

Obesity Is Increasingly Viewed as a Community Problem by Both the Public and Healthcare Professionals

Theodore K. Kyle^a, Diana M. Thomas^b, Adam G. Tsai^c

^aConscienHealth, Pittsburgh, PA, USA; ^bMontclair State University, Montclair, NJ, USA; ^cKaiser Permanente of Colorado

Abstract

Background: Weight bias and stigma complicate clinical and policy approaches to obesity. Appreciation of external causes for obesity can reduce weight bias. We found in 2013 that the public primarily views obesity as a personal problem of bad choices. AMA classified obesity as a chronic disease in June 2013.

Methods: Through a validated online survey, a representative U.S. sample of 38,625 adults (POP) and 3,518 healthcare professional (HCP) respondents was asked whether they viewed obesity primarily as a personal problem of bad choices, community problem of bad food and inactivity, or medical problem. Respondents were divided into 4 waves: Feb 2013, Mar 2013, Aug 2013, and May 2014. The HCP sample included registered nurses, physicians, dietitians and nutritionists, and healthcare policy or management professionals. We analyzed the changing views of POP and HCP respondents over time using ANOVA and examined demographic variables (age, gender, income, region, urban density) associated with these shifts.

Results: Significant shifts of perceptions occurred in 2014. Both POP and HCP respondents became more likely to view obesity as a community problem in 2014 (POP 42% v 25%; HCP 44% v 26%). HCPs became less likely to view obesity as a medical problem in 2014 (16% v 31%). In 2014, younger and higher income respondents more likely view obesity as a community problem. Older respondents more likely view it as a medical problem. Male and rural respondents more likely view obesity as a personal problem of bad choices. All differences are significant, $p < 0.0001$.

Conclusions: These data suggest that views of obesity have shifted in 2014 away from obesity as a personal problem of bad choices and toward a community problem of bad food and inactivity. HCPs became less likely to consider obesity to be a medical problem, despite AMA defining obesity as a disease.

Introduction

Obesity is a complex chronic disease resistant to behavioral and medical treatment. Though accounts of medical obesity management dating to the early 20th century are documented¹ and the National Institutes of Health published guidelines for the diagnosis and treatment of obesity in 1998,² the American Medical Association did not recognize obesity as a disease until June, 2013.³ A recent study of public perceptions in Australia and the United States found that public perception of obesity as a problem of personal responsibility limits support for public health and clinical interventions to reduce obesity.⁴ Prior research suggests that a public health problem becomes amenable to health policy solutions when the public understands the problem in systemic terms — involuntary risk, universal risk, knowingly created risk — rather than exclusive terms of personal risk and responsibility.⁵

In prior research, healthcare professionals (HCP) and the general population of adults (POP) were found to commonly regard obesity as a personal problem attributable to bad choices, rather than a medical or community problem of shared risks related to bad food and inactivity. Utilizing identical methods to that prior research, the present study was undertaken to measure changes in the perceptions of obesity by POP and HCP respondents that took place between early February 2013 and September 2014.

Methods

Successive stratified samples representative of adult U.S. Internet users were recruited for an anonymous, voluntary online survey through Google Surveys,⁶ beginning in February 2013. Distinct cohorts of respondents were also surveyed in March and August 2013, and in May and September 2014. (The data collected in September 2014 is new data, not reflected in the abstract, which was submitted in June.) In each time period, both POP and HCP cohorts were recruited. The HCP cohorts included registered nurses (RN), physicians (PHY), dietitians and nutritionists (DN), and healthcare policy and management professionals (HPM). The characteristics of the sample are summarized in **Tables 1 and 2**.

Table 1: Unweighted Demographic Characteristics of Respondents

Characteristics	POP n=54,111	HCP n=5,024	Reference U.S. Census
Gender			
Male	57.3%	53.4%	48.7%
Female	42.7%	46.6%	51.3%
Age			
18-24	18.3%	18.0%	13.0%
25-34	28.3%	24.9%	17.7%
35-44	15.6%	15.1%	16.7%
45-54	14.6%	16.6%	18.0%
55-64	15.7%	17.4%	16.2%
65+	7.6%	8.1%	18.4%
Geography			
Northeast	13.8%	15.7%	17.7%
South	24.7%	29.4%	37.4%
Midwest	30.4%	27.1%	21.4%
West	31.1%	27.8%	23.5%
Urban Density			
Urban	41.2%	42.6%	80.7%
Suburban	46.0%	46.2%	
Rural	12.8%	11.3%	19.3%
Income			
<\$25,000	11.9%	12.0%	24.0%
\$25-49,000	45.7%	48.8%	23.9%
\$50-74,000	26.0%	25.8%	17.6%
\$75-99,000	8.8%	8.5%	11.9%
\$100-149,000	5.3%	3.6%	12.4%
>\$150,000	2.2%	1.3%	10.1%

Table 2: Sample Size and Composition per Time Period

	Feb 2013	Mar 2013	Aug 2013	May 2014	Sep 2014
POP	2,708	12,059	12,086	23,408	3,850
HCP	560	1,092	1,004	1,363	1,005
PHY	174	366	354	297	323
RN	159	318	252	385	233
HPM	146	277	247	502	289
DN	81	131	151	179	160

Respondents were asked: "Which phrase comes closest to describing the type of problem that you think obesity is?"

- Personal problem of bad choices
- Community problem of bad food and inactivity
- Medical problem
- A totally different kind of problem

POP respondents who chose "a totally different kind of problem" were then asked "If obesity is not a personal problem, medical problem, or community problem, what type of problem, if any, do you think it is?" The brevity of the survey is by design to minimize non-response bias.⁶

Weighting factors based on age, gender, and region were applied for each respondent to adjust for sampling bias and permit reporting of results that represent the full population of U.S. adult Internet users from which the sample was drawn.

The changing views of POP and HCP respondents over time were analyzed using ANOVA to examine demographic variables (age, gender, income, region, urban density) associated with these shifts. The significance of shifts in responses over time was tested using a 2-tailed Z test.

Results

In 2014, the proportion of both the POP and HCP samples viewing obesity as a community problem increased significantly. This increase was most pronounced in May, but remained significant in September as compared to responses in 2013. In the general population, this shift was offset by a reduction in people viewing obesity as a problem of personal choices. Among healthcare professionals, the view of obesity as a problem of personal choices was already less common than among the general public and no further reduction was observed. Instead, the proportion of healthcare professionals viewing obesity as a medical problem declined. These data are summarized in **Figures 1 and 2**.

Figure 1: Prevalence of Perceptions of Obesity in the POP Sample

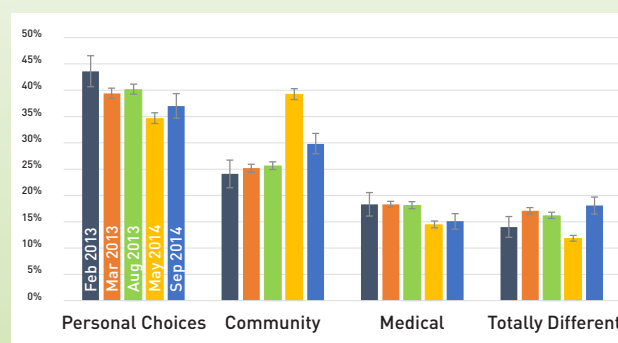
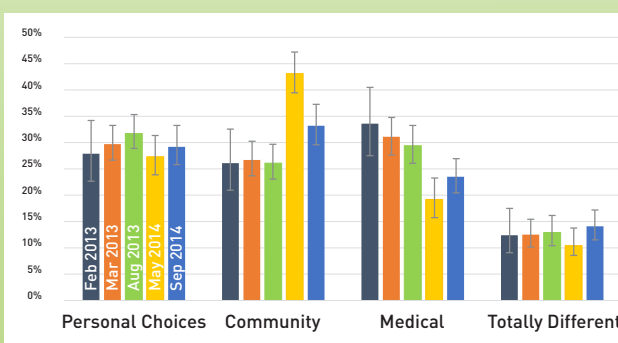


Figure 2: Prevalence of Perceptions of Obesity in HCP Sample



ANOVA revealed that older respondents were more likely to view obesity as a medical problem, while male and rural respondents were more likely to view obesity as a problem of personal choices ($p < 0.0001$).

Discussion

Two events with potential to affect public and professional opinions about obesity occurred during the time that these data were collected. In June 2013, the American Medical Association (AMA) adopted a policy designating obesity as a disease, which stimulated considerable media attention and public debate of the merits of this decision. These data would suggest that the AMA decision did little to encourage either the public or healthcare professionals to view obesity as a medical problem.

In early May 2014, two weeks before the May data were collected, the documentary film *Fed Up* was released and it garnered substantial attention in news, policy, and social media.⁷ Virtually all national news and health media reported on this film's release and the film generated 390 million impressions in social media.⁸ Two dominant themes in this movie were complex causes of obesity that are outside the control of individuals and the culpability of the food industry for marketing products that have caused an increase in the prevalence of obesity.

The unusual increase in perceptions of obesity as a community problem by the public and healthcare professionals in the May sample suggests that publicity surrounding the movie may have influenced public opinion. This effect appears to have faded as time has passed since the movie's release.

This study has limitations worth noting. Internet users comprised the sample, which likely introduced bias because only 78% of adults in U.S. use Internet. Internet users tend to be younger, more educated, and have higher incomes compared to the general population. Demographic data are inferred from IP addresses and cookies. Though this method helps to improve response rates and reduce sampling error, respondents are not explicitly answering questions about demographics as they do in more traditional surveys. This can introduce errors at the level of individual respondents, even though aggregate demographic findings are generally comparable to more traditional methods.

Non-response bias is a factor in any survey methodology, and the methodology used in this study has the potential to reduce it. Nonetheless, potential respondents who are more concerned with the subject of the study — obesity — might be more likely to respond, thus introducing bias.

Despite these limitations, the shifts in attitudes observed are noteworthy. If understanding shared risks — as opposed to isolated, individual risks — facilitates the formulation of sound public policy for a health problem such as obesity, then the trends observed in these data may be helpful.

Conclusions

Perception of obesity as a community problem of bad food and inactivity increased among the general public and healthcare professionals in this sample of adult Internet users between 2013 and 2014.

Public perception of obesity as a problem of personal choices declined modestly.

Perception of obesity as a medical problem by healthcare professionals declined, despite the designation of obesity as a chronic disease by the AMA during the time period studied.

The documentary film *Fed Up* may have played a role in influencing perceptions of obesity by both the public and healthcare professionals.

Acknowledgements and References

ConscienHealth provided funding for the conduct of this research. Picture Motion graciously provided data and reports on social and news media coverage of *Fed Up*.

1. Levine DI. Corpulence and Correspondence: President William H. Taft and the Medical Management of Obesity. *Ann Int Med*. 2013;159(8):565-570.
2. National Heart, Lung, and Blood Institute. Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults. The Evidence Report. NIH publication no. 98-4083 http://www.nhlbi.nih.gov/guidelines/obesity/ob_gdlns.pdf [September 1998].
3. Pollack, A. "AMA Recognizes Obesity as a Disease." *New York Times* (June 2013).
4. Lee NM, et al. Public Views on Food Addiction and Obesity: Implications for Policy and Treatment. *PLOS ONE* (2013) 8(9): e74836.
5. Lawrence RG. Framing Obesity: The Evolution of News Discourse on a Public Health Issue. *Int J Press Pol*. 2004;9(3)56-75.
6. McDonald P, Mohebbi M, and Slatkin B. Comparing Google Consumer Surveys to Existing Probability and Non-Probability Based Internet Surveys. Google Inc. http://www.google.com/insights/consumersurveys/static/consumer_surveys_whitepaper.pdf (2012).
7. Picture Motion. PicMo Policy Focus: *Fed Up* <http://www.picturemotion.com/2014/08/08/picmo-policy-focus-fed-up/> (August 2008).
8. Sprout Social Inc. Social media analytics report on *Fed Up*. Custom report for Picture Motion. (September 2014).