Tools of the Trade: Using NCCOR’s Measures Registry Resource Suite in the Field

July 23, 2020

Society for Nutrition Education & Behavior 2020
Tools of the Trade: Using NCCOR’s Measures Registry Resource Suite in the Field

PRESENTERS

Amanda Sharfman, MS, MPH
Program Manager, NCCOR Coordinating Center
FHI 360

Nurgul Fitzgerald, PhD, RDN
Associate Professor
Rutgers University

Alisha Farris, PhD, RDN
Assistant Professor
Appalachian State University
Session Outline

• Overview of NCCOR
• Overview of NCCOR’s Measures Registry Resource Suite
• Case Study: How to use the Measures Registry Resource Suite in a research project
• Case Study: How to use the Measures Registry Resource Suite in the classroom
• Other NCCOR resources
• Closing
Learning Objectives

• By the end of the session, the participant will be able to apply the NCCOR Measures Registry Resource Suite to select appropriate measures of nutrition, physical activity, and environments to support their research and evaluation projects.

• By the end of the session, the participant will be able to describe three considerations for selecting a measure for research or evaluation projects related to nutrition, physical activity, or obesity to inform future research or evaluation efforts.

• By the end of the session, the participant will be able to select tools for evaluating different scenarios using the Measures Registry Resource Suite.
ACCELERATING PROGRESS TO REDUCE CHILDHOOD OBESITY
The nation’s public health agency

The nation’s health research engine

The nation’s largest philanthropy devoted to health

The nation’s leader on farming and food

THE FOUR LARGEST FUNDERS OF CHILDHOOD OBESITY RESEARCH JOINED FORCES TO FORM

National Collaborative on Childhood Obesity Research | SNEB 2020
IDENTIFY, DESIGN, AND EVALUATE INTERVENTIONS

INCREASE AND IMPROVE SURVEILLANCE

IMPROVE CAPACITY TO CONDUCT RESEARCH AND PROGRAM EVALUATION

PROVIDE NATIONAL LEADERSHIP TO ACCELERATE IMPLEMENTATION THROUGH COMMUNICATION AND OUTREACH

WORK WITH NON-HEALTH PARTNERS TO INTEGRATE CHILDHOOD OBESITY PRIORITIES

NCCOR GOALS
By building on each other’s strengths and perspectives, NCCOR’s unique public-private partnership demonstrates that it is possible to get more done more quickly—and have a greater impact—working together than by working alone.
NCCOR is raising the bar, supporting scientists with tools to amplify their work and findings.
Measures registry resources suite

Measurement tools in one place!

- Measures Registry
- User Guides
- Learning Modules
HOW TO USE THE RESOURCES SUITE

START with an overview of the domains by watching the Measures Registry Learning Modules

SELECT the domain(s) and review the corresponding Measures Registry User Guides

USE the Measures Registry, select the appropriate measure to address your research or evaluation question.
Domains

Measures Registry Resource Suite

- Individual Diet
- Individual Physical Activity
- Food Environment
- Physical Activity Environment
Measures Registry Learning Modules

- Four modules break down key measurement concepts in 15 minutes or less
- Include an introductory module on the series and four modules for each domain
- Each module domain includes a glossary, resources, and a case study to facilitate learning
- Ideal for users newer to research and evaluation in diet or physical activity
- Include short quizzes at the end of modules

http://www.nccor.org/mrlearningmodules/
Measures Registry Learning Modules: Introduction
Measures Registry Learning Modules: Individual Diet

1. Module 1: Introduction to the Individual Diet Module Series
2. Module 2: Considerations for measuring diet in the context of childhood obesity research
3. Module 3: Overview of measures of individual diet
4. Module 4: Case Study: Assessing the effects of a home-based obesity intervention on preschool children’s dietary behaviors
Measures Registry Learning Modules: Food Environment

Module 1: Introduction to the Food Environment Module Series
Module 2: Measuring the physical, social, and person-centered aspects of food environments
Module 3: Making decisions about what food environment tools to use
Module 4: Case Study: Evaluating a home-based intervention to reduce childhood obesity
Measures Registry Learning Modules: Individual Physical Activity

1. Module 1: Introduction to the Individual Physical Activity Module Series
2. Module 2: Processing, scoring, and interpreting physical activity data
3. Module 3: Selecting and using activity monitors
4. Module 4: Case Study: Understanding walking behaviors and barriers to active travel to school
Measures Registry Learning Modules: Physical Activity Environment

**Module 1:** Introduction to the Physical Activity Environment Module Series

**Module 2:** GIS-based measures for the physical activity environment

**Module 3:** Audit tools for physical activity environment assessments

**Module 4:** Case Study: Improving streetscapes and parks around schools
Question 5 of 5

When selecting measurement tools for community program projects, it is important to consider the tools’ validity and reliability.

- True
- False

CHECK ANSWER
Question 5 of 5

When selecting measurement tools for community program projects, it is important to consider the tools’ validity and reliability.

- True
- False

YES, THAT IS CORRECT.

It is important to consider the validity and reliability of measurement tools selected for community program projects. However, the assessment of reliability and validity may need to be confirmed in the population group involved with the project. The NCCOR Measures Registry includes information on the reliability and validity of tools included as well as the population that was used to establish reliability and validity.
HOW TO USE THE RESOURCES SUITE

START with an overview of the domains by watching the Measures Registry Learning Modules.

SELECT the domain(s) and review the corresponding Measures Registry User Guides.

USE the Measures Registry, select the appropriate measure to address your research or evaluation question.
Measures Registry User Guides

• Designed to:
  • Provide an overview of measurement
  • Describe general principles of measurement selection
  • Present case studies to walk users through the process of using the Measures Registry to select appropriate measures
  • Direct researchers and practitioners to additional resources
Individual Diet

• Overview of dietary behavior, which is primarily defined as dietary intake and related dietary behaviors (e.g., frequency of snacking, perceptions, and attitudes)
• Outline of the literature identifying links between diet and childhood obesity
• Concepts relevant to studying diet, including unique considerations regarding the quality of data collected in studies of children
• Methods and tools used to assess dietary intake and related dietary behaviors, including objective and self-report methods
• Principles related to psychometric properties of measures, along with random and systematic measurement error
Food Environment

• Definitions for key food environment venues
• Concepts in food environment assessment
• Methods of food environment measurement across settings
• Principles related to psychometric properties of measures
• Distinctions between single and multi-item measures, response scales, and sensitivity to change
Individual Physical Activity

- A framework to understand the unique needs of different types of studies and an introduction to the various categories of physical activity assessment options
- A description of the complexities of quantifying physical activity
- The challenges involved in assessing a multi-dimensional and dynamic behavior
- Specific considerations for measuring physical activity in children
- Considerations related to calibrating activity monitors, interpreting differences in active versus sedentary behaviors, and using new monitoring and data collection technologies and more
Physical Activity Environment

• A rationale for assessing physical activity environments and defining the key physical activity environment settings

• Description of various methods for measuring the physical activity environment

• Methods of physical activity environment measurement across settings

• Principles related to psychometric properties of measures, along with distinctions between single and multi-item measures, response scales, and sensitivity to change
HOW TO USE THE RESOURCES SUITE

**START** with an overview of the domains by watching the Measures Registry Learning Modules

**SELECT** the domain(s) and review the corresponding Measures Registry User Guides

**USE** the Measures Registry, select the appropriate measure to address your research or evaluation question.
Measures Registry

- Launched in 2011, the Measures Registry is a web-based portfolio of nearly 1400 studies using more than 100 discrete measures related to diet and physical activity.
- Search and Filter capabilities by:
  - Domain
  - Measures Type
  - Age
  - Urbanicity

www.nccor.org/measures/
At a glance

• The Measures Registry highlights
  ▪ Type of measures available
  ▪ Number of Items within measurement tools
  ▪ Links to full text

• Measures are provided when available
Study Design

- Provides the following details on study design:
  - Design Type
  - Health Outcomes Assessed
  - Obesity Measures
  - BMI Measured or Self-Report
  - Covariates
- Further details study participants:
  - Age
  - Sex
  - Race/Ethnicity
  - Income level
  - Sample Size
Additional information

• Reports on
   How to Use the Measures
    o Including (when available) time required, training required, and data collection protocols, analysis instructions
   Validity & Reliability
    o Including (when available) type, construct/subscale assessed, test/statistic used, and results
Examples of Included Measures

• Questionnaires
• Instruments
• Diaries
• Logs
• Electronic devices
• Direct observation of people or environments
• Protocols
• Analytic techniques
**Additional Resources**

MEASURES REGISTRY LEARNING MODULES:
Helping You Understand Measurement Concepts and Approaches for Diet and Physical Activity Research

**NCCOR**
National Collaborative on Childhood Obesity Research | SNEB 2020
Questions?

Amanda Sharfman, MS, MPH
Project Manager
FHI 360
asharfman@fhi360.org
How to Use the Measures Registry in a Research Project

Nurgul Fitzgerald, PhD, RDN
Associate Professor
Rutgers, The State University of New Jersey
nurgul.fitzgerald@rutgers.edu
Conceptual Model of Environmental Factors Related to Dietary Disease Risk

- Physical Environment
- Person-Centered Environment
- Social Environment

Flowchart:
- Food Choices
- Dietary Consumption
- Dietary-related Disease Risk
1. How many and what types of food venues are present?
2. What foods are available?
3. What foods are accessible?
4. What health-related information is present?

PHYSICAL ENVIRONMENT

• Home
• Childcare, preschool, school, and community venues
• Stores and restaurants
1. Social support for healthy food choices
2. Role modeling or social expectation of food choice, eating behavior
3. Food choice incentives or rewards
4. Policies, practices, or rules about eating behavior

SOCIAL ENVIRONMENT

- Youths – peers
- Parents
- Teachers
- Other adults
1. Perceptions of the physical environment
   - Availability, access
   - Affordability
   - Acceptability of product

2. Perceptions of the social environment
   - Social norms
   - Social support
   - Perceptions of policies, rules
   - Perceptions of cultural appropriateness
Measuring Food Environment

- Geo-spatial analyses (GIS)
- Observational assessments (audits)
  - Example: NEMS
- Interviews, questionnaires
  - School Health Policy and Practice Survey
  - CATCH Health Behavior Questionnaire
  - Many others available
HOW TO USE THE RESOURCES SUITE

START with an overview of the domains by watching the Measures Registry Learning Modules

SELECT the domain(s) and review the corresponding Measures Registry User Guides

USE the Measures Registry, select the appropriate measure to address your research or evaluation question.
Before you begin the measurement selection in the Registry

Clear understanding of:

- Project aim
- Population to study, sample size
- Logistics:
  - Access, staff availability, budget and time constraints
- Outcomes of interest
Assessing the physical environment: Opportunities and challenges

Geographic Information Systems (GIS)

**PROS**
- Data collection is fairly objective
- Data can be pulled and aggregated efficiently
- Data can be portrayed visually in highly effective ways

**CONS**
- Analytic expertise is required
- Store and restaurant data are often outdated
- Data affecting availability and accessibility are not included
- Does not account for various factors that influence where people shop for food or eat
- Relationship between food availability and diet-related health is difficult to demonstrate

Observational scans

**PROS**
- Training data collectors is required, but is fairly easy to do
- Data analysis is straightforward
- Can provide feedback to stakeholders quickly

**CONS**
- May be difficult to find an existing scan to meet specific project needs
- Adapted scans or newly created scans will need to be evaluated for practicality, reliability, and validity
Before you begin the measurement selection in the Registry

Clear understanding of

- Project aim
- Population to study, sample size
- Logistics:
  - Access, staff availability, budget and time constraints
- Outcomes of interest
- Psychometric characteristics: reliability, validity
Two Critical Features of Measures

**RELIABILITY**
- Do two independent observers record data similarly? (inter-rater)
- Consistency over time (test-retest)
- Multiple questions designed to measure the same concept: do they? (internal consistency)

**VALIDITY**
- Does the measure seem to assess the intended factor of interest? (face validity)
- How does the measure perform in comparison to a gold standard? (criterion validity)
- Does the instrument include all of the relevant aspects of the measure of interest? (content validity)
- Is the measure related to other factors in the expected direction? (construct validity)
Other considerations: Reliability, validity, and age appropriate tools

- Abstract concepts will be difficult for many children
- Depending on reading level, surveys may need to be read
- Use the age filter in the Measures Registry
- Check the reliability and validity of tools

Reliability

Validity
Measures Registry

The Measures Registry is a searchable database of diet and physical activity measures relevant to childhood obesity research. Its purpose is to standardize use of common measures and research methods across childhood obesity research at the individual, community, and population levels.

Measures are tools and methodologies used to assess individuals’ diet, physical activity, and the environments in which these behaviors occur. Examples of measures include questionnaires, instruments, diaries, logs, electronic devices, direct observations of people or environments, protocols, GIS and analytic techniques.

Even with the Measures Registry, however, it can be challenging for users to choose the most appropriate measures for their work. Therefore, to aid users in choosing measures for their work in childhood obesity, NCCOR developed the Measures Registry User Guides. Organized by the same four domains as the Measures Registry, the User Guides are designed to provide an overview of measurement, describe general principles of measurement selection, present case studies that walk users through the process of using the Measures Registry to select appropriate measures, and direct researchers and practitioners to additional resources and sources of useful information.

SEARCH THE REGISTRY
ACCESS THE USER GUIDES

EXPLORE MORE RESOURCES
- NCCOR Student Resources Guide
### Measures Registry

#### Filter options
- **Search**
  - Contains: corner store
- **Domain**
  - Individual Dietary Behavior (0)
  - Food Environment (29)
  - Individual Physical Activity Behavior (0)
  - Physical Activity Environment (4)
- **Measure Type**
  - GIS (3)
  - 24-hour dietary recall (0)
  - Food frequency (0)
  - Electronic monitor (0)
  - Environmental observation (29)
  - Questionnaire (1)
  - Record or log (3)
  - Other (8)
- **Age**
  - 2 - 5 Years (1)
  - 6 - 11 Years (4)
  - 12 - 18 Years (4)
  - Adults (0)
- **Context**
  - Metro/Urban (29)

#### Results
Showing all 29 matching measures

<table>
<thead>
<tr>
<th>Measure Name</th>
<th>First Author</th>
<th>Year Published</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability and Quality of Foods in Grocery Stores</td>
<td>Kipke MD</td>
<td>2007</td>
</tr>
<tr>
<td>Block Urban Area Market Basket Survey</td>
<td>Block D</td>
<td>2006</td>
</tr>
<tr>
<td>China Urban Built Environment Scan Tool (CUBEST)</td>
<td>Su M</td>
<td>2014</td>
</tr>
<tr>
<td>Corner Stores in Proximity to Schools Food Environment</td>
<td>Lucan SC</td>
<td>2010</td>
</tr>
<tr>
<td>FURIO-PREVOR Community Questionnaire for Food and Built Environments</td>
<td>Pomerleau J</td>
<td>2013</td>
</tr>
<tr>
<td>Food Availability Survey</td>
<td>Horowitz CR</td>
<td>2004</td>
</tr>
<tr>
<td>Food Environment Classification Tool for Newcastle upon Tyne</td>
<td>Lake AA</td>
<td>2010</td>
</tr>
<tr>
<td>Food Environment Survey for Adolescents</td>
<td>Hua J</td>
<td>2014</td>
</tr>
<tr>
<td>Food Establishments Relative to Location of Schools (Spatial Analysis)</td>
<td>Kipke MD</td>
<td>2007</td>
</tr>
<tr>
<td>Food Store Survey</td>
<td>Hasler AS</td>
<td>2006</td>
</tr>
</tbody>
</table>

**Compare 6 measures**

- Nutrition Env...dy (NEMS) score
  - Frank L | 2006
- Nutrition Env... Real Stores
  - Glanz K | 2007
- Nutrition Env...WIC Recipients
  - Andreuwa T | 2012
- Survey Tool for Food Stores
  - Hasler AS | 2011
- Price, Availability... Vegetables
  - Winkle E | 2006
- Availability ... Grocery Stores
  - Kipke MD | 2007
## Comparing Measures

<table>
<thead>
<tr>
<th>Show empty rows</th>
<th>Availability and Quality of Foods in Grocery Stores</th>
<th>Nutrition Environment Measures Study (NEMS) score</th>
<th>Nutrition Environment Measures Study (NEMS-S) for Retail Stores</th>
<th>Nutrition Environment Measures Survey in Stores (NEMS-S) Survey for WIC Recipients</th>
<th>Price, Availability, and Variety of Fruit and Vegetables</th>
<th>Survey Tool for Food Stores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domain</td>
<td>Food Environment</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
</tr>
<tr>
<td>Measure Type</td>
<td>GIS</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
</tr>
<tr>
<td></td>
<td>Environmental observation</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
</tr>
<tr>
<td></td>
<td>Record or log</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
</tr>
<tr>
<td>Available Info</td>
<td>Validity</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
</tr>
<tr>
<td></td>
<td>Reliability</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
</tr>
<tr>
<td></td>
<td>Instrument</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>Hispanic</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
</tr>
<tr>
<td></td>
<td>Black/African American</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
</tr>
<tr>
<td>Language</td>
<td>English</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
</tr>
<tr>
<td>Context</td>
<td>Metro/Urban</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
</tr>
<tr>
<td></td>
<td>Small Town/Rural</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
<td>☑️</td>
</tr>
</tbody>
</table>
Citation

Abstract
BACKGROUND: Eating, or nutrition, environments are believed to contribute to obesity and chronic diseases. There is a need for valid, reliable measures of nutrition environments. This article reports on the development and evaluation of measures of nutrition environments in retail food stores.

METHODS: The Nutrition Environment Measures Study developed observational measures of the nutrition environment within retail food stores (NEMS-S) to assess availability of healthy options, prices, and quality. After piloting, measures were completed by independent raters to evaluate inter-rater reliability and across two occasions to assess test-retest reliability in grocery and convenience stores in four neighborhoods differing on income and community design in the Atlanta metropolitan area. Data were collected and analyzed in 2004 and 2005.

RESULTS: Ten food categories (e.g., fruits) or indicator food items (e.g., ground beef) were evaluated in 85 stores. Inter-rater reliability and test-retest reliability of availability were high: inter-rater reliability kappas were 0.84 to 1.00, and test-retest reliabilities were .73 to 1.00. Inter-rater reliability for quality across fresh produce was moderate (kappas, .44 to 1.00). Healthier options were higher priced for hot dogs, lean ground beef, and baked chips. More healthful options were available in groceries than convenience stores and in stores in higher income neighborhoods.

CONCLUSIONS: The NEMS-S tool was found to have a high degree of inter-rater and test-retest reliability, and to reveal significant differences across store types and neighborhoods of high and low socioeconomic status. These observational measures of nutrition environments can be applied in multilevel studies of community nutrition, and can inform new approaches to conducting and evaluating nutrition interventions.

Full Text
The full text is available at https://doi.org/10.1016/j.amepre.2006.12.019
Study Design

- Design Type: Validation/Reliability
- Health Outcomes Assessed: None
- Obesity Measures: Not applicable
- BMI Measured or Self-reported: Not applicable
- Covariates: Not reported
- Data Reported on Race/Ethnicity: Quantitative data for community or area
- Data Reported on SES: Quantitative data on study sample
- SES-related Variables: Income

Study Participants

- Age: Not applicable
- Sex: Not applicable
- Race/Ethnicity: Black/African American
- Predominantly Low-income/Low SES: Not applicable
- Sample Size: Not Available

Administration

- Who Administered: Researcher administered
- How Administered: In-person
- Time Required: 41.8 (SD 14.4) minutes for grocery stores and 14.4 (SD 5.3) minutes for convenience stores
- Training Required: Yes, time reported: 2 days
- Instructions on Use: Access at the appendix to the article at American Journal of Preventive Medicine

Data Analysis

- Data Collection/Analysis Costs: Not available
- Data Collection/Protocol: Not available
- Instructions on Data Analysis: Access at the appendix to the article at American Journal of Preventive Medicine
<table>
<thead>
<tr>
<th>Type of reliability</th>
<th>Construct/subscale assessed</th>
<th>Test/statistic used</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inter-rater</td>
<td>Food availability</td>
<td>Kappas, percent agreement</td>
<td>Kappas were 0.83 to 1.00 and rates of agreement were from 92.9% to 100%</td>
</tr>
<tr>
<td>Inter-rater</td>
<td>Quality across fresh produce</td>
<td>Kappas, percent agreement</td>
<td>Kappas were 0.44 to 1.00 and rates of agreement were from 85.3% to 100%</td>
</tr>
<tr>
<td>Test-retest</td>
<td>Food availability</td>
<td>Kappas, percent agreement from 86.6% to 100%</td>
<td>Kappas were 0.73 to 1.00 and rates of agreement were from 90.2% to 100%</td>
</tr>
<tr>
<td>Test-retest</td>
<td>Quality across fresh produce</td>
<td>Kappas, percent agreement</td>
<td>Kappas were 0.11 to 1.00 and rates of agreement were from 75% to 100%</td>
</tr>
</tbody>
</table>
In summary

1. Finding the appropriate measurement tool is essential in any research project or program evaluation.
2. Be certain the tool you choose meets the needs of your project and is appropriate for your population.
3. Look for one that has some demonstrated reliability and validity, and try to contribute to reliability and validity.
4. Choose a tool that will provide the most rigorous measure within your project resources.
5. There is no PERFECT tool! Do the best you can.

Questions?

Nurgul Fitzgerald, PhD, RDN
Associate Professor
Rutgers, The State University of New Jersey
nurgul.fitzgerald@rutgers.edu
Using the Measures Registry Resource Suite in the Classroom

Alisha Farris, PhD, RDN
Assistant Professor
Appalachian State University
farrisar@appstate.edu
Applicable *Courses* for the NCCOR Measures Registry

- Community Assessment
- Community Research
Case Study: Community Health Assessment Course

• Graduate level

• Course goal:
  - develop skills to assess community health status and resources in rural and global settings

• Selected course objectives:
  - utilize qualitative, quantitative, and mixed methods to conduct a health assessment on a county in North Carolina
  - assess current and future community-level needs for keeping the public healthy
County Health Assessment Project
Community Health Assessment Assignment

https://ctb.ku.edu/en

https://www.healthycommunities.org/resources/community-health-assessment-toolkit
CASE STUDY  CLASS ASSIGNMENT: COMPARING MEASURES OF PHYSICAL ACTIVITY ENVIRONMENT IN A LOCAL PARK.

INTRODUCING THE MEASURES REGISTRY USER GUIDE: FOOD ENVIRONMENT

TEACHING SLIDE DECK

MEASURES REGISTRY, USER GUIDES, AND LEARNING MODULES
A SUITE OF RESOURCES FOR PROFESSORS

Looking for tools and resources designed and developed by other experts in the field to make research and teaching easier? Look no further than NCCOR’s Measures Registry, User Guides, and Learning modules—a suite of free tools that can support faculty within and outside of the classroom. The Measures Registry is an online database of articles with measures of individual diet and physical activity and their environments, and the User Guides and Learning Modules provide an overview of measurement and describe general principles of measure selection.

Two Critical Features of Measures: Important in Environmental Measures as Well!

**RELIABILITY**

- Do two independent observers record data on the environment in a similar way? (inter-rater)
- Is there consistency over time in how the environment is assessed? (test-retest)
- Are items designed to measure the same aspect of the environment correlated? (internal consistency)

**VALIDITY**

- Does the measure used seem to assess the factor of interest? (face validity)
- Is the measure used related to a gold standard measure of the environment? (criterion)
- Do the items used to assess the environment include all of the relevant aspects of the environment? (content)
- Is the environmental measure related to other factors in expected directions? (construct)
List of Included Case Studies

- **Case Study 1**: Study to Evaluate a School-based Intervention on its Ability to Positively Influence the School Food Environment
- **Case Study 2**: Study to Evaluate a Family-based Intervention on Its Ability to Reduce BMI-z Scores in Obese Children
- **Case Study 3**: Intervention to Improve Healthy Eating Behaviors in Independent Neighborhood Restaurants
- **Case Study 4**: Study on Implementing a Farmers Market-based Obesity Treatment Program to Change Purchase and Eating Behaviors for Women and Children Enrolled in WIC/SNAP
Community Health Assessment Assignment

• Part 1: Describe your NC county and identify stakeholders
• Part 2: Define the purpose, goals and objectives of the assessment
• Part 3: Collect secondary data, plan for primary data
• Part 4: Analyze and interpret the data
• Part 5: Disseminate and agree on identified health priorities
Part 3: Collect secondary data, plan for primary data

• Thorough review of secondary data
  ▪ Surveillance systems, literature review
  ▪ County, state, national levels
• Identification of gaps – what do they still need to know?
  ▪ Plan for primary data collection
Part 3, Question 1:
What data do you still need to gather about your NC County health issue/population?
Steps

• READ/WATCH:
  - Readings
  - NCCCOR Measures Registry Video
  - NCCCOR Food Environment, Module 3
Part 3, Question 2 & 3:

Using the NCCOR website, find an appropriate tool for your population and health issue and list it below.

--Why did you choose this survey tool? Be sure to comment on:
a) Validity and reliability
b) Appropriate fit for your demographic
c) Accessibility
• READ/WATCH:
  • NCCOR Food Environment, Module 4
  • Dr. Farris, example using NCCOR
• Using the Registry

• Comparing potential measures

• Things to consider
  • Access and availability
  • Validity and reliability
  • Resources and time
Adaptations

4. Did you include the whole survey or select only sections of it? Why or why not?

5. Are you planning on adapting the tool to fit your specific population needs? Why or why not?

6. How will you distribute this tool to your population? What things might you need to consider in reaching your population?
Questions?

Alisha Farris, PhD, RDN
Assistant Professor
Appalachian State University
Email: farrisar@appstate.edu
NCCOR Tools

Our work is supporting researchers and practitioners with tools that help build the capacity for research and surveillance.

CATALOGUE OF SURVEILLANCE SYSTEMS

This interactive web tool provides one-stop access to a wide array of national, state, and local surveillance systems at multiple levels.

LEARN MORE →
Catalogue of Surveillance System

One-stop access to review, sort, compare over 100 surveillance systems relevant to childhood obesity research and the evaluation of policy and environmental interventions

- All offer publicly available data collected within the past 10 years in the U.S.
- Includes systems that contain data for evaluating policy and environmental interventions
- Makes manuscript development easier
- A great resource for teaching and for students
- Video overview of features and how to use
- Updated annually

Find the Catalogue at www.nccor.org/css
Youth Compendium of Physical Activities

A searchable tool of 196 common activities and the estimated energy cost associated with each activity

- Provides energy costs for sedentary activities, standing, household chores, playing in games and sports, walking, and running
- Reports energy expenditure levels in youth METs. A youth MET (METy) is a MET that has been adjusted to account for the unique physiological characteristics of children and adolescents.
- For use by a wide variety of people, including researchers, health care professionals, teachers and coaches, and fitness professionals
- Use for research, public health policy making, education, and interventions to encourage physical activity in youth
- Represents group-level estimates for energy expenditure

Find the Compendium at www.nccor.org/youthcompendium
NCCOR’s webinar series connects you with experts and explores the latest childhood obesity news and research.
Hey Students!

Check out the NCCOR Student Hub!

Free tools for students!
https://www.nccor.org/student-hub/
Sign up!
NCCOR e-Newsletter
NCCOR.org/enewsletter
Why should students use NCCOR’s tools?

They’re free, easy to use, and save time by providing easy access in one centralized location!

How can these tools help me in my classes or on my projects?

These resources can assist you in selecting the most appropriate measures or datasets. These are handy for thesis or capstone projects where you can:
- Conduct systematic reviews and meta-analyses
- Develop a childhood obesity intervention
- Evaluate a health promotion program

What types of undergraduate and graduate programs can use these tools?

Students in all types of programs can benefit from these tools, including Master’s and PhD programs in public health, nutrition, exercise physiology, and epidemiology.

Sign up for NCCOR Student Hub!

→ nccor.org/e-newsletter
Have you used any of NCCOR’s tools?

• Let us know at nccor@fhi360.org and we may feature you in our next webinar or resource!
Questions?