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Baited by Clickbait: Reading Beyond the Headlines

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How accurately does the media report on original research articles? Our research project was a literature review to determine whether the media publishes factual summaries of research or misleads readers into believing false claims. Media reporters can take shortcuts and jump to inaccurate conclusions that can mislead the public, such as how the press reported that vaccines may cause autism—which has been scientifically disproven, as in the 2013 article "Increasing Exposure to Antibody-Stimulating Proteins and Polysaccharides in Vaccines Is Not Associated with Risk of Autism" published by F. DeStefano, C. Price, and E. Weintraub in the *Journal of Pediatrics*. According to J. Dunn's "The Difference Between How Millennials and Baby Boomers Consume News, in One Chart" published by *Business Insider* in 2017, 64% of young adults aged 18–24 say that their main news source is online publications, which shows how crucial it is for the media to report authentic research findings.

Our research evaluated A. Sandoiu's article "Breast Cancer: Bacterial Deficiency Linked with Onset," published online in 2017 by *Medical News Today*, which reported links between bacterial deficiency and breast cancer, and which we picked based on its heading, "Antibiotics May Prevent Breast Cancer." The term *clickbait* refers to an attention-grabbing phrase or title that encourages readers to click on an article, and we considered this heading to fit that criteria. To determine if the reporting in this media article was accurate, we first read the research publication on which the article was based: "Breast Tissue, Oral and Urinary Microbiomes in Breast Cancer" by H. Wang et al. in *Oncotarget* in 2017. Next, we searched in two professional databases, the Cumulative Index of Nursing and Allied Health Literature and PubMed, using the search terms "breast cancer and microbiomes," "cancer and bacteria," and "antibiotics and breast cancer" to find three additional articles published within the past five years related to the original research topic. We organized our results in a quantitative research grid, which included the strengths, weaknesses, and results of each study. Finally, we compared the findings of the research literature to the media report for accuracy and compiled our final literature review.

Based on our literature review, the suggestion in the media article's heading that antibiotics could prevent breast cancer was misleading. Each of our supporting research articles mentioned that bacteria levels play a role in breast cancer development, but none of the research mentioned the use of antibiotics as a preventative measure or treatment. This extrapolation of the research findings could provide false hope to readers since it has not been proven one way or another whether antibiotics have any effect on preventing breast cancer. Our aim is to show others that when the media reports on research, it may not be entirely accurate. We hope to inspire other students and members of our generation to look beyond headlines and media reports and appreciate the value of research literature.

Research advisor Nicole Adams writes: "Nurses are trusted by the public to be knowledgeable and honest. It is crucial that they are able to evaluate media in a comprehensive manner and communicate clearly. These students impressed me with their writing ability and their analysis of a media report, the original scientific publication, and supporting literature."

A word cloud of the most commonly used words in our original literature review, highlighting media, research, and study as some of our most used topics.

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