

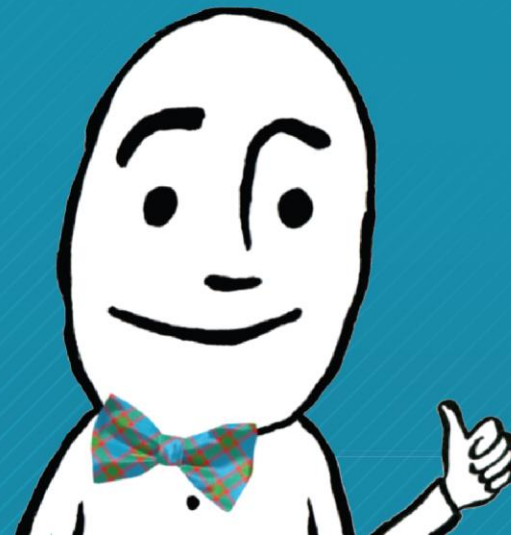
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1. Spotlight: Improving research on children at high risk for obesity: When to apply, adapt, or develop a measure
 - Latetia Moore, CDC
2. One on one:
 - Melicia Whitt-Glover, Gramercy Research Group, Council on Black Health
 - Stella Yi, New York University
 - Teresa O'Connor, Baylor College of Medicine
3. NCCOR announcements

TODAY'S PROGRAM



Today's Conversation



**Latetia Moore,
PhD, MSPH**
Centers for Disease
Control and Prevention



**Melicia Whitt-
Glover, PhD,
FASCM**
Gramercy Research
Group, Council on Black
Health



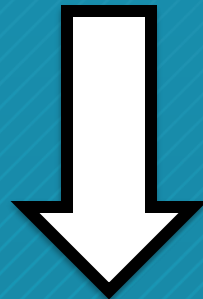
**Stella Yi, PhD,
MPH**
New York University
Grossman School of
Medicine



**Teresa O'Connor,
MD, MPH**
Baylor College of Medicine

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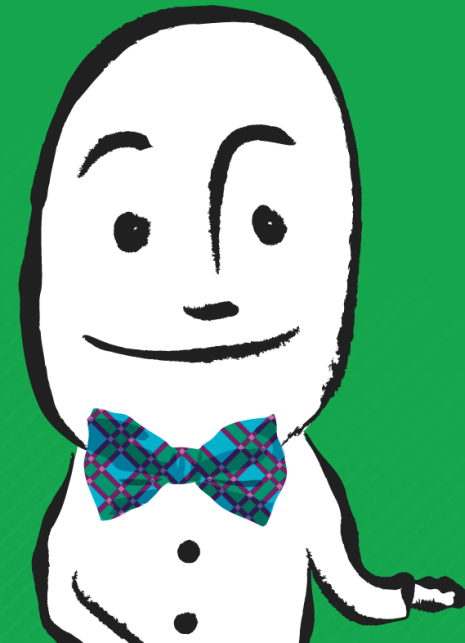
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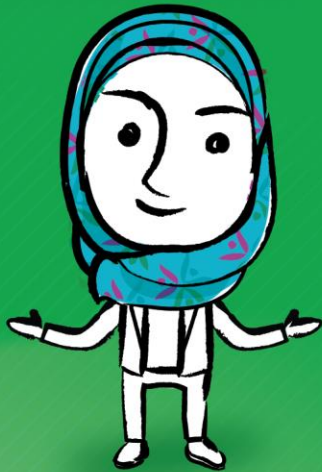
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SPOTLIGHT



Measures for Children at High Risk for Obesity: Choosing Whether to Apply, Adapt, or Develop a Measure

Background

- Children and their families at high risk for obesity are often under-represented in validation studies. Children and their families at high risk for obesity are often under-represented in validation studies, highlighting the importance of culturally and linguistically appropriate instruments for interventions and research.
- **NCCOR's Measures Registry** hosts nearly 1,400 articles on obesity-related measures but less than 1 in 5 were used, adapted, or developed for high-risk populations.^{1,2}
- While the recent Measures Registry review identified more measures used in high-risk populations, especially among African American and Hispanic individuals and communities, even fewer were used among Asians, American Indians/Alaska Natives, or Hawaiian/Pacific Islanders, despite the high prevalence of overweight and obesity among American Indian and Hawaiian/Pacific Islander children. It is evident that more measures are needed.

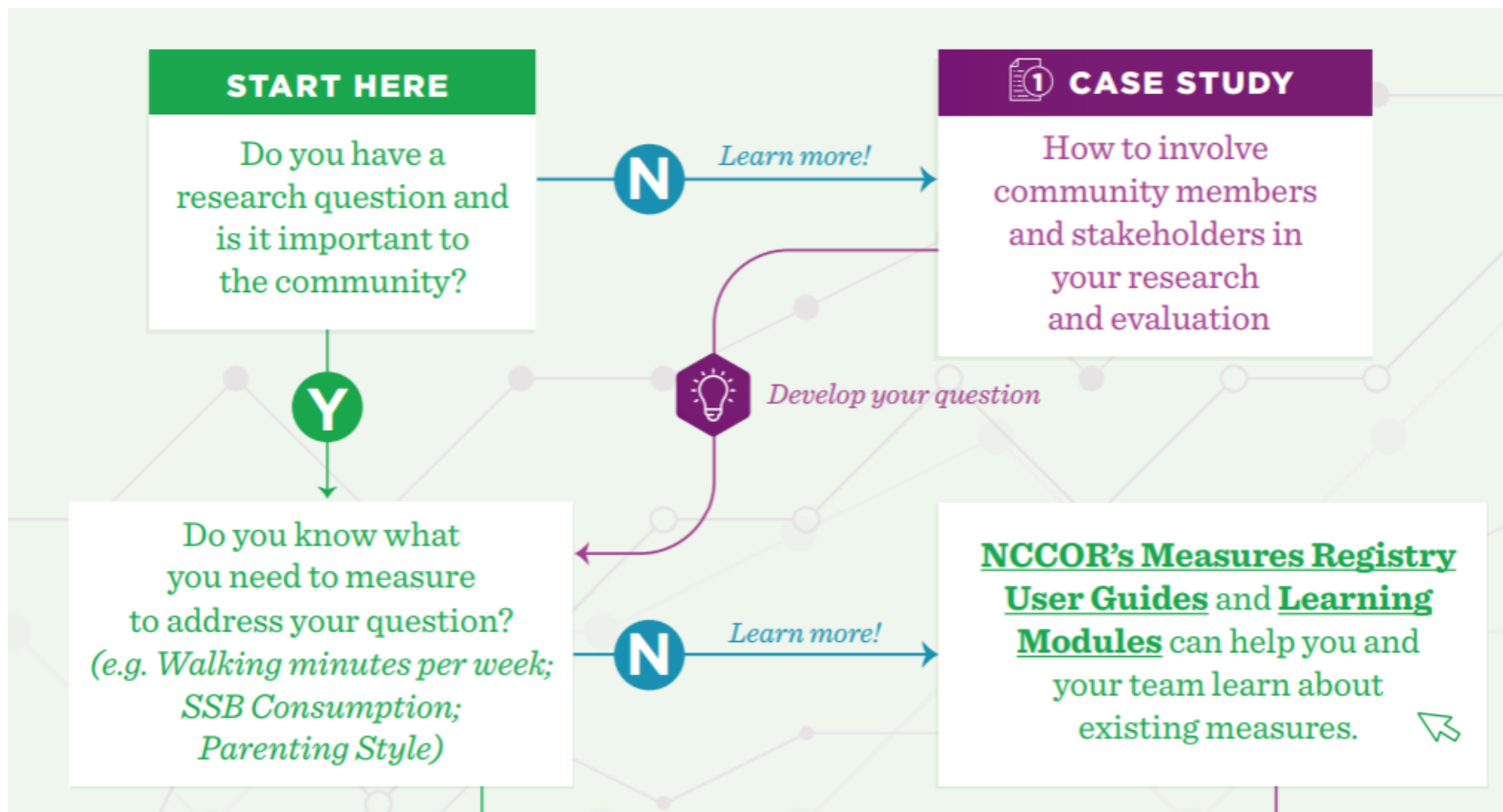
1. Foti_et al. Identification of Measurement Needs to Prevent Childhood Obesity in High-Risk Populations and Environments. Am J Prev Med. 2020 Sep 4:S0749-3797(20)30260-9.

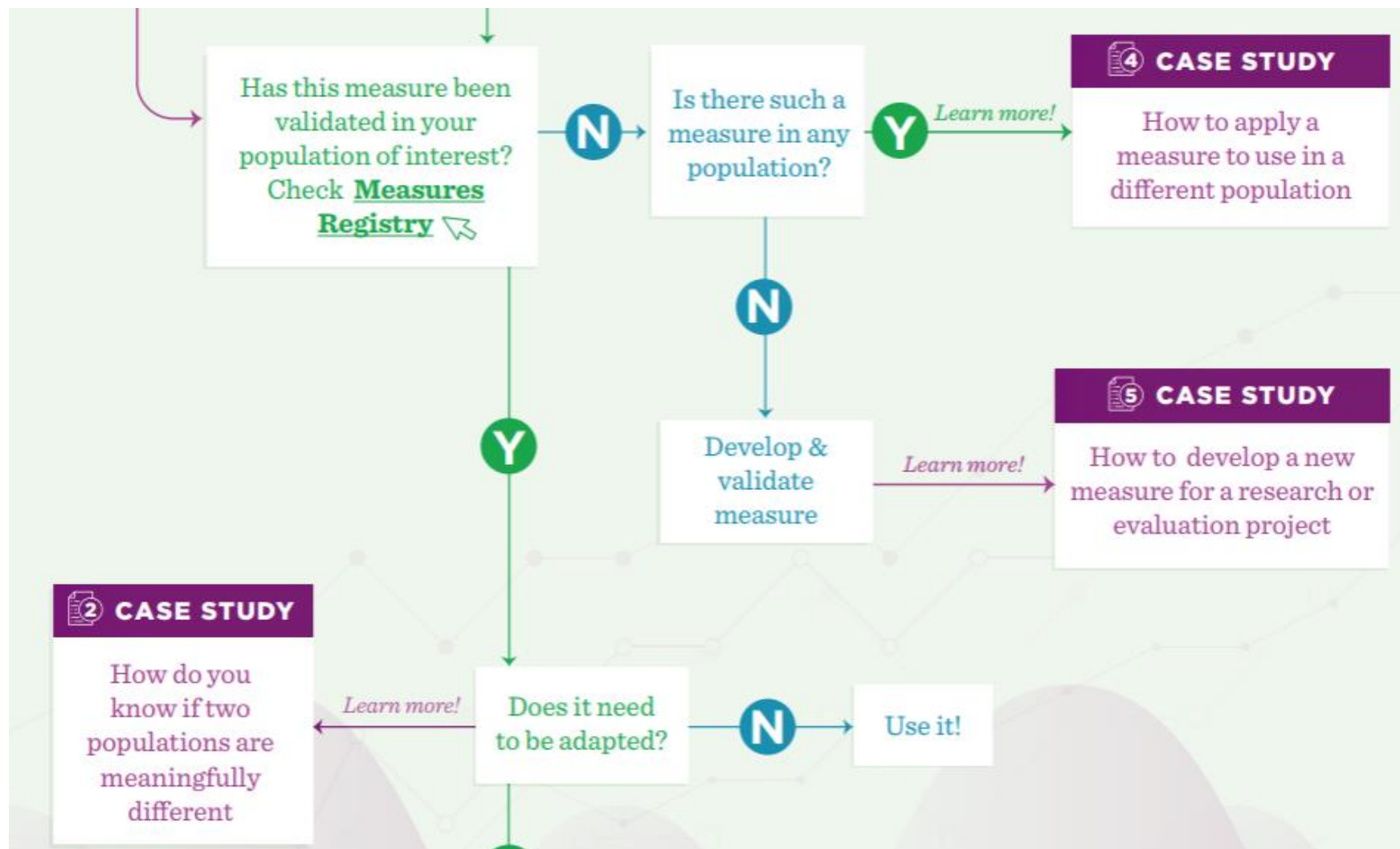
2. Institute of Medicine. Evaluating Obesity Prevention Efforts: A Plan for Measuring Progress. Washington, DC: National Academy of Sciences; 2013.

Methods

- In 2019–2020, NCCOR
 - Conducted a gap assessment of existing obesity measures that were applied, adapted, or developed for high-risk populations
 - Hosted an expert panel and workshop, Advancing Measurement for High-Risk Populations and Communities Related To Childhood Obesity, to identify priorities and develop guidance

Decision Tree





Case scenarios

Case Study 1: How to involve communities and stakeholders in your research and evaluation project

Case Study 2: How to determine whether a population has unique characteristics that require measures adaptation

Case Study 3: How to adapt a measure for use in a different population

Case Study 4: How to apply a measure to use in a different population

Case Study 5: How to develop a new measure for your research/evaluation project

Resource List

Adapting Measures

Guides

- › **An orientation for new researchers to key domains in implementation science**

This paper describes five domains across D&I research: assessment and intervention selection, dissemination and sustainability. We also discuss evaluation and implementation processes to drive ongoing learning and improvement. In each section, we include widely cited literature and resources to orient themselves to the field, and we identify areas for further research.

<https://academic.oup.com/tbm/article/10/1/179/5184>

- › **Evaluation of a Multi-Step Survey Translation Protocol for Multinational, Multiregional, and Multicultural Communities: A Survey Methodology**

This book addresses the need for refined tools and methods for cultural and cross-national studies worldwide. Based on the International Conference on Multinational, Multicultural, and Multicultural Methods (3MC), this book identifies important changes in survey approaches, outlines new findings, and provides insights into future developments in the field.

<https://onlinelibrary.wiley.com/doi/book/10.1002/9780470609927>

Example articles

- › **Auxiliary measures to assess factors related to food insecurity: Preliminary testing and baseline characteristics of newly designed hunger-coping scales**
This paper aims to describe the development and preliminary testing of new scales to assess hunger-coping behaviors in a very low-income population.
<https://www.ncbi.nlm.nih.gov/pubmed/27462530>
- › **Cultural adaptation of physical activity self-report instruments**
The objective of this paper is to describe an approach to further tailor physical activity self-report measures to a target community, and to report on focus group and cognitive interview findings.
<https://www.ncbi.nlm.nih.gov/pubmed/22287446>
- › **Cognitive testing of physical activity and acculturation questions in recent and long-term Latino immigrants**
This paper ascertains the degree to which language (English versus Spanish) and residence time in the United States influence responses to survey questions concerning two topics: self-reported acculturation status, and recent physical activity.
<https://bmcpublichealth.biomedcentral.com/articles/10.1186/1471-2458-10-481>
- › **Home food and activity assessment: Development and validation of an instrument for diverse families of young children**
The purpose of this study was to refine and psychometrically test an instrument measuring the home food and activity environment of geographically and economically diverse families of preschool-age children.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4104664/>

How to apply a measure to a different population

Case Study 4

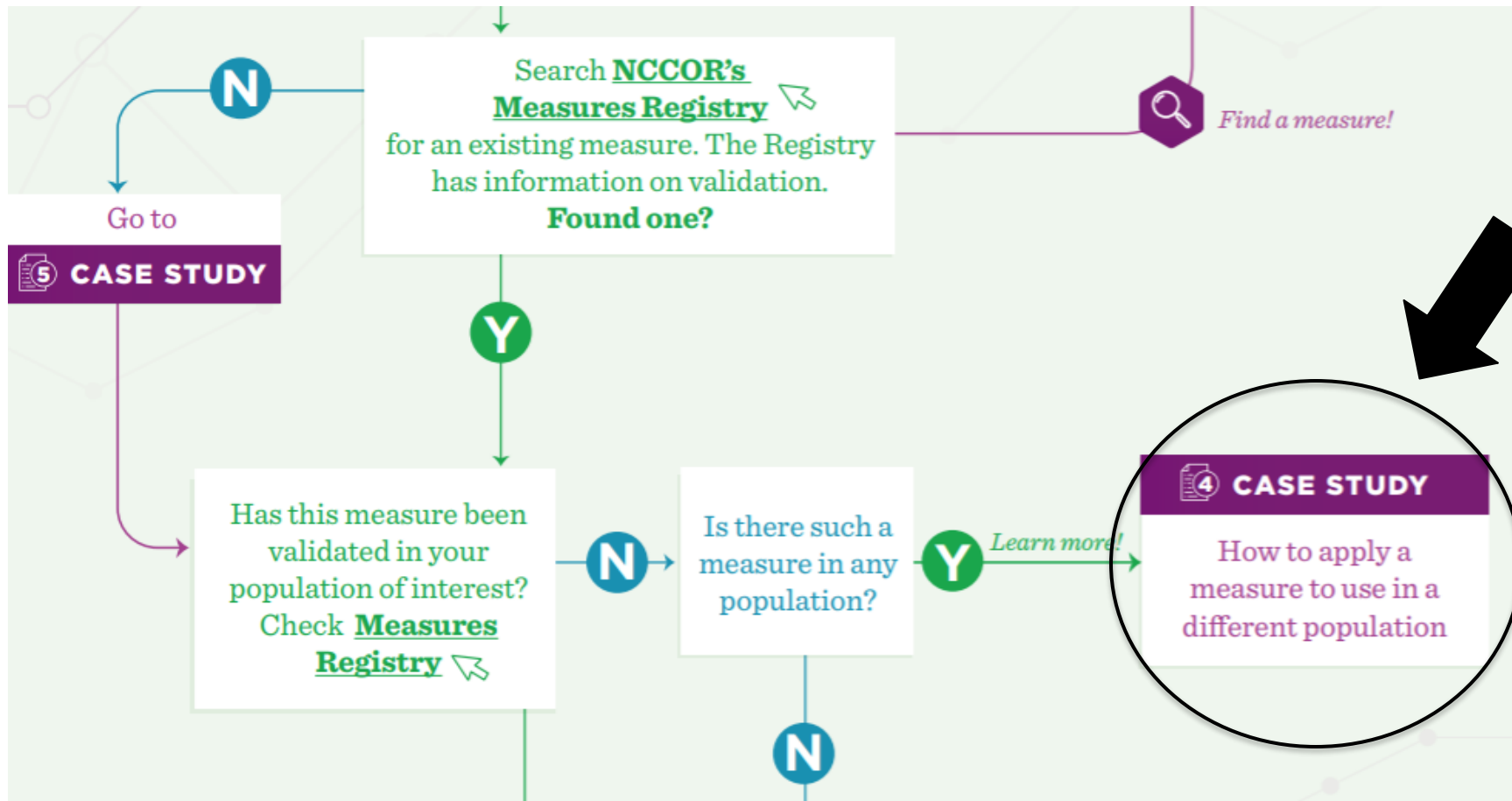
Dr. Melicia Whitt Glover, PhD, FASCM

President and CEO

Gramercy Research Group

Executive Director

Council on Black Health



Rationale

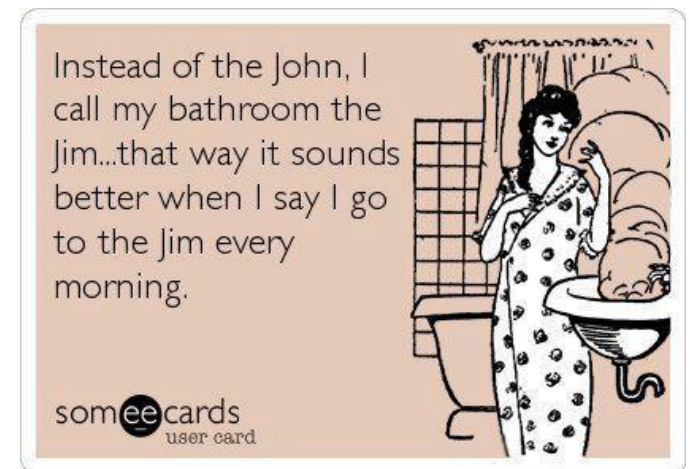
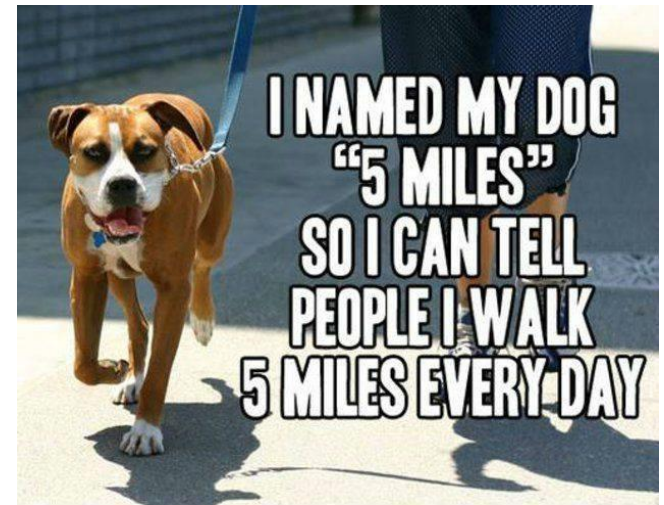
- Regular physical activity participation is linked with health benefits
- Most adults do not achieve national physical activity recommendations
- Disparities in physical activity participation exist by gender, race/ethnicity, and personal characteristics
- Effective interventions are needed to improve physical activity in low active groups

We FEEL busy/active....



Considerations

- How to assess pre-program PA
 - Self-report
 - Low active women
 - Sensitive to change
- How to capture different PA types
 - LTPA, occupation, transportation, other
- How to maximize recall accuracy
 - Intensity-level
 - Bout length
 - Total time



Measure Selection

	Original IPAQ	Modified IPAQ
Time	Last 7 days	Usual week
Activity Type	Vigorous Moderate Walking Sitting	Vigorous Daily walking Brisk walking Moderate
Frequency	Days per week (open)	Days per week (category)
Duration	Minutes per day 10-minute bouts	Minutes/day (category) 10-minute bouts

Data Collection Process

10-minute exercise bout for orientation (*Instant Recess*®)

Complete PA questionnaire

Brief discussion/calculate PA



Lessons Learned

- 10-minute PA bout aided PA recall
 - Understanding of bout length
 - Understanding of PA intensity
- 10-minute PA bout modeled healthy behavior
- *Usual* PA aided in recall
 - Avoided “unusual” circumstances
- Close-ended questions reduced:
 - Time to complete questionnaire
 - Nonsense responses
 - Time to calculate results/determine eligibility

Contact Information

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Council on Black Health

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How to adapt a measure for use in a different population

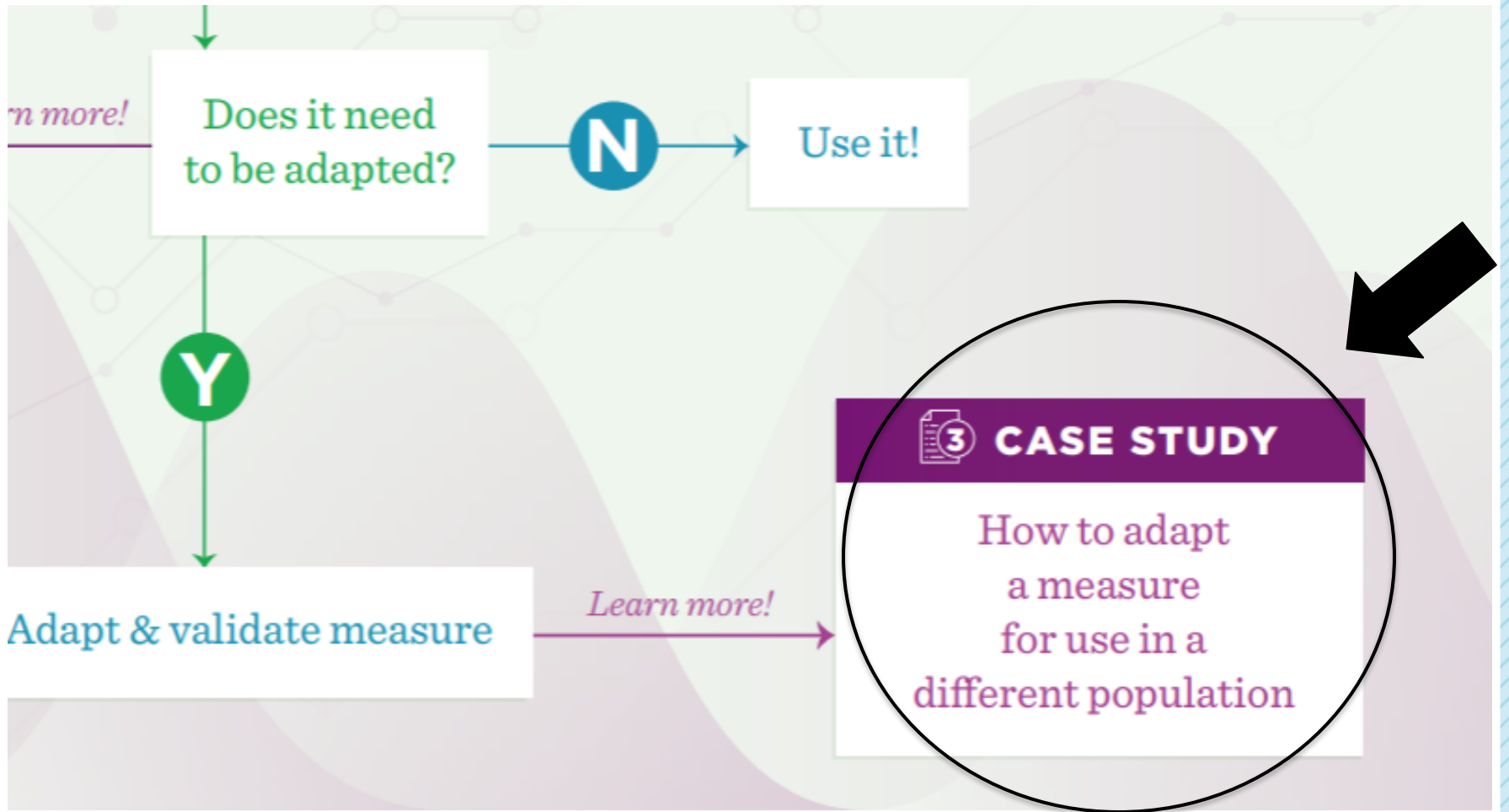
Case Study 3: Adaptation of the NHANES Dietary Screener Questionnaire for Asian Americans

Stella Yi, PhD, MPH

Assistant Professor

Department of Population Health

New York University Grossman School of Medicine



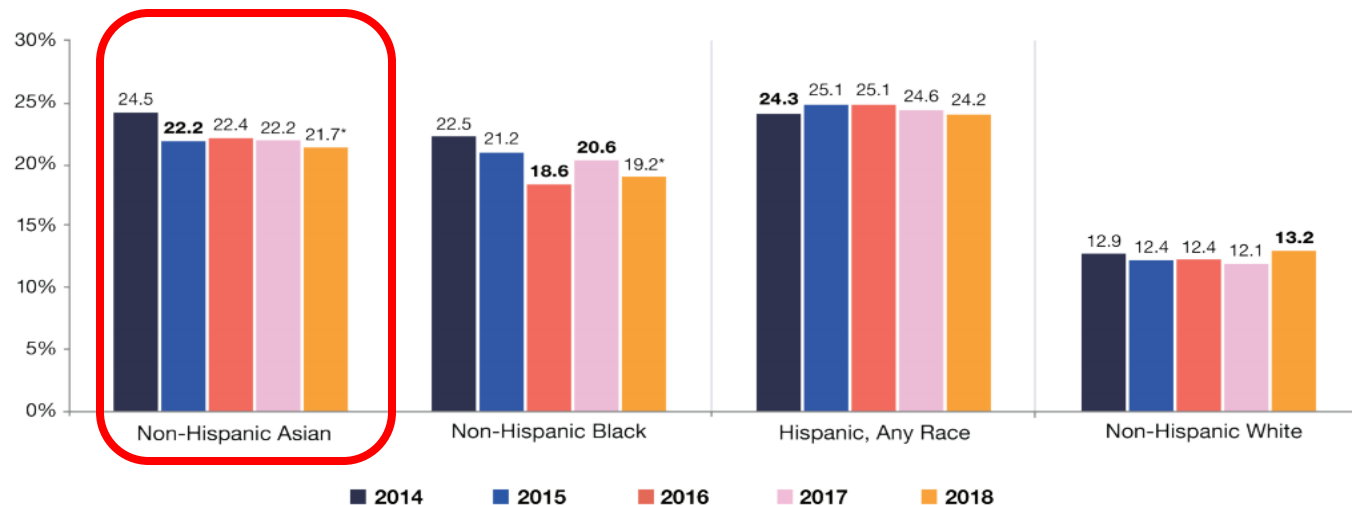
Background

Asian Americans are a Community of Color and a Health Disparity Population

- Unique dietary habits:
 - High sodium, low whole grain intakes
 - High seafood, low sugary drink consumption
- High burden of:
 - Diabetes
 - High cholesterol
 - Non-alcoholic fatty liver disease
 - Heart disease, stroke
 - COVID-19

NYCgov Poverty Rates by Race and Ethnicity, 2014–2018

Asian Americans are a high poverty group in NYC



Current Research Practices Do Not Reflect the Diversity of Asian Americans

Asian-American Cuisine

Lunch

Beef noodle soup, canned, low-sodium

Chinese noodle and beef salad

Beef roast

Peanut oil

Soy sauce, low-sodium

Carrots

Zucchini

Onion

Chinese noodles, soft-type

Apple

Tea, unsweetened

Dinner

Pork stir-fry with vegetables

Pork cutlet

Peanut oil

Soy sauce, low-sodium

Broccoli

Carrots

Mushrooms

Steamed brown rice

Tea, unsweetened

Snack

Almond cookies

Milk, 1%, low-fat

- Bangladesh
- Bhutan
- Burma
- Cambodia
- China
- Hong Kong
- India
- Indonesia
- Japan
- Korea
- Laos
- Malaysia
- Nepal
- Pakistan
- Philippines
- Singapore
- Sri Lanka
- Taiwan
- Thailand
- Vietnam

NYU Center for the Study of Asian American Health (NYU CSAAH)



Mission: To reduce health disparities in the Asian American community through research, training and partnership development.



<https://med.nyu.edu/departments-institutes/population-health/divisions-sections-centers/health-behavior/section-health-equity/research>

Purpose

- To describe the process of culturally adapting a validated diet screener for use in the English-speaking, Asian American population.



*Pasquale Rummo,
PhD, MPH*

Methods – Selection of Instrument

- Review of published literature
- Review of National Cancer Institute, Register of Validated Short Dietary Assessment Instruments
- Selected Dietary Screener Questionnaire (DSQ)
 - NHANES 2009-10

Methods – Adaptation Process

Who is your end user?

- e.g., age, race/ethnicity, acculturation level
- **CSAAH adaptation**, target population:
 - Younger to middle-aged
 - Asian American
 - English only – modest to high level of acculturation

Methods – Adaptation Process

How specific do you want your measure to be?

- e.g., Asian subgroup

	Focus on one subgroup (e.g., Chinese American)	Focus on multiple subgroups (e.g., pan- Asian American)
Pros	Greater specificity of cultural example Available dollars for translation in one language	Broader utility
Cons	Limited utility	Long-winded, confusing questions

- **CSAAH adaptation:** Six largest Asian subgroups
 - Chinese, Filipino, Asian Indian, Korean, Vietnamese, Japanese

Methods – Adaptation Process

Who can help?

- i.e., for what subgroups can you support a valid cultural adaptation?
- **CSAAH adaptation**
 - Pasquale, Stella, Rhea Naik

Asian subgroup	Reviewers
Chinese	Stella Chong, Jennifer Wong, Stephanie Liu, Binh Liu
Filipino	Lily Divino, Mary Joy Garcia
Asian Indian	Alka Kanaya, MD Taher, Sameer Talegawkar
Korean	Simona Kwon, Deborah Min, Chorong Park
Vietnamese	Tracy Vo
Japanese	Kosuke Tamura

Methods – Review, Documentation

- Review and compilation of responses
- Modified DSQ questions
- Document process using FRAME



*Jeannette Beasley,
PhD, MPH*

Results

- 15 of 26 DSQ questions were modified
 - Addition of examples/prompts
 - e.g., samosas, battata vadas, and chả khoai tây chiên were added to the fried potatoes item
 - Description of food item was modified
 - e.g., “puree and stir fry with vegetables” was used to describe sauces
- Addition of question: seafood intake
 - *During the past month, how often did you eat seafood? Include fish and other types of shellfish you had in soups and other mixtures, including imitation crab meat.*

Next Steps and Additional Resources

- Validation in Chinese American population using ASA-24
- Development of Latinx adaptation for use in U.S. population
 - Mexican, Puerto Rican, Dominican, Cuban, *‘Central American,’ ‘South American’*

Contact Information

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@DrStellaYi

Funding Sources:

National Institute on Minority Health and Health Disparities,
Center for Excellence
(U54-MD000538-15-6822)

National Heart, Lung and Blood Institute (R01HL141427)

How to develop a new measure for a given population

Case Study: Physical activity parenting
among Latino parents

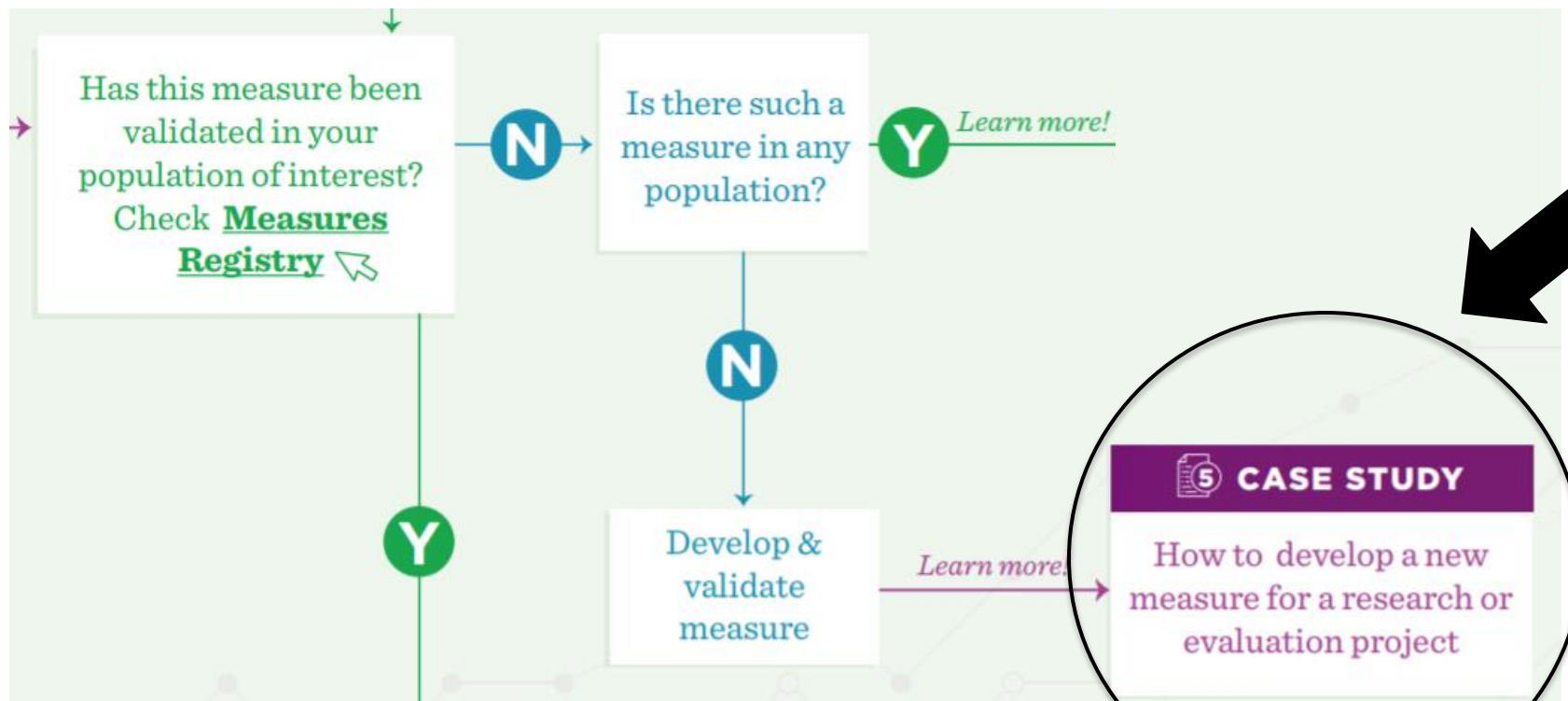
Teresia O'Connor, MD, MPH

Associate Professor of Pediatrics

USDA/ARS Children's Nutrition Research Center

Academic General Pediatrics

Baylor College of Medicine



Background

- Latino children are at high risk for obesity
- Goal: Cross-sectional observational study of Latino preschool children's physical activity
 - Geographic description of neighborhood
 - Neighborhood safety
 - Parent perception of neighborhood
 - Cultural variables (acculturation, familism)
 - Physical activity parenting practices

Measurement Considerations

Variable	Assessment Tool
Children's physical activity	Accelerometers
Geographic description of neighborhood	GIS data
Neighborhood safety	City level crime and traffic safety data
Parent perception of neighborhood	Validated surveys
Cultural variables (acculturation, familism)	Validated surveys
Physical activity parenting practices	???

Physical Activity Parenting Practice Scales

- Intended for older children
 - Problems: engage in different physical activities, require supervision, development
- Not developed for Latino families
 - Problems: cultural influences on parent-child interactions (protective), cultural influences on gender
- Not available in Spanish

Develop Preschooler Physical Activity Parenting Practices (PPAPP) Scale

- Engaging with stakeholders
 - Latino parents of preschoolers in our community
 - Other researchers/experts in parenting
- Qualitative Formative Studies
 - Interviews
 - Focus groups
 - Nominal Group Technique
 - Open-ended surveys

Develop Preschooler Physical Activity Parenting Practices (PPAPP) Scale

- Engaging with stakeholders
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Focus Groups: Nominal Group Techniques

- 10 focus groups
 - 5: What do parents do to encourage PA for their child?
 - 5: What do you and other parents do that may discourage PA for their child?
 - Stratified by parent education
- Output considered against published literature and expert input
- Generated a 38-item list of parenting practices (encouraging or discouraging)

Assess psychometrics

- Cross-sectional study of 240 Latino parents
 - Factor structure
 - Test-retest reliabilities
 - Internal reliabilities
- Associations to children's physical activity in sub-sample
- 31-item PPAPP scale

Lessons Learned

- Parent input through the focus groups identified novel parenting behaviors and constructs
- Nominal Group Technique limited our ability to explore reasons for using parenting practices or perceived effectiveness
- We did not engage fathers in formative work—missed opportunity!

CASE STUDY 5

How to develop a new measure for your research/evaluation project? The Preschooler Physical Activity Parenting Practice (PPAPP) scale for Latino parents

Background

Latino children experience health disparities in obesity. This may be due to health disparities in physical activity, cultural beliefs about physical activity among young children, and/or unique challenges in accessing physical activity venues in their communities, to name a few. This case study describes the development of a new measure to assess the combined effects of environmental and psychosocial determinants of physical activity among Latino preschool-aged children. The intent of the study is to assess physical activity parenting practices in addition to other social and environmental variables that could affect young children's physical activity levels.

Considerations and challenges

Who is the target population for the measure?

The study uses a cross-sectional observational design to measure children's physical activity and locations objectively, along with parental report of perceptions of their environment, cultural variables, and their own physical activity parenting practices. Children are too young to report on their parent's behaviors. Therefore, the team needs to identify a self-report instrument for Latino parents of 3–5 year old children.

Do any measures on physical activity parenting practices for Latinos exist?

Measure Development

Stakeholder input is critical when developing new instruments to ensure the appropriate behaviors or attitudes are included to correctly measure a construct of interest. It was therefore deemed essential to obtain input from Latino parents of 3–5 year old children when developing the PPAPP instrument. Ten focus groups were conducted to identify what Latino parents do to either encourage or discourage physical activity among their preschool-aged children. Nominal group technique was selected as an efficient, yet comprehensive approach to use in this important initial step. This semi-qualitative, multi-step method allowed participants to brainstorm and nominate ideas that the group could then prioritize as more or less important. The ideas generated from this stakeholder input were then used to develop 38 parenting practices items, which were characterized as encouraging or discouraging based on the parents' input and prior published parenting instruments. The psychometrics of the resulting scales were then assessed on data obtained from 240 Latino parents of preschoolers of the planned study. This included assessing the factor structure, test-retest reliability, and internal reliabilities of the resulting 31-item instrument, as well as the associations to objectively assess physical activity among a sub-sample of the parents' children.

The team used the resulting instrument in the planned cross-sectional observation study to assess the combined effects of environmental and psychosocial determinants of physical activity among Latino preschool-aged children. Since then, the instrument has been used in other studies of Latino parents and their preschool-aged children and adapted for other populations.

Lessons Learned

- Obtaining input from the target population when developing the measure was critical. Their input generated some items that were not included in previous measures. It is unlikely those items would have been included if the measure was developed by the research team alone.

Related References

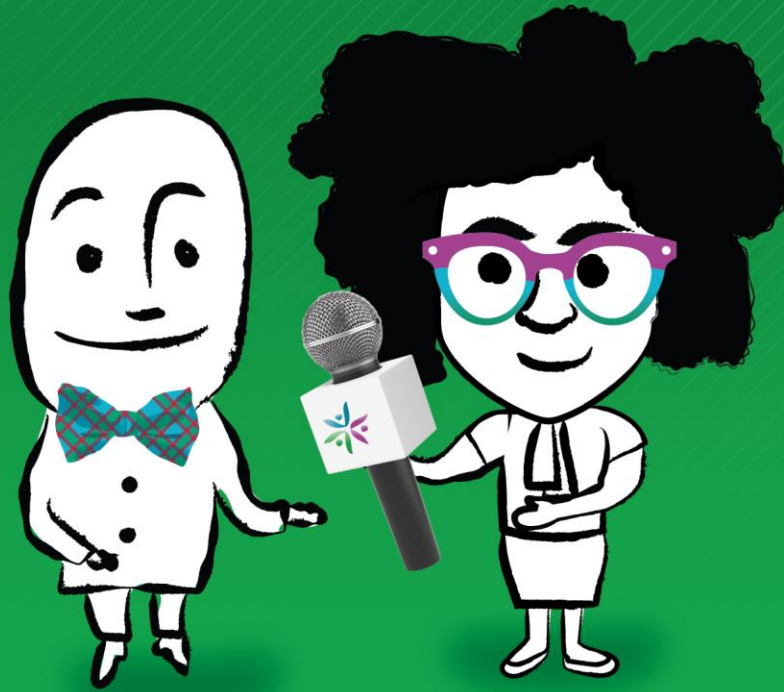
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- Cerin E, Baranowski T, Barnett A, Butte N, Hughes S, Lee RE, et al. Places where preschoolers are (in)active: An observational study on Latino preschoolers and their parents using objective measures. *Int J Behav Nutr Phys Act.* 2016;13:29.doi: 10.1186/s12966-016-0355-0
- O'Connor TM, Cerin E, Lee RE, Parker N, Chen TA, Hughes SO, et al. Environmental and cultural correlates of physical activity parenting practices among Latino parents with preschool-aged children: Ninos Activos. *BMC Public Health.* 2014;14:707.doi: 10.1186/1471-2458-14-707

Contact Information

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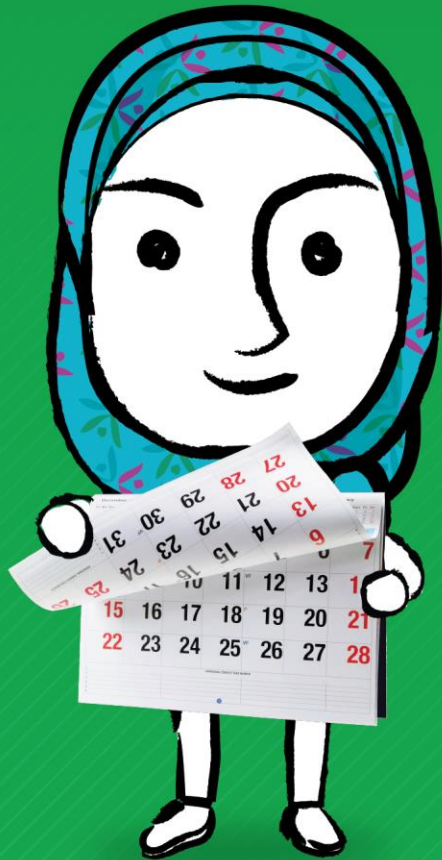
Funding Source:

NIH-Eunice Kennedy Shriver National Institute of Child Health & Human Development (R21HD060925)



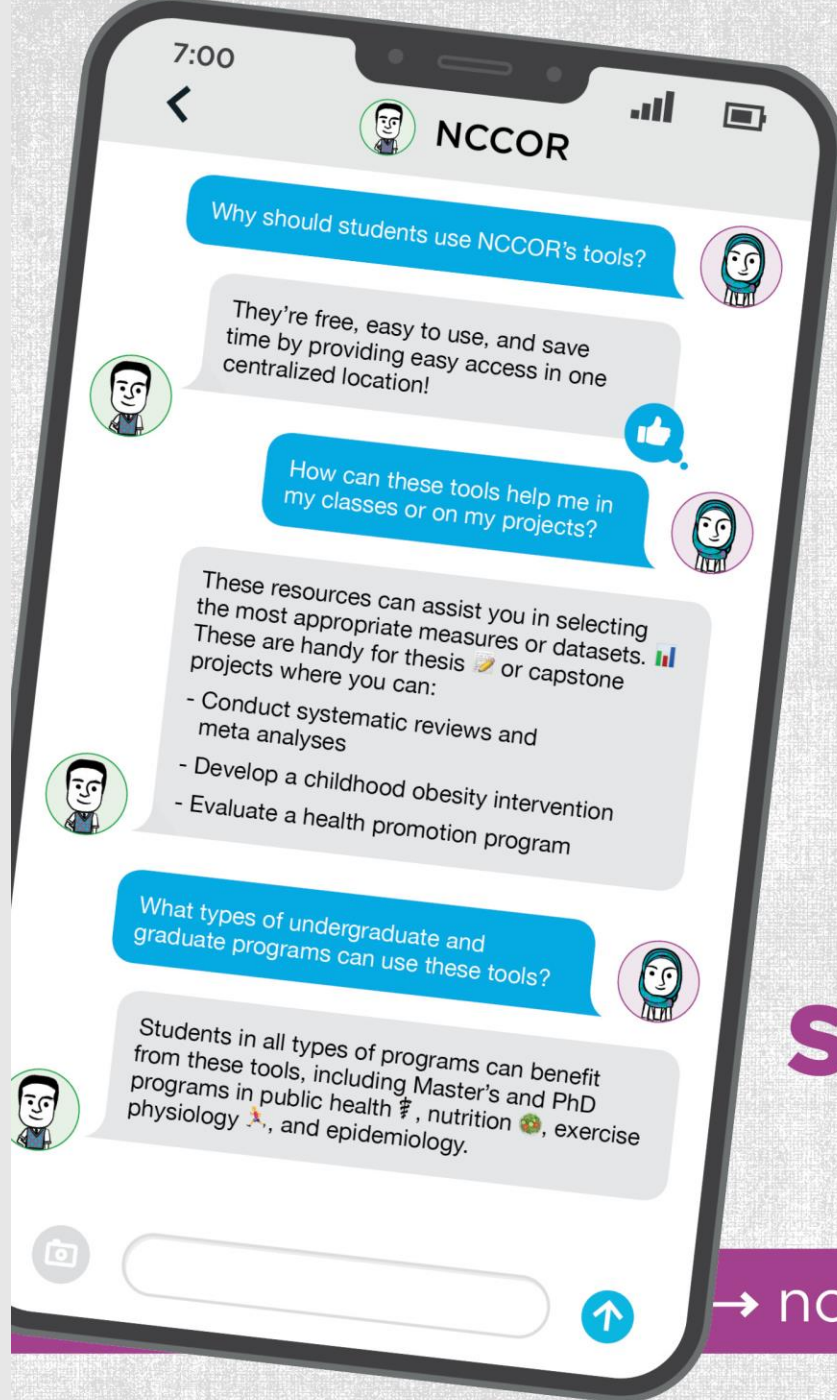
ONE ON ONE

UPCOMING EVENTS



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- NCCOR Showcase: Highlighting new projects, tools, and resources
 - February 10, 2021 at 2 p.m. EST
 - Register:
<https://connectexplore.eventbrite.com/>



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THE NCCOR STUDENT HUB

Tools and resources for students studying diet and physical activity

Discover free tools and resources supported by CDC, NIH, USDA, and RWJF to help you with your coursework and research.

ADDITIONAL RESOURCES

- Student Resources Guide
- Professor Factsheet
- Q&A for Public Health Students

CHECK OUT THE NCCOR TOOLS

- MEASURES REGISTRY RESOURCE SUITE**
A suite of three tools: the Measures Registry, User Guides, and Learning Modules, that help users understand key measurement concepts and find appropriate measures for research and evaluation projects.
- CATALOGUE OF SURVEILLANCE SYSTEMS**
An easy to navigate, one-stop access to over 100 publicly available datasets relevant to childhood obesity research.
- YOUTH COMPENDIUM OF PHYSICAL ACTIVITIES**
A list of 796 common activities in which you participate and the estimated energy cost associate with each activity.

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NCCOR has a **Connect & Explore webinar series** that connects you with leading experts in the field on a variety of public health topics.

[See all webinars](#)

SIGN UP FOR THE STUDENT HUB

Our quarterly student e-newsletter connects you to free tools and resources that can support your schoolwork and research. Each newsletter will feature a case study of a student using one of the tools and will also share other childhood obesity events and resources.

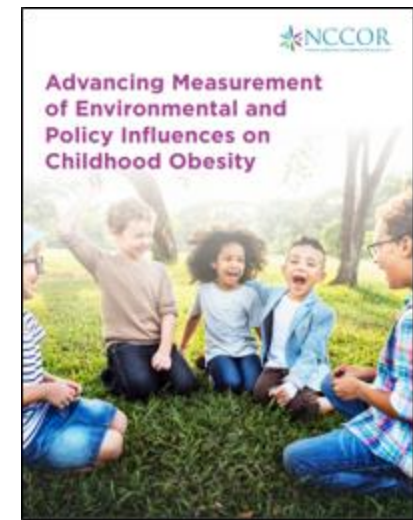
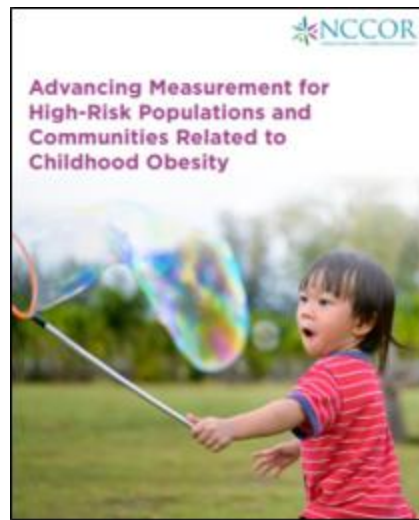
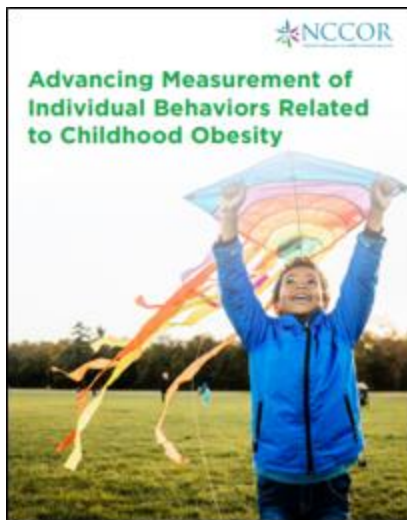
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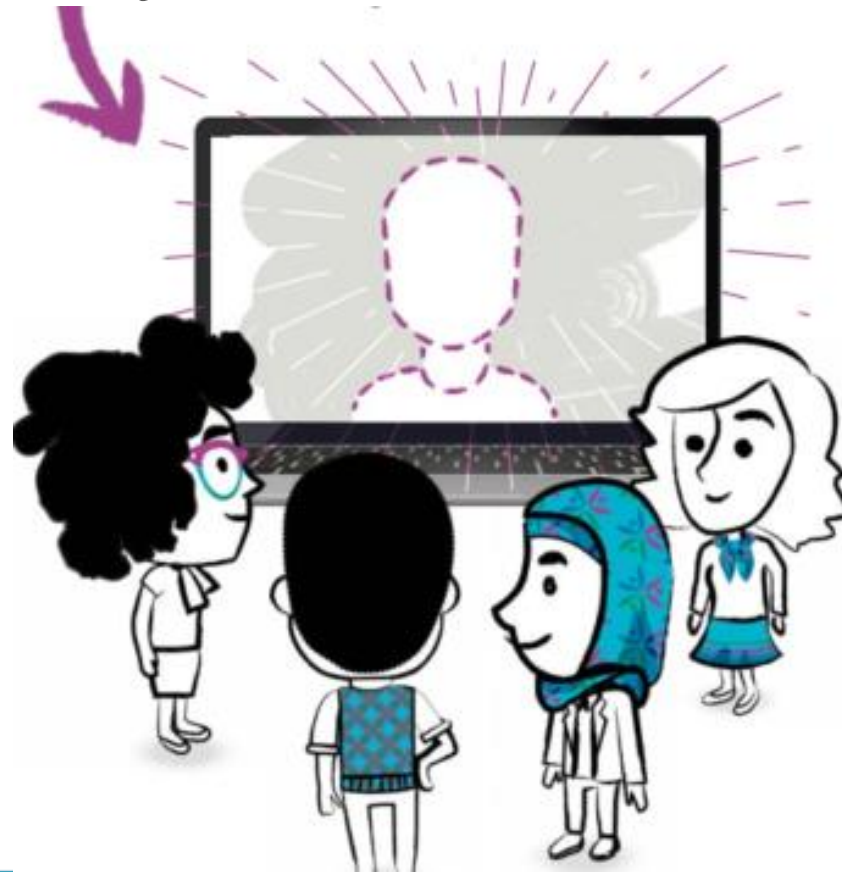
Advancing Measurement for Childhood Obesity: White Papers

- Read NCCOR's three white papers on advancing measurement in childhood obesity research at <https://www.nccor.org/projects/measurement-workshop-series/>



Have you used any of NCCOR's tools?

- Let us know at nccor@fhi360.org 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

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

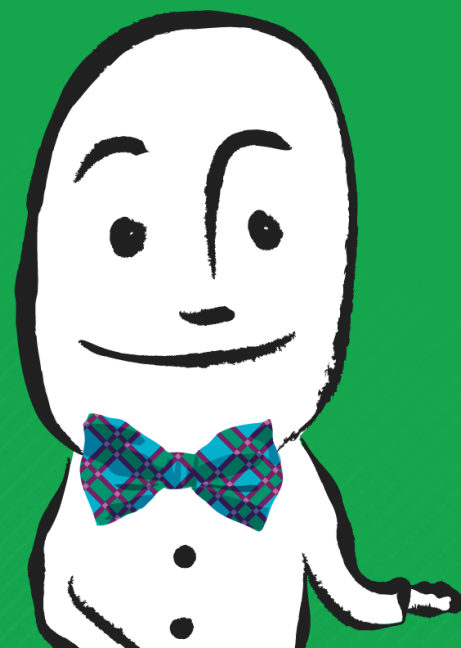
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Upcoming Webinars

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