

Title:

Obesity Indicators, Accuracy of Body Weight Perception, and Chronic Illness Among Chinese-Americans

Mei R. Fu, PhD

Rory Meyers College of Nursing, New York University, New York, NY, USA

Session Title:

Global Research and International Collaborations in the Pacific Rim

Slot:

D 10: Friday, 28 July 2017: 10:45 AM-12:00 PM

Scheduled Time:

11:45 AM

Keywords:

chronic illness, obesity and perception of body weight

References:

References:

1. World Health Organization, *Obesity: preventing and managing the global epidemic. Report of a WHO consultation.* World Health Organ Tech Rep Ser, 2000. **894**: p. i-xii, 1-253.
2. Jia, H. and E.I. Lubetkin, *The impact of obesity on health-related quality-of-life in the general adult US population.* J Public Health (Oxf), 2005. **27**(2): p. 156-64.
3. Barnes, J.S. and C.E. Bennett, *The Asian population 2002*, C. Bureau, Editor. 2002: Washing, D.C.
4. Liou, D., K.D. Bauer, and Y. Bai, *Psychosocial variables and obesity-risk-reduction behaviors in Chinese Americans.* Ecol Food Nutr, 2011. **50**(6): p. 486-505.
5. Nam, S., *Obesity and asian americans in the United States: systematic literature review.* Osong Public Health Res Perspect, 2013. **4**(4): p. 187-93.
6. Bates, L.M., et al., *Immigration and generational trends in body mass index*
7. Liu, S., Fu, M.R., Hu, S., Wang, V.Y., Crupi, R., Qiu, J.M., Cleland, C., D'Eramo Melkus, G. (2015). Obesity Indicators and Chronic Illness among Chinese Americans: A Pilot Study. *Journal of Obesity & Weight Loss Therapy*, 5:4; <http://dx.doi.org/10.4172/2165-7904.1000270>.
8. Liu, S., Fu, M.R., Hu, S., Wang, V.Y., Crupi, R., Qiu, J.M., Cleland, C., D'Eramo Melkus, G. (2015). Accuracy of Body Weight Perception and Obesity among Chinese Americans. *Obesity Research & Clinical Practice*. DOI: 10.1016/j.orcp.2015.04.004. Epub Ahead, May 1, 2015.

Abstract Summary:

Obesity is pandemic globally. Incorrect perception of body weight has profound impact on obesity as well as chronic illnesses. One third of Chinese Americans have incorrect perception of body weight. Addressing perception of body weight in nursing practice and research is imperative to prevent obesity and chronic illnesses.

Learning Activity:

LEARNING OBJECTIVES	EXPANDED CONTENT OUTLINE
Learn about the measurements of obesity indications and perception of body weight.	The presentation will explain the conceptualization and operationalization of

	measuring obesity indicators and perception of body weight.
Learn about the impact of obesity indications and perception of body weight on chronic illnesses.	The presentation will explain the relationships among obesity indicators, perception of body weight, and chronic illnesses. The presentation will also explain the predictive values of perception of body weight on obesity indicators as well as obesity indicators on chronic illnesses.

Abstract Text:

Purpose:

Compared to Chinese population in China, Chinese Americans have increased risk for obesity due to immigration and environmental changes. Obesity has been identified as a major source of unsustainable health costs, morbidity and mortality due to multiple chronic illnesses, including hypertension, type 2 diabetes, cardiovascular diseases and certain types of cancer. Obesity indicators generally include Body Mass Index (BMI), waist circumference, hip circumference, weight to hip ratio, weight to height ratio, fasting blood glucose and Glycated hemoglobin (HbA1C). Accuracy of body weight perception is an individual's perception of their body weight in comparison with actual body weight and is associated with weight related behaviors. Chinese Americans have increased risk for obesity but no studies have examined the impact of accuracy of body weight perception on obesity, obesity indicators and chronic illness.

Methods:

This study used a descriptive and cross-sectional design. Participants were recruited from metropolitan New York area. Data included demographic information, accuracy of perception of body weight, anthropometric measures (weight, height, BMI, waist circumference, hip circumference, weight to height ratio, weight to hip ratio, fasting plasma glucose and HbA1C). Chronic illnesses were assessed using a researcher developed self-report checklist and verified by medical record review.

Results:

Among the 162 Chinese Americans in the study, 52 participants (32%) did not perceive their body weight correctly. Significantly more male ($p=0.003$), older ($p=0.003$), and less educated ($p=0.047$) participants had incorrect accuracy of body weight perception. Participants with incorrect perception of body weight had higher HbA1C ($p=0.004$) and hypertension ($p=0.035$). Accuracy of perception of body weight significantly predicted waist circumference ($p<.001$), hip circumference ($p<.001$), weight to height ratio ($p=0.001$), BMI ($p<.001$) and weight ($p<.001$) even after controlling for all demographic factors. Of 94 (58%) participants had fewer than three chronic illnesses and 68 (42%) had three or more chronic illnesses. The three most common chronic illnesses in this population were diabetes (65.4%), hypertension (46.9%), and eye problem (38.3%). Controlling for all demographic factors, numbers of chronic illnesses remained significant associations with obesity indicators of waist circumference ($p=0.006$), hip circumference ($p=0.020$), weight to height ratio ($p=0.011$), HbA1C ($p=0.026$). Obesity indicators also had significant associations with individual chronic illness of diabetes, hypertension, heart diseases, eye and foot problems.

Conclusion:

One third of Chinese Americans did not perceive their body weight correctly. Accuracy of perception of body weight significantly predicted abnormal values of obesity indicators even after controlling for all demographic factors. General obesity indicator (BMI), central obesity indicators (waist circumference, hip circumference, weight to height ratio) and HbA1c were significantly associated with chronic illnesses. Nursing practice and interventions need to address perception of body weight, gender and age differences to promote normal values of obesity indicators so as to prevent obesity and chronic illnesses among this population.