

Self-Perception of Weight and Health and Dietary Quality

Chung-Tung Jordan Lin* and Jonq-Ying Lee**

*Center for Food Safety and Applied Nutrition, U.S. Food and Drug Administration,
Chung-Tung.Lin@fda.hhs.gov.

**Department of Food and Resource Economics, University of Florida,
JonqYing@ufl.edu.

*Poster prepared for presentation at the Agricultural & Applied Economics Association
2010 AAEA, CAES, & WAEA Joint Annual Meeting, Denver, July 25-July 27, 2010.*

*Copyright 2010 by Chung-Tung Jordan Lin and Jonq-Ying Lee. All rights reserved.
Readers may make verbatim copies of this document for non-commercial purposes by any
means, provided that this copyright notice appears on all such copies.*

Chung-Tung Jordan Lin, Center for Food Safety and Applied Nutrition, U.S. Food and Drug Administration, College Park, MD 20740
 Jonq-Ying Lee, Department of Food and Resource Economics, University of Florida, Gainesville, FL 32306

INTRODUCTION

Past research showed that an individual's weight and health perception may affect his/her physical activity and diet behaviors.

- overweight perception among overweight men is significantly associated with decreased odds of meeting recommended leisure time activities and of consuming sufficient fruit servings per day compared with acceptable weight men (Atlantis et al., 2008).

- dietary quality is positively associated with perceived health (Keller et al. (1997) and Watters and Satia (2009)).

Yet, many individuals have misperception of their weight status (Kuchler and Variyam, 2002 and 2003; Chang and Christakis, 2003).

- when obese or overweight individuals do not see themselves as overweight, they may not be motivated to adopt and adhere to healthier dietary choices.

- when those who have normal weight or are underweight believe they are overweight, they may practice unnecessary and harmful diet to change their weight.

Despite the potential implications of weight and health perceptions on individuals' health and dietary practices, little existing research has examined how these perceptions are related to individual's dietary quality. Particularly,

- what is the dietary quality of those who are overweight or obese but do not see themselves as such?

- what is the dietary quality of those who are not overweight or obese but see themselves as such?

- what is the dietary quality of those of those are overweight or obese and see themselves as such?

OBJECTIVE

To test the hypothesis that misperception of one's weight status is associated with poorer dietary quality, controlling for other factors such as life style behaviors, dietary and meal pattern and status, and demographics.

CONCEPTUAL AND EMPIRICAL MODELS

Social recognition theory (Bandura 1986) and health belief model (Glanz et al. 1997) suggest lower dietary quality can occur because:

- those who are overweight or obese do not see themselves as such fail to see the risk (outcome expectancy hypothesis);
- those who are overweight or obese and accept their weight status feel they cannot succeed in changing their diet (behavioral capability hypothesis);
- those who are not overweight or obese but see themselves as such perceive nonexistent threat (perceived risk hypothesis).

Empirical model -- Household production theory

DATA AND METHODOLOGY

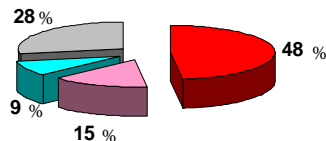
Self-perception and others -- 2001-2002 National Health and Nutrition Examination Survey (NHANES),

20+ years, non-pregnant, had reliable dietary intake information, n=4,431

Dietary quality -- 1995 USDA Health Eating Index (0 – 100)

Weighted descriptive statistics and weighted least-squares regression

WEIGHT STATUS: PREVALENCE OF MISPERCEPTION



- Overweight assessors (perception="overweight" BMI=obese or overweight)
- Underestimate assessors (perception="normal weight" BMI=obese or overweight)
- Overestimate assessors (perception="overweight" BMI=normal or underweight)
- Other

Healthy Eating Index: 64 out of 100

REGRESSION ESTIMATES

HEI scores are:

- 2.6 points LOWER for underestimate assessors
- 2.3 points LOWER for overweight assessors
- 1.6 points LOWER for overestimate assessors (relative to "other" individuals)

HEI scores are POSITIVELY related to

- excellent or good perceived health
- female gender
- 64+ years old
- other race (non-Hispanic white/black) or Hispanic
- ate breakfast the previous day
- participated in Women, Infants, and Children (WIC) program

HEI scores are NEGATIVELY related to

- 34-50 years old
- non-Hispanic black
- current and previous smoking
- more hours in watching TV or computer
- food insecurity

CONCLUSIONS

Holding other factors constant, the hypothesis that misperception of one's weight status is associated with poorer dietary quality is not refuted by the data

Implications

- need to educate consumers about their weight status
- need to educate consumers about skills and knowledge related to healthy eating and diets
- need to customize education and information to meet the challenges posed by misperception
- need to use multi-pronged approach to addressing obesity and other diet-related illnesses

BIBLIOGRAPHY

- Bandura, A. (1986). *Social Foundations of Thoughts and Actions*. Englewood Cliff, NJ: Prentice Hall.
- Chang, VW, and NA Christakis (2003). "Self perception of weight appropriateness in the United States." *American Journal of Preventive Medicine* 24: 332-9.
- Glanz, K., F.M. Lewis, and B.K. Rimer (1997). "Linking theory, research, and practice." In *Health Behavior and Health Education: Theory, Research, and Practice*, eds. Glanz, K., F.M. Lewis, and B.K. Rimer. San Francisco, CA: Jossey-Bass.
- Keller, HH, T. Osbye, and E. Bright-see (1997). "Predictors of dietary intake in Ontario seniors." *Canadian Journal of Public Health* 88: 305-9.
- Kuchler, F. and J.N. Variyam (2002). "Misperceptions in self-assessed weight status vary along demographic lines." *Food Review Winter*: 21-7.
- (2003). "Mistakes were made: misperceptions as a barrier to reducing overweight." *International Journal of Obesity* 37: 856-861.
- Watters, J.L. and J.A. Satia (2009). "Psychological correlates of dietary fat intakes in African-American adults: a cross-section study." *Nutrition Journal* 8: 15.