

SYSTEMATIC REVIEW OPEN ACCESS

Weight Bias in the Perinatal Period: An Integrative Review

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ABSTRACT

Background: Weight bias toward individuals with higher body weights in healthcare settings is associated with adverse health behaviors, reduced healthcare utilization, and poor health outcomes. The purpose of this integrative review was to explore: (1) What has been measured and described regarding perinatal care providers' and students' weight bias toward pregnant, birthing, and postpartum individuals with higher body weights? (2) What has been measured and described regarding pregnant, birthing, and postpartum individuals' experiences of weight bias? (3) What is the association of experiences of weight bias with perinatal and mental health outcomes among pregnant, birthing, and postpartum individuals?

Methods: We conducted a systematic search in CINAHL, PubMed, and PsycINFO databases to identify relevant research publications related to the Medical Subject Headings (MeSH) terms weight prejudice (and related terms) and pregnancy (and related terms). The review was guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA), Johns Hopkins Nursing Evidence-Based Practice model for study quality determination, and the Whittemore and Knafl integrative review framework for data extraction and analyses.

Results: Twenty-two publications met inclusion criteria, representing six countries and varying study designs. This review found pervasive sources of explicit weight bias in the perinatal period, including care providers and close relationships. Experiences of weight bias among pregnant and postpartum individuals are associated with adverse perinatal and mental health outcomes.

Discussion: The findings address a knowledge gap regarding a summary of literature on weight bias in the perinatal period and elucidate its prevalence as well as its negative influence on perinatal and mental health outcomes. Future research efforts on this topic must examine the nature and extent of perinatal care providers' weight bias by demographic factors and explore its association with clinical decision-making and perinatal and mental health outcomes.

1 | Introduction

Weight bias is the explicit and implicit social devaluation of individuals based on their higher body weights [1]. This type of bias can lead to weight-based prejudice, unfair treatment, and discrimination [1]. Weight bias toward individuals who have higher body weights is widespread in various aspects of society and culture, such as workplaces, educational settings, media,

and interpersonal relationships [2–4]. Since weight is frequently regarded as a result of personal responsibility and willpower, weight bias is most often attributed to unhealthy eating habits and lack of physical activity [1]. However, while diet and exercise can affect weight, the determinants of an individuals' size and weight are complex and multifaceted, with epigenetic, childhood, psychological, socioeconomic, and environmental factors playing prominent roles [5].

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Recent meta-analyses and comprehensive reviews have identified that healthcare professionals exhibit significant levels of weight bias [6, 7]. These biases can affect healthcare delivery. Some evidence indicates that when providing care for individuals with higher body weights, healthcare providers spend less time, engage in less active listening, and are less likely to establish emotional rapport, compared with when they care for individuals with lower body weights [8–11]. Additionally, the healthcare environment itself can contribute to negative experiences for individuals with higher body weights, such as inadequately-sized chairs, scales, blood pressure cuffs, examination gowns, and pelvic exam equipment [12]. Perhaps not surprisingly, individuals who have higher body weights and perceive weight bias in healthcare settings seek care less frequently [12–16]. Indeed, experiences of weight bias are associated with unhealthy behaviors including increased food intake and substance use, less physical activity, as well as adverse health consequences such as negative body image, low self-esteem, weight gain, anxiety, stress, depression, and suicidality [12, 16–20].

In the last decade, a growing body of research describes experiences of weight bias in perinatal care settings. For example, Incollingo Rodriguez, Dunkel Schetter, and Tomiyama [21] reported that 28% of pregnant and postpartum individuals with higher body weights experience weight bias from their care providers. Moreover, weight bias has recently been acknowledged as a potential contributor to adverse reproductive health outcomes by the American College of Obstetricians and Gynecologists [22] and the National Academy of Medicine [23]. In 2020, the first conceptual analysis of “weight stigma related to pregnancy” was published [24] and a scoping review outlined potential causes of weight stigma in prenatal care settings and recommendations for mitigation [13]. However, despite increasing attention to this issue, no systematic, summative review of the literature exists on weight bias in the perinatal period. Advancing understanding of experiences and consequences of weight bias in perinatal settings is important as the prevalence of US individuals of childbearing age (20–39 years old) with higher body weights (i.e., body mass index [BMI] ≥ 30 kg/m²) is at an all-time high at 39.7%, compared to 28.3% in 2000 [25, 26].

To address this key gap in the literature, the authors conducted an integrative review to answer the following questions: (1) What has been measured and described regarding perinatal care providers’ and students’ weight bias toward pregnant, birthing, and postpartum individuals with higher body weights? (2) What has been measured and described regarding pregnant, birthing, and postpartum individuals’ experiences of weight bias? (3) What is the association of experiences of weight bias with perinatal and mental health outcomes among pregnant, birthing, and postpartum individuals?

Given the diverse methodologies (experimental and nonexperimental research) and data sources reflected in existing studies published on this topic, an integrative review framework [27] was selected to summarize the evidence. The knowledge gained from this integrative review can provide a comprehensive understanding of the existing literature on weight bias in the perinatal period to help inform clinical practice and future research needed to mitigate it.

2 | Methods

2.1 | Search Strategy and Article Eligibility Criteria

This review was informed by the Whittemore and Knafl’s [27] methodological approach for conducting integrative reviews and Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines [28]. A protocol for the review was not registered publicly but detailed documentation of the review can be obtained from the first author. After the first and senior authors established inclusion/exclusion criteria for publication eligibility (Table 1), Cumulative Index to Nursing and Allied Health Literature (CINAHL), PubMed, and PsycINFO databases were searched on April 30, 2023. No start date was selected given the dearth of literature on this topic. With the assistance and review by a medical librarian, the Medical Subject Heading (MeSH) term “weight prejudice” (F01.145.813.550.813, F01.829.595.8130) and related terms (i.e., weight bias, weight stigma, and weight-based discrimination) were combined with the MeSH term “pregnancy” (G08.686.784.769) and related terms (i.e., perinatal, birth) and searched in the title and abstract fields of each database (see Appendix S1). Studies of individuals seeking pregnancy were included if pregnant and/or postpartum individuals were the majority of the sample. Studies of students learning to provide care during the perinatal period (defined as within pregnancy, birth, and/or the postpartum period) were included given the limited studies of providers on this topic and in light of evidence that student’s training in professional health disciplines exhibit weight bias [29]. Studies that exclusively investigated weight bias internalization (WBI) were not sought, as this topic is outside the scope of this review. WBI, in this context, refers to the internalization of self-directed weight stigma, which occurs when individuals with higher body weights become conscious of negative weight-related stereotypes and apply these stereotypes to themselves [30]. There was no financial or nonfinancial support for this review, and the authors had no competing interests.

2.2 | Search Outcome, Article Review, and Assessment of Evidence Quality

Database searches were entered into Rayyan (<https://rayyan.ai>), a web-based tool for reviewing articles. The search yielded 63 unique research publications (Figure 1). Each publication was independently evaluated using a full-text review by the first and last authors (HB and JN) against the a priori selection criteria described in Table 1. Studies with one or more exclusion criterion were eliminated from inclusion. Disagreements between reviewers were discussed until consensus was achieved. The Whittemore and Knafl [27] integrative review approach provided a systematic framework for data synthesis and analysis of weight bias in the perinatal period. The retained articles underwent an iterative review by the first and last authors (HB and JN) of the study variables (independent and dependent), examining them for differences and similarities. The variables were tabulated from each article to generate three research questions that could synthesize key findings across all 22 articles included for review. Because of the dearth

TABLE 1 | Inclusion/exclusion criteria.

	Inclusion	Exclusion
Participants	Pregnant or postpartum individuals and/or perinatal care providers	Individuals who are not pregnant or postpartum, providers not engaged in perinatal care
Study design	Any qualitative, quantitative, or mixed-methods design	Literature reviews, editorials, dissertations, meta-analyses, meta-syntheses
Study focus	Examination of weight bias, weight stigma, weight prejudice, weight-based discrimination experienced by pregnant and/or postpartum individuals or among perinatal care providers and/or students toward pregnant and/or postpartum individuals	Did not examine weight bias, weight stigma, weight prejudice, or weight-based discrimination experienced by pregnant and/or postpartum individuals or among perinatal care providers and/or students toward pregnant and/or postpartum individuals. Excluded studies on weight bias internalization.
Setting	Any	None
Time period	Any	None
Language	English	All other languages
Publication type	Peer-reviewed articles	Non-peer reviewed publications

of quantitative findings of weight bias among perinatal care providers and/or students and the varying survey tools used, there was insufficient literature to statistically compare effect sizes and conduct a meta-analysis. In addition, for the qualitative studies, a record was kept that documented developing theories and data analysis used to assist with data interpretation [31]. The quality of each study was evaluated using the Johns Hopkins Nursing Evidence-Based Practice (JHNEBP) model [32] for appraisal assessment (Levels I, II, or III) and quality (A, B, or C).

3 | Results

3.1 | Study Design, Setting, Sample, and Quality Appraisal

Twenty-two publications met criteria for the integrative review. Nine studies used qualitative designs [33–41], ten used quantitative designs [21, 42–50], and three used mixed-method approaches [51–53]. They were published from 2013 through April 2023 and included samples from six different countries (Table 2). Four studies [34, 48, 49, 51] surveyed a combined total of 590 providers and/or students (Swedish midwives, $N=222$; Australian medical students, $N=215$; Australian midwifery students, $N=33$; US obstetrician gynecologists [OB/GYNs], $N=94$; US family practice physicians [FPs], $N=26$). Nineteen studies [21, 33, 35–47, 49, 50, 52, 53] collected data regarding experiences of pregnant or postpartum individuals or used data from the Centers for Disease Control and Prevention's (CDC) Pregnancy Risk Assessment Monitoring System (PRAMS), for a total of 21,887 women and two transgender men. Six studies [21, 43, 44, 49, 52, 53] used the same US sample ($n=501$) or a subset thereof. Of the 14 studies [21, 35, 36, 38, 40–47, 52, 53] that reported pregnant or postpartum individuals' race and/or ethnicity, most participants identified as white. One study sampled from a

Chinese population of women [47] while another sampled from a Canadian population of women [42], which included Indigenous ($n=23$ of 182) and Black ($n=21$ of 182) women. Finally, two studies sampled from a US population of women [35, 45] with high participation among Black women ($n=13$ of 18 and $n=108$ of 214, respectively). Eight studies limited inclusion to individuals with an elevated BMI of varying cutoffs, either via self-identification or extraction from health records [33, 35–39, 41, 49]. All studies surveyed or interviewed pregnant or postpartum individuals (up to 5 years after birth), and two studies [33, 38] included those who had tried to conceive, experienced infertility, or lost a pregnancy or child. Findings from each study and its quality assessment are in Table 3.

3.2 | Synthesis of Key Findings

Key findings from this integrative review answer three research questions regarding weight bias in the perinatal period:

Question 1. What has been measured and described regarding perinatal care providers' and students' weight bias toward pregnant, birthing, and postpartum individuals with higher body weights?

Findings of quantitative [48, 50, 51] and qualitative [34] studies measuring weight bias among perinatal care providers and students provide congruent evidence that weight bias is prevalent globally. Among US OB/GYNs [48], Swedish midwives and OB/GYNs [51], and Australian medical and midwifery students [50], negative attitudes toward pregnant individuals with higher BMIs (compared with lower BMI categories) were reported. Some perinatal care providers and students preferred to treat women with lower BMI categorizations and held attitudes that “people with obesity can be difficult to deal with” and are less able to self-manage their own health. Others were aware of their own weight bias and therefore avoided discussions about weight with pregnant individuals

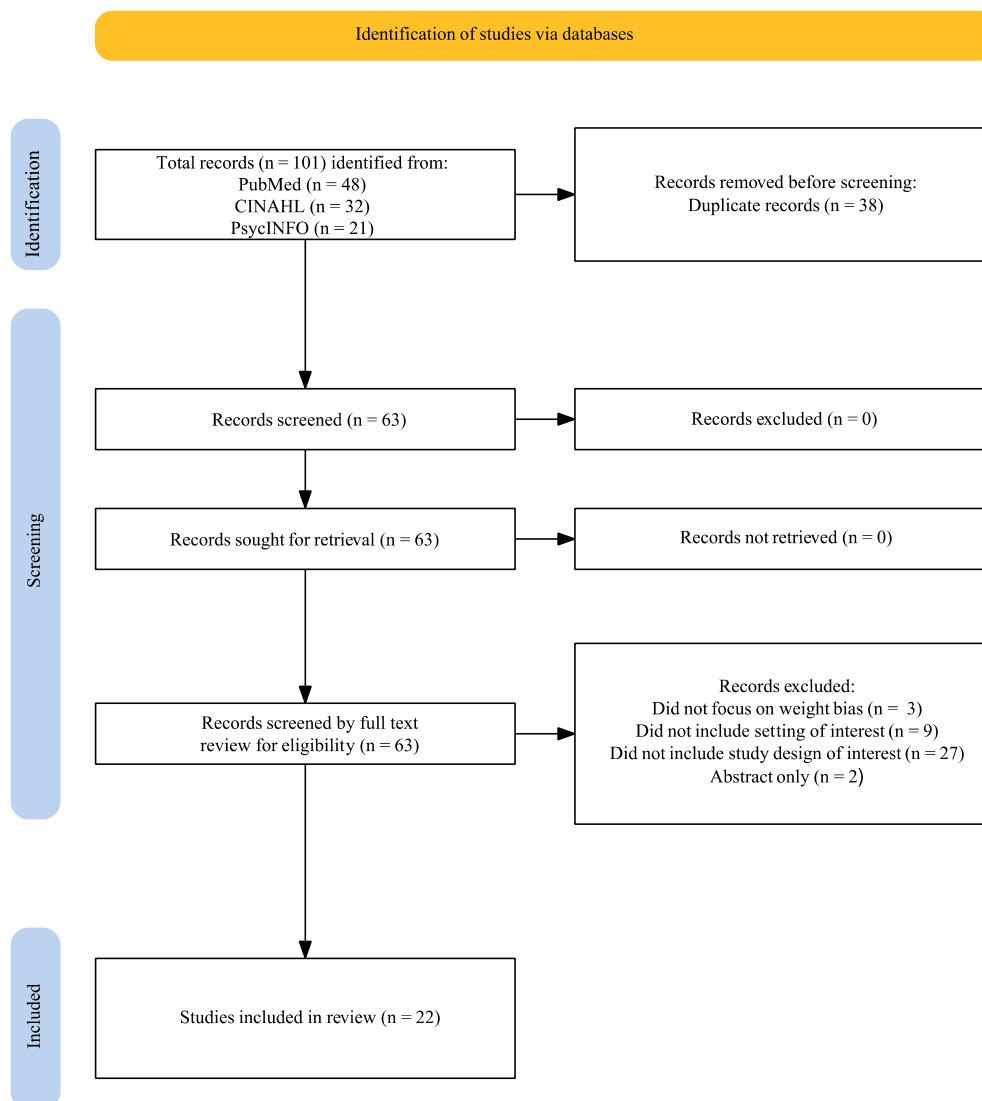


FIGURE 1 | PRISMA flowchart illustrating the search strategy. From Page et al. [28]. [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

[34]. Welsh et al. [48] reported that US OB/GYNs held significantly more negative attitudes (scale 4–30) toward patients with higher BMIs than their FP counterparts (OB/GYNs' mean 19.2 (SD 3.3) vs. FPs' mean 15.0 [SD 4.0]; $p < 0.001$, Cohen's $d = 1.05$).

The aforementioned studies [48, 50, 51] did not use consistent survey tools to measure perinatal care providers and students' weight bias. One study [51] used the validated Beliefs About Obese People [54], a second [50] used the validated Lewis et al.'s [55] Anti-Fat Attitude Test, while the third [9] developed survey questions adapted from another tool. Two studies [48, 51] used questions adapted from the same validated survey designed for healthcare professionals [56], but due to researchers' revisions to the Likert scale and questions, they could not be compared with each other or aggregated.

Altogether, although only three published studies [48, 50, 51] across three countries have published quantitative findings of weight bias among perinatal care providers and/or students, explicit weight bias was consistently reported. Implicit weight bias was not measured. Comparisons of findings between types of

perinatal care providers across the three countries could not be made due to different survey tools used and small sample sizes.

Question 2. What has been measured and described regarding pregnant, birthing, and postpartum individuals' experiences of weight bias?

Pregnant and postpartum individuals with higher body weights experienced weight bias from perinatal care providers and/or students as well as other sources; these findings will be described separately. No studies surveyed laboring individuals to examine experiences of weight bias during birth.

3.3 | Weight Bias From Perinatal Care Providers and/or Students

Perinatal care providers and/or students were perceived as a consistent source of weight bias for pregnant and/or postpartum individuals with higher body weights [21, 33, 36–38, 40, 44, 50]. Moreover, perceived negative treatment increased

TABLE 2 | Characteristics of included studies ($N=22$).

Publication and country	Study type	Sample with self-identified race/ethnicity	Method(s)
Basinger, Quinlan, and Rawlings (2023) [33] United States	Qualitative	Women ($N=249$, race not collected) who self-identified as “plus size” and had tried to conceive, experienced infertility, been pregnant, had a baby, or lost a pregnancy or child	Online survey exploring participants’ recall of positive and negative weight-related messages that affected the way they think, feel, or act
Christenson et al. (2018) [34] Sweden	Qualitative	Midwives ($N=17$, white)	Semi-structured interviews exploring how midwives approach communication about gestational weight gain recommendations and to characterize communication facilitators and barriers
Christenson, Torgerson, and Hemmingsson (2020) [51] Sweden	Mixed methods	Midwives ($n=205$, white) and obstetricians ($n=69$, white)	Online survey using Beliefs about Pregnant Women with Obesity scale, Beliefs About Obese People scale, Attitudes toward Caring for Patients with Obesity Scale, and open-ended questions
Dieterich et al. (2022) [35] United States	Qualitative	Women 1–2 months postpartum ($N=18$, including 13 Black, 3 white, 1 Asian, 1 biracial; 1 Hispanic and 17 non-Hispanic) with an elevated prepregnancy BMI $>25\text{ kg/m}^2$	Semi-structured interviews targeting participant perceptions of their weight and their experiences of weight stigma during interactions with perinatal care providers, and its perceived influence on their breastfeeding experience or behaviors
Hill et al. (2023) [42] Canada	Quantitative	Women ($N=182$, including 126 white, 23 Indigenous, 21 Black, remaining “other”) ≥ 12 weeks’ gestation with a singleton pregnancy ≥ 18 years of age	Online survey that assessed weight-related factors that influence body dissatisfaction in pregnancy, using Body Image Pregnancy Scale, and other experiences of weight stigma and perception of gestational weight gain
Hurst et al. (2021) [36] United States	Qualitative	Women ($N=30$, including 25 white, 4 Black, and 1 Asian; 1 Hispanic, 29 non-Hispanic) with a BMI $>40\text{ kg/m}^2$ who had given birth in the last 3 years	Semi-structured interviews targeting participant perceptions of (1) respect and the listening skills shown by providers, (2) discussions about weight and weight gain, (3) understanding of the effects of unhealthy weight on them and their babies during pregnancy, and (4) ways in which the healthcare team could improve their communication about these topics
Incollingo Rodriguez et al. (2019) [43] United States	Quantitative	501 pregnant ($n=143$) and postpartum ($n=358$) women (sample by race: 337 white, 14 Black, 51 Latina, 14 Asian, 11 “other” or multiracial, 74 not reported)	Online survey that explored experiences of weight stigma from varying sources (number of sources and frequency of experiences), and its association with greater depressive symptoms, maladaptive dieting behavior, emotional eating behavior, perceived stress, gestational weight gain, and postpartum weight retention
Incollingo Rodriguez et al. (2019) [45] United States	Quantitative	Postpartum women ($N=214$, including 108 Black, 50 Latina, and 56 white)	Online surveys which asked about sources and frequency of weight-stigmatizing experiences, with varying outcomes measures related to symptoms, weight gain, and behaviors

(Continues)

TABLE 2 | (Continued)

Publication and country	Study type	Sample with self-identified race/ethnicity	Method(s)
Incollingo Rodriguez et al. (2020) [44] United States	Quantitative with one open-ended question	501 pregnant ($n = 143$) and postpartum ($n = 358$) women (sample by race: 337 white, 14 Black, 51 Latina, 14 Asian, 11 “other” or multiracial, 74 not reported)	Online surveys using self-report measures which examine sources (and an example) and frequency of weight-stigmatizing experiences, concerns about weight stigma, and BMI
Incollingo Rodriguez, Dunkel Schetter, and Tomiyama (2020) [21] United States	Quantitative with one open-ended question	501 pregnant ($n = 143$) and postpartum ($n = 358$) women (sample by race: 337 white, 14 Black, 51 Latina, 14 Asian, 11 “other” or multiracial, 74 not reported)	Online surveys using self-report measures which examine sources and frequency of weight-stigmatizing experiences, concerns about weight stigma, and BMI
Jensen et al. (2022) [37] Denmark	Qualitative	Pregnant and postpartum women ($N = 5$, race not reported) with prepregnancy BMI $>28 \text{ kg/m}^2$	Semi-structured interviews about embodied experiences of pregnancy, motherhood, experiences of eating and physical activity, and motivational factors for engaging in lifestyle interventions
Kair and Colaizy (2016) [46] United States	Quantitative, secondary data analysis	Postpartum women ($N = 19,145$, including 11,676 white, 1437 Black, and 568 “other”; ethnicity not reported) using Centers for Disease Control’s Pregnancy Risk Assessment Monitoring System data (2004–2008) from three states (Illinois, Maine, and Vermont)	Not applicable
Lamarre et al. (2020) [38] Canada	Qualitative	Women ($N = 13$) and transgender men ($n = 2$) who had been labeled “overweight” or “obese” and have been or attempted to become pregnant (sample by race: specifics not given, majority identified as White or did not specify, 2 White and Jewish, 1 Indigenous)	Semi-structured interviews which asked participants about the care received when seeking pregnancy and during pregnancy
Lauridsen, Sandøe, and Holm (2018) [39] Denmark	Qualitative	Women ($N = 21$, race not reported, fluent in Danish) with BMI $\geq 30 \text{ kg/m}^2$ who had given birth 4–5 years prior	Semi-structured interviews about participants’ experiences in an intervention project focusing on severely overweight pregnant women
Mulherin et al. (2013) [50] Australia	Quantitative	Study 1: Postpartum women ($N = 627$, race not reported) Study 2: Preservice medical ($N = 215$) and midwifery maternity care providers ($n = 33$) (race not reported)	Study 1: Participants answered questions that assessed perceived quality of perinatal care Study 2: BMI was collected and providers were surveyed on attitudes toward and perceptions of pregnant women of varying weights using a novel hypothetical patient case. They also completed questions adapted from Hebl and Xu, which evaluates patient self-management and health and attitudes toward caring for the patient. The Anti-Fat Attitude Test was also used

(Continues)

TABLE 2 | (Continued)

Publication and country	Study type	Sample with self-identified race/ethnicity	Method(s)
Nagpal, Tomiyama, and Incollingo Rodriguez (2021) [49] United States	Quantitative	Pregnant and postpartum women ($N = 358$, race not reported)	Online survey using the Weight Stigma Concerns Scale
Nagpal et al. (2021) [40] Canada	Qualitative	Pregnant women ($N = 9$, including 8 white, 1 Asian) receiving specialized prenatal care for their obesity	Semi-structured interviews about experiences of weight stigma in healthcare settings during pregnancy, what their provider did well/could have done better, and advice for healthcare providers on care of pregnancy women with higher body weights
Nagpal et al. (2022) [41] Canada	Qualitative	Pregnant women ($N = 8$, including 7 white, 1 Asian) living with obesity with a BMI >35 kg/m ²	Semi-structured interviews which asked about experiences of weight stigma during pregnancy related to physical activity and how to improve physical activity opportunities for pregnant women related to weight stigma
Nagpal et al. (2022) [52] United States	Mixed methods	Pregnant and postpartum women ($N = 501$) (sample by race: 337 white, 14 Black, 51 Latina, 14 Asian, 11 “other” or multiracial, 74 not reported)	Online survey with open-ended questions that represented examples of weight-stigmatizing experiences from close relations
Nippert et al. (2021) [53] United States	Study 1: Mixed methods Study 2: Quantitative, cross-sectional	Study 1: Pregnant and postpartum women ($N = 123$, including 101 white, 3 Black, 11 Latina, 3 Asian, and 5 “other” or not reported) Study 2: Online newspaper articles ($N = 33$) were reviewed that were about pregnancy or the postpartum period relevant to weight, weight gain, weight loss, or obesity	Study 1: Online survey that queried participants on if they had been treated differently because of their weight, and if so, the source. Of those that endorsed media as a source, 103 provided examples Study 2: n/a
Sun, Peng, and Lommel (2022) [47] China	Quantitative	Postpartum women ($N = 507$, Chinese)	Printed survey using the Perceived Weight Stigma Questionnaire, the Weight Bias Internalization Scale, and the Depression Anxiety Stress Scale
Welsh et al. (2021) [48] United States	Quantitative	Obstetrician/gynecologists ($n = 25$) and family practice physicians ($n = 26$) (sample by race: 39 white, 3 Hispanic, 8 “other”)	Surveys assessed self-perceived weight, overall satisfaction with care provided to patients with obesity, and the Beliefs and Perceptions scale (with 3 subscales: Negative Attitudes toward Patients with Obesity, Perceived Confidence and Preparedness, and Perceived Weight Bias in Profession)

TABLE 3 | Key findings, level and quality of evidence, and question the study addressed ($N = 22$).

Publication and country	Key findings	Evidence level and quality ^a	Question the study addressed ^b
Basinger, Quinlan, and Rawlings (2023) [33] United States	Most (77.2%) of the messages were negative, with healthcare providers as the most reported source. Patient's messages: (1) told that fat mothers are bad mothers because large bodies are not suited to pregnancy, birth, or parenthood; (2) felt their bodies were blamed by healthcare providers, and received care that lacked competence, compassion, or education on treating them; (3) Received weight-normative comments about their fat bodies; (4) received weight-inclusive, empowering, and supportive counter-narratives	IIIB	2
Christenson et al. (2018) [34] Sweden	Midwives' empathy and awareness of weight bias influences their communication with patients. Midwives use avoidant behaviors to cope with fear of inflicting worries, shame, or feelings of guilt in pregnant women. Avoidant behaviors included adjusting weight recommendations, toning down risks and avoiding talking about weight. Midwives felt conflicting responsibilities about educating patients about healthy gestational weight gain yet strive be empathic and consider the stigma of being overweight and associated shame. Midwives reported a lack of competence in their communication skills, weight-related knowledge, and resources, support, and guidelines for this population	IIIB	1
Christenson, Torgerson, and Hemmingsson (2020) [51] Sweden	91% felt that patients with obesity have poor eating habits that lead to their obesity, 57% felt they can be difficult to deal with, and 76% felt confident that they provide quality care to patients with obesity. 17% of midwives avoided weight-related topics, which occurred more among those who had not been trained in motivational interviewing	IIIB	1
Dieterich et al. (2022) [35] United States	Reported themes: "Size doesn't matter: They looked beyond the scale," "My self-confidence and desire to breastfeed is more important than weight." and "I was on my own" (limited social support, not weight stigma, influenced breastfeeding practices)	IIIB	2
Hill et al. (2023) [42] United States	Greater body dissatisfaction was reported by individuals who indicated they had experienced weight stigma (3.2 ± 0.68) compared with those who reported they had not experienced weight stigma (2.8 ± 0.68 ; $t(180) = 4.1$, $p < 0.001$, Cohen's $d = 0.68$). In a regression analyses, significant independent variables were perception of excess weight before pregnancy, perception of gestational weight gain, attempting weight loss up until pregnancy and experiencing weight stigma in pregnancy, with body dissatisfaction scores as the dependent variable. The regression model was significant ($\chi^2 = 4$, $N = 178 = 13.9$, $p < 0.001$). The significant variables were perceptions of weight gained in pregnancy ($p = 0.003$) and experiencing weight stigma in pregnancy ($p = 0.011$)	IIIA	3

(Continues)

TABLE 3 | (Continued)

Publication and country	Key findings	Evidence level and quality ^a	Question the study addressed ^b
Hurst et al. (2021) [36] United States	Reported at least one negative experience during their prenatal care experience, and more than half recalled an experience where their weight did affect their care, such as poor communication from their providers or pain during a routine ultrasound. Described “scare tactics” by their provider when discussing weight and that their hospital stays were adversely affected by experiences of bias. Felt their care was inadequate and needed to advocate for themselves. Preferred their provider be more straight forward when discussing weight-related care. Prior weight bias experiences made them fearful of potential bias while receiving care. Felt that group prenatal care for women with obesity would be helpful, as well as advice about how to incorporate physical activity into a busy schedule and breastfeeding information. The word “weight” was preferred over “obesity and BMI”	IIIB	2
Incollingo Rodriguez et al. (2019) [43] United States	Women experiencing weight stigma from a higher number of sources reported more depressive symptoms, maladaptive dieting behavior and perceived stress when controlling for pregnancy BMI, parity, weeks of pregnancy or months since birth, and demographic covariates. Weight-stigmatizing experiences were also associated with more emotional eating behavior in pregnant women and greater postpartum weight retention in postpartum women	IIIA	3
Incollingo Rodriguez et al. (2019) [45] United States	Weight-related everyday discrimination predicted postpartum depressive symptoms at 1 month and 1 year postpartum but was not significantly associated with depressive symptoms at 6 months postpartum. Weight-related everyday discrimination was also associated with greater and excess gestational weight gain and weight retention at 1 year postpartum but was not associated with weight retention at 6 months postpartum, or blood pressure and cortisol levels postpartum	IIIA	3
Incollingo Rodriguez, Dunkel Schetter, and Tomiyama (2020) [21] United States	Higher BMI was correlated with a higher number of sources. Participants with BMI ≥ 30 kg/m ² had higher rates of experiences of weight stigma from healthcare providers, media, and society. All participants, regardless of BMI, reported experiences of stigma at similar rates from work, partner, church, friends, family, and other mothers. Examples of weight stigma experiences were provided from all sources	IIIA	2
Incollingo Rodriguez et al. (2020) [44] United States	Report of weight stigma from healthcare providers (specifically physicians and nurses) was significantly associated by pregnancy BMI category, with 77 (28.4%) of women with pregnancy obese BMI endorsing experiences of weight stigma from healthcare providers ($p < 0.001$). 77% of participants changed providers because of weight-related treatment (more likely to occur among those with a higher pregnancy BMI). Almost 9% would feel uncomfortable seeking assistance with breastfeeding from a healthcare provider. Participants who experienced weight stigma reported some positive perinatal healthcare experiences. Some ($n = 80$) described specific weight stigma experiences, including negative attitudes, unkind or disrespectful treatment, evaluative and inappropriate comments about their weight, and a focus on high-risk status and potential negative outcomes based on weight	IIIA	2

(Continues)

TABLE 3 | (Continued)

Publication and country	Key findings	Evidence level and quality ^a	Question the study addressed ^b
Jensen et al. (2022) [37] Denmark	Women shared ambivalence about their bodily experience including (1) relief in its functionality that it can carry a pregnancy but also unease about the focus on the abdomen and their inability to meet proper pregnant body ideals/aesthetics; (2) concerns of being pregnant and classified as obese, and unsure what it would take to be satisfied and comfortable with their size; (3) positive and negative experiences from healthcare professionals, including empathy and respect as well as judgment and weight discrimination; (4) lack of motivation for postpartum lifestyle changes due to previous failed attempts at losing weight, but more motivation to gain more physical mobility to be able to play with their children	IIIB	2
Kair and Colaizy (2016) [46] United States	When compared to women of normal weight, women with obesity received differential treatment by hospital staff regarding promotion of breastfeeding. Specifically, they had lower odds of breastfeeding within the first hour after birth, breastfeeding exclusively while in hospital, and being given a phone number for lactation support, and higher adjusted odds of pacifier use	IIIA	3
LaMarre et al. (2020) [38] Canada	Women shared: (1) internalization of stigmatizing healthcare provider interactions around weight, including fear and shame-inducing comments, skepticism of their eating and exercise habits, enforcement of weight loss prior to pregnancy/fertility treatment, and intense monitoring of body size and weight gain during pregnancy; (2) experiences of weight stigma that limited their access to needed care based on assumptions of pathology about their bodies; (3) seeking a welcoming healthcare system through self-advocacy. There was intersectionality of participants' experiences of weight stigma with other personal characteristics, such as gender identity, sexuality, age, and Indigeneity	IIIA	2
Lauridsen, Sandøe, and Holm (2018) [39], Denmark	Reported: (1) Mixed experiences of being identified as a "severely overweight pregnant woman" (some surprised, some felt it as appropriate); (2) Positive ("I was treated well") and negative (weight bias) experiences of interacting with research intervention staff and healthcare professionals who provided prenatal care; (3) Differing opinions if pregnancy was the best time to initiate a lifestyle change and whether it sustained itself long term	IIIB	2
Mulherin et al. (2013) [50], Australia	Study 1: As BMI increased, women reported more negative treatment Study 2: Higher levels of weight-stigmatizing attitudes were associated with less positive perceptions of self-management and health. A student's higher BMI was associated with more positive perceptions of patient self-management and health, regardless of the patient's weight	IIIA	Study 1: 2 Study 2: 1
Nagpal, Tomiyama, and Incollingo Rodriguez (2021) [49], United States	The predictive model was significant for gestational diabetes ($p = 0.001$), and weight stigma concerns made a statistically significant contribution ($p = 0.01$). The predictive model was also significant for cesarean section ($p < 0.001$) and macrosomia ($p = 0.048$), and pre-pregnancy BMI made a statistically significant contribution to both variables ($p < 0.001$ and $p = 0.016$, respectively)	IIIA	3

(Continues)

TABLE 3 | (Continued)

Publication and country	Key findings	Evidence level and quality ^a	Question the study addressed ^b
Nagpal et al. (2021) [40], Canada	Negative weight stigma experiences included: (1) poor communication (offensive terminology and vague advice for weight management and complications); (2) generalized recommendations about exercise and diet and lack of person-centered care; (3) association of their weight with all parts of prenatal care. Three provider recommendations to reduce weight stigma included: (1) practice sensitive communication by avoiding offensive language and fear-based tactics when discussing obesity and pregnancy complications; (2) offer individualized care by understanding their health priorities, circumstances, and preferred type of therapeutic interventions; (3) avoid blaming weight for all pregnancy health conditions	IIIB	2
Nagpal et al. (2022) [41], Canada	Two sources of weight stigma were identified during pregnancy related to physical activity: Lack of visual representation of all body types and individualized recommendations that incorporate physical barriers or health goals around physical activity. Suggestions were given to improve visual inclusivity of pregnant women with obesity exercising, and to promote person-centered exercise prescriptions that account for individual goals. Providers should ask about exercise goals before providing recommendations. Promotional materials should include physical activity recommendations that include home exercises	IIIB	2
Nagpal et al. (2022) [52], United States	157 (31.4%) reported close relations as a source of weight stigma, including immediate and extended family, partners, and friends. The average frequency of weight-stigmatizing experiences was less than once to a few times a month. There was no association between prepregnancy BMI and frequency of weight stigma from close relations. Reported: (1) experiences of negative assumptions about their prenatal health, fetal development, and lifestyle behaviors; (2) expectations around an ideal pregnant or postpartum body; (3) negative comments leading to self-judgment	IIIB	2
Nippert et al. (2021) [53], United States	Study 1: The participants who endorsed media as a source of stigma had a significantly higher prepregnancy BMI than those who did not. They reported experiencing weight stigma from the media between at least once to a few times per week. The most common content type reported was photographs or images. Felt ugly or awful because of what they saw or read in the media. Perceptions from media included: (1) there is a perfect or ideal pregnant body; (2) media messages that women should “bounce back” to pregnancy weight shortly after birth; (3) the media praises the appearance of celebrity’s mothers, which reinforces unrealistic expectations and standards Study 2: Most articles include an image of a pregnant woman with average weight or thinness. Weight was referred to negatively and often in relation to maternal or child mental or physical health consequences. Weight ideals were portrayed unrealistically and without mention of official guidelines	IIIB	2
Sun, Peng, and Lommel (2022) [47] China	21.1% experienced perceived weight stigma, and 66.1% scored at the mean. Experiences of weight-based discrimination were higher among low-income postpartum women, identified as a worker or a farmer, and reported stress, depression, or weight bias internalization	IIIA	2

(Continues)

TABLE 3 | (Continued)

Publication and country	Key findings	Evidence level and quality ^a	Question the study addressed ^b
Welsh et al. (2021) [48] United States	OB/GYNs are satisfied with their care to patients with obesity, but compared with FPs, have higher levels of negative attitudes (explicit weight bias) toward them and reported higher levels of weight bias among their OB/GYN colleagues	IIIA	1

^aDang et al. [32]; Whittemore and Knafl [27].

^bQuestions: (1) What has been measured and described regarding perinatal care providers' and students' weight bias toward pregnant, birthing, and postpartum individuals with higher body weights? (2) What has been measured and described regarding pregnant, birthing, and postpartum individuals' experiences of weight bias? (3) What is the association of experiences of weight bias with perinatal and mental health outcomes among pregnant, birthing, and postpartum individuals?

with BMI [50]. These pregnant and postpartum individuals expressed feelings of shame, blame, and a sense that their providers lacked competence, respect, compassion, and appropriate education [33, 38, 44]. During interactions with their perinatal care providers, some reported experiencing skepticism about their eating and exercise habits, encountered poor communication and offensive language, felt that providers used “scare tactics” when discussing weight-related topics, and perceived there was too much focus on their weight, weight gain, and weight-related high-risk status [36, 40, 44]. Some also perceived the advice they received regarding weight management, exercise, and diet to be vague and not specific to them as individuals [40].

In one study, 7.7% of pregnant women changed care providers due to a perception that they were receiving poor weight-related care [44]. Additionally, nearly 9% of pregnant and postpartum individuals in this same study ($n=43$ of 501) felt uncomfortable seeking breastfeeding assistance because of their weight [44]. These findings are in contrast to a more recent, but smaller, study of postpartum individuals in the United States with higher body weights ($N=18$) who reported feeling confident in their ability to breastfeed as a result of receiving weight-inclusive care [35]. Some individuals with higher body weights reported positive healthcare experiences in three other studies (two Danish [37, 39] and one US [33]); these individuals recounted empowering, weight-inclusive, empathetic, respectful narratives.

Three studies [36, 40, 41] sought feedback from pregnant individuals with higher body weights regarding how perinatal care providers could improve their care and reduce weight bias. Specific suggestions included practicing sensitive communication by avoiding offensive language and fear-based tactics when discussing weight and pregnancy complications [40]. Participants emphasized the importance of receiving individualized care that considers their health priorities and personal circumstances [40]. Additionally, they expressed the need for perinatal care providers to avoid attributing all health problems during pregnancy to weight [40]. Modifications to physical activity recommendations included revising images on handouts to include individuals with higher body weights, as well as incorporating exercises that can be done at home [41]. Neutral and less stigmatizing weight-related terminology was also encouraged, such as “weight” instead of “obesity” or “BMI” [36].

3.4 | Weight Bias From Sources Other Than Perinatal Care Providers and/or Students

Five studies explored sources of weight bias during the perinatal period in addition to perinatal care providers and/or students [21, 41, 44, 52, 53]. All but one of those studies [41] used the same US sample of pregnant and postpartum women ($N=501$). Sources of weight bias, ranked from highest to lowest, included society, media, strangers, immediate family, healthcare providers, other mothers, friends, work, extended family, partner, and church [21]. Of the participants, 64.9% reported encountering bias from at least one source. Compared with lower prepregnancy BMI referent groups, participants with a higher prepregnancy BMI (≥ 30 kg/m²) endorsed a higher number of weight

bias sources ($p < 0.001$) and reported the top three weight bias sources as healthcare providers ($p < 0.001$), media ($p = 0.001$), and society ($p = 0.001$) [21]. In a separate sample, pregnant women identified physical activity-related environments as a contributor to their experience of weight bias, noting limited representation of diverse body types in online and exercise promotional materials [41].

One study found that among a subsample of pregnant individuals ($n = 123$), who acknowledged media as a source of weight bias, had significantly higher prepregnancy BMIs compared with those who did not ($p < 0.001$) [53]. They reported being exposed to weight bias from the media at least once a week and as often as a few times a week. The most reported media content included photographs or images found on television, news outlets, the Internet, or social media platforms, which lacked representation of individuals with higher body weights. Online newspaper articles often depicted higher weight mothers or children with potential physical or mental health consequences. Some pregnant and postpartum individuals reported feeling negative about themselves due to perceptions of what they saw or read in the media, such as: (1) a perfect or ideal pregnant body exists, (2) women should quickly return to their prepregnancy weight after birth, and (3) celebrity mothers' appearances should be commended for their thin pregnant or postpartum bodies [53].

A distinct study examined close relations as a source of weight bias among pregnant and postpartum individuals ($N = 501$) [52]. Nearly one-third of these participants ($n = 157$) reported experiencing biased treatment from their immediate and extended family, partners, friends, or another (unidentified) source regarding their weight, which occurred approximately twice a month. Participants felt that their close relations held negative assumptions about their prenatal health, fetal development, and lifestyle behaviors. They also perceived specific expectations regarding an ideal pregnant or postpartum body were being imposed by their close relations. Lastly, negative comments from these close relations led to self-judgment [52].

In summary, compared to those with a lower prepregnancy BMI, individuals with a BMI ≥ 30 kg/m² reported their perinatal care provider as the most common source of weight bias. Specific suggestions from pregnant and postpartum individuals with higher body weights include the need for a more individualized, weight-inclusive approach and use of less stigmatizing language. Evidence indicates that most pregnant and postpartum individuals with higher body weights also experienced weight bias in interpersonal relationships [21, 41, 44, 52, 53]. Almost half of the published literature on sources on weight bias in the perinatal period used the same US sample.

Question 3. What is the association of experiences of weight bias with perinatal and mental health outcomes among pregnant, birthing, and postpartum individuals?

No studies explored the association of weight bias experienced by birthing individuals with perinatal and mental health outcomes. Five studies [42, 43, 45, 46, 49] reported that experiences of weight bias among pregnant and postpartum individuals are associated with various negative health outcomes. Four studies [42, 43, 45, 49] explored if the experience of

weight bias from any source was associated with adverse perinatal and mental outcomes among individuals with higher body weights. Using logistic regression modeling, Nagpal and colleagues evaluated relationships of prepregnancy BMI and experiences of weight bias with perinatal health outcomes in postpartum women ($N = 358$) [49]. They found that weight bias contributed significantly and uniquely ($OR = 1.07$, $p = 0.01$) to the prediction of gestational diabetes. Incollingo Rodriguez et al. [45] examined associations between experiences of weight-related discrimination in everyday life and adverse perinatal and mental health outcomes using a US subsample of postpartum individuals ($n = 214$). After adjusting for prepregnancy BMI and race/ethnicity, weight-related everyday discrimination predicted depressive symptoms at 1 month ($B = 0.19$, $p < 0.01$) and at 1 year postpartum ($B = 0.16$, $p < 0.05$), and was associated with greater ($B = 0.19$, $p < 0.05$) and excess gestational weight gain ($B = 0.22$, $p < 0.01$) and weight retention at 1 year postpartum ($B = 0.21$, $p < 0.05$). Another study examined weight bias with similar and different adverse perinatal and mental health outcomes among pregnant and postpartum women ($N = 501$) [43]. The authors concluded that regardless of prepregnancy BMI, the frequency of sources of weight bias (less than once a month to 3 or more a day) was significantly associated ($p < 0.001$) with greater depressive symptoms, maladaptive dieting behavior, emotional eating behavior (pregnant women only), perceived stress, and higher postpartum weight retention [43]. Hill et al. [42] found that body dissatisfaction was greater among pregnant individuals who had experienced weight bias during pregnancy compared with those who had not ($p < 0.001$, Cohen's $d = 0.68$).

One US study by Kair and Colaizy [46] examined the relationship between BMI and breastfeeding. Using CDC's PRAMS dataset as a secondary data analysis ($N = 19,145$), women with higher body weights were less likely to initiate breastfeeding when compared to those with normal weights (70% vs. 79% (unweighted), $p < 0.0001$). The researchers proposed that weight bias may be a determinant of lower breastfeeding rates among postpartum individuals with higher body weights given their lack of breastfeeding support received by hospital staff [46]. Specifically, after adjusting for covariates including past experience of breastfeeding, postpartum individuals with higher body weights had lower adjusted odds of breastfeeding within the first hour after giving birth (adjusted odds ratio [AOR] 0.73, $p < 0.0001$), breastfeeding the newborn exclusively while in hospital (AOR 0.62, $p < 0.0001$), being given a phone number for lactation support with instructions to breastfeed on demand (AOR 0.82, $p = 0.019$), and higher adjusted odds of using a pacifier (AOR 1.19, $p = 0.008$).

Thus, study findings indicate that experiences of weight bias among pregnant and postpartum women were associated with adverse perinatal outcomes (gestational diabetes, excessive weight gain and/or retention, poor eating habits, and lower breastfeeding rates) and mental health outcomes (body dissatisfaction, depressive symptoms, and perceived stress). Many of the studies had small sample sizes and tested novel hypotheses, versus assessing an established predictor of BMI with adverse perinatal and mental health outcomes. The Kair and Colaizy study [46] was a secondary data analysis and did not examine weight bias directly.

4 | Discussion

This integrative review, to our knowledge, is the first to synthesize current research about weight bias in the perinatal period. In all but one study [35], our findings indicate that, across six countries (United States, Canada, Sweden, Denmark, Australia, and China), weight bias is present in the perinatal period and associated with adverse perinatal and mental health outcomes [42, 43, 45, 46, 49]. The evidence of weight bias among perinatal care providers and/or students was based on either quantitative assessment through direct measurement or via perceptions from pregnant and postpartum individuals with higher body weights. Quantitative findings [48, 50, 51] documenting weight bias among perinatal care providers and students are consistent with findings of implicit and explicit weight bias in a recent large national study among US certified nurse-midwives and certified midwives ($N=2257$) [57, 58].

It is unknown if the extent and direction of weight bias among perinatal care providers and/or students would be different in countries other than those studied thus far. Body size is a social construct [59]. Perceptions about body shape and size may vary across cultures, including some African countries where body size ideals reflect larger bodies [60]. However, it is likely that weight bias experienced by pregnant and postpartum individuals is harmful, regardless of cultural norms.

A concerning finding in our review is the descriptions of negative perinatal care experiences by pregnant and postpartum individuals in higher body weights. Participant in these studies reported feelings of blame and shame, and felt their perinatal care providers lacked competence, respect, compassion, and/or appropriate education [33, 34, 44, 50]. Negative experiences increased as BMI increased [50]. For some, this experience prompted a transfer of prenatal care to a different provider; some postpartum individuals did not feel comfortable asking for help with breastfeeding [44]. Descriptions of negative care experiences are incongruent with providers' perceptions of their care. Among US OB/GYNs ($N=25$) [48] and Swedish midwives ($N=205$) and obstetricians ($N=69$) [51] (who all exhibited explicit weight bias), 76%–80% reported high confidence that they provide quality care to this patient population.

Negative patient experiences may be attributed to a lack of adequate training among perinatal care providers regarding effective communication techniques with pregnant and postpartum individuals about their weight-related health. In a 2020 scoping review ($N=14$ studies) of communication practices of providers who care for pregnant individuals with higher body weights, weight-related counseling during pregnancy was suboptimal due to stigmatizing patient experiences [61]. A recurrent theme among the providers was reluctance, uncertainty, discomfort, and a lack of confidence in how to communicate effectively about this sensitive topic. The presence of explicit weight bias among perinatal care providers in our integrative review is not surprising considering the extensive evidence of weight bias among other healthcare professionals and students [6, 29, 62]. In a 2021 systematic review and meta-analysis of 41 studies (the largest to date), many

types of healthcare professionals (e.g., nurses, physicians, dietitians, psychologists, and occupational therapists) exhibited both implicit and explicit weight bias [6].

Our review also indicates that experiences of weight bias among pregnant and postpartum individuals are present in close relationships [21, 52]. While these relationships can provide support for many pregnant and postpartum individuals, they can also inflict harm with judgmental comments about appearance and health behaviors. Pressure to meet body ideals in pregnancy is associated with increased pregnancy-related anxiety, depression, and eating disorder symptomatology [63]. In addition, this review suggests that media messages reinforced unrealistic expectations and standards surrounding pregnancy and postpartum bodies [53]. Perinatal care providers may not be aware of these everyday negative experiences among pregnant and postpartum individuals, as well as their associated perinatal and mental health outcomes.

Links between weight bias and adverse perinatal and mental health outcomes were evident in our review of the literature, although the study samples were small and used different outcome variables. Experiences of weight bias among pregnant and postpartum women were associated with adverse perinatal outcomes (gestational diabetes, excessive weight gain and/or retention, poor eating habits, and lower rates of breastfeeding) and mental health outcomes (body dissatisfaction, depressive symptoms, and perceived stress). Some of these are consistent with literature outside the perinatal period which documents an association of weight bias with adverse health outcomes (poor body image and body dissatisfaction, weight gain, depressive symptoms) [4, 53]. The outcomes of higher rates of gestational diabetes and lower rates of breastfeeding are especially concerning. Gestational diabetes is associated with higher prevalence of preterm birth, cesarean birth, infant born large for gestational age, as well as an increased risk of developing diabetes mellitus in the birthing individual later in life [64]. A minimum of 6 months of exclusive breastfeeding is advised by the World Health Organization [65] and American Academy of Pediatrics [66]. Breastfeeding is strongly recommended for individuals with higher body weights due to its protective impact on reducing childhood obesity in offspring.

Although the findings of this integrative review reiterate the presence of weight bias in the perinatal period, the 22 studies included in this review were limited in methodology, scope, and replicability. Six studies used the same US sample [21, 43, 44, 49, 52, 53]. A majority of the qualitative studies had small sample sizes, and one was a secondary data analysis [46]. Of the 14 studies that reported race and/or ethnicity, samples were predominately white, limiting generalizability [21, 35, 36, 38, 40–47, 52, 53]. Studies reporting the associations of weight bias with perinatal and mental health outcomes examined different variables, making comparisons difficult [42, 43, 45, 46, 49]. Only one data collection approach was replicated; semi-structured interviews were conducted in six studies across three countries (United States, Canada, Denmark), although the specific interview questions varied [36–41].

The published literature on the quantitative measurement of weight bias among perinatal care providers and students was

limited to three studies [48, 50, 51], which offers a narrow perspective of the direction and extent of such bias. In addition, implicit weight bias was not measured, despite evidence that it is present among US midwives [57] and healthcare professionals [6] and can negatively influence clinical care [12]. Another limitation in synthesizing this literature was the wide variation in survey tools used to measure weight bias. A lack of consistent validated weight bias survey measures has been discussed in a prior systematic review [6] that identified 26 different outcome measures to assess weight bias among many types of healthcare professionals across 41 studies. Similarly, in a systematic review of weight bias measures, Lacroix et al. [67] determined that many studies had incomplete psychometric evidence and lacked people-first language. Determination of appropriate, psychometrically sound survey tools to measure weight bias among perinatal care providers can also pose a challenge, given that weight gain is recommended during pregnancy and a physiologic expectation. Survey tools used to measure weight bias among other types of healthcare professionals may not be appropriate for use with perinatal care providers, making measurement more difficult.

An additional hurdle that emerged in this review was the lack of consistent keywords used to categorize weight bias research. While the database search methodology yielded 22 publications, different search terms might have captured additional weight bias studies in the perinatal period. The MeSH term “weight prejudice” was introduced in 2020 [68] and is recommended as a keyword for future studies examining weight bias.

4.1 | Implications for Clinical Practice

While pregnancy, birth, and the postpartum periods are typically filled with joy, many pregnant and postpartum individuals with higher body weights instead experience weight bias from multiple sources, including their perinatal care providers. Weight bias, if unchecked, leads to unfair treatment and discrimination [69]. A recent joint international consensus statement from leading experts in the medical community called for immediate mitigation of weight bias in all healthcare settings [1], including perinatal care. Additionally, a 2023 position statement from the World Obesity Federation articulates the need for global efforts to reduce weight stigma in health research and health promotion efforts [70]. Collectively, the evidence from our review suggests that negative experiences among pregnant and postpartum individuals with higher body weights, coupled with providers’ reluctance and lack of confidence in their communication practices [34], or high confidence regarding their care [48], require a call to action to improve the delivery of perinatal care to this vulnerable population.

Perinatal care providers and students can first increase awareness and engage in self-reflection regarding their implicit and explicit weight bias [71, 72]. They should also consider how weight bias contributes to weight-centric and potentially harmful communication and counseling and overall poor quality of care [71]. Based on pregnant and postpartum individuals’ recommendations [36, 40, 41], perinatal care providers and students should seek consent to discuss healthy lifestyle

behaviors and avoid a focus on weight [72]. Additionally, it is important for providers to examine their weight-related language, using neutral terminology and the preferred words of each individual patient [36, 72, 73]. Using person-centered communication skills [74] and consideration of weight-inclusive frameworks [40, 75] such as the *Health at Every Size* (HAES) approach [76] may be useful when engaging in patient counseling. Providers can also improve communication by avoiding blaming weight for all pregnancy conditions [40] or inducing fear or shame when discussing weight and pregnancy complications. Person-centered, compassionate, and individualized care is recommended [40, 41, 72]. Finally, it is important to create a welcoming healthcare environment for patients of all sizes, including armless chairs, readily available gowns, and blood pressure cuffs of all sizes, as well as respectful messages and imagery in patient resource materials, clinic signage and artwork, and healthcare websites [41, 72]. Altogether, healthcare systems and providers must prioritize engaging in empathic communication and person-centered, weight-inclusive care.

4.2 | Future Research Directions

Our integrative review identified multiple dimensions of the perinatal weight bias literature that are understudied or missing. The MeSH term “weight prejudice” is recommended as a publication keyword for future weight bias studies. As the study sizes were small and lacked diversity, research is needed regarding the extent of both implicit and explicit weight bias among perinatal care providers and other sources in the United States and globally. Measurement tools for perinatal care providers must be developed and validated. Designing and implementing a multi-site mixed-methods study that incorporates a validated measurement tool and semi-structured interviews would allow for a deeper understanding of weight bias among perinatal care providers and the experiences of pregnant, birthing, and postpartum individuals under their care. Additionally, it is crucial to ensure future study samples encompass racial, ethnic, and cultural diversity [38, 77]. Researchers should examine whether weight bias among perinatal care providers varies with gender identity, race, ethnicity, age, years in practice, geographic region, and provider BMI. Such knowledge would enable exploration of associations between perinatal care providers’ weight bias and clinical decision-making, unnecessary interventions, and adverse outcomes. Studies examining gestational diabetes and breastfeeding rates are warranted, as is research to clarify the link of weight bias with mental health outcomes. Intervention studies designed to mitigate weight bias among perinatal care providers, students, and staff must be developed and tested to inform innovative curricula in health professional programs that can educate and better equip students prior to entering the workforce. Altogether, the findings would be instrumental in informing the development of new healthcare models aimed at delivering respectful and weight-inclusive perinatal care.

5 | Conclusion

Pregnant and postpartum individuals with higher body weights routinely encounter weight bias in the perinatal period, which

can have detrimental effects on their perinatal and mental health outcomes [42, 43, 45, 46, 49]. Rigorous research using diverse samples is needed to further examine weight bias among perinatal care providers and evaluate its association with clinical decision-making and perinatal and mental health outcomes. Innovative research could inform the development of interventions to enhance the delivery of perinatal care for individuals of all body weights.

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Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

This was an integrative review. The sources of the data are discussed in the manuscript.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section.