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Obesity: Role of Health Behavior

Vibha Bhargava, Ohio State University¹ Gong-Soog Hong, Ohio State University²

Abstract

According to the American Obesity Association, "Obesity is a complex, multi-factorial chronic disease involving environmental (social and cultural), genetic, physiologic, metabolic, behavioral and psychological components." Prevalence of obesity and overweight has been increasing dramatically in the U.S. The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK, 2000) reported that nearly one-fourth of the adults in US are obese. Presence of obesity has been associated with various physical and psychological disorders. Wellman and Friedberg (2002) reported that there is an association between obesity and type 2 diabetes mellitus, heart disease, hypertension, stroke, and certain types of cancer. Himes (2000) found that obesity is positively associated with limitations in activities of daily life (ADLs) for women.

The epidemic of obesity has burdened the health care system in the U.S. The direct and indirect costs attributed to overweight and obesity are significant. The economic and social impacts of obesity have drawn attention of researchers as well as the policy efforts. Researchers have widely explored the causes and consequences of obesity. However, little effort has been made to understand the factors or behaviors associated with the likelihood of being obese, especially using national database. In order to frame relevant policies, it is pertinent to have a complete understanding of the problem and see if it is more of a personal or a public issue or a mix of both.

This study uses the 1994 – 1996 Continuing Survey of Food Intake by Individuals and the companion Diet and Health Knowledge Survey to compare and contrast the characteristics, i.e., health status, health production factors, health behavior, health knowledge, food attribute preferences and demographic characteristics, of the obese, overweight and the normal weight individuals. The dependent variable used in this study is a dummy coded polychotomous variable indicating whether a person is obese, overweight or normal weight. Since the response variable is ordered, ordered logit analysis was used to estimate the probabilities.

In the sample, nearly 21% of the respondents are obese, about 37% are overweight and the rest (42%) are normal weight. The results indicate that those individuals, who do not perceive their health to be excellent, have more number of chronic illnesses, those who are full time employed, those who do not exercise, watch TV for more than 5 hours in two days, do not place importance on body weight, and receive food stamps are more likely to be obese then the comparison groups. Those who do not smoke or consume alcohol are also more likely to be obese. The older individuals are less likely to be obese. Education also has a significant effect on the likelihood of being obese, with the higher educated people being less likely to be obese. Males and blacks are more likely to be obese and overweight.

Based on the findings, various implications for the community and policy efforts to curb the epidemic of obesity can be drawn. The employers should provide cafeterias with healthy food choices and an opportunity for the employees to be physically active. According to The Surgeon General's Report, 40 percent of the US adults do not participate in any active physical activity. Increased TV watching hours is significantly associated with obesity. Various community programs aimed at including the adults in active leisure might aid in reducing TV watching hours. The significant impact of health behavior variables on obesity and over weight indicates that a change in behavior of the individuals could be of help in controlling the spread of obesity. Behavior change takes place gradually through learning. Many schools have reduced their time allocated for physical activities. There should be more emphasis on physical education in schools. Food stamps recipients are more likely to be obese. This indicates that the nutrition education component of the program is ineffective and needs to be evaluated and reformed.

References

Adrian, J., & Daniel, R. (1976). Impact of socioeconomic factors on consumption of selected food nutrients in United States. American Journal of Agricultural Economics, 58, 31-38.

American Obesity Association (2002). AOA Fact Sheets. Retrieved March 28, 2003, from http://www.obesity.org/subs/fastfacts/obesity_what2.shtml

Becker, G.S. (1964). <u>Human capital: A theoretical and empirical approach to education.</u> New York, Columbia University Press.

Bowman, S.A., Lino, M., Gerrior, S.A., & Basiotis, P.P. (1998). The Healthy Eating Index: 1994-96, U.S. Department of Agriculture, Center for Nutrition Policy and Promotion, July.

Bryant, W.K. (1990). <u>The economic organization of the household.</u> Cambridge: Cambridge University Press.

Center for Disease Control (2001). 1991 – 2001 Prevalence of obesity among U.S. adults by state. Retrieved February 10, 2003, from http://www.cdc.gov/nccdphp/dnpa/obesity/trend/prev_reg.htm

Chou, S.Y., Grossman, M., & Saffer, H. (2002). An economic analysis of adult obesity: Results from the Behavioral Risk Factor Surveillance System. NBER Working Paper No. 9247.

Finke, M.S. (1998). The decision to eat a lower-fat diet: Impact of the Nutrition Labeling and Education Act, Doctoral Dissertation, The Ohio State University.

Fuchs, V.R. (1966). The contribution of health services to the American economy. <u>Milbank Memorial Fund Quarterly</u>, 44, 65-102.

Grossman, M. (1972). On the concept of health capital and demand for health. <u>Journal of Political Economy</u>, 80, 223-255.

Himes, C.L. (2000). Obesity, disease, and functional limitations in later life. <u>Demography</u>, 37(1), 73-82.

Jeffery, R.W., French, S.A., Forster, J.L., & Spry, V.M. (1991). Socioeconomic status differences in health behaviors related to obesity: The Health Worker Project. International Journal of Obesity, 15, 689-696.

Kenkel, D.S. (1991). Health behavior, health knowledge, and schooling. <u>Journal of Political Economy</u>, 99, 287-305.

Kennedy, P. (1998). A Guide to Econometrics. MIT Press.

National Institute of Diabetes and Digestive and Kidney Diseases. (2000). Statistics related to overweight and obesity. Retrieved February 10, 2003, from http://www.niddk.gov/health/nutrit/pubs/statobes.htm

Nayga, R.M. (2001). Effect of schooling on obesity: Is health knowledge a moderating factor? <u>Education</u> <u>Economics</u>, 9(2), 129-137.

Peters, J.C. (2003). Combating obesity: Challenges and choices. <u>Obesity Research</u>, 11 (Suppl), 7S – 11S. Philipson, T.J., & Posner, R.A. (1999). The long-run growth in obesity as a function of technological changes. Retrieved March 18, 2003, from http://www.harrisschool.uchicago.edu/wp_99_8.pdf.

Thompson, D., & Wolf, A.M. (2001). The medical-care cost burden of obesity. <u>Obesity Reviews</u>, 2, 189-197.

Wardle, J, Waller, J., & Jarvis, M.J. (2002). Sex differences in association of socioeconomic status with obesity. American Journal of Public Health, 92, 1299 – 1304.

Wellman, N.S. & Friedberg, B. (2002). Causes and consequences of adult obesity: health, social and economic impacts in the United States. <u>Asia Pacific Journal of Clinical Nutrition</u>, 11 (Suppl), S705-S709.

Wing, R.R. (2003). Behavioral interventions for obesity: Recognizing our progress and future challenges. Obesity Research, 11 (Suppl), 3S - 6S.

Endnotes

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¹ Doctoral Student, Department of Consumer and Textile Sciences, <u>bhargava.15@osu.edu</u>, 573-2681523

² Professor and Chair, Department of Consumer and Textile Sciences, hong.177@osu.edu, 614-247-7243