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Technical Note in Biostatistics and Research

The impact of weight bias in forensic medicine: Challenges and implications for objectivity in medical legal practice

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Abstract

Weight bias, defined as negative attitudes and stereotypes directed toward individuals based on their weight, has profound implications in healthcare and legal settings. In forensic medicine, where objective assessments are critical to the pursuit of justice, weight bias can distort clinical and legal evaluations. This article examines the prevalence of weight bias in forensic medicine, its impact on disability judgments and medical-legal outcomes, and proposes solutions for mitigating bias to ensure fairness and accuracy. Emphasizing the need for education and standardized guidelines, we argue that addressing weight bias is essential for maintaining the integrity of forensic science and bio-psycho-social evaluation.

Key words: Weight bias; healthcare; forensic medicine.
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INTRODUCTION

Weight bias has been extensively documented in various medical fields, where it contributes to stigmatization, misdiagnosis, and unequal treatment of individuals with obesity. However, its presence in forensic medicine—a discipline tasked with providing unbiased, scientifically accurate information for legal contexts—has received limited attention. Forensic professionals, including medical examiners, pathologists, and forensic psychiatrists, are expected to base their assessments strictly on evidence. Nevertheless, weight bias can lead to diagnostic overshadowing, inappropriate attribution of death or injury to weight-related conditions, and flawed legal testimonies, which may adversely affect the administration of justice.

The present work deals with the obesity stigma observed from different points of view by focusing the attention on stigma measures and assessment and the role of language in the bio-psycho-

social context. The stigma based on weight (weight stigma, weight bias, weight discrimination) refers to behaviors and negative beliefs towards people's weight, and is expressed through stereotypes, prejudices and discriminations due to their overweight or obesity condition.

Obesity is often wrongly defined as the inability of self-care [1]. This type of stigma is tied to the idea that weight is almost entirely under individual control, strengthening the concept of obesity as a blame and a laziness and personal failure sign. The stigma related to weight can be expressed through verbal comments (verbal abuse, denigration, teasing), physical assaults (hitting, kicking, pushing) and relational victimization (social exclusion, being avoided, being left out). Moreover, this form of stigma can be perceived with mental pain by people affected by obesity - leading them to avoid social situations because of the fear of receiving negative comments - or can be internalized - this could lead to the belief that the negative comments are real. Self-depreciation and self-contempt could be consequences of internalized stigma [2].

Weight stigma is part of the life of individuals affected by pervasive obesity both in work, personal, and school environment. Even Media often picture people with obesity as clumsy, ridiculed and stereotyped not only as regards adults, but also about children and adolescents affected by obesity. The stigma related to weight has a profound psychological impact, it was found in association with severe depression, low self-esteem, anxiety, social and behavioral problems and a lower quality of life [3].

Unfortunately, stigma toward obesity is present even in healthcare settings and health specialists could inadvertently manifest negative behaviors toward patients with obesity, with negative results on patients' health [4]. There is scientific evidence which proves that because of weight stigma lots of individuals repeatedly change doctor and avoid specialized exams, worsening their health conditions.

Moreover, it is very interesting to observe how stigma affects weight loss treatments, including bariatric surgery (BS. BS is a very effective procedure to treat obesity. Nevertheless, worldwide only 0,1-2% of obese people who may take advantage from this intervention decide to resort to surgery. The under- utilization of this clinical procedure is mostly related to an unequal access to after-care treatments, misconceptions about its safety and efficacy, social and cultural prejudices and stigma. Such as obesity, even bariatric surgery is highly stigmatized. This solution considered an easy way to simplify the weight loss process, or "the last resource" after repeated failure. Furthermore, obese people, who decide to undergo bariatric surgery, may be stigmatized and perceived by others as unwilling to control their weight and carry on a traditional diet [5]. Surgery is not the goal, but the first step towards a better and a long-lasting quality of life that requires adhesion, constancy and a long-term effort [6]. The psychological impact related to bariatric surgery weight loss has persistent effects, even after surgery mostly related to the following post-surgery diet.

The main scales of assessment, used to investigate the presence and the effects of the stigma on people affected by obesity, have been identified, through a review of the literature on PubMed's search engine.

Those scales detect the perception of the person's stigma and have been used in several clinical studies to verify research hypotheses on how to comprehend how much the perception of the stigma can affect the course of the treatment or even better help-seeking and the subsequent successful lasting weight loss.

In literature more than ten tools are available to assess weight bias, such as for example: (1) Anti-Fat Attitudes, AFAT [7]; (2) Anti-Fat Attitudes Test, AFAT; (3) Fat Phobia Scale, FPS [8]; (4) ATOP / BAOP [9]; (5) Weight Self Stigma Questionnaire, WSSQ [10]; (6) Weight Bias Internalization Scale, WBIS [11]; (7) Modified Weight Bias Internalization Scale [12]; (8) Stigmatizing Situations Inventory [13]; (9) Experienced Weight Stigma, EWS [14]. Each of these scales assess the stigma linked to obesity, over time it has been observed how essential having standardized measurements is necessary to acquire valid and reliable data. Thanks to researchers it has been understood even more how the weight-related stigma is a pervasive and invasive element that has a significant impact on people's physical and psychological health.

But if the stigma is made of words, maybe is the language the key to prevent it?

The answer is without a doubt positive: the language is generally considered as the set of words and non-verbal communication that accompanies them. Considering scientific evidence, the language used to describe overweight or obese people can have a deep effect on these individuals, leading to a type of discrimination that, in a lot of cases, excludes them from leading what is considered a normal life by most people.

It has been reported that specific words, such as "obese" and "severely obese", are negatively perceived by people who suffer from obesity, although those words are

commonly used by healthcare providers.

A lot of other terms have been reported, for example such as "heavy" or "big", or any generalizations that refer to obese people as a great burden for the National Health Service. According to the working group "language matters", healthcare providers refer to difficulties in finding suitable terms to use towards these kinds of patients. Health professionals declare to ignore how to discuss properly about patient weight, and that they need further training to increase their competencies to face the problem of obesity.

Those poor competencies result in even more barriers when it comes to obesity. Such barriers include the lack of confidence to use un appropriate language and the concern of hurting or making the person affected by obesity react negatively, pushing them far from future treatments [15].

For this reason, the last section of this paper examines the "general principles for the communication between the healthcare provider and the person who lives with obesity, to reduce the stigma and to improve the well- being of the individual" by Charlotte Albury e coll. [16], such as a training tool for healthcare professionals. To address the problem of weight stigmatization, healthcare providers may be encouraged to use a non- judgmental approach, which means use merely only clinical valuations.

Using the so called "fat humor" (the sense of humor about fat people) is counterproductive. Healthcare providers can have an important role in reducing obesity stigma inside healthcare systems. They're supposed to train in order to acquire a proper language to talk about this condition and to counsel people affected by obesity, making them feel comfortable, favoring a more positive behavior toward treatments and a better therapeutic adherence and outcome [17].

Although forensic professionals are trained to provide unbiased, evidence-based conclusions, they are not immune to the prejudices that permeate society [18]. Research indicates that healthcare providers, including those working in forensic settings, may unconsciously attribute symptoms, injuries, or causes of death to a person's weight, rather than considering alternative explanations. This bias, known as diagnostic overshadowing, can lead to flawed medical conclusions.

Addressing weight bias in forensic medicine is essential for ensuring the accuracy and fairness of forensic assessments. One crucial step in mitigating this bias is through education and training [19]. Forensic professionals need to be made aware of the ways in which weight bias can influence their work, and they must be equipped with strategies to counteract it. Training programs that focus on recognizing implicit bias and its effects on medical decision-making can help forensic professionals approach their cases with greater objectivity.

Additionally, the development of standardized guidelines for evaluating individuals with obesity can play a significant role in reducing the impact of bias [20]. These guidelines should be rooted in empirical research and account for the unique anatomical and medical characteristics of individuals with higher body mass. By following clear, evidence-based protocols, forensic professionals can reduce the likelihood that personal biases will influence their conclusions.

Another important strategy for combating weight bias is the use of peer review in forensic cases. When multiple experts are involved in evaluating a case, the risk of bias affecting the final conclusions is diminished. Peer review provides a mechanism for holding forensic professionals accountable for their findings, ensuring that reports remain grounded in objective evidence rather than subjective assumptions.

Ultimately, addressing weight bias in forensic medicine is not just a matter of improving the quality of medical evaluations; it is a matter of justice. The legal system relies on forensic experts to provide unbiased, scientifically accurate information, and when bias infiltrates medical-legal assessments, the consequences can be severe [21]. By confronting weight bias head-on, forensic professionals can uphold the principles of fairness and impartiality that are foundational to both medicine and the law.

In conclusion, weight bias poses a significant challenge to the objectivity of forensic medicine. To ensure the integrity of forensic science, it is imperative that professionals in the field actively work to recognize and counteract weight bias through education, standardized guidelines, and peer accountability. Only by addressing this issue can forensic medicine truly fulfill its mission of delivering justice based on evidence, not prejudice.

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References

1. Puhl RM, Heuer CA. The stigma of obesity: a review and update. Obesity (Silver Spring). 2009 May;17(5):941-964. doi: 10.1038/oby.2008.636. Epub 2009 Jan 22.
2. Ratcliffe D, Ellison N. Obesity and internalized weight stigma: A formulation model for an emerging psychological problem. Behav Cogn Psychother. 2015;43(2):239-252.
3. Emmer C, Bosnjak M, Mata J. The association between weight stigma and mental health: A meta-analysis. Obes Rev. 2020;21(1)
4. Di Pauli D. Obesità e Stigma. Positive Press; 2021. ISBN 88-8429-110-0
5. Vartanian LR, Fardouly J. The stigma of obesity surgery: Negative evaluations based on weight loss history. Obes Surg. 2013;23(10):1545-1550.
6. Brewis AA. Stigma and the perpetuation of obesity. Soc Sci Med. 2014;118:152-158.
7. Crandall CS. Prejudice against fat people: Ideology and self-interest. J Pers Soc Psychol. 1994;66(5):882-894. https://doi.org/10.1037/0022-3514.66.5.882.
8. Bacon JG, Scheltema KE, Robinson BE. Fat Phobia Scale revisited: The short form. Int J Obes (Lond). 2001;25(2):252-257. https://doi.org/10.1038/sj.ijo.0801537.
9. Allison DB, Basile VC, Yuker HE. The measurement of attitudes toward and beliefs about obese persons. Int J Eat Disord. 1991;10(5):599-607.
10. Lillis J, Luoma JB, Levin ME, Hayes SC. Measuring weight self-stigma: The Weight Self-Stigma Questionnaire. Obesity (Silver Spring). 2010;18(5):971-976. https://doi.org/10.1038/oby.2009.353.
11. Lee M, Dedrick RF. Weight Bias Internalization Scale: Psychometric properties using alternative weight status classification approaches. Body Image. 2016;17:25-29.
12. Pearl RL, Puhl RM. The distinct effects of internalizing weight bias: An experimental study. Body Image. 2016;17:38-42. doi:10.1016/j.bodyim.2016.02.002.
13. Vartanian LR. Development and validation of a brief version of the Stigmatizing Situations Inventory. Obes Sci Pract. 2015;1(2):119-125. https://doi.org/10.1002/osp4.11.
14. Verhaak AM, Ferrand J, Puhl RM, et al. Experienced weight stigma, internalized weight bias, and clinical attrition in a medical weight loss patient sample. Int J Obes (Lond). 2022;46(6):1241-1243.
15. Rizzo A, Sitibondo A. Obesity and Life History: The Hypothesis of Psychological Phenotypes. Psych. 2023;5(3):866-875.
16. Albury C, Strain WD, Le Brocq S, Logue J, Lloyd C, Tahrani A, Language Matters Working Group. The importance of language in engagement between health-care professionals and people living with obesity: a joint consensus statement. Lancet Diabetes Endocrinol. 2020;8(5):447-455.
17. Rizzo A, Alfa R, Piccolo MC, et al. Binge eating and personality traits: A gender-specific analysis

among patients affected by obesity. Adv Med Psychol Public Health. 2024;1(1):6-11.
18. Rizzo A, Gatto E, Calandi L, et al. Embodied online therapy. Nova Sci Publ. 2024. https://doi.org/10.52305/TCJD121
19. Rizzo A, Costantino E, Peronace D, et al. Obesity and eating disorders: Evidences for differentiation. Counsel Psychol Nexus. 2024;10-19. KMAN Publication Inc.
20. Rizzo A, Calandi L, Faranda M, Rosano MG, Carlotta V, Vinci E. Stigma against Mental Illness and Mental Health: the role of Social Media. Adv Med Psychol Public Health. 2025;2(2):125-130. doi:10.5281/zenodo.13223184
21. Rizzo A. Obesity and life events: The hypothesis of psychological phenotypes. Qeios. 2023. https://doi.org/10.32388/LEBBTL