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# Childhood Obesity Research Across Borders:

**Part 1: Social Determinants of Health** 

**Part 2: The Physical Environment** 

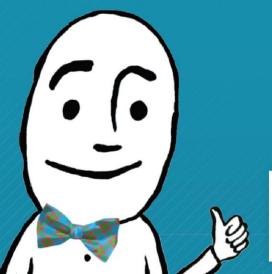
# Spotlight: Childhood Obesity Research Across Borders: The Social Determinants of Health

- Childhood Obesity & The Social Determinants of Health
- Migration as a Determinant of Childhood Obesity in the United States and Latin America
- The Social Environment and Childhood Obesity

Q&A

**NCCOR** Announcements

# TODAY'S PROGRAM





## **Today's Conversation**



Karen Hilyard, PhD, Moderator



Mireya Vilar-Compte, PhD, Universidad Iberoamericana



Rafael Perez-Escamilla, PhD, Yale University



Guadalupe X. Ayala, PhD, San Diego State University



# Need technical assistance? Have a question for our speakers?

Type your question(s) by clicking the Q&A icon located below and representative will respond shortly.



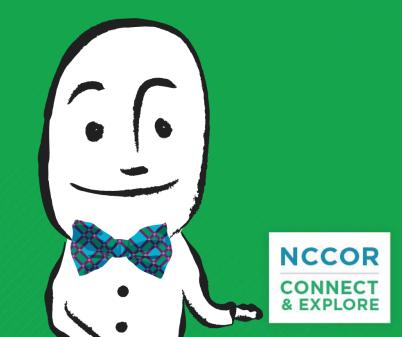


# Join the conversation on social media #ConnectExplore

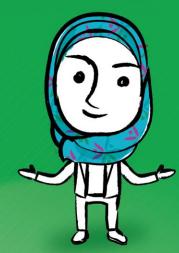




# INTERACTIVE POLL



# SPOIL GII





# Childhood Obesity & The Social Determinants of Health

Professor Rafael Pérez-Escamilla, PhD
Director, Maternal Child Health Promotion Program, Global
Health Concentration and Office of Public Health Practice
Yale School of Public Health

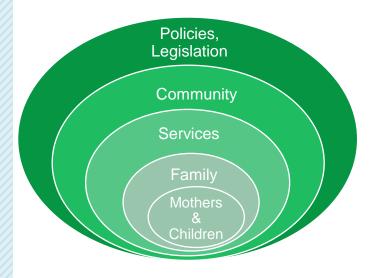


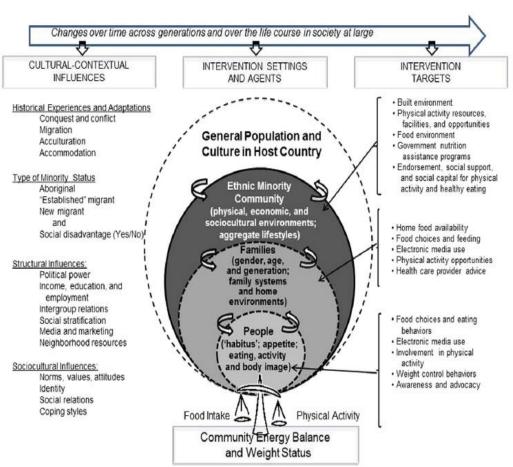
# Childhood Obesity Prevention Across Borders: The Promise of US-Latin American Research Collaboration

- NIH Fogarty Center for Global Health Studies
- Scientific Co-chairs
  - Rafael Perez-Escamilla, Yale University
  - Abby King, Stanford University
- Activities
  - 2 workshops in Washington, D.C. (2017 & 2019)
  - 2 special supplements in Obesity Reviews (2017 & 2021)
  - RFP for cross-borders collaborations (2020)



# Conceptual Frameworks (Obesity Rev. 2021)

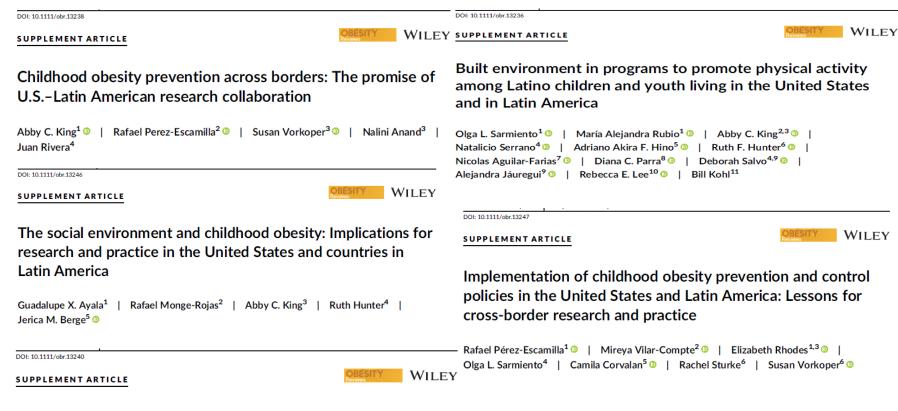




Kumanyka et al. Prev Med (2012)



# Childhood Obesity Prevention Across Borders: The Promise of US-Latin American Research Collaboration - Obesity Reviews (2021)



Migration as a determinant of childhood obesity in the United States and Latin America

```
Mireya Vilar-Compte<sup>1</sup> | Arturo V. Bustamante<sup>2</sup> | Nancy López-Olmedo<sup>3</sup> |
Pablo Gaitán-Rossi<sup>1</sup> | Jaqueline Torres<sup>4</sup> | Karen E. Peterson<sup>5</sup> | Graciela Teruel<sup>1</sup> |
Rafael Pérez-Escamilla<sup>6</sup>
```



# Childhood Obesity Prevention Across Borders: The Promise of US-Latin American Research Collaboration - Obesity Reviews (2021)

DOI: 10.1111/obr.13242

SUPPLEMENT ARTICLE



SUPPLEMENT ARTICLE



Measurement challenges for childhood obesity research within and between Latin America and the United States

```
David Berrigan<sup>1</sup> | S. Sonia Arteaga<sup>2</sup> | Uriyoán Colón-Ramos<sup>3</sup> | Lisa G. Rosas<sup>4</sup> | Rafael Monge-Rojas<sup>5</sup> | Teresia M. O'Connor<sup>6</sup> | Rafael Pérez-Escamilla<sup>7</sup> | Elizabeth F. S. Roberts<sup>8</sup> | Brisa Sanchez<sup>9</sup> | Martha Maria Téllez-Rojo<sup>10</sup> | Susan Vorkoper<sup>11</sup> | the Cross Borders Working Group
```

Capacity for childhood obesity research in Latin American and US Latino populations: State of the field, challenges, opportunities, and future directions

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Deborah Salvo<sup>1</sup> | Diana C. Parra<sup>1</sup> | Alejandra Jáuregui<sup>2</sup> | Eugen Reséndiz<sup>1</sup> |
Armando Garcia-Olvera<sup>2</sup> | Daniel Velazquez<sup>2</sup> | Nicolas Aguilar-Farias<sup>3</sup> |
Uriyoán Colón-Ramos<sup>4</sup> | Adriano A. Hino<sup>5</sup> | Harold W. (Bill) Kohl III<sup>6</sup> |
Michael Pratt<sup>7</sup> | Andrea Ramirez Varela<sup>8</sup> | Manuel Ramirez-Zea<sup>9</sup> | Juan A. Rivera<sup>10</sup>
```

DOI: 10.1111/obr.13241

SUPPLEMENT ARTICLE



SUPPLEMENT ARTICLE

DOI: 10.1111/obr.13243



An action-oriented framework for systems-based solutions aimed at childhood obesity prevention in US Latinx and Latin American populations

```
Leandro M. T. Garcia<sup>1</sup> Ruth F. Hunter<sup>1</sup> Kayla de la Haye<sup>2</sup> Christina D. Economos<sup>3</sup> Abby C. King<sup>4,5</sup>
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Childhood obesity prevention across borders: A National Institutes of Health commentary

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Susan Vorkoper<sup>1</sup> | S. Sonia Arteaga<sup>2</sup> | David Berrigan<sup>3</sup> | Kevin Bialy<sup>1</sup> | Andrew A. Bremer<sup>4</sup> | Paul Cotton<sup>5</sup> | Susan Czajkowski<sup>3</sup> | Elizabeth Neilson<sup>6</sup> | Stavroula K. Osganian<sup>7</sup> | Charlotte A. Pratt<sup>5</sup> | Le Shawndra N. Price<sup>5</sup> | Derrick C. Tabor<sup>8</sup> | Jenelle R. Walker<sup>5</sup> | Makeda J. Williams<sup>7</sup> | Nalini Anand<sup>1</sup>
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# Key Lesson Learned

 Social determinants of health need to be taken into account to effectively address the cross-borders childhood obesity pandemic





# Key Lesson Learned

 Few anti-obesity policies have been designed and implemented taking the social determinants of health and equity considerations into account



Implementation of childhood obesity prevention and control policies in the United States and Latin America: Lessons for cross-border research and practice

- Front-of-food-package warning labels as an example
  - Profound food systems changes needed for low-income families to have access to affordable healthy and nutritious foods in lieu of unhealthy ultra-processed foods and beverages targeted by the warning labels



# **Moving Forward**

- Important to understand why and how the social determinants of health can be taken into account to improve the effectiveness of anti-obesity policies across borders
- Today's webinar examples
  - Migrations (Vilar-Compte et al., 2021)
  - Social environments (Ayala et al., 2021)

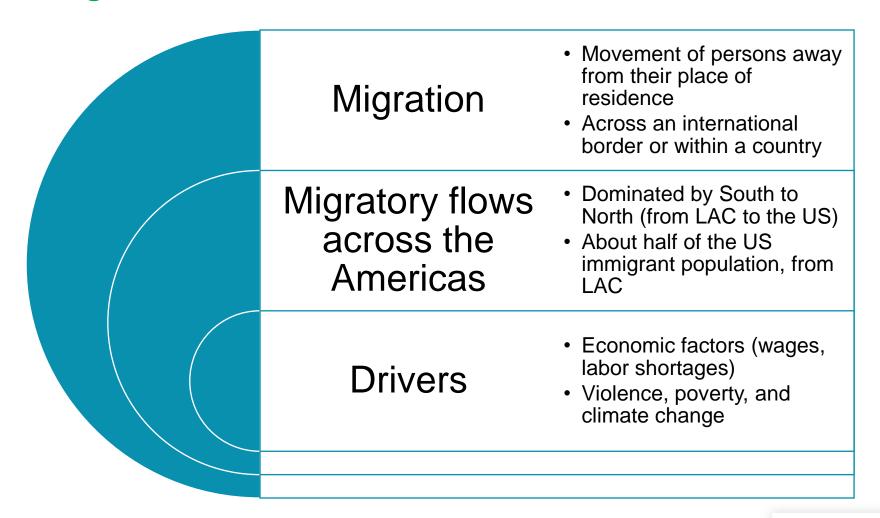


# Migration as a determinant of childhood obesity in the United States and Latin America

Mireya Vilar-Compte
Research Center for Equitable Development (EQUIDE)
Universidad Iberoamericana
Mexico



### Migration: Definition, Trends and Drivers





# Why Migration Matters for Childhood Obesity

### Migration

 Determinant and consequence of social determinants of health

### Mechanisms

- Culture (acculturation)
- Stress
- Migrant networks

Aim: understand mechanisms (migratory and post-migratory) determining childhood obesity

Importance: effective prevention strategies for childhood obesity among migrant families need to account for such complex mechanisms



# Studying Childhood Obesity Through the CEB Framework

Source: Kumanyika S, Taylor WC, Grier SA, et al. Community energy balance: a framework for contextualizing cultural influences on high risk of obesity in ethnic minority populations. Prev Med. 2012;55(5):371-381

Changes over time across generations and over the life course in society at large



#### CULTURAL-CONTEXTUAL INFLUENCES

#### Historical Experiences and Adaptations

Conquest and conflict Migration Acculturation Accommodation

#### Type of Minority Status

Aboriginal "Established" migrant New migrant and Social disadvantage (Yes/No)

#### Structural Influences

Political Power Income, education and employment Intergroup relations Social stratification Media and marketing Neighborhood resources

#### Sociocultural Influences

Norms, values, attitudes Identity Social relations Coping styles

#### INTERVENTION SETTINGS AND AGENTS

General Population and

Culture in Host

#### Ethnic Minority Community

Families

(gender, age, and generation; family

People
"habitus", appetite;
eating, activity and
body image

#### Food Intake

#### Physical Activity

Community Energy Balance and Weight Status

#### INTERVENTION TARGETS

- Built environment
- Physical activity resources, facilities, and opportunities
- Food environment
- Government nutrition assistance programs
- Endorsement, social support, and social capital for physical activity and healthy eating
- Home food availability
- Food choices and feeding
- Electronic media use
- Physical activity opportunities
- Health care provider advice
- Food choices and eating behaviors
- Electronic media use
- Involvement in physical activity
- Weight control behaviors
- Awareness and advocacy



# Studying Childhood Obesity Through the CEB Framework

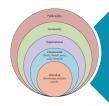
 3 key aspects about the CEB framework → migration and childhood obesity



Migrant environment and lifestyle in the host community, but accounting for self-identity & traditions



Adaptations to the host community (+,-, +/-) considering minority status and structural influences (stigma, prejudice)



**Ecological interventions** 



### Two Applications of the CEB Framework

- Migrant networks
  - Kinship networks as channels of cultural and material interchange
  - Association with childhood obesity in origin community (i.e., Mexico)
- Binational interventions
  - Ventanillas de Salud VDS (Health Windows)



## Migrant Networks

H<sub>0</sub>: Children in Mexico with migrant networks in the US will be differently exposed to US-centric social norms

↑ risk of childhood overweight and obesity over time

Extended networks more likely to affect childhood obesity (i.e., horizontal, resemble more)



## Migrant Networks

- Longitudinal and nationally representative data (MxFLS)
- Two-random intercept logistic models
- Step-wise modelling approach (unadjusted + individual level variables + household level controls)

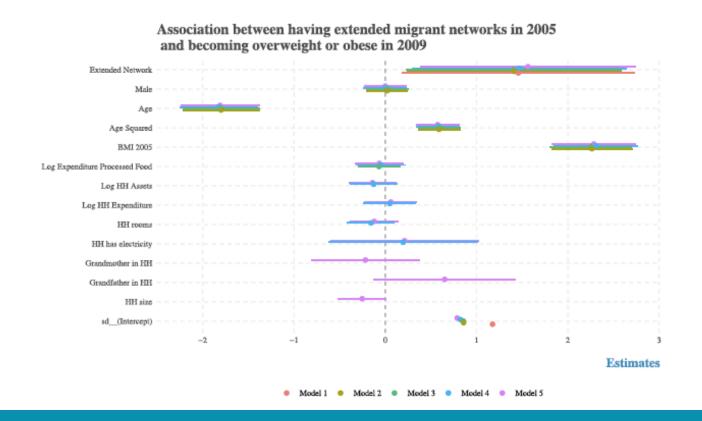


△ in BMI status category among children in the community of origin was associated with having migrant networks



## Migrant Networks

Children embedded in migrant networks, 
 † risk of developing overweight and obesity relative to children with no networks in the US (larger and more significant for extended networks)





# Bicultural Interventions: Ventanillas de Salud (VDS)

VDS a bicultural health intervention

- Binational
- Culturally sensitive
- Available nationwide
- Address fear of accessing social services
- Address structural inequities

**VDS** operation

- Mexican government \$ and partnership with public and private organizations
- 49 VDS (Mexican Consulates), 25 states
- 1.5 million visits yearly (70% undocumented migrants)



# Bicultural Interventions: Ventanillas de Salud (VDS)

#### 3 types of services

(i) healthy lifestyles, (ii) immunization & early detection, (iii) referrals

#### VDS acknowledge key CEB framework's factors

(i) self-identity and traditions, (ii) structural inequities (fear of deportation, stigma, lack of insurance)

Mainly individually-based, but partnering enables reaching other ecological layers

Potential to design interventions addressing childhood obesity (cultural tailoring, reaching distrustful populations)



## Key Messages

- Migration is a social determinant of health that can impact childhood obesity
- Due to the dynamic nature of migration, it can affect children's lifestyles in the host and origin community
- Different interventions are needed to effectively address childhood obesity among migrant children, including:
  - binational approaches
  - life course perspectives
  - structural inequities in origin and host communities



### Thank you!



# The social environment and childhood obesity: Implications for research and practice in the United States and countries in Latin America

### Guadalupe X. Ayala, MA, PhD, MPH

Professor of Public Health, San Diego State University
Director, Institute for Behavioral and Community Health
Co-Director, SDSU HealthLINK Center for Transdisciplinary Health
Disparities Research
Director, SDSU HealthLINK Endowment



### Transdisciplinary Collaboration

# **Jerica M. Berge** – Developmental Psychology – Family Systems

Department of Family Medicine and Community Health, Medical School, University of Minnesota, Minnesota, Minnesota, USA

Rafael Monge-Rojas – Social Psychology – Interpersonal Processes

Health and Nutrition Unit, Costa Rican Institute for Research and Education on Nutrition and Health (INCIENSA), Cartago, Costa Rica

**Abby C. King** – Behavioral Scientist – Community and Population Level Interventions

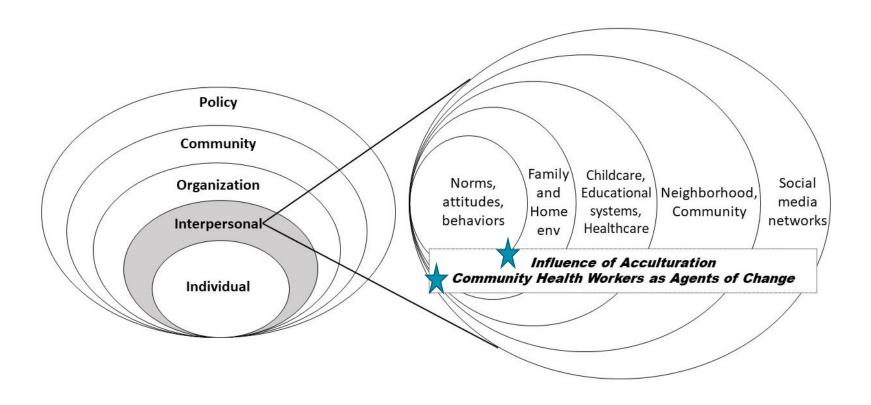
Departments of Epidemiology & Population Health and Medicine (Stanford Prevention Research Center), Stanford University School of Medicine, Stanford, California, USA

**Ruth Hunter** – Social Networks

Centre for Public Health, Queen's University Belfast, North Ireland, Belfast, UK



### Conceptualizing the Social Environment



Socio-Ecological Framework

Social processes at all levels of the framework



### Social Influences: Individuals

Individually-held norms, attitudes and behaviors of children and their parents relevant to interpersonal relationships

**Gender norms:** Socially constructed and accepted roles and stereotypes ascribed to gender (e.g., machismo, marianismo)

Implications for physical activity: Some activities incompatible with female gender stereotypes

**Implications for diet:** Consumption of some foods (e.g., meat) more masculine



### Social Influences: Families

Family norms, attitudes and behaviors, parenting strategies, and sibling behaviors, including those that affect the broader home environment

**Familismo:** Socially-constructed norm with implications on: (1) family obligations, (2) family support, and (3) family as a referent

**Implications for diet:** Parental monitoring of child's food consumption has a positive influence on risk for childhood obesity

Implications for physical activity: Parental modeling of physical activity important in the promotion of child physical activity



### Social Influences: Communities

Social norms and attitudes are communicated, and behaviors are enacted within communities, thus serving as role models to others.

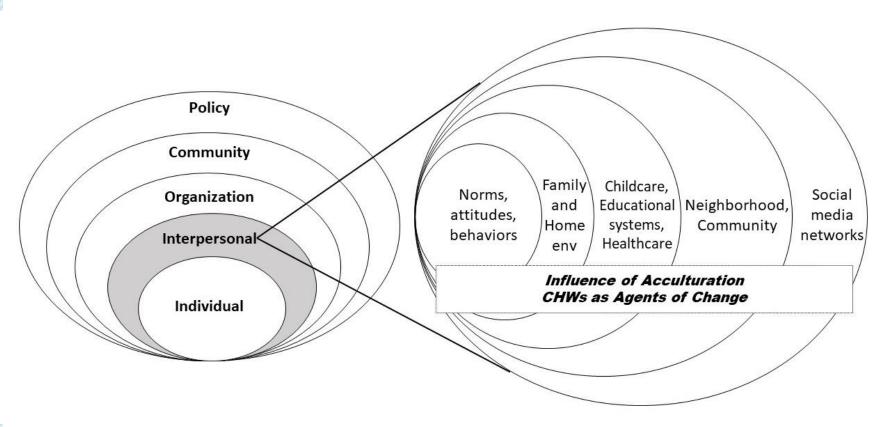
**Cultural syndromes**: social constructs that help to organize and interpret the world by focusing attention on subjective elements of the environment, such as values, norms, beliefs, and assumptions (e.g., individualism and collectivism)

**Individualist countries** show a stronger tendency to harbor anti-fat prejudice when they hold individuals accountable for their weight

**Collectivist countries** are less likely to link negative cultural values (being obese is bad) to the person (being an obese person is bad)



### Conceptualizing the Social Environment



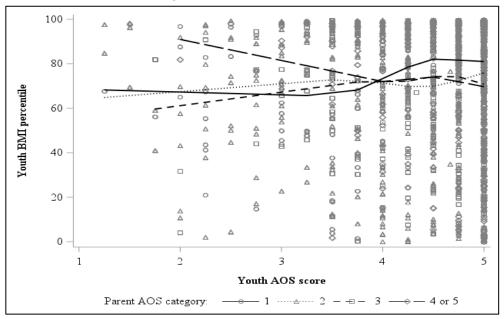
Socio-Ecological Framework

Social processes at all levels of the framework



# Influence of Acculturation and Childhood Obesity

- **Definition:** Acculturation is a complex process in which individuals retain parts of their original culture while also adopting beliefs, values, and behaviors from the new culture they are continuously exposed to.
- Language acculturation gap and youth obesity



LeCroy et al., (2021)...NIH-funded Hispanic Community Health Study/Study of Latino Youth (HCHS/SOL Youth)



# Community Health Workers as Change Agents

- Many definitions! Many names!
- Para-professional, often identified by the community as leaders, who can serve as a positive source of influence within families and communities
- Addressing childhood obesity through.....

Individuals

Motivational interviewing

Realistic goal setting

Teach effective parenting strategies

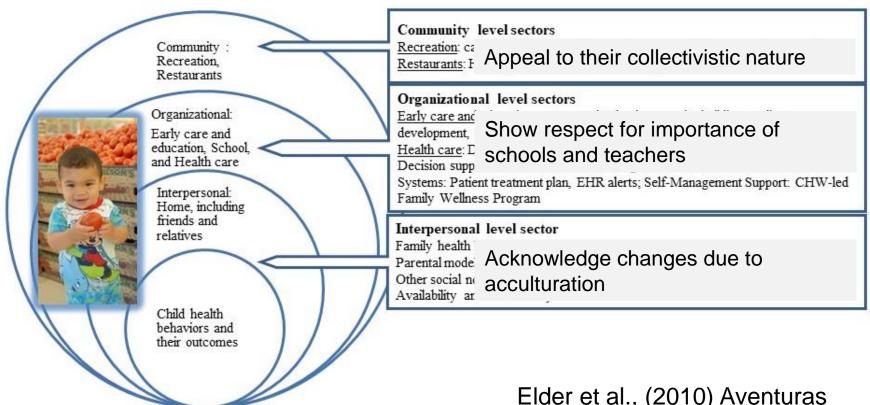
Linking with services

Advocating for build environment changes



### NHLBI-funded Aventuras Para Niños

### CDC-funded California Childhood Obesity Research Demonstration Study (CA-CORD) *Our Choice / Nuestra Opción*



Elder et al., (2010) Aventuras Ayala et al., (2015) CA-CORD



### **Future Directions**

Use innovative methods to study social processes

- Ecological Momentary Assessment (EMA)
- Resident driven data collection, including Photovoice

Image-based: Video recording, Eye tracking



### Key Messages

- Consider social processes at all levels of the socioecological framework
- Consider the influence of changes in culture with in- and out-migration (acculturation), and how these changes influence our behaviors with implications on health
- Consider the positive influence of community health workers and other peer supporters across levels of the socio-ecological framework



## Thank you!

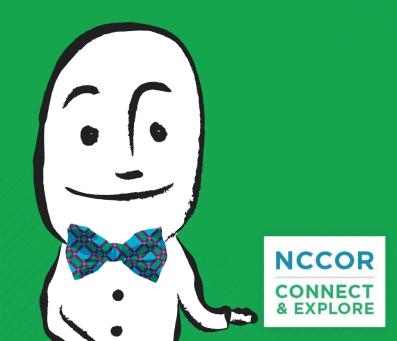
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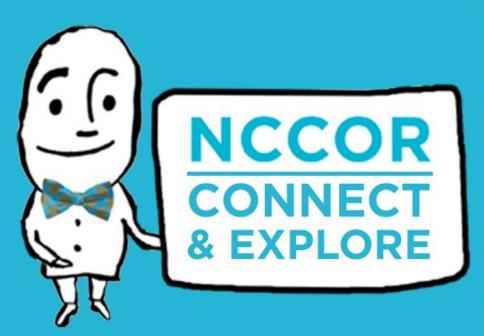






# ANNOUNCEMENTS





### **Childhood Obesity Research Across Borders:**

Part 1: Social Determinants of Health

Thursday, June 17, 12-1pm ET

### Childhood Obesity Research Across Borders:

Part 2: The Physical Environment

Tuesday, July 20, 12-1pm ET





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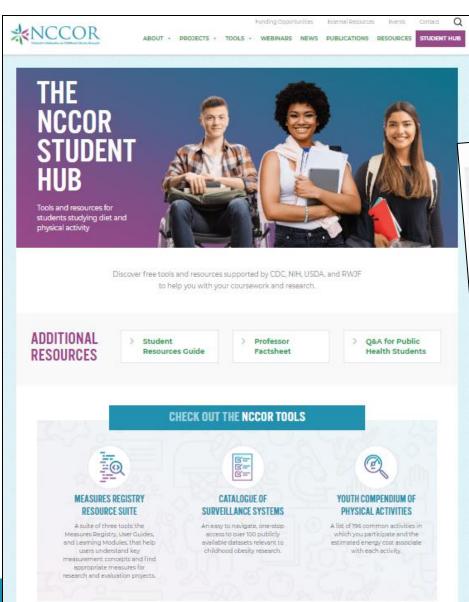




# Sign up for NCCOR Student Hub!

→ nccor.org/e-newsletter

### Check out the student hub webpage!

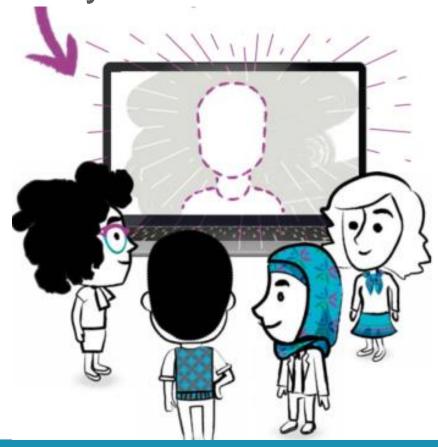






### Have you used any of NCCOR's tools?

 Let us know at <u>nccor@fhi360.org</u> and we may feature you in our next webinar!





# FURTHER QUESTIONS?

Other questions about NCCOR or upcoming activities?

Email the NCCOR Coordinating Center nccor@fhi360.org





ABOUT + PROJECTS + TOOLS + WEBINARS PUBLICATIONS EVENTS RESOURCES

#### WHAT'S HAPPENING IN

#### **NCCOR NEWS**

NCCOR publishes chapter: Behavioral Design as an Emerging Theory for Dietary Behavior Change

NCCOR is highlighting multidisciplinary partnerships to celebrate National Childhood Obesity Awareness Month 2018!

Utility of the Youth Compendium of Physical Activities

NCCOR to present at the Society for Prevention Research and the American College of Sports Medicine 2018 Annual Meetings

NCCOR updates the Catalogue of Surveillance Systems and seeks recommendations for new systems

### Connect & Explore



### **Upcoming Webinars**

Mark your calendar for these upcoming Connect & Explore webinars!



# THANK YOU!

