

Transparency and Readability Assessments of Childhood Obesity Websites

Pamela K. O'Neal

Elliott School of Communication, College of Liberal Arts and Sciences

Abstract. Currently, there are over 25 million U.S. children who are overweight or obese [1 & 2]. Approximately 113 million or 80% of adult Americans regularly seek health information on the Internet [3]. Parents whose children are diagnosed as overweight or obese may look to the Internet for information about how best to manage this critical health issue. The quality of the information they receive may at times be misleading or inaccurate [4]. By examining websites containing information about obese and overweight children and confirming if the content meets standards set forth by the U.S. Health and Human Services Department (U.S.H.H.S.), the transparency of childhood obesity websites can be determined. Parents who obtain information about their child's health from websites need to know (1) the identity of the site's sponsor, (2) the purpose of the site, (3) information sources utilized, (4) privacy policy, (5) if the site is evaluated and (6) how it is updated [5]. To assess the transparency and clarity of websites containing information about the management of childhood obesity, 52 websites were examined to indicate the extent to which they followed the six criteria.

Introduction

Childhood obesity is a major health concern of many parents, The National Center for Chronic Disease Prevention and Health Promotion notes that the “prevalence of obesity among children ages 6 to 11 more than doubled in the past 20 years, increasing from 6.5% in 1980 to 17.0% in 2006. The rate among adolescents ages 12 to 19 more than tripled in this same time period, increasing from 5% to 17.6%” [6]. The financial costs of this epidemic are significant. The U.S. Government Accountability Office in October 2005 [7] concluded that obesity-related health expenditures accounted for more than 25 percent of the growth in health care spending between 1987 and 2001. In 2000, an estimated \$117 billion was spent on health-related expenditures due to obesity with \$61 billion in direct costs. These figures, along with the health risks associated with childhood obesity such as increased chances for Type II diabetes, high blood pressure and sleep disorders [8] reinforce the importance of obtaining correct and updated information on the Internet. Many Americans rely on the Internet as their primary source of information for topics such as childhood obesity therefore it is essential to examine the content of websites [3].

Experiment, Results, Discussion and Significance

This study reports the results of an examination of websites whose content provides information about childhood obesity. Because most people use a search engine to look for health information on the Internet, the top five search engines, Google, Yahoo, AOL, MSN and Ask.com [9] were used to pull websites for analysis. Search terms used to select sites were: childhood obesity, overweight child, overweight adolescent, obese child and obese adolescent.

An extensive review of the literature resulted in a list of potential search terms. confirmed through comparison with articles selected through *The Cambridge Scientific Abstract*, which identified the 10 most recently published journal articles on childhood obesity. The most recent published articles were selected to determine the most current terms being used to describe overweight and obese children. Articles came from the *Journal of American Medical Association* and other well-known journals within the medical field. To find the most common terms used in describing childhood obesity, the journal articles were copied into a Microsoft Word document where the find feature was used to determine how many times terms such as “childhood obesity” appeared in a document. The term “childhood obesity” was found 848 times, the word “child” was found 1400 times, the word “adolescent” was found 228 times, the word “overweight” was found 309 times and the word “obese” was found 214 times. The five terms that emerged most often were chosen as search terms in the search engines. Other terms that were searched but not utilized due to fewer results and included “youth”, “kid”, and “fat”.

Using the terms childhood obesity, child, adolescent, overweight and obese, the first five sites identified by each search engine were selected. This resulted in 125 websites for preliminary analysis. Duplicate websites were considered only once and news and academic websites were removed from analysis because the standards set forth

by the U.S.H.H.S. did not apply. Websites were also scanned for appropriateness and to determine their readability and at what grade level they were written. Fifty-two websites were retained for analysis.

Number and Percentages of Websites that included criteria set by U.S.H.H.S.

	Yes	No	Results
Identity	48	4	92% of the time Websites provided the identity of the developers
Purpose	11	41	21 % of the time Websites stated their purpose
Sources	36	16	69% of the time Websites named the sources of their information
Privacy	43	9	83% of the time Websites had a privacy policy
Evaluation	7	45	13% of the time Websites divulged if they were evaluated
Updated	33	19	63% of the time Websites gave the date it was last updated

Thirty-two of the 52 websites included statistics. Twenty of those had statistics at least five years old or older. One website had statistics dated 1994. Websites were also examined to assess readability and grade level of their information. The average U.S. adult reads at an eighth or ninth grade level [11]. Upon examining each Website only 16 had material at or below a reading grade level between the 8th and 9th grades.

Conclusions

Based on the findings of this study, the following conclusions are drawn. Many websites currently available do not meet the transparency criteria recommended by the U.S.H.H.S. Further, when websites display statistics, more than half the time they are over five years old. According to Goldfarb's [11] explanation of reading levels, it may be difficult for some readers to understand or comprehend the material presented on the sites. In order to help establish better websites, developers should present more up to date material, update their sites more often, have sites evaluated and state the purpose of the site. NOTE: what in particular was hard to understand? Were there differences or trends regarding, say, government web sites or those from companies or organizations? Which groups had the best sites?

- [1] National Center for Health Statistics. (January 30, 2007). Prevalence of Overweight Among Children and Adolescents: United States, 2003-2004. Retrieved November 5, 2007, from http://www.cdc.gov/nchs/prodcuts/pubs/pubd/hestats/overweight/overwght_child_03.htm.
- [2] Mayo Clinic Staff. (2006). Childhood Obesity. Retrieved September 3, 2007, from <http://www.mayoclinic.com/health/childhood-obesity/DS00698>
- [3] Fox, S. Reports: Health (2006). Pew Internet & American Life Project. Retrieved October 4, 2008 from: http://www.pewinternet.org/PPF/r/190/report_display.asp
- [4] California HealthCare Foundation. (2001). Proceed with Caution A Report on the Quality of Health Information on the Internet. Retrieved February 7, 2009 from: <http://www.chcf.org/documents/consumer/ProceedWithCautionCompleteStudy.pdf>.
- [5] United States Department of Health and Human Services. (2000). Healthy People 2010. Retrieved December 12, 2008 from: <http://www.healthypeople.gov/document/HTML/Volume1/11HealthCom.htm>
- [6] National Center for Health Statistics. (2007). Prevalence of Overweight Among Children and Adolescents: United States, 2003-2004. Retrieved November 5, 2007, from http://www.cdc.gov/nchs/prodcuts/pubs/pubd/hestats/overweight/overwght_child_03.htm.
- [7] United States Government Accountability Office. (October 7, 2005). *Childhood Obesity: Most Experts Identified Physical Activity and the Use of Best Practices as Key to Successful Programs* (GAO-06-127R). Retrieved September 20, 2007, from <http://www.gao.gov/new.items/d06127r.pdf>. www.shapingamericashealth.org/
- [8] Mayo Clinic. (2008) Childhood Obesity Complications. Retrieved February 15, 2008 from <http://www.mayoclinic.com/health>.
- [9] Bausch, S & McGiboney, M. (2008) Nielsen News Release. Retrieved December 8, 2008 from: http://www.nielsen-online.com/pr/pr_081125.pdf
- [10] Mayo Clinic. (2008) Childhood Obesity Complications. Retrieved February 15, 2008 from <http://www.mayoclinic.com/health>
- [11] Goldfarb, N.M. (2005). How Well Does the Average U.S. Adult Read? *Journal of Clinical Research Best Practices*. Retrieved Feb. 16, 2008 from http://firstclinical.com/journal/2005/0509_Literacy.pdf