

5. AHRQ and NIH-funded Comprehensive Evaluation of the Effectiveness of Childhood Obesity Prevention Programs Conducted Worldwide

Primarily funded by the United States Department of Health and Human Services (USDHHS) Agency for Healthcare Research and Quality (AHRQ) with additional funding support from the NIH, since 2011, we have been conducting systematic reviews and meta-analyses to assess the effects of interventions directed at children and/or their families (including school-based and non-school based programs, as well as those related to policies and the built environment) on childhood obesity and related conditions, and children's related knowledge, beliefs and attitudes.

6. US CDC Community Preventive Services Task Force Community Guide on Childhood Obesity Prevention

Dr. Wang's team is a formal collaborative partner of the US CDC Obesity Coordination Team, which consists of leading experts from the CDC, NIH, and the US Community Preventive Services Task Force and universities. The team aims to develop a CDC Community Guide on School-based Childhood Obesity Prevention. The guide will be developed built upon the 835-page AHRQ report that Dr. Wang's team published in 2013 assessing the effectiveness of childhood obesity interventions.

7. NIH P60 Grant Funded Twin Study in China: the Influence of Genetics and Dietary Intake on Child Growth and Health During Puberty

This study followed a cohort of 311 pairs of twins and their parents in South China to examine:

- How genetics, dietary calcium intake, and their interaction may affect children's adiposity and health (metabolic profile)
- How prenatal factors (e.g., maternal pre- and during pregnancy nutrition) may affect children's later growth, maturation and health (e.g., adiposity and metabolic profile)
- How prenatal factors, early child growth trajectory, children's diet, family factors such as parenting practice, and their interactions may affect child growth, maturation and health



8. A Large School-based Childhood Obesity Prevention Study in China: The Health Legacy Project of the 2nd International Summer Youth Olympic Games (YOG) held in Nanjing

- Effective and sustainable physical activity (PA) promotion programs in schools are needed to support child health, including for obesity prevention
- Encouraged by the International Olympic Committee, we conducted a legacy project targeting at childhood obesity prevention through PA promotion started in Sep 2013 in Nanjing City, the host city of the 2014 2nd Summer YOG
- 10,091 students from 48 schools were enrolled for the randomized controlled trial, where 1-year PA promotion program was provided for intervention schools, in addition to health education provided to all schools
- At end of the one-year intervention, the intervention group increased PA and had less body mass index increase than the control group



Join Our Effort to Fight Global Obesity Epidemic!

Find out more at

<http://sphhp.buffalo.edu/childhoodobesity>

Contact Us

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For donations, please contact:

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Systems-oriented Global Childhood Obesity Intervention Program



Mission

- Promote innovative research on childhood obesity
- Facilitate collaboration and integration of resources and expertise in childhood obesity research from different fields and from different parts of the world
- Develop novel, effective and sustainable solutions to prevent childhood obesity
- Train young researchers, health professionals and future leaders in the childhood obesity field

About Us

- Our program includes researchers and trainees based at UB-SUNY as well as collaborators and trainees from other domestic and international institutions including other top universities and selected US federal agencies
- We value multidisciplinary and international collaborations; and apply transdisciplinary approaches to study childhood obesity etiology and prevention
- We bring together expertise relevant to childhood obesity such as basic science, epidemiology, nutrition, biostatistics, medicine, economics, geography, engineering, environmental and social policy research in an innovative way in our research
- Our research projects are of various study designs including school-based interventions, systems models based theoretical interventions, large cross-sectional and cohort studies, twin study, analysis of large data sets pooled from multiple sources, systematic review, and meta-analysis
- Some of our NIH-funded ongoing research projects in the U.S. and international settings emphasize the integration of geospatial analysis with systems science methods



Director's Message:

Obesity has become a global epidemic. The prevalence of overweight and obesity keeps rising in many countries worldwide, affecting over 30% of adults and many children. For example, in the largest industrialized country, the United States, 2/3 of adults and 1/3 of children are overweight or obese, and the rates are much higher in some racial/ethnic groups. In China, the largest developing country and the world's second largest economy, about 1/3 of adults and 1/6 of children are overweight or obese. The global obesity epidemic is a result of the complex interplay of many factors, ranging from biology, genetic factors, behaviors, urban planning, national and regional economies, food and health policies, to global trade. It requires the involvement of multiple stakeholders ranging from citizens to government agencies, and use of a systems approach, both to control the epidemic and to address many related adverse health- and financial consequences. We welcome you to join our effort to fight the global obesity epidemic!

Youfa Wang, MD, MS, PhD

Program Director, Professor at University at Buffalo, the State University of New York (SUNY)

About the Director:

- As an internationally known expert in childhood obesity, Dr. Wang has over 170 publications including about 140 peer-reviewed papers. His work is widely cited, e.g., some papers are cited >1000 times
- As the PI, he has secured about \$23 million NIH research grants in the field of childhood obesity, including multiple NIH R01 grants and a \$16 million NIH U54 center grant
- He has served on numerous national and international expert committees and leadership positions including in related societies such as The Obesity Society and the American Society of Nutrition

Our Selected Projects:

1. Global Childhood Obesity Network

- Fosters international and interdisciplinary collaborations among leading childhood obesity experts and researchers
- Disseminates research findings among researchers, health professionals, educators and policy makers
- Connects researchers and facilitates discussions of key topics in the field among researchers and stakeholders from different institutions and countries
- Finds effective and sustainable solutions for controlling the global childhood obesity epidemic
- Trains young researchers, health professionals and future leaders in the childhood obesity field



2. The National Aeronautics and Space Administration (NASA) Mission X: Train Like an Astronaut Program



- An international health and fitness challenge for children
- It covers 28 countries worldwide
- Its website* provides games, handouts, journaling, videos and podcasts of physical and educational activities used by astronauts to prepare for space exploration
- Includes hands on exercises that promote strength training, core building, muscle endurance and agility
- These activities promote a healthy life style by helping kids improve concentration, hand-eye reaction time, aerobic and anaerobic fitness, bone health and high energy levels
- Dr. Wang's team is helping evaluate the effectiveness of the Mission X program, develop new intervention programs, expand the program into more countries and increase its enrollment in the US



* <http://trainlikean astronaut.org>

3. NIH U54 Grant Funded Multilevel Systems-oriented Childhood Obesity Study in China

- Studies the impact of the contextual factors (e.g., national and regional food policy, food accessibility, food price, food marketing, social norms) on children's dietary intakes using an innovative, integrated conceptual framework and novel statistical approaches including systems analysis
- Examines synergistic multilevel interplay between the social, environmental, family, and individual factors, that affect children's energy balance related behaviors, and thus affect adiposity outcomes at individual and population levels
- Studies how children and families make food intake decisions considering their individual, family, community, and social environment factors, and why some groups may respond to their food environment differently



4. NIH R01 Grant Funded US Nationwide Study- Causes and Interventions for Childhood Obesity: Innovative Systems

- Uses innovative, integrated conceptual frameworks and multilevel statistical analysis approaches, to examine the influences and interactions between individual, family and environmental factors on childhood obesity
- Uses agent-based models to test simple rules (e.g., how children may interact with their social and built environments) that help explain individuals' energy balance related behaviors and obesity risk and the changes in population level rates of these outcomes
- Determines the key contextual drivers of the childhood



obesity epidemic at the population level (i.e., time trends), using a novel combination of systems analysis methods and nationally representative data sets linked with contextual measures