1. Overview of NCCOR’s Measures Registry Resource Suite
2. Spotlight: NCCOR’s Tools in Action: Featuring the Summer Physical Activity and Friendship Study
   • Tyler Prochnow
3. One on One
   • David Berrigan, NIH
   • Sarah Sliwa, CDC
4. NCCOR Announcements
Today’s Conversation

Tyler Prochnow
PhD Candidate at Baylor University

David Berrigan, PhD, MPH
National Institutes of Health

Sarah Sliwa, PhD, MS
Centers for Disease Control and Prevention
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Type your question(s) in the chat box located on the right and a representative will respond shortly.
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INTERACTIVE POLL
NCCOR’s Measures Registry Resource Suite
Standard measures are needed for:

- Research and evaluation related to the causes of childhood obesity
- Interventions to prevent and treat obesity in children
- Programs and policies concerning individual and environmental determinants of childhood obesity
- Progress towards identification and implementation of evidence-based interventions, programs, and policies
Measures Registry Resource Suite

- Measures Registry
- Measures Registry User Guides
- Measures Registry Learning Modules
Measures Registry

• Launched in 2011, the Measures Registry is a web-based portfolio of nearly 1,400 studies on more than 100 discrete measures related to diet and physical activity.

• Measures are categorized into four domains:
  – Individual Diet
  – Food Environment
  – Individual Physical Activity
  – Physical Activity Environment
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, and analytic techniques.
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 selecting appropriate measures
  – Direct researchers and practitioners to additional resources
• Cover the four domains of the Measures Registry
Measures Registry User Guides

To help researchers choose the most appropriate measures for their work in childhood obesity, NCCOR has developed four Measure Registry User Guides. This project was funded through NCCOR’s first strategic funding alliance with The JPB Foundation. The Measures Registry User Guides are designed to:

- Provide an overview of measurement
- Describe general principles of measurement selection
- Present case studies that walk researchers through the process of using the Measures Registry to select appropriate measures
- Direct researchers to additional resources and sources of useful information

Click the boxes below to access the User Guides.
Measures Registry Learning Modules

- 17 modules; 4 for each domain and an introductory module
- Each module takes 15 minutes or less
- Designed to
  - Introduce the domain
  - Highlight key topics
  - Demonstrate the process of choosing a measure via a case study
  - Test your knowledge with quiz questions following each module
Measures Registry Learning Modules

The Measures Registry Learning Modules are designed to complement the Measures Registry and Measures Registry User Guides and assist researchers and practitioners with choosing the best measures across the four domains of the Measures Registry: individual diet, food environment, individual physical activity and physical activity environment. The Learning Modules include an introductory module that provides an overview of the module series, as well as four modules for each of the four domains. Each module domain also includes a glossary, additional resources, and an interactive case study. The Learning Modules are a great tool for users who are newer to research and evaluation in diet and physical activity, or individuals who need a refresher on key concepts. The modules were also designed with students and faculty in mind and include short quizzes to enhance classroom learning and understanding of key concepts.

Access each learning module below.

- Introduction to the Measures Registry User Guide Module Series
- Individual Diet
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
SPOTLIGHT
Summer Physical Activity and Friendships Study with Tyler Prochnow
Summer PA and Friendships

• Decreased PA during summer
• Fewer structured opportunities
• Summer Care Programs (e.g. Boys & Girls Clubs)
  – Attended by more than 14.3 million each year
  – May fill gap
• Social influences?
Social Influences on PA

- Selection – Choose friends based on PA
- Influence – Become more like friends over time
- Co-participation or Concurrent Play
Research Questions

• How are friendships at a summer care program related to PA?
• How do these friendships change over time?
  – Does PA play a role in these changes?
Research Questions

Questions about the Adolescent

- Self-reported PA
- Skill Competency
- Team Sport Participation
- Demographics

Social Network Questions

- Relation
- Location
- Frequency of play
- Activity
- Support
Why you should use NCCOR’s Measures Registry!

• So simple to use
• Everything in one place
• Quick scope of options
What does it look like?

NCCOR Measures Registry

Filter options

Search
Contains

Domain

- Individual Dietary Behavior (26)
- Food Environment (7)
- Individual Physical Activity Behavior (152)
- Physical Activity Environment (16)

Measure Type

- GIS (0)
- 24-hour dietary recall (0)
- Food frequency (1)
- Electronic monitor (1)
- Environmental observation (3)
- Questionnaire (152)
- Record or log (3)
- Other (12)

Age

- 2 - 5 Years (24)
- 6 - 11 Years (152)
- 12 - 18 Years (85)
- Adults (10)

Context

- Metro/Urban (97)
- Small Town/Rural (9)

Results

Showing 1-25 of 152 matching measures

<table>
<thead>
<tr>
<th>Measure Name</th>
<th>First Author</th>
<th>Year Published</th>
<th>Compare</th>
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<tbody>
<tr>
<td>3 Day Physical Activity Recall (DPAR) Questionnaire for 8 to 12 Year Old Girls</td>
<td>Farr JH</td>
<td>2011</td>
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<td>Activity Questionnaire (GEMS GAQ)</td>
<td>Story M</td>
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<td>Activity Questionnaire in 8 to 9 Year Olds (GEMS GAQ)</td>
<td>Truth HS</td>
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<td>Athletic Identity Questionnaire (AIQ) for 4th and 5th Graders</td>
<td>Anderson CD</td>
<td>2017</td>
<td></td>
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<tr>
<td>Attitudes Toward Outdoor Play (ATOP) Scales for 9 to 12 Year Olds</td>
<td>Beyer K</td>
<td>2017</td>
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<tr>
<td>Behavioral Lifestyle Changes Questionnaire for 9 to 17 Year Olds</td>
<td>Carillo-Bernade Y</td>
<td>2017</td>
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<td>Bone Specific Physical Activity Questionnaire (BSAQ) for 8 to 13 Year Old Girls</td>
<td>Farr JH</td>
<td>2011</td>
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<tr>
<td>Child and Adolescent Physical Activity and Nutrition Survey for 11 to 14 Year Olds</td>
<td>Strugnell L</td>
<td>2011</td>
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<td>Child and Adolescent Television Viewing and Ads Survey</td>
<td>Avalo G</td>
<td>2007</td>
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<td>Children’s Participation Assessment Scale in Activities Outside of School-Parent Version (CPAS-P) for 6 to 12 Years Olds</td>
<td>Amiri M</td>
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<td>Children’s Leisure Activities Study Survey (CLASS)</td>
<td>Telford A</td>
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<td>Huang YJ</td>
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<td>Children’s Physical Activity Questionnaire (CPAQ) for 9 and 10 Year Olds</td>
<td>Nor Aini J</td>
<td>2013</td>
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<td>Children’s Physical Activity Questionnaire (CPAQ) for 9 to 10 Year Olds</td>
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<td>Children’s Travel Behaviours and Independent Mobility Questions for 4th to 6th Graders</td>
<td>Lessouche R</td>
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<td>Children’s Travel to School Measure for 11 to 14 Year Olds</td>
<td>Tseta L</td>
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<tr>
<td>Commitment to Physical Activity Scale for Adolescents for Fifth to Seventh Graders</td>
<td>Robbins LB</td>
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## Comparing Measures

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<thead>
<tr>
<th>Domain</th>
<th>Attitudes Toward Outdoor Play (ATOP) Scales for 9 to 13 Year Olds</th>
<th>Knowledge, Attitudes, and Habits Questionnaire for 5 to 7 Year Olds</th>
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<tr>
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<td>Food Environment</td>
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<tr>
<td>Individual Physical Activity Behavior</td>
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<td>Physical Activity Environment</td>
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<th>Measure Type</th>
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<td>GIS</td>
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<td>24-hour dietary recall or food frequency</td>
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<td>Electronic monitor</td>
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<td>Environmental observation</td>
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<td>Questionnaire</td>
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<th>Knowledge, Attitudes, and Habits Questionnaire for 5 to 7 Year Olds</th>
<th>Motivation for Physical Activity</th>
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<td>Validity</td>
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<td>✅</td>
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<tr>
<td>Reliability</td>
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<td>Instrument</td>
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<th>Age</th>
<th>Attitudes Toward Outdoor Play (ATOP) Scales for 9 to 13 Year Olds</th>
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<tr>
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<td>12 - 18 Years</td>
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Health Behavior in School-aged Children (HBSC) Questionnaire for 11 and 15 Year Olds

Citation

Abstract
OBJECTIVES: Better assessment of the reliability of the physical activity and sedentary behaviour items across countries in all WHO regions is highly needed. The aim of the study was to examine the test-retest reliability of selected physical activity and sedentary behaviour items of the HBSC questionnaire in Czech, Slovak and Polish adolescents.

METHODS: We obtained data from 693 Czech, Slovak and Polish (50.9% boys) primary school pupils, grades five (mean age = 11.08; SD = 0.45) and nine (mean age = 15.12; SD = 0.45), who participated in a test-retest study in 2013. We used the single measures of Intraclass Correlation Coefficients (ICC) and Cohen's Kappa statistic to estimate the test-retest reliability of all selected items within the sample and stratified by gender, age group and country.

RESULTS: Both physical activity items (VPA and MVPA) and most of the sedentary behaviour items showed moderate agreement (ICC 0.41-0.60) and a similarly moderate correlation (Cohen's Kappa 0.3-0.5) after dichotomization.

CONCLUSIONS: The physical activity and sedentary behaviour items of the HBSC questionnaire seem to be at the borderline of reliability to be used in adolescents.

Full Text
The full text is available at https://dx.doi.org/10.1007/s00038-014-0628-9
HBSC - PA

Health Behavior in School-aged Children (HBSC) Questionnaire for 11 and 15 Year Olds

Domain(s)
Individual Physical Activity Behavior

Measure Type
Questionnaire

Measure Availability
Measure included in article

Number of items
5 Reported

Study location
Metro/Urban
Olomouc, Pardubice, Kosice, Warsaw, Czech Republic, Slovakia, Poland

Languages
Czech, Polish

Information about Development of Measure
The Health Behavior in School-aged Children (HBSC) questionnaire's vigorous physical activity and moderate to vigorous physical activity items have been shown to be reliable in adolescent populations. But HBSC questions regarding sedentary behaviors, such as television watching and computer use have not been tested adequately in diverse child populations to know if they have acceptable reliability or acceptable validity. This study examines the test-retest reliability of selected physical activity and sedentary behavior items of the HBSC questionnaire in Eastern European adolescents.
<table>
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<tr>
<th>Type of reliability</th>
<th>Construct/subscale assessed</th>
<th>Test/statistic used</th>
<th>Result</th>
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<tr>
<td>Test-retest</td>
<td>Health Behavior in School-aged Children questionnaire, moderate to vigorous physical activity items</td>
<td>Intraclass correlation coefficients (ICC), (95 % CI)</td>
<td>ICC = 0.52, (0.46-0.58), all ICC = 0.53, (0.45-0.61), boys ICC = 0.51 (0.41-0.59), girls ICC = 0.52, (0.43-0.60) 11 year olds ICC = 0.52 (0.42-0.60), 15 year olds</td>
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<tr>
<td>Test-retest</td>
<td>Health Behavior in School-aged Children questionnaire, vigorous physical activity items</td>
<td>Intraclass correlation coefficients (ICC), (95 % CI)</td>
<td>ICC = 0.55, (0.49-0.61), all ICC = 0.56, (0.48-0.64), boys ICC = 0.52, (0.44-0.61), girls ICC = 0.52, (0.44-0.60) 11 year olds ICC = 0.58 (0.50-0.66), 15 year olds</td>
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<tr>
<td>Test-retest</td>
<td>Health Behavior in School-aged Children questionnaire, TV use</td>
<td>Intraclass correlation coefficients (ICC), (95 % CI)</td>
<td>ICC = 0.51, (0.45-0.57), weekday, all ICC = 0.52, (0.46-0.58), weekend, all</td>
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<tr>
<td>Test-retest</td>
<td>Health Behavior in School-aged Children questionnaire, computer/internet use</td>
<td>Intraclass correlation coefficients (ICC), (95 % CI)</td>
<td>ICC = 0.61, (0.55-0.66), weekday, all ICC = 0.62, (0.56-0.67), weekend, all</td>
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<tr>
<td>Test-retest</td>
<td>Health Behavior in School-aged Children questionnaire, sitting time</td>
<td>Intraclass correlation coefficients (ICC), (95 % CI)</td>
<td>ICC = 0.55, (0.48-0.60), weekday, all ICC = 0.53, (0.47-0.59), weekend, all</td>
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<td>Test-retest</td>
<td>Health Behavior in School-aged Children questionnaire, physical activity items</td>
<td>Cohen's $\kappa$</td>
<td>$k = 0.25$ to 0.57, all $p &lt; 0.001$</td>
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</table>
Outcomes of the Study

- Cross-Sectional Results
- Longitudinal Results
- Network Perceptions
- Next steps
Cross-Sectional Results

- Perceived Skill is spatially correlated
- Friendships are mutual and occur between same age and sex adolescents
- Self-reported PA was associated with more nominations received but less sent
- Similarity in PA increased the odds of connection in the larger program
Longitudinal Results

• Over time adolescents formed friendships based on similarity in PA at larger program
• Smaller program saw opposite effects
• Evidence of friend turnover or change in friend groups due to new members or members leaving
Network Perception Results

Adolescents perceive similar levels of PA for their friends

More physically competent and central adolescents were perceived as more active
Next Steps

• Objectively measured activity levels
• Self-response Network Data
Final Words

• Use the resources
• Take advantage of every opportunity
• Ask questions and reach out

YOU GOT THIS
Questions

• Tyler_prochnow1@baylor.edu
• Tprochnow.com
ONE ON ONE
QUESTIONS?
Please type your question(s) in the chat box located on the right.
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
Check out the new student hub webpage!
Have you used any of NCCOR’s tools?

• Let us know at nccor@fhi360.org and we may feature you in our next webinar!
Upcoming Events

- NCCOR will have a booth at SOPHE in Atlanta, GA March 17-20
- NCCOR presenting at SOPHE Student Workshop Wednesday, March 18, 11:15–12:45 p.m.
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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**Connect & Explore**

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**Upcoming Webinars**

Mark your calendar for these upcoming Connect & Explore webinars!
THANK YOU!