
BIOGRAPHICAL SKETCH

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NAME: Bai, Yang.

eRA COMMONS USER NAME: ybai

POSITION TITLE: Assistant Professor

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Shanghai University of Sport, Shanghai	BS	2010	Kinesiology
Iowa State University, Ames, IA	MS	2012	Physical activity and Health Promotion
Iowa State University, Ames, IA	PhD	2016	Physical activity and Health Promotion

A. PERSONAL STATEMENT

I am a physical activity and health promotion researcher with primary interests focused on youth fitness and obesity surveillance and promotion. I have been involved in a large on-going participatory fitness and physical activity promotion network with the Cooper Institute, NFL PLAY 60 FITNESSGRAM Partnership Project, sponsored by NFL foundation since 2010. I am in charge of data management and analysis from over 1100 schools and over millions of student record from multiple years. We track the longitudinal trends of youth fitness and obesity as well as the programming effectiveness over time. I also have extensive research experience on analyzing youth fitness and obesity data from the whole state of Texas and Georgia involve since 2014. I am familiar with other public health and education related database including county healthy ranking and National Center for Education Statistics. I have conducted numerous studies to merge county and school level data to further examine a variety of factors explained the childhood disparity. I am proficient in using statistical software (e.g., SAS, Mplus, SPSS, and R) and advanced statistical models to process large-scale complicated data.

B. POSITIONS AND HONORS

Positions

2010-16 Teaching and Research Assistant, Iowa State University, Ames, IA
2016-19 Assistant Professor, University of Vermont, Burlington, VT
2019- Assistant Professor, University of Utah, Salt Lake City, UT

Other Experiences and Professional Memberships

American College of Sport Medicine, 2012-present
Society of Health and Physical Educators America, 2013-present
International Society of Behavior Nutrition and Physical Activity, 2016-present
International Society for the Measurement of Physical Behavior, 2016-present

C. CONTRIBUTION TO SCIENCE (Summaries of Selected Lines of Research)

Participatory research network to promote physical activity among children and youth

Participatory research model empowers schools to adopt and modify health promotion program to meet individual school's needs. To better disseminate the evidence-based programs it's essential to evaluate program effectiveness in real-world settings. I have specific expertise in the evaluation of large-scale longitudinal participatory research program with complicated statistical modelling. Example papers are referenced below:

- 1) Saint-Maurice, PF., **Bai, Y.**, Welk, G.J., Allums-Featherston, KA., Norman, C., & Bandelli, NL. (2017) Impact of NFL PLAY 60 programming on elementary school children's body mass index and aerobic capacity: The NFL PLAY 60 FitnessGram Partnership Project. *Journal of School Health*.
- 2) **Bai, Y.**, Saint-Maurice, PF., Welk, G.J., Russell, DW., Allums-Featherston, KA., & Norman, C. (2016) The longitudinal Impact of NFL PLAY 60 Programming on Youth Aerobic Capacity and BMI. *American Journal of Preventive Medicine*.
- 3) Welk G.J, **Bai Y.**, Saint-Maurice PF, Candeleria N, Allums-Featherston KA, & Anderson K. (2016) Design and Evaluation of the NFL PLAY 60 FITNESSGRAM Partnership Project. *Research Quarterly for Exercise and Sport*. 87(1):1-13.
- 4) **Bai, Y.**, Saint-Maurice, PF., Welk, G.J., Allums-Featherston, KA., Norman, C., & Anderson, K. (2015) Prevalence of youth fitness in U.S.: Baseline results from the NFL PLAY 60 FITNESSGRAM project. *Journal of Pediatrics*. 167(3):662-8.

Surveillance of youth fitness and obesity

The epidemic of childhood obesity presents a major health challenge as the obese children are more likely to become obese adult. I have extensive research experience on aerobic fitness and obesity surveillance using millions of youth fitness data from both national and state level. Example papers are referenced below:

- 1) Yi, X., You, F., Burns, R., **Bai, Y.**, & Zhang, P. (2018) Body Mass Index and Physical Fitness among Chinese Adolescents from Shandong Province: A Cross-sectional Study. *BMC Public Health*.
- 2) Saint-Maurice, PF., **Bai, Y.**, & Welk, G.J. (2017) The Healthy Fitness Zone continuum as a measure of change in youth BMI: an example using 2012-2014 data from Georgia. *Public Health Report*.
- 3) **Bai, Y.**, Saint-Maurice, PF., & Welk, G.J. (2017) Fitness Trends and Disparities Among School-Aged Children in Georgia, 2011-2014. *Public Health Report*.
- 4) **Bai, Y.**, Chen, S., Laurson, K., Kim, Y., Saint-Maurice, P., & Welk, G.J. (2016) The Associations of Youth Physical Activity and Screen Time with Fatness and Fitness: A Cross Sectional Study. *Plos One*. 11(1): e0148038. DOI: 10.1371/journal.pone.0148038

Factors associated with physical activity and health

Understanding the complex underlying factors associated with health and physical activity behaviors is essential to design tailored and effective intervention. I have contributed to examining various of county, school, individual level correlates explained the variance in physical activity and health. Example papers are referenced below:

- 1) **Bai, Y.**, Allums-Featherston, KA., Saint-Maurice, PF., Welk, G.J., & Norman, C. (2018) Evaluation of Youth Enjoyment toward Physical Activity and Physical Education. *Pediatric Exercise Science*.
- 2) **Bai, Y.**, & Welk, G.J. (2017) School and County Correlates Associated with Youth Body Mass Index. *Medicine & Science in Sports & Exercise*.
- 3) **Bai, Y.**, Saint-Maurice, PF., Welk, G.J., Allums-Featherston, KA., & Norman, C. (2016) Explaining disparities in youth aerobic fitness and body mass index: relative impact of socioeconomic and minority status. *Journal of School Health*.
- 4) **Bai, Y.**, Chen, S., Vazou, S., Welk, G.J., & Schaben, J. (2015). Mediated effects of perceived competence on youth physical activity and sedentary behavior. *Research Quarterly for Exercise and Sport*. 86(4):406-13. DOI: 10.1080/02701367.2015.1087639

A complete list of my published works are available online in MyBibliography:

https://scholar.google.com/citations?hl=en&user=ysHASwcAAAAJ&view_op=list_works&sortby=pubdate

D. RESEARCH SUPPORT

Conrad Hilton Foundation Hudziak (PI) 07/01/17 – 06/30/20
University of Vermont Wellness Environment

The project aims to teach college students about the four pillars of wellness, fitness, mindfulness, nutrition, and mentorship in order to reduce the number of risky behaviors made.

Role: Co-PI

Cooper Institute Bai (PI) 06/15/17 – 10/31/17
Evaluation of Texas FitnessGram Outcomes in 2014-2016

To provide a comprehensive evaluation of the Texas FitnessGram dataset from 2014 to 2016 which includes annual data from more than 3 million Texas youth

Role: PI

Cooper Institute & Subcontract from Iowa State University Bai (PI) 08/16/16 – 08/15/19
NFL PLAY 60 FITNESSGRAM project-Phase III

To examine whether additional support and resources influence the successful adoption and utilization of the FITNESSGRAM program and youth fitness and activity.

Role: PI

University of Vermont Bai (PI) 02/01/15 – 12/31/18
EEPRSS

Fight Hypertension in the Digital Age

To examine the activity trackers feasibility as a behavior change strategy of themselves or as an adjunct to traditional methods among population with hypertension.

Role: PI

Completed Research Support

NIH R21CA188641 Welk (PI) 07/01/14 – 06/30/17
Calibration of the Online Youth Activity Profile for School-Based Evaluations

This study systematically evaluated the utility of the online version of Youth Activity Profile for school-based research on physical activity and sedentary behavior.

Role: Research Assistant

Cooper Institute Welk (PI) 01/01/14 – 09/30/15
Texas FITNESSGRAM Project

The project evaluates longitudinal health related fitness data from school in the entire state of Texas as part of the state mandated use of FITNESSGRAM.

Role: Research Assistant

Cooper Institute Welk (PI) 10/01/09 – 06/30/16
Evaluation of FITNESSGRAM NFL PLAY 60 Partnership

The project evaluates the impact of NFL PLAY 60 Programming using a participatory research model and training on use of FITNESSGRAM.

Role: Research Assistant