Obesity Research & Clinical Practice (2015) 9, 448—457

ORIGINAL ARTICLE

Influencing weight bias: The impact of biased questionnaire anchors on stereotype beliefs and judgments

R.A. Carels[a,*], **J. Rossi**[a], **M. Taylor**[b], **J. Borushok**[b], **A. Kiefner-Burmeister**[c], **N. Cross**[b], **N. Hinman**[b], **J.M. Burmeister**[b]

[a] *East Carolina University, United States*
[b] *Bowling Green State University, United States*
[c] *University of Findlay, United States*

Received 3 December 2014; received in revised form 2 February 2015; accepted 5 February 2015

KEYWORDS
Cognitive aspects of survey methodology;
Anchor effect;
Weight bias;
Social consensus;
Source credibility

Summary
Objectives: In this investigation, biased questionnaire response anchors were designed to indirectly manipulate respondents' estimates of their peers' stereotypic beliefs or the estimates of scientific research findings about individuals with obesity. The current study tested the hypothesis that biased response anchors could influence personal beliefs about obesity.
Methods: Two-hundred adults participated in the study. A simple manipulation of questionnaire items (i.e., asking respondents to estimate peers' beliefs or scientific research findings) using biased response scale anchors was designed to subtly relay information about certain personality traits of individuals with obesity.
Results: The anchor manipulation significantly influenced participants' immediate and follow-up weight biased beliefs as well as participants' evaluation of an obese job applicant's potential for employment.
Conclusion: Social judgments about obese individuals may be susceptible to subtle manipulation of response anchors and may be impacted by the source of comparison information (e.g., peers; scientific research).

* Corresponding author at: East Carolina University, Department of Psychology, Greenville, NC 27858-4353, United States. Tel.: +1 2527375070.
E-mail address: carelsr14@ecu.edu (R.A. Carels).

http://dx.doi.org/10.1016/j.orcp.2015.02.002

Introduction

Weight stigma and discrimination are ubiquitous and produce a number of detrimental individual and societal costs [1]. Individuals with obesity are often characterized unfavorably (e.g., ''lazy,'' ''weak-willed'') and negative weight-based stereotypes are widespread [1]. Research examining weight stigma and attitude change suggests that attitudes toward people with obesity may be influenced by direct manipulation of social consensus information (i.e., information on attitudes that are purportedly from peers and the credibility of the source [2]). Specifically, Puhl and colleagues [2] showed that students from Yale changed their explicit beliefs and attitudes regarding individuals with obesity to more closely align with purported social consensus and scientific research information when it is discrepant with their personal beliefs and attitudes [2]. Moreover, their findings imply that source credibility, such as whether information reportedly originates from scientific research or an in-group source (i.e., Ivy league versus community college students), may be a key factor in determining whether presented information influences judgment.

Shifts in attitudes are susceptible to both direct manipulation of social consensus information and the credibility of the source through techniques, such as providing direct feedback to participants that one's views differ from one's peers or experts [2] as well as indirect manipulations of social consensus information and the credibility of the source through techniques, such as asking respondents to judge the frequency of particular attitudes of peers or experts utilizing biased questionnaire response anchor sets [3—5]. Research on the cognitive aspects of survey methodology suggests that response option sets, skewed in either a positive or negative direction influence reported response frequencies and ratings, and may also influence social judgments. Biased response anchors influence judgments through factors such as cognitive heuristics (i.e., mental shortcuts used to make rapid, automatic judgments [3,6]). Cognitive heuristics can lead to systematic and potentially detrimental biases and fallacies when information is presented in a way that skews a person's attitudes or beliefs in a harmful direction [3]. Beyond cognitive heuristics, Schwartz's [4] research reveals that response options also create a frame of reference for responding. In other words, respondents consider the available range of response options to frame their estimation of behavioral frequencies, especially when perceived personal knowledge regarding these events or behaviors is sparse. In the specific domain of weight bias, people may use biased response anchors to frame their estimates of social consensus or scientific research community supported information regarding characteristics of overweight individuals. This framing may lead respondents to adjust their attitudes and beliefs about overweight individuals to more closely align with biased anchor sets, leading to increased stigmatization of individuals with obesity.

Similar research examining attitudes and social judgments toward another stigmatized group, African Americans, also provides valuable evidence adding support to the current study's premise. Wittenbrink and Henly [5] found that participants exposed to a measure suggestive of negative beliefs towards African Americans (the measure featured numerical response anchor sets skewed to imply more negative information about African Americans), subsequently espoused more negative beliefs about African Americans (i.e., rated them as having more negative traits and fewer positive traits). Importantly, this anchor manipulation not only influenced trait beliefs in a negative way, but also produced outcomes suggestive of increased generalizable prejudice. In addition, people exposed to the negatively biased anchor (suggestive of negative beliefs towards African Americans came from an unidentified source) were significantly more confident that an African American defendant in a mock jury case was guilty, when compared to people exposed to a positively biased anchor set. This important study suggests that exposure to biased information via response anchor sets may lead to the development, solidification, or strengthening of prejudicial beliefs.

No previous weight bias research has examined the impact of manipulating questionnaire response anchor sets on attitudes toward people with obesity. Additionally, the current study builds upon previous studies which have examined the relationship between extreme response anchors, source information, attitude formation and change, and social judgment. The investigation's first purpose was to examine whether exposing individuals to biased numerical response sets during an independent manipulation would influence subsequent prevalence ratings of various desirable and undesirable traits of individuals with obesity immediately following active exposure to the biased response anchors and one-week following. It was hypothesized that prior exposure to biased anchor response sets would predict subsequent attitudes about individuals with obesity immediately and one week following response anchor set exposure. Specifically, it was conjectured that people who received a response anchor