

THE RISE AND FALL OF FAD DIETS:
HOW THE NEWS MEDIA FRAME AND REPRESENT THE ATKINS DIET,
1972-2005

A Thesis presented to the Faculty of the Graduate School
University of Missouri-Columbia

In Partial Fulfillment
Of the Requirements for the Degree
Master of Arts

by

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MAY 2006

The undersigned, appointed by the Dean of the Graduate School, have examined the thesis entitled

THE RISE AND FALL OF FAD DIETS:
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2005

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And hereby certify that in their opinion it is worthy of acceptance.

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DEDICATIONS

This paper is dedicated to four very special people who passed as I pursued my Master's degree: Eugene "Bay" Johnson (Maternal Grandmother); Cleophus Jones (Uncle); Gracie Johnson (Aunt); and Ms. Yvonne Simpkins (A Close Friend of the Family). I miss you all very much, and I know that you are looking down on me.

First, I would like to thank Jesus Christ, my Lord and Savior. It is because of you that this was possible. It is because of you that ALL things are possible. To my parents, Mary and Ralph, you have raised two wonderful children with no other formula than to "support them in their chosen endeavors." I continue to try to make you both proud of me. To my brother Reggie, thanks for being an inspiration. You told me to always strive to be better than you, but you continue to make that a hard path to follow. Anyiesa, thank you for always being frank with me when I needed it. I truly appreciate you. Reana and Ryan, "my babies," thank you for always being a source of laughter. To my friends, line sisters, church and the entire Johnson family, thanks for your endless motivation and encouragement. You are my personal cheerleaders. Also, thank you to my co-workers and supervisors at Deloitte Touche Tohmatsu who were so understanding and flexible as I toiled away at this paper.

Finally, to my thesis, "my boyfriend" of a year, we had a great run. We have experienced a lot of late nights, early mornings, periods of frustration, highs and lows. Although, I have enjoyed our relationship and learned so much from it, I am elated to see it come to an end.

ACKNOWLEDGEMENTS

A very huge, special thanks to my committee chair, Dr. Shelly Rodgers. You are truly wonderful! Thank you for giving me a swift kick in the rear when I needed it and pushing me when I felt like I was running out of gas. I share this thesis with you. To all of my committee members, Dr. Wayne Wanta, Dr. Cynthia Frisby and Dr. Louise Miller, thank you for your patience as you followed me on this rocky journey. All of your comments and suggestions have made this paper something I will always be proud of.

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The Rise and Fall of Fad Diets: How the News Media Frame and Represent the Atkins Diet, 1972-2005

INTRODUCTION

Obesity/overweight continues to be a major health problem in the United States. Obesity affects nearly one-third of the adult population or about 60 million Americans (American Obesity Association, 2005). Obesity, defined in terms of an excess of body fat or a body mass index (BMI) that exceeds 30 (American Obesity Association, 2005), causes about 300,000 deaths annually in the U.S. making this the second-leading cause of preventable deaths, second to smoking (Gibbs & Wayt, 2005, p. 70).

Illnesses, genetics, environmental, psychological, economic and social factors have all been attributed to the existence of obesity/overweight. While these factors have been considered the most common contributors to the disease, the media have been accused of adding to the obesity/overweight issue by shaping perceptions of eating.

A study conducted by Hardus, Vuuren, Crawford and Worsley (2003) looked at public perceptions of the causes and prevention of obesity/overweight among primary school children. Results of the study suggested a connection between the media and obesity. The authors note, "While the public appears to have acknowledged that no one factor is responsible for childhood obesity, the media's promotion of unhealthy foods and the overconsumption of fast foods were perceived to be key causative factors, being identified as extremely important by one in two adults" (Hardus, Vuuren, Crawford, & Worsley, p. 1470).

But more significant than the causes are the effects of obesity. According to the World Health Organization, obesity-related illnesses affect "more than 115 million

people in the developing world, up from essentially none two generations ago” (Coles, 2005, p. 15). Noted diseases include: type 2 diabetes; coronary heart disease; high blood pressure, osteoarthritis, cardiovascular disease, kidney disease, sleep apnea and several cancers.

In the fight against obesity, medical procedures, such as bariatric surgery (restrictive and malabsorptive techniques), special programs, such as Weight Watchers, Jenny Craig, drugs and pills of all types, and diet camps have served as methods to control the epidemic. However, no solution has been as popular as good old-fashioned dieting. This is confirmed by the exceptional revenue dieting generates. Berzins (1999) notes that: “Long-held beliefs have led large numbers of people to diet to the benefit of a thriving diet industry which estimated revenues of \$35-50 billion a year” (p. 372).

American society places a great deal of emphasis on appearance and body image, and the media often reinforces these concepts. Many of these body images are not realistic or reflective of the average person. Yet these images are considered what the average person should look like or aspire to emulate.

This is an important point because the images and information seen in the media can influence how people construct their own ideas of beauty and health. As a result, many people—putting trust in these sources—employ the advice of television, magazines and newspapers as they race to adopt society’s “ideal look” of health.

The average model portrayed in the media is approximately 5'11" and 120 pounds. By contrast, the average American woman is 5'4" and 140 pounds (Wolf, 1991). Research has shown that a discrepancy between the "actual" self (attributes you and others believe you possess) and the "ideal" self (attributes you or others believe you should possess) can produce negative emotional states such as sadness, discouragement, and depression (Harter, 1998; Holmstrom, 2004, p. 198).

Media messages are potentially powerful sources of information. Many individuals trust media sources to provide the most up-to-date and accurate information. According to Carling et al. (2003), “the mass media are an important source of medical information. Medical reports can increase or diminish the willingness of individuals to seek medical care (or participate in clinical trials), may raise expectations (sometimes falsely), may dash hopes, or may provoke alarm (sometimes unnecessarily)” (Carling, Herrin, Larsson & Oxman, 2003, p. 324).

Previous research has shown that the serious health information seeker will most likely attain his or her health information from newspapers because of the high reliability of the information received from newspapers (Dutta-Bergan, 2004, p. 277). Thus, newspapers serve as a potentially important outlet in which individuals—particularly those who want more in-depth health or medical information—seek out.

The purpose of this research is to examine how newspapers, an important outlet in which individuals seek health information, frame fad diets. This is an important topic because we know from decades of research that the media (and media frames) influence how individuals come to view their world, “essentially, the media are presumed to provide a lens through which we experience the world, ultimately shaping our beliefs about it” (Bell, Berger, Cassady & Townsend, 2005, p. 27).

Whether the stories are positive or negative, it seems likely that the way in which fad diets are framed may also influence how individuals perceive and think about dieting. Bell, Berger, Cassady, and Townsend (2005) argue that media representations can shape how individuals think about the world as well as their beliefs about the world. With

regard to nutrition, they state: “there is value in investigating the types of messages the media present about nutrition and exercise” (p. 28).

Of specific importance are the facts and details that accompany news stories about fad diets particularly in relation to public health facts. Mixed messages regarding dieting caused the Federal Trade Commission (FTC) to tighten its hold on the weight-loss industry. It launched Operation Waistline—a long-term enforcement program designed to halt misleading and deceptive claims in the weight-loss marketplace (Tufts University Health & Nutrition Letter, 1997, p. 2).

Hence, news stories that provide inadequate information about the benefits and risks of fad diets have the potential to create misperceptions and perhaps confusion about potential health benefits. Without adequate health information about diets—pros and cons as well as potential positive and negative consequences—individuals are less likely to make informed decisions about which diets are best for them and how certain diets may affect their health and general well-being. Thus, in addition to examining the framing of fad diets, this research aims to examine whether public health facts—information that would aid health decisions—are present in diet news stories.

The method was a content analysis of 123 news stories located through a Lexis-Nexis search. The fad diet selected for the present research was Atkins, which emphasizes high protein and low carbohydrates. Atkins provides an important case study because it has been around since 1972 and provides a reasonable number of news stories to examine between 1972 and 2005, the time period of the sample examined. It is important to note that even though the Atkins diet has been publicized since 1972, in this

study it is considered a “fad diet” because it only peaked in popularity between 2000 and 2004.

The use of Atkins as a case study will enable the researcher to examine the frames and public health facts that are used and/or presented in news stories about Atkins in an effort to determine whether there are patterns or trends with regard to biased frames or inadequate presentation of public health facts. Such patterns would have implications for strategic communicators who manage the image of brands and provide insights into, perhaps, alternative messages or information that is needed to provide a balanced perspective of fad diets. The results of this study may also be useful for those in the news industry—journalists and editors—who write and edit stories on nutrition, diet and exercise. By providing details about the framing of fad diets and, perhaps, what is missing with regard to public health facts, the researcher hopes to provide insights into the types of details that may require additional attention on the part of news reporters and editors.

LITERATURE REVIEW

Theoretical Framework

The present study draws on two theories, framing and the public health model of reporting. This section begins by discussing frames, followed by a discussion of the public health model of reporting or PHMR.

Framing is considered one of the most “fertile” areas of research in journalism and mass communication (Riffe, 2000, p. 2). Framing is important because the theory examines how journalists and reporters characterize an issue or story. The definition of framing differs from study to study, but its universal quality is that it looks at what’s inside the box (what facts or perspectives have been included) and what is outside the box (what facts or perspectives have excluded) and why. Shah, Watts, Domke, and Fan (2002) described framing as “news constructions, emphasizing certain details while omitting others, helping to shape citizens’ political perceptions and preferences by encouraging certain avenues of thought and action” (p. 340).

Applied to the present research, frames and the construction of news stories about Atkins can influence or perhaps alter the public’s views on nutrition and most importantly, dieting. Edwards, Fico and Richardson (2004) studied the balance of content within frames and how they affect media credibility and concluded that, “the method used for assessing story balance in these studies emphasizes the space given to contenders in the structure of stories covering controversy” (p. 303). The Atkins diet has been the subject of controversy making Edwards, Fico and Richardson’s research pertinent from a public health perspective. Frames that lack pertinent information or are biased are cause for concern and would need to be balanced against the backdrop of

information and details that provide news consumers a more complete picture of how fad diets may affect their health.

In speaking about frames it is also important to recognize second-level agenda setting. “The principal difference between the research literature on frames and second-level agenda setting is that second-level agenda setting examines the impact of news frames on public agenda” (Ghanem, 1997, p. 6). Agenda setting relates to this study because it looks at the importance of issues and problems (Ghanem, 1997, p. 5). In this study, the issue or problem is the presentation of the Atkins diet in newspapers.

A concept that derives from second-level agenda setting is attributes. By looking at the attributes of an issue, we get a more detailed examination of that picture. The attributes of an object are the set of perspectives or frames that journalists and the public employ to think about each object (Ghanem, 1997, p. 5). In this study, the “object” is the Atkins diet. As we look at framing, the variable will also measure attributes of Atkins in news stories to determine the valence of the frame. Valence refers “more generally to the capacity of a stimulus or an event to trigger in an individual a positive or negative affective state, in the absence of prior manipulations of the quantitative dimension” (Iran-Nejad & Ortony, 1985, p. 260). In this case, valence refers to the tone—positive, negative, neutral—of attributes or terms, linked to the Atkins diet.

Framing, as it relates to this study, examines how news stories are constructed regarding the Atkins diet. It looks at what information has been highlighted within these stories and what has been excluded to determine whether patterns are present with regards to biased frames or an inadequate presentation of public health facts. Looking at the frame is important in this study because frames deliver messages to audiences

regarding what information is important. Frames become much more risky when they involve health and nutrition issues. Selecting certain facts while excluding others creates constructs that impact public opinion and audience interpretations.

In the case of Atkins and other fad diets, the way they are framed may influence readers' perceptions about the diets. The American Heart Association (2002) states: "Many Americans may be understandably confused by the recent surge of media interest in the role of high-fat, low-carbohydrate diets for weight loss, spurred in part by an article in the July 7 issue of the *New York Times Magazine*."

As a result, it is important to evaluate whether stories involving fad diets send negative or positive messages, and whether the information in these stories is based on reliable medical documentation. With regard to Atkins, there have been several studies that have tested short- and long-term effects of the Atkins diet on health outcomes. Certain studies were conducted internally, by an Atkins team of researchers, and others were conducted independently of Atkins by medical researchers at universities.

According to Atkins.com, the diet causes weight loss because the body burns both carbohydrates and fat as fuel for its energy needs. Carbohydrate is the first fuel to be metabolized. Cutting down sufficiently on the intake of carbohydrates makes the body convert from the metabolic pathway of burning carbohydrates to burning fat as the primary energy source (Atkins, 2005).

Studies have shown that high-protein meals provide more hunger satiety than high-carbohydrate meals, making high-protein consumers more likely to eat less. For instance, of eight studies that compared subjective hunger and satiety in the hours following consumption of a single high-protein meal and/or a control meal, six reported

increased satiety with the high-protein diet compared with at least one control diet. The two that showed no differences used liquid breakfasts instead of solid food, which may have influenced the results (Eisenstein, Roberts, Dallal & Saltzman, 2002, p. 189).

Two recent studies also support the theory that high-protein diets grant greater weight-loss results than a low-fat or low-calorie diet. A (2004) comparison study at Duke University Medical Center found that people who followed a low-carbohydrate, high-protein diet lost more weight than people on a low-fat, low-cholesterol, low-calorie diet during a six-month period. The study found the low-carb diet was more effective for weight loss (Duke Medical News, 2004). A (2003) study led by researchers at the Weight and Eating Disorders Program of the University of Pennsylvania School of Medicine, found similar results. At the three- and six-month marks, dieters lost twice as much weight as those on low-calorie, conventional or high-carbohydrate diets. However the study found no difference in weight loss (between the groups) after a year (University of Pennsylvania, 2003).

Additionally, the Atkins Web site has created a poll in which Atkins dieters may report the results of their dieting. The poll asks dieters if they are successfully moving from one phase to another on the diet. As of October 3, 2005, 24 percent of the respondents (6,167) answered yes, 24 percent (6,329) said they gained weight when they tried to move on, and 47 percent (12, 160) said they were still in the induction phase, while 5 percent (1,313) admitted to being unaware of any phases besides induction (Atkins, 2005).

Based on these studies, it is unclear whether Atkins is a healthy way to lose weight or not. Thus, it will be important to examine news stories to determine whether

they are framed in positive, negative or neutral terms with regard to the effects of the Atkins diet. In the case of these studies, one might expect to find stories that show both sides of the issue—proponents *and* critics of the Atkins diet. Since it is unclear whether one side will be utilized to a greater degree than the other in news stories about Atkins, the following research question was proposed:

RQ1: How is the fad diet, Atkins, framed relative to its publicized effectiveness?

The tone, attitude or content of a frame is the result of several determinants. Journalists—who piece together information for stories—are affected by a variety of factors that influence how they construct frames. Wanta and Craft (2004) argue that, “Indeed, the notion that reporters color the news according to their own perspectives—whether those perspectives are gender-, race- or ideology- based—persists even in the face of mixed empirical support for it” (p. 124). Journalists bring their own preconceived notions, experiences, personal beliefs, values and attitudes to their reporting, which affects the story’s content.

Realistically, journalists do not live secluded from the rest of the world. They are also affected by their environment—the most important being the newsroom. They influence each other during budget meetings, casual conversation, the exchanging of ideas, etc. Mohl (2002) notes that: “A reporter always has to worry about presumption. Presumption tags along on every story. It lurks in every story budget meeting. Despite our best attempts to avoid them, our presumptions inevitably find their way into our news pages and broadcasts” (p. 3).

At times reporters write from a personal values perspective, which means that societal or public angles of the story might be overlooked. Dunwoody, Giese, Griffin,

Kahlor and Neuwirth (2003) have conducted several studies on health risks and information insufficiency. They urge journalists to shy away from crafting messages based on what they think an audience needs to know (p. 366). According to Dunwoody and her colleagues (2004), “In a risk communication context, information insufficiency is the gap between what people believe they know about a risk and what they think they need to know to cope in their daily lives” (p. 51). This is why it is important to examine whether public health facts are present in stories involving fad diets.

The Public Health Perspective

The second theory that guides this research is a relatively new model developed by a group of researchers and the Berkeley Media Studies group, called the Public Health Model of Reporting, or PHMR. Broadly speaking, “a public health perspective brings many prisms to a problem. A public health perspective encourages a multidimensional understanding of health-related issues. Consequently, adopting a public health perspective has many important implications” (Shaffer, 2003, p. 2).

The public health perspective focuses on a single topic, prior information discovered on the topic, and all of the possible outcomes related to the topic including diseases, social, legal and ethical issues and possible methods of prevention. For instance, a study by Rodgers and Thorson (2001) looked at the reporting of crime and violence in the *Los Angeles Times*. From the public health perspective, the study treated violence as a disease while looking at solutions and consequences to violence, causes and risk factors, and the economic impact and monetary cost of violence (p. 175). The authors found through content analysis that very few stories included a public health perspective and the

authors concluded that this would be an important angle in which to write future news stories about crime and violence.

The public health perspective is important because it does not look at individual subjects as isolated events. Rather it treats each as an ongoing health-related problem with possible prevention, perpetual risks, consequences and patterns occurring at a community level (Rodgers & Thorson, 2001). The public health perspective looks at a subject as a public issue through a detailed lens. Schaffer and Korn (2003), using the topic of gambling, studied the public health perspective of addictive behaviors. They found that “one benefit of this view is that it promotes consideration of health-related phenomena at a macro level that might not be available using more individually oriented research approaches” (Korn & Schaffer, 2003, p. 2). The public health model allowed them to examine gambling behavior, its risks and implications on individual and public health, in addition to possible strategies and methods of intervention.

Love, Love and Laudico (2004) used the public health perspective to look at the impact of breast cancer. Using this model they focused on activities in breast cancer prevention, early detection, curative treatment and therapy of advanced disease. They found that using the public health models helped to identify that interventions (of public health problems) need to be practical, associated with limited or no side effects or toxicities, and very inexpensive (p. 136).

Wallace (2005) examined aging through the public health perspective. He determined that a public health perspective takes a proactive rather than reactive stance in order to promote health and prevent disease among the elderly. “It fosters good health and anticipates challenges to health, rather than waiting for a problem to occur and then

working to fix or cure it” (p. 6). Ultimately, Wallace concluded that when public health networks collaborate with aging organizations on issues affecting the elderly, effective strategies could be developed and implemented (p. 10).

In the aforementioned studies, the public health model in general has looked at groups, individuals, institutions and the public’s contributions to an epidemic or social problem—the groups’ impact on the social problem and/or efforts to improve or solve it. Additionally, the public health model has been used to study various subjects e.g. alcoholism, adoption, gambling to violence and breast cancer, but very little, if any research has been extended to the topic of obesity/overweight and dieting. Yet, research in this area would be beneficial to provide more insight into the growing problem of obesity/overweight and how dieting, often viewed as a solution to obesity, has become an area of concern and how, potentially, the news media help or hurt the obesity/overweight crisis in this country with the inclusion or exclusion of pertinent public health facts.

In this study, fad diets are examined from the public health perspective. This entails looking at the impact of fad diets on public health which includes: health risks that have been associated with fad diets; presentation of health effectiveness associated with the diet; consequences of fad diets; the economic costs associated with fad diets; methods of preventing adverse effects of fad diets. Most importantly, the public health perspective looks at whether the media have been effective in presenting the aforementioned factors to the public.

However, it should be noted that, “not everything that appears in print is scientifically sound or even safe. Moreover, even if every fact mentioned in a magazine article is correct, it may be impossible to address all aspects of a complex topic in 500,

1000, or even 2,000 words” (American Council on Health & Science, 2002, p. 26). On the other hand, a study by Teisl, Levy and Derby (1999) found that information about diet-disease relationships provided by credible sources such as the news media seem to educate the public and provide a stimulus for the purchase of healthier products (p. 205). Indeed, the news media’s credibility and accuracy have been a topic of controversy in regards to the presentation of health information. Thus, it will be beneficial to see if public health information is present and accurate in stories involving the Atkins diet because individuals still utilize the news media, particularly newspapers, as a source of health information.

According to Tanner (2004), “the reality of science is what people read in the press. The media are their only contact with what's going on in the rapidly changing scientific and technical fields, as well as a major source of information about the implications of these changes for their lives” (p. 24). As a result, public health facts are mandatory in regards to the presentation of fad diets in the media.

As noted by Restaurants and Institutions (1996), “studies show that Americans get most of their nutrition information from the media—and about half of those surveyed said the information is confusing” (p. 34). If individuals are receiving inadequate or incomplete information about positive or negative consequences of the diet, and these public health facts are absent, the public should be informed and media sources should be held accountable.

Public health facts in fad diet stories are of particular importance because many medical-based organizations do not support fad diets. For example, the American Heart Association launched a campaign against fad diets, stating that it has declared war on the

diets and wants to “inform the public about misleading weight-loss claims.” The organization states: “Fad diets often make promises that are untrue or unsafe. The tips in this section (on the site) will help you spot fad diets and avoid the unhealthy activities they recommend.” The organization also adds that many diets are falsely endorsed by the organization (American Heart Association, 2005).

The American Diabetes Association, however, does not take as straightforward of a stance on fad diets as the AHA, but it does recommend eating a wide variety of foods including vegetables, whole grains, fruits, non-fat dairy products, beans, and lean meats (poultry and fish) (American Diabetes Association, 2005). The organization also encourages people with diabetes to consume no more than 20 percent of calories from protein, while high-protein/low-carbohydrate diets exceed these recommendations—protein makes up 35 percent of the calories in the Atkins diet and Protein Power (John Hopkins Medicine, 2002).

However, the USDA 2005 Dietary Guidelines for Americans suggests keeping total fat intake between 20 to 35 percent of calories, with most fats coming from sources of polyunsaturated and monounsaturated fatty acids, such as fish, nuts, and vegetable oils. But for those who need to lose weight, the organization encourages dieters to aim for a slow, steady weight loss by decreasing calorie intake, maintaining an adequate nutrient intake and increasing physical activity (Healthier U.S. Govt., 2005). This contests the quick weight-loss results most fad diets promote.

Based on this review, it is clear that some of the most respected health organizations have attempted to make (nutrition) information available regarding dieting. However, it is not clear based on the literature and partly due to a lack of research in this

area whether or not public health facts will be present in news stories about the Atkins diet. Therefore, the following research question was addressed:

RQ2: To what extent are public health facts present in news stories about Atkins?

News Sources

“The commercial structure of newspapers is important background against which to understand the difficulties of science and medical reporting and, in particular, the critical role of reliable sources of information” (Wilkie, 1996, p. 1308). The credibility of news sources—the individuals who are interviewed or sought out to discuss health topics as well as pros and cons of various medical treatments or interventions (in regards to dieting)—is an issue in this study—as in the case of dieting. According to Franco-Alzman et al. (2001), “among other positive roles, the mass media are considered an important vehicle of health education to promote health and prevent illness. The media also facilitate the dissemination of medical and clinical knowledge among health professionals and the public at large” (p. 235). “The National Health and Research Council has identified the media as one of the most potent influences in our society” (Gibbons, Graham, Marraffa & Sultana, 2000, p. 94).

Thus, the credibility of the story resides in the sources. Cote and Fico (1999) state that: “The structural story characteristics reporters control include which sources to cite, what information from them to include, and what space and prominence to give the information” (p. 126).

Hence, sources of news stories are perhaps just as important as the facts contained in the stories themselves and, indeed, one might argue that the presence or absence of public health facts can be attributed at least to some degree to the sources that are

selected to be interviewed for news stories. “Studies show that the choice and use of sources in science stories have many implications on how these stories reach, serve and influence public perception, opinion and behavior as well as the formation of public policy (Sirianni, 2005).

Consumers are able to select information from a variety of sources. “Information of food and nutrition is widely available from a variety of different sources, ranging from the pervasive mass media (print or electronic) through government agencies, professionals, industry, to nongovernmental organizations. The consumer is constantly exposed to a myriad of messages which are often contradictory” (de Almeida, Giachetti, Graca, Kafatos, Lappalainen, de Winter, Kearney, 1997, p. 16).

Graham, Gibbons, Marraffa and Sultana (2000) studied sources of and gaps in nutrition information and services used by parents of children, teachers and school nurses to understand where parents and professionals access health information. The study found that the main source of health information for parents included family, their own knowledge, friends, the doctor, television, radio, books and magazines (p. 93).

Thus, just as it is important to examine public health facts that may be present in stories about Atkins, so too is the need to examine the types of sources that are used to present those facts. Indeed, the facts very much depend on the sources that are used or interviewed in the news stories. “Sources have a tremendous effect on mass media content, because journalists can not include in their news reports what they don’t know” (Shoemaker & Reese, 1991, p. 150).

Thus, the following research question was addressed:

RQ3: What types of sources do media outlets use to address health facts in stories about Atkins?

METHOD

The method was a content analysis. A “content analysis systematically examines the communications content of messages and thus sheds light on why and how the media covers certain issues” (Brittle & Zint, 2003 p. 18). A content analysis was selected as the best method to evaluate the sample’s 123 newspaper stories for public health facts in a *post hoc* fashion in order to determine the frames, public health facts and sources used in stories about Atkins—the three research questions addressed here.

Sample

The electronic database Lexis-Nexis was used to identify all newspaper articles that were published between 1972—the year the first Atkins book was published—and August 2005, the time of the study, with the term(s) “Atkins diet” in the headline. The search returned more than 300 results. Articles were eliminated under the guidelines that: 1) it included less than 500 words—considered a small feature and not a length desirable for current purposes; 2) the story related to Atkin’s affect on another food industry—an angle that while important is not relevant to the present study; 3) it was an editorial or opinion piece, with the justification that only “news” stories (breaking news or features) are acceptable; 4) or made reference to Dr. Robert Atkin’s death—another angle that was not relevant to this study. Additionally, it was decided that these stories most likely would not make science or medical references to the Atkins diet and, subsequently, would not yield the types of stories that would be needed in which to examine the current research questions.

After weeding out irrelevant stories, the final sample consisted of 92 stories. Stories ranged between 500 to 1900 words in length. The following publications were

represented in the sample: *The Washington Post*, *The Denver Post*, *Tampa Tribune*, *Milwaukee Journal Sentinel*, *The Boston Herald*, *The Dominion Post*, *Columbus Dispatch*, *The San Francisco Chronicle*, *St. Petersburg Times*, *USA Today*, *The Gazette*, *Pittsburgh Post-Gazette*, *Chicago Sun-Times*, *The San Diego Union-Tribune*, *Toronto Star*, *Independent On Sunday*, *Scotland On Sunday*, *The Herald*, *Omaha World Herald*, *St. Louis Post-Dispatch*, *Times-Picayune*, *The Toronto Sun*, *The Houston Chronicle*, *The Irish Times*, *The New York Times*, *The Observer*, *The Boston Globe*, *Daily News*, *The Toronto Star*, *Ottawa Citizen*, *The Irish Times*, *The Daily Telegraph*, *The Guardian*, *The Herald*, *San Antonio Express-News*, *The Guardian*, *The Australian*, *The New Zealand Herald*, *The Independent*, *Financial Times*, *Sunday Telegraph*, *South China Morning Post*, *Plain Dealer*, *The Scotsman*, *Rocky Mountain News*, *The Oregonian* and the *Los Angeles Times*.

Unit of Analysis

The unit of analysis in this study is the newspaper story. In each story, individual terms or words are evaluated to determine the tone of frames. Individual words are also examined to determine the types of sources present. And finally, individual sentences are evaluated to determine whether (and which) public health facts are present.

Coding Categories

There are four primary coding categories, which are relevant to the study's three research questions, including: frames, public health facts, the presentation of health effectiveness and sources. Each coding category is defined below.

Frames. "Framing is the selection of a perceived reality in such a way to promote a particular problem, definition or casual interpretation. The way a problem is framed

might determine how people understand and evaluate the issue” (Ghanem, 1997, p. 6). In the present study, the frame to be examined is that of story valence. Valence refers to “describing product performance information or decision outcomes in either positive or negative terms” (Berger & Smith, 1995, p. 705). There are three levels to this category: positive, negative and neutral. Consistent with Rodgers and Thorson (2000), when the story includes approving or affirmative terms and the outcome of the story is reported as desirable, the valence of the story frame is coded as positive e.g. losing weight; maintaining weight loss; achieving good health (Atkins.Com, 2005). When the story includes disapproving terms and the outcome or consequence of the story is reported as undesirable, the story frame valence is negative e.g. the Atkins diet has been associated with heart disease, osteoporosis, impaired kidney functions, colorectal cancer, diabetes complications (Barnard, 2002, p. 12). When both or neither negative or positive tones are present, the valence of the frame is considered neutral.

Public Health Facts. Public health facts were defined in terms of health-related information that is disseminated to the general population with the intent to inform and/or influence health behaviors (Rodgers & Thorson, 2001). To examine the presence of public health facts in crime stories, Rodgers and Thorson (2001) developed five categories, including solutions/prevention, economic impact, risk factors consequences, and psychological impact.

On the basis of its analytical focus on fad diets specific to Atkins, this study operationalizes public health facts about dieting in terms of the first four categories— solutions/prevention, economic impact, risk factors and consequences (defined below). Psychological impact, the fifth coding category devised by Rodgers and Thorson (2001)

examines public health facts from a psychological perspective in determining how, in their case, crime and violent acts impact or influence the psychological health or well-being of individuals who were present during or after the criminal act including victims, perpetrators and innocent bystanders. However, it is unclear what the psychological impacts of fad dieting are on individuals, and upon close inspection of the Atkins stories, it does not appear that such facts or details are represented. Thus, the first four variables were used plus one additional variable, designed specifically for this study. The variables are defined below.

Solutions/prevention. Solutions were defined in terms of acts, methods or processes of solving or preventing a health problem (Rodgers & Thorson, 2000). This includes explanations that would aide readers in determining how to use the Atkins diet or alternatives to prevent obesity or overweight: “If you want to lose weight,” she says, “you should eat the same balance of food groups. But in smaller portions” (The Guardian London, July, 16, 2002). Or, “Demand by patients for the controversial Atkins diet has become so common at an NHS hospital that dieticians have decided to ban it” (The Daily Telegraph, Aug. 20, 2003). These are just a few examples of the types of prevention/solution public health facts that will be examined in stories about Atkins.

Economic impact. Economic impact was defined in terms of monetary costs involved in dieting, obesity/overweight and the like (adapted from Rodgers & Thorson, 2000). Facts that were coded included: monetary costs of long-term, short-term dieting and obesity e.g. costs of prescribed treatment; medical treatments, hospitalization; cost to the community; cost to the family; and so on. For example, “The questions are not cosmetic ones. The best estimates blame obesity/overweight for about 300,000 American

deaths each year, Klein said. About 65 percent of American adults and 15 percent of children are overweight or obese” (Plain Dealer, April 29, 2004). Again, these are just a few examples of the types of costs that will be searched for in the Atkins stories.

Risk factors. Risk factors were defined in terms of health facts that explain the chance of injury, loss or damage due to a health problem or solution (Rodgers & Thorson, 2000). In the case of Atkins, this would include facts about the pros and cons of the diets as well as information about who is at risk of developing different diseases as the result of being overweight. Con e.g. “The Atkins diet is high in saturated fat and meat, which have been shown to increase heart disease and some cancers” (USA Today, Dec. 16, 2002). Or another example is, “Instead, the committee noted, high-protein diets can compromise vitamin and mineral intake and cause heart, liver and kidney abnormalities. The report also concluded that two of the high-protein diets—Atkins and Protein Power—have particularly high intakes of total fat, saturated fat and cholesterol, all of which raise the risk of heart disease” (The Washington Post, Oct. 9, 2001).

Consequences. Consequences were defined in terms of the effects of the Atkins diet impact on obesity/overweight individuals, families, communities or institutions (adapted from Rodgers & Thorson, 2000). Facts that were coded included: consequences to the patient’s well-being and life style (e.g., Will they develop mental or physical health problems that may cause them to quit work? Will they gain the weight back and additional weight? “It works, but for the majority not for long. I know people who've lost a lot of weight on this diet, but they regain it and that's where the problem lies’ Ms Radd said” (The Sunday Telegraph, Sept. 14, 2003). This is just one of several consequences facts that will be examined in the Atkins stories.

Presentation of health effectiveness. Presentation of health effectiveness was defined in terms of health expectations associated with the diet as it compares to the current health standards implemented by health organizations or research. This was measured in terms of being supportive or unsupportive of the Atkins diet. Supportive presentation of health effectiveness was defined in terms of Atkins diet facts that coincide with the health suggestions of an organization or the most up-to-date nutrition research e.g. “Several new studies show that some dieters lose more weight on the Atkins plan than on more conventional low-fat diets” (USA Today, Dec. 10, 2002).

Alternatively, presentation of health effectiveness of Atkins diet can be *unsupportive* of the diet. That is, the fad diet does not coincide with the health suggestions of an organization or the most up-to-date nutritional information, e.g. “It may be, said Hill, that some people do better with the Atkins approach and others lose more weight on a more traditional, low-fat diet, such as that recommended by the National Institutes of Health, the American Heart Association and the American Diabetes Association” (The Washington Post, Oct. 29, 2002).

Sources. In the book, “Mediating the Message,” Reese and Shoemaker (1991) described sources as “the actors whom journalists observe or interview, including interviewees who appear on the air or who are quoted in...articles, and those who only supply background information or story suggestions” (150). Reese and Shoemaker divided sources into categories: official sources, government officials or police; organizational sources, corporations, community groups; individual sources, ordinary people (1991, p.151). In this study, sources were defined as the type of resource the author attributes information or facts to, in the news story. The levels in this category

included: 1) scientists or researcher—medical or health professional, a nutritionist 2) organization—health organization, e.g. American Heart Association, USDA 3) public persons (not a medical or health professional; any person not affiliated with a health organization)—ordinary person, a former or current dieter, a food distributor, chef, restaurant owner.

Additional variables that were coded for tracking purposes included: the newspaper's name, headline of the news story, date and page number.

Intracoder Reliability

The researcher coded the content analysis and tested intracoder reliability. Holsti's formula was used for all intracoder reliabilities. Although Holsti (1969) has been criticized for being overly simplistic, its strength lies in the code/re-code requirements of intracoder reliabilities. Basically, the researcher coded a pre-determined number of news stories, waited three days and then re-coded the same stories again. This helped to ensure that the coding categories were reliable. A pre-test of the coding instrument was conducted prior to the start of the study by randomly selecting three news stories, or about 2.5% of the total sample. Alterations to the coding sheet and categories were carried out. Once the pilot study was completed and changes were made, a beginning intracoder reliability was conducted by randomly selecting six news stories from the sample, or about 5% of the total sample. This is an adequate number of news stories to examine for the initial intracoder reliability, according to Riffe, Lacy and Fico (1998). Once an acceptable intracoder reliability of .80 was reached (Holsti, 1969), coding began. About mid-way through the content analysis, a second intracoder reliability was taken and a final intracoder reliability was taken again at the end of the content analysis.

Consistent with Riffe, Lacy and Fico (1998), 10% of the original sample was coded and re-coded in the final intracoder reliability, or a total N of about 12. All stories coded for the intracoder reliabilities were used in the final data analysis as well—but only the final (re-code) reliabilities.

Intracoder reliability results can be summarized as follows. The first pretest returned a reliability of ($r^{\wedge} .625$) for results of Time 1 and Time 2. The largest inconsistency was for source information, specifically regarding the “scientist/researcher” and “organization” options. Before initially testing the following situation had not been resolved: if Dr. Jones from the American Heart Association is attributed in a quote, would this reference be coded as a “scientist/ researcher” or an “organization,” or both? In this case it was decided to code the source as a “scientist/researcher” *and also* in the category of “organization” *only* if the same organization had not already been coded in the story. In other words, an organization could only be coded once in an article. Once this area was clarified, intracoder reliability was tested again, and succeeded the .80 cut-off ($r^{\wedge} 1.0$).

RESULTS

To address the research questions, frequencies and percentages were computed using Excel. The results can be summarized as follows.

Research Question 1

RQ1 sought to determine how the fad diet, Atkins, is framed relative to its publicized effectiveness. This was examined with the following variables: V. 5-frames and V. 10- presentations of health effectiveness. Frames were used to determine the overall tone of each story. The results showed that there were slightly more negative than positive stories, with fewer neutral stories, about Atkins during the time frame specified (see Table 2), also see (Tables 3 and 4).

Presentations of health effectiveness also were examined to address RQ1. Results revealed that there were nearly twice as many stories that did not support the Atkins diet compared to those that presented health effectiveness in support of the diet (Table 5).

Research Question 2

RQ2 examined the extent to which public health facts were present in news stories about Atkins. This was addressed using variables V.6- solutions/prevention, V7.- economic impact, V8.-risk factors and V9.- consequences. A total of 421 public health facts were coded. There was an overall average of 1.1 (of each) public health fact in every story. Results also showed that risk factors were the most prevalent public health fact—twice as many as the second-most prevalent public health fact, consequences. Consequences was followed closely by the variable solutions/prevention, however the economic impact variable was barely present in most stories (see Table 6).

Research Question 3

RQ3 attempted to determine the type of sources media outlets use to address health facts in stories about Atkins. A total of 460 sources were coded. Results showed that organizations were used slightly more than scientists/researchers. As shown in Table 7, of the total sources selected for stories, ordinary persons made up the smallest percentage of sources used.

DISCUSSION AND CONCLUSION

The purpose of this research was to examine how U.S. daily newspapers represented the Atkins diet since its inception in 1972. Story frames, public health facts and sources were examined. The findings from the content analysis revealed that during the time period examined, the stories regarding the Atkins diet: 1) were more negative than positive; 2) were more non-supportive than supportive in terms of health effectiveness; 3) a majority of the stories analyzed were published in 2004; 4) provided more public health facts about the individual (e.g., risk factors) as opposed to public level factors (e.g., solutions/preventions); and 5) predominantly used organizations as sources, with fewer sources who were researchers/scientists and ordinary persons.

Theoretical Implications

Framing theory, which assesses the information journalists choose to include or leave out in news stories, was one of the theories used to guide this research. In this study, a majority of the stories were framed negatively and few stories had neutral-tones. This trend was observed again with publicized health effectiveness—coded in terms of supportive or non-supportive. Combined, these findings suggest that, by and large, the Atkins diet has been framed negatively over the years. Additionally, the findings suggest that journalists present health expectations associated with the diet—as it compared to the current health standards of health organizations or research—to legitimize their frames and ultimately the way they covered the Atkins diet.

Of course, because we are looking at the theory of framing, we must question why most of the stories were not neutral, but instead possessed a negative tone, potentially indicating a bias. Frames that are biased are cause for concern and would need to be

balanced against a pool of information and details that provide news consumers with a more complete picture of how fad diets may affect their health. Then again, health issues such as dieting, *have* positive and negative aspects and it is up to the journalist to determine which forms of valence (conveyed through facts and angles) to convey. In the present study, negativity was a common frame, though the rationale for this is not entirely clear based on these findings.

The second theory used was the public health model of reporting. This theory serves as a complement to framing in the sense that the presence of public health facts factors enter into the tone of the frame. First, the findings showed that the frequency of public health facts in a news story ranged from .05 to 2.6 with an overall average frequency of 1.1 (per public health fact). This is slightly more public health facts than what Rodgers and Thorson (2001) found in their examination of such facts present in stories about crime and violence, which came to about 1 public health fact for every story examined. An implication is that the issue of dieting may necessitate a greater number of public health facts or alternatively, it may be easier for journalists to find and report public health facts for stories about dieting than other health-related stories such as crime and violence. Alternatively, it may be the case that dieting is “naturally” in the realm of health stories, whereas crime and violence may not historically be reported as a health issue, which could account for the difference.

As for specific types of public health facts, risk factors were among the most frequently reported on. This is probably a positive sign, as readers should be informed about individual risks and consequences of dieting. However, risk factors ranged from things like “bad breath” to “death” with little or no commentary about *which* risk factors

individuals of different ages, genders, etc. might be prone to, suggesting that in addition to providing basic “health facts” about dieting, context and perspective also are needed to provide individuals with a more holistic picture of potential consequences of dieting.

This research echoes what many other public health studies show—there are limitations to the public health facts present in stories. Usually, stories included public health facts that focused on individual impact (e.g. risk factors, consequences) rather than public issues (e.g. economic impact and solutions/preventions). For instance, the economic impact variable had the lowest frequency. There were very few mentions of the Atkins diet impact on the growing costs of the obesity/overweight epidemic in this country (on individuals and the public)—for instance, the cost of prescribed treatment; cost of medical treatments, hospitalization—or other costs related to dieting (e.g., costs to communities, costs to families, etc.). Perhaps more public health facts, on the individual level, are present because the diet encourages the public to take on the diet individually—to monitor their own eating, exercise and weight loss. The Atkins diet is not advertised as a “do it with a buddy,” group-focused diet like others such as Weight Watchers or Jenny Craig. As a result, many of the public health variables concentrate on the Atkins diet’s affects on individuals.

Hence, the findings suggest that while readers learn about potential individual health effects, this appears to be done at the expense of the public health perspective, which could provide a broader context in which to judge individual types of facts.

Just as it was important to examine public health facts present in these stories, it was important to examine the types of sources used to attain these facts. The content analysis findings revealed that most reporters used medical sources—

scientists/researchers and organizations—for health information regarding Atkins.

Doctors or nutritionists were frequently quoted, in addition to organizations such as the American Heart Association, Atkins Nutritional Foundation and various universities to support or argue an Atkins' claim. An implication is that reporters sought out appropriate and relevant sources for the news stories. However, the use of individual health experts—researchers and scientists—was not used as much as individual organizations. This might be attributed to the public relations efforts of organizations that disseminate press releases and research findings, for instance, which are presumably easier and faster for journalists to use than seeking out specific experts.

Although it is not uncharacteristic for medical professionals to create a product, in this case Atkins, and fund research for an outside group to test the product, the over reliance on organizations made some of the information in the news stories questionable, because Atkins was a major contributor of these findings. Yet, reporters combated much of this information with strong recommendations from such organizations as the American Heart Association and the American Diabetes Association, which opposed Atkins.

This may help to explain why reporters elected negative over positive frames and non-supportive over supportive health effectiveness frames. Perhaps this was their way of providing “balance” to stories that relied predominantly on Atkins-funded research, research that presumably could be biased to favor the Atkins diet. Future studies can examine this issue in greater detail.

Last, the use (or lack of use) of ordinary persons in dieting stories is a potential drawback to the news stories themselves. Most of the ordinary people sourced here were

individuals who were struggling with their weight or people who knew other people on a diet. Although it seems “responsible” for reporters to reference research or doctors, the first-hand experience of former dieters adds a certain type of validity to selected stories. Additionally, it seems unusual that individuals were not highlighted in these stories, as reporters typically use the “face” of an individual to project a certain human-interest angle to news stories, particularly those about health. Again, it may be the case that using press releases and published studies about dieting are more convenient and easily accessible—indicating a higher reliance on organizations and health experts—as opposed to seeking out individuals for these stories. Individuals who are on Atkins would presumably need to be interviewed, which could serve as a source of bias. Hence, reporters may not have used as many ordinary persons as an attempt to provide balance and fairness in stories about Atkins.

Practical Implications

In addition to the theoretical implications, there are a number of practical implications that should be highlighted as well. First, the research suggests that despite some public health facts noted in the stories, reporters and editors do not (by and large) appear to rely on a public health perspective when reporting on dieting stories—in this case, Atkins. There are several explanations for this. First, reporters are trained to write stories from the individual’s perspective. Providing stories about an individual’s struggle with weight is simply more appealing and more human interest than a more societal—oriented view, such as that afforded by the public health model of reporting.

Additionally, reporters are also on deadlines and generally have 24 hours or less to write a story. Many public health facts, such as the impact of dieting on communities,

take longer to collect and, in some cases, may be difficult to determine even when time is not a constraint. An implication, then, is that while the public health model of reporting provides a broad framework for reporting on health news, additional factors such as news processes and news logistics must be considered in the grand scheme of how health topics get reported.

Secondly, in regards to the public health model, reporters seem to overlook tying public health facts to the underlying issue or the “so what,” which in this case is obesity. Certainly it is important to inform readers of consequences or risk factors in regards to using fad diets, but it is also important for reporters to show that fad diets are connected to a larger issue—obesity. Most of the Atkins stories neglected to address this aspect. There were very few stories that looked at position of fad diets in the scope solving the obesity/overweight epidemic. Very few stories provided obesity/overweight statistics.

Just as time constraints are a problem, so is space. Many editors or reporters are limited in the amount of space for news stories. In this study, word counts ranged from 500 to nearly 2000 words. Hence, it is reasonable to think that reporters collect far more details and facts than are needed for the news stories and then narrow down the stories to keep within word limits set by their editors. An implication is that many health stories may not have space to provide elaborate details with regard to dieting as it relates to obesity. Still, the facts and details that do make it into the news stories are by and large at the reporter’s discretion (which is where framing comes in). It is interesting that in the present study, reporters primarily relied on negativity to convey information about Atkins. This was perhaps due to a need to keep readers interested in this issue over the years. Stories that only highlight positive aspects, besides being biased and probably

inaccurate, may not hold the interest of readers as much as Atkins stories that create “conflict”—some stories report positive aspects, whereas others highly negative aspects. Conflict, for better or worse, is one of the hallmarks of news reporting. Given that the Atkins diet has been around for so long and, over the years contradictory research findings have been provided about Atkins, this rationale seems quite plausible.

Limitations and Directions for Future Research

As with every study, this one has several limitations that should be noted. First, the sample was collected over time through a Lexis-Nexis search and, for this reason, the author feels confident that the universe of Atkins’ stories (at least those that used the term “Atkins” in the headline or article) was retrieved. Careful steps were taken to weed out duplicate stories to avoid over/underrepresenting certain stories or characteristics within stories. Despite these efforts, the final sample was limited to 92 stories that were specific to the Atkins diet, which is a rather small, unrepresentative sample of stories about dieting in general. Future studies can overcome this limitation by selecting from a broader variety of fad diets (e.g., South Beach Diet) to increase the overall sample size and provide more generalizable results. Also, to expand upon the present research it will be important to acknowledge the heavy use of other sources to obtain information about health issues and dieting, such as the Internet and television. In this age, individuals find it easier to Google the Atkins diet to retrieve a wealth of information about the diet, rather than taking time to read the newspaper. Consequently, the Internet and television sources potentially have an affect on the public’s perception of the Atkins diet. It will be helpful to look at how these sources framed the Atkins diet (during the study’s time frame) to evaluate a possible relationship.

In addition to the public health facts examined here, future studies will want to determine and examine public health facts that are perhaps more specific to weight control and diet. The public health facts that were used here were adapted from studies on crime and violence as a health epidemic. However, it may be that alternative health facts are needed to examine the issue of dieting. For instance, in addition to risk factors provided in Atkins's stories it may be necessary to code for types of risks and severity of risks mentioned. For instance, are dieters being informed that by trying the diet they could risk bad breath and gaining the weight back or are they being told that they could develop heart disease and experience kidney problems or idealistically are they being informed of all of the above? Clearly, these are different types and intensities of risk factors, and future studies can examine these and other public health facts to add to the knowledge we already have about what constitutes a public health fact.

Last, the purpose of this study was to provide a descriptive "lay of the land" of how Atkins's news stories were framed, and the public health facts and sources used. Thus, the statistical analysis relied on frequencies and percentages to provide this description. Although there is nothing inherently "wrong" with these basic statistics, future studies will want to take a more sophisticated look at relationships between and among the variables examined here to gain a better sense of if/how the variables work together in the development of news stories. Additionally, future studies will want to examine the effects of the variables examined here to determine which combinations of frames/public health facts/sources yield which types of results. This will enable researchers and practitioners to make decisions about exactly what types of facts to include in health stories that emphasize weight control and dieting.

Conclusion

As fad diets continue to rise and fall in popularity, the framework offered here can be used to assess the representation of those stories in the news media. Reporters and editors have a responsibility to present fair and balanced facts, frames and details to their readers, and this study was an attempt to evaluate these efforts. The findings point to a number of positive trends and suggest room for improvement in the framing and reporting of obesity/overweight as a public health issue.

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Table 1-Frequency of terms (attributes) in Atkins diet stories, 1972-2005

Type of Term	Frequency	Percentage
<i>Positive</i>	551	38
<i>Negative</i>	579	40
<i>Neutral</i>	331	23

*This table reflects the total frequency of terms (1460) relative to the Atkins diet in stories within the study's sample time frame.

Table 2- The tone (frame) of Atkins diet stories, 1972-2005

Story Tone	Frequency	Percentage
<i>Positive</i>	32	35%
<i>Negative</i>	40	43%
<i>Neutral</i>	20	22%

*This table reflects the total frequency of Atkins diet story frames (92) within the study's sample time frame.

Table 3- The tone (frame) of Atkins diet stories by year of publication, 1992-1999

Year of Publication	Story Tone	Frequency	Percentage
1992	Positive	0	0
	Negative	1	100
	Neutral	0	0
1997	Positive	1	100
	Negative	0	0
	Neutral	0	0
1998	Positive	1	50
	Negative	1	50
	Neutral	0	0
1999	Positive	1	33
	Negative	2	67
	Neutral	0	0

*This table reflects the total frequency of Atkins diet story frames (7) in the 1990s.

Table 4- The tone (frame) of Atkins diet stories by year of publication, 2000-2005

Year of Publication	Story Tone	Frequency	Percentage
2000	Positive	0	0
	Negative	1	50
	Neutral	1	50
2001	Positive	0	0
	Negative	2	100
	Neutral	0	0
2002	Positive	1	14
	Negative	5	71
	Neutral	1	14
2003	Positive	19	43
	Negative	18	41
	Neutral	7	16
2004	Positive	9	33
	Negative	9	33
	Neutral	9	33
2005	Positive	0	0
	Negative	2	66
	Neutral	1	33

*This table reflects the total frequency of Atkins diet story frames (85) in the 2000s.

Table 5- How Atkins is framed relative to its publicized effectiveness, 1972-2005

Publicized Health Effectiveness	Frequency	Percentage
<i>Supportive</i>	23	25%
<i>Unsupportive</i>	44	48%
<i>Neutral</i>	25	27%

*This table reflects the tone of publicized health effectiveness in stories relative to the Atkins diet (92) within the studies sample time frame.

Table 6- The extent to which public health facts are present in news stories about Atkins, 1972-2005

Public Health Variable	Average Frequency	Percentage
<i>Solutions/Prevention</i>	0.8	17%
<i>Economic Impact</i>	.05	1%
<i>Risk Factors</i>	2.6	57%
<i>Consequences</i>	1.1	24%

*This table reflects the total frequency of public health variables (421) present in Atkins diet stories within the study's sample time frame.

Table 7 – The types of sources media outlets use to address health facts in stories about Atkins, 1972-2005

Source Type	Average Frequency	Percentage
<i>Scientists/Researchers</i>	1.9	39%
<i>Organizations</i>	2.1	43%
<i>Ordinary Person</i>	0.9	18%

*This table reflects the total frequency of sources in Atkins diet stories (460) within the study's sample time frame.