using multilevel linear regressions, separately in males and females, that isolated age, period and cohort effects whilst controlling lifetime mean income inequality, country wealth, and socioeconomic position. The heterogeneity in the sample between time periods, age groups and economic contexts afforded a more powerful analysis of early-life income inequality than could achieved using a ‘time-invariant’ cross-sectional design or a ‘context-invariant’ longitudinal design (see Methods supplement).

Results: Income inequality from birth to age 4 is associated with psychosomatic symptoms and lower life satisfaction in female adolescents and with bullying victimisation in both gender groups. Income inequality from birth to age 4 is also associated with dual involvement in being bullied and bullying others. However, no such associations were found with income inequality from age 5 to 9, which suggests a sensitive period of exposure during infancy and early childhood.

Conclusions: Early-life exposure to income inequality relates to mental health symptoms in female adolescents and to bullying victimisation in both genders during adolescence, after wealth and inequality in the intervening years are controlled. One can only speculate which specific mechanisms are involved. Other research on income inequality suggests that parent-child attachment styles, maternal mental health, maternal care, or child neglect and maltreatment play a role. The findings reinforce earlier correlational research and show that links between income inequality and adolescent wellbeing are established before school entry, so although schools remain an effective venue to mitigate the association through health promotion and violence prevention, those efforts would not account for the associations found here. It seems more likely that income inequality is a proxy of psychological stress and adversity that alters developmental processes in infancy and early childhood and manifests in adolescence as reduced mental health and vulnerability to bullying.

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MENTAL HEALTH OF SYRIAN REFUGEE ADOLESCENTS: HOW FAR HAVE WE COME?
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Purpose: The political crisis in Syria and instability has resulted in Syrians fleeing to neighboring countries. Turkey currently holds the largest refugee population in the world. In order to shelter these displaced people, temporary accommodation centers (TACs) have been established in Turkey, especially near the Syrian border. In 2016, we conducted a study looking at the psychiatric symptoms of a group of Syrian refugee adolescents living in one of Turkey’s TACs. The findings of that study suggested that mental health had been compromised in these teens. Since then many measures have been taken to address this problem such as better living conditions in the TACs, greater opportunities for education and more extensive healthcare options. The aim of the current study was to re-assess the psychiatric symptoms and to additionally see if there were any influences of gender, age and duration of stay at the TAC on the post-traumatic stress disorder (PTSD) levels of these adolescents.

Methods: A total of 76 adolescents (35F; 41M) aged between 12-18 years (M=14.2, SD=.83) received the Brief Symptom Inventory (BSI) which assessed their anxiety, depression, negative self-concept, somatization and hostility levels in addition to a global severity index. Results >1.0 indicated psychopathological symptoms.

Results: The duration of stay at the camps ranged between 1 – 8 years (M=5.97, SD=2.03). Out of the sample, 30% reported having experienced loss of a family member as a result of the Syrian war. All subscores decreased from 2016 to 2019 showing significant improvement in psychopathological symptoms. The most significant change was in the global severity score which decreased from 2.15 to 0.8, from 2016 to 2019 respectively. A correlation was conducted to see the relationship between age of adolescent, years of stay at the camp and the subscales of the BSI. The only significant correlation was that between years of stay at the camp and the depression subscale (r(70)=.26, p=.03). An independent samples t-test was conducted to assess gender differences on the subscales. It was found that adolescent girls reported significantly higher scores than males in anxiety (t(71)=2.09, p=.04), depression (t(68)=2.49, p=.015), somatization (t(72)=2.66, p=.01) and the global severity index (t(60)=2.52, p=.015).

Conclusions: Since the first study was conducted interventions to improve the quality of life in the TACs have been made. The conversion of tent cities into container cities is one of the most significant changes. All of the teens in our study were enrolled in school and were also bilingual (Turkish and Arabic). This study shows that the interventions designed to tackle PTSD symptomology may have been affective in improving the mental health status of these teens by transforming risk to wellness and provides a roadmap for tackling existing issues in vulnerable conditions. Additionally, females are under higher risk for psychopathology so gender targeted interventions may be necessary to deal with these issues.

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44. LUNCH FOR A.L.L.! ACCEPTABILITY OF LUNCH AMONG LEARNERS: A LOOK AT ADOLESCENT ATTITUDES TOWARD ACCESSING FOOD AMONG THOSE WITH AND WITHOUT FOOD INSECURITY
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Purpose: It is estimated that 12.3% of U.S. households faced food insecurity during 2015-2017, including 14% in Texas where one in four children face hunger. School lunch programs provide an opportunity to reduce disparities in access to nutrition, but are not optimally utilized. Only 58% of eligible children participated nationwide in 2017. Following Hurricane Harvey in September 2017, there was a transition by all of Houston Independent School District (HISD) to provide universal free lunch to students. This study sought to determine if universal free lunch helps to improve acceptability of school lunch utilization among urban adolescents with low socioeconomic status, and if this varies by food security status. We hypothesized this would not only improve access to food for adolescents with food insecurity, but moreover improve acceptability among this population. Secondary aims were to elicit adolescent opinions regarding continued barriers to school lunch utilization.

Methods: A convenience sample of English and/or Spanish speaking students in grades 9-12 were approached while seeking services at four clinics located in Houston public high schools with greater than 90% of students eligible for free/ reduced price lunch based on need. After consent was obtained, participants were given a one page survey to complete in English or Spanish. Surveys elicited demographic information, food security status (derived from the AAP Hunger Vital Sign), and reasons behind school lunch participation or non-participation, including barriers (The School Lunch Experience & The Non-Participation Survey). Acceptability was measured via self-reported likelihood of participation when lunch is free for all. All approached were offered a handout with information about local food resources. Participants with and without food insecurity were compared for the primary outcome, acceptability of universal free lunch, using a two-tailed independent samples t-test. Descriptive statistics and chi-square were utilized to evaluate secondary objectives of barriers to participation. Adolescents seeking services in these same clinics helped interpret results.

Results: 100 participants were recruited with 30 (30.3%) screening positive for food insecurity. Fifty-four participants (58.1%) endorsed eligibility for free/ reduced price lunch based on need; 38 participants (40.9%) were unsure of their eligibility status. Participants with food insecurity were significantly more likely to report participating in school lunch when it is free for all as compared to participants who were food secure (t (df) = -3.499 (97), p = 0.001). Line length impacts both groups, but disproportionately affects individuals with food insecurity (75% vs. 41.3%, p=0.006). While taste appears to be a key barrier for the sample as a whole, only 21.7% of respondents with food insecurity agreed as opposed to those who are food secure 55% (p < 0.001).

Conclusions: Universal free lunch is associated with increased acceptability of school lunch participation among adolescents with food insecurity and could potentially impact utilization among those in greatest need. Ongoing barriers to free lunch participation appear to differ by food security status. Future research should be directed toward methods for reducing lunch line length, a potential balancing measure.

Sources of Support:
FOOD INSECURITY AND ADOLESCENT MENTAL HEALTH IN 156 COUNTRIES
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Purpose: Food insecurity affects 1 in 3 people and is the most powerful social determinant of health worldwide. The United Nations has pledged to end hunger through its Sustainable Development Goals. Moreover, insufficient access to nutritious food may be harmful to adolescents’ psychological wellbeing. The present study sought to investigate the association between food insecurity and young people’s psychological wellbeing across the four World Bank economic regions. We hypothesized that food insecurity would be significantly associated with lower psychological wellbeing, while controlling for gender and relative income.

Methods: This study used cross-sectional data collected yearly between 2013 and 2017 by Gallup World Poll which surveyed nationally representative samples of residents in more than 150 countries around the world. The sample consisted of 114,132 15 to 24 year-olds. Food insecurity was assessed using the Food Insecurity Experience Scale (FIES) which contains eight dichotomous (yes/no) items which relate to the core, cross-cultural elements of food insecurity with a recall period of 12 months. Psychological wellbeing was measured using the Daily Experience Index (DEI), a 10-item index which asks about 5 positive and 5 negative experiences from the previous day. Scores are out of 100, with higher scores indicating greater wellbeing.

Results: Nearly half the sample (53%) was female and the mean age was 19.71 years old (SD=2.81). The countries were stratified into four economic regions as defined by World Bank: Low Income (N=30,544), Lower Middle Income (N=31,834), Higher Middle Income (N=28,948), and Higher Income (N=22,806). Multilevel regression analyses showed a negative association between food insecurity and psychological wellbeing in each of the four regions. As food insecurity increased by one unit on the FIES, psychological wellbeing decreased by 3.51 units (SE= 0.33) in Low Income region, 3.15 (SE= 0.40) in the Lower Middle Income region, 2.80 (SE= 0.40) in the Higher Middle Income region and 1.84 (SE=0.66) in the High Income region. These associations were found while controlling for gender and relative income.

Conclusions: This study reveals a salient relationship between food insecurity and mental health among individuals aged 15 to 24 years-old in 156 countries around the world. The relationship is stronger in lower income regions and held up to statistical controls of relative socioeconomic standing in the country. These findings emphasize the necessity of taking action against food insecurity around the world, and the importance of investing in policies that target food access in addition to poverty as a means to improve adolescent wellbeing.

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LABELING OF RISK-TAKING BEHAVIORS IN A LATINX COMMUNITY: IMPLICATIONS FOR YOUTH ENGAGEMENT WITH COMMUNITY RESOURCES
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Purpose: Adolescence is a time of rapid brain development and concurrent novelty seeking. In some youth this results in health-impacting “high risk” behaviors. The labeling of youth and the moral and social values that are placed on their behaviors has been described previously. Less is understood about how labeling of youth in populations with relatively high rates of adolescent-specific health challenges such as teen pregnancy and youth violence influences their health, wellbeing, and engagement with potentially protective community resources. This study extends Labeling Theory to investigate how community and peer labeling of adolescents, based on their known or perceived behaviors, affects their relationships with peers, engagement in school, and support from adults in the primarily Latinx agricultural community of Salinas, CA.

Methods: Forty eighth graders (age range 12 to 15) were recruited from four Salinas middle schools to participate in two semi-structured in-depth interviews approximately one year apart. Bilingual research assistants conducted interviews in English or Spanish. Participants were a subset of the youth enrolled in A Crecer, the Salinas Teen Health Study, a prospective cohort study with two years of follow-up. Interviews focused on adolescents’ future aspirations, support systems, and relationships. Interviews were transcribed verbatim and five research team members completed iterative rounds of modified grounded theory coding.

Results: Participants identified behaviors as being on a “good path” (e.g., success in school, abstinence from sex and illicit substances) or a “wrong path” (e.g., truancy, sexual activity, substance use). They noted that youth may be labeled as “good kids” or “bad kids” based on their observed behaviors. Participants also reported that youth may be labeled based on other people’s perceptions of their behaviors, where youth live, or their family and peer associations. Participants often expressed harsh judgements about the actions of youth who engage in behaviors on the “wrong path.” However, consistent with Labeling Theory’s concept of proximity, when considering the actions of close friends and family members, participants held a nuanced understanding that “good kids” might sometimes make high-risk choices. Participants reflected on the negative effects of being labeled as a “bad kid” with particular emphasis on disengagement from adult supports, ostracism from peer connections, and limitations on educational opportunities.

Conclusions: Early and middle adolescents in this agricultural community reported that youth who are labeled as “bad kids” due to perceived or actual engagement in high-risk behaviors have less social support from peers, adult community members, and school. These labels may be influenced by community norms, as well as by structural factors affecting students struggling in the educational system or those involved in the juvenile justice system. Interventions to shift perceptions of age-normative risk-taking towards a research and community focus on why some youth take risks, the environmental circumstances that promote risk-taking, and the structural factors that can protect youth may reduce youth stigma and improve their engagement in critical community support systems.
INTRODUCTION AND PROGRESSION OF A “BREAKFAST AFTER THE BELL” PROGRAM IN AN URBAN MIDDLE SCHOOL FROM 2016-2019

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Purpose: In 2016, an estimated 7 million adolescents (ages 10-17) struggled with food insecurity in the US. Research has shown that students who eat nutritious breakfasts perform better in school, have better attendance rates, and exhibit fewer behavior problems. Free and reduced-price breakfast programs have been implemented nationwide to help address these issues, but students often miss cafeteria-based breakfasts, in part because of late school arrival. Breakfast after the Bell methods, such as Breakfast-in-the-Classroom (BIC) and Grab and Go (G&G), are known to increase breakfast accessibility. Because free breakfasts in the cafeteria were poorly utilized at an urban middle school in our community, we introduced a Breakfast after the Bell program and assessed student participation and satisfaction, as well as teacher satisfaction and feasibility, over 3 academic years from 9/2016 to 6/2019.

Methods: In the first year of the program, we changed the cafeteria-style breakfast to a BIC system, allowing students direct access to breakfast delivered to their first period classroom. In the second year, in response to teacher feedback, we had students pick up the same breakfast in the hallway, enroute to their first class. In the third year, in response to student feedback, we changed to a G&G system that allowed students to choose from a wider variety of pre-packaged breakfasts from a cart on the main floor, prior to their first class. Student participation rates were monitored daily over the three years. Data from the 2015-16 school year’s cafeteria-based breakfast program were used for comparison. Quantitative and qualitative student data were examined twice annually to assess satisfaction and acceptability. Data from teacher surveys were examined annually to assess acceptability and elicit ideas for improvement. Simple frequencies and descriptive statistics were used to analyze the quantitative data. Qualitative data were collated into a single file for review.

Results: In the 2015-16 baseline year, 29% of students participated in the cafeteria-based breakfast program. The average participation in the 2016-17 academic year increased to 66% following the implementation of the BIC Program. In 2017-18, the participation rate decreased to 60% with students expressing concern with lack of variety and poor taste of the food. In 2018-19, the BIC program was changed to the G&G program, which offered students a greater variety of breakfast choices, and participation increased to 71%. By the end of the third year, 92% of teachers were supportive of the breakfast program, indicating that in-class breakfast decreased student crankiness and hunger, and made the overall school environment more positive.

Conclusions: Breakfast after the Bell substantially increased student participation in this urban middle school’s universal free breakfast program. Satisfaction data from students and teachers provided essential information for program improvement. Nearly all teachers perceived the new program to have a positive impact on students and the school environment. Our Breakfast after the Bell intervention
increased breakfast accessibility to an age group that is particularly vulnerable to the risks of food insecurity, and could potentially help them build healthier lifelong eating patterns.

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