Science of Nursing and Health Practices

Science infirmière et pratiques en santé

Article de synthèse des connaissances | Knowledge synthesis article

Nurses' and Nursing Students' Perceptions Toward People Living in Larger Bodies: A Scoping Review

Perceptions du personnel infirmier et futur personnel infirmier envers les personnes vivant dans un corps gros : une revue de la portée

Karyne Duval https://orcid.org/0000-0001-6110-9665 Faculty of Nursing, Université Laval, Heart and Lung Institute Research Centre - Université Laval, Department of Health science, Université du Québec à Rimouski, Lévis campus, Quebec, Canada

Élisabeth Bélanger https://orcid.org/0009-0001-4464-5877 Faculty of Nursing, Université Laval, Quebec, Canada

Marie-Claude Laferrière https://orcid.org/0000-0002-2820-1387 Faculty of Nursing, Université Laval, Quebec, Canada

Marie-Pierre Gagnon https://orcid.org/0000-0002-0782-5457 Faculty of Nursing, Université Laval, CHU de Québec-Université Laval Research Center, VITAM – Research Center in Sustainable Health, Quebec, Canada

Maria Cecilia Gallani https://orcid.org/0000-0002-3418-9134 Faculty of Nursing, Université Laval, Heart and Lung Institute Research Centre - Université Laval, Quebec, Canada

Correspondance | Correspondence:
Karyne Duval
karyne.duval.1@ulaval.ca

ISSN 2561-7516

Keywords

weight bias; nursing science; nurses; obesity; scoping review

Abstract

Introduction: Weight bias among healthcare professionals contributes to inequitable care for people living in larger bodies (PLLB). Nurses play a crucial role in perpetuating or challenging this stigma. Yet, little is known about how this issue has been conceptualized, studied, and addressed within nursing research. **Objectives**: This scoping review aims to provide a comprehensive and structured synthesis of the peer-reviewed literature on weight bias among nurses and nursing students, identifying conceptual, temporal, and geographical trends and highlighting persistent gaps to inform future research and training initiatives. **Method**: Following the Joanna Briggs Institute methodology and PRISMA-ScR standards, we searched PubMed, CINAHL, and PsycINFO for empirical studies published between January 1, 2005, and June 10, 2025. Eligible studies explored nurses' or nursing students' perceptions toward PLLB. Two reviewers working independently screened studies and extracted data related to study design, context, conceptual focus, theoretical grounding, key findings, and identified research gaps. **Results**: A total of 34 studies were included. Most were cross-sectional, quantitative, and conducted in the United States. Concepts were grouped into 6 domains, with self-reported perceptions being most frequently assessed. The majority reported negative perceptions. Few studies used theoretical frameworks, and only 1 was grounded in nursing theory. Interventions were limited and often lacked long-term evaluation. Geographical representation was uneven, with no Canadian studies identified. **Discussion and Conclusion**: This review highlights persistent bias and fragmented research. Future studies must adopt theory-informed, methodologically diverse, and geographically inclusive approaches. Embedding equity, diversity, and inclusion principles is essential to foster stigma reduction and improve care for PLLB.

Mots-clés

grossophobie; sciences infirmières; infirmières; obésité; revue de la portée

Résumé

Introduction : Les biais liés au poids chez les professionnel·les de la santé contribuent à des soins inéquitables pour les personnes vivant dans un corps gros (PCG). Le personnel infirmier joue un rôle clé dans la reproduction ou la remise en question de cette stigmatisation. Pourtant, la manière dont ce phénomène est conceptualisé, étudié et abordé dans la recherche infirmière demeure peu documentée. **Objectifs** : Cette revue de la portée vise à fournir une synthèse structurée de la littérature sur les préjugés liés au poids chez le personnel infirmier actuel et futur, en identifiant des tendances conceptuelles, temporelles et géographiques, ainsi que les lacunes à combler pour orienter la recherche et la formation. **Méthode** : Conformément à la méthodologie du *Joanna Briggs Institute* et aux lignes directrices PRISMA-ScR, PubMed, CINAHL et PsycINFO ont été interrogées pour repérer des études empiriques publiées entre le 1er janvier 2005 et le 10 juin 2025. Deux évaluatrices ont sélectionné indépendamment les études admissibles et extrait les données. **Résultats** : Au total, 34 études ont été incluses. La majorité était quantitative, transversale et menée aux États-Unis. Les concepts ont été regroupés en 6 domaines, les perceptions autodéclarées étant les plus fréquentes. Peu d'études mobilisaient un cadre théorique, et 1 seule reposait sur une théorie infirmière. Les interventions étaient en minorité et rarement évaluées à long terme. Aucune étude canadienne n'a été recensée. **Discussion et conclusion** : Cette revue met en évidence des préjugés persistants et une recherche morcelée. Des approches théoriquement éclairées, méthodologiquement variées et géographiquement inclusives sont essentielles pour améliorer les soins offerts aux PCG.

INTRODUCTION

Recent data from the Public Health Agency of Canada (2025), based on body mass index (BMI) categories, estimate that approximately 65% of Canadian adults fall within the combined overweight and obesity range. Although an emerging international consensus (Rubino et al., 2025) distinguishes between clinical and preclinical obesity, incorporating organic dysfunctions beyond BMI into the diagnostic criteria, BMI-based classifications remain the standard for population-level estimates and served as the principal metrics used in the studies included in this review. Given these trends, obesity is widely recognized as a global "epidemic" and a major public health concern requiring urgent attention (Powell-Wiley et al., 2021). Public health campaigns therefore aim to prevent and reverse obesity through the promotion of healthy lifestyle behaviours (Edache et al., 2021; Le Bodo et al., 2017). However, these strategies reinforce the prevailing narrative that weight is solely an individual's responsibility, attributing a larger body to a lack of self-discipline in nutrition and physical activity (Fruh et al., 2021; Rubino et al., 2020). Such perspectives contribute to weight-based stereotypes, labeling people living in larger bodies (PLLB) with negative personality or behavioural traits such as laziness, poor health, noncompliance, and a lack of intelligence or self-control (Fruh et al.; Fulton and Srinivasan, 2022). These stereotypes perpetuate weight bias, defined as the expression of negative and prejudicial attitudes toward individuals based on their body weight or size (Pearl, 2018). Attitudes may be implicit, reflecting unconscious bias, or explicit when openly expressed (Fishbein and Ajzen, 2010; Fruh et al.; Lacroix et al., 2017). Weight bias can lead to discrimination, including inequitable treatment and microaggressions (Fruh et al.; Fulton and Srinivasan), with adverse outcomes such as unhealthy eating, exercise avoidance, depressive symptoms, anxiety, body dissatisfaction, and low self-esteem (Rubino et al., 2020; Wu and Berry, 2018). Although discrimination may affect individuals perceived as underweight, this review focuses specifically on weight bias toward PLLB.

Weight bias is widespread in media, education, employment, and healthcare settings (Clark, 2021; Fruh et al., 2021; Shelton, 2016). Its presence among healthcare professionals is particularly concerning (Alberga et al., 2019). A systematic review of 41 studies measuring weight bias among healthcare professionals, including physicians, nurses, dietitians, and psychologists, reported the presence of negative weight bias across all professional groups examined (Lawrence et al., 2021). Physicians may spend less time with PLLB, avoid thorough examinations, and provide limited health education (Tomiyama et al., 2018). They may also focus excessively on weight loss, which can result in missed or incorrect diagnoses of more serious conditions (Alberga et al., 2016; Huizinga et al., 2009). Consequently, after experiencing weight bias, PLLB may delay or avoid seeking care, even when needed (Rubino et al., 2020).

In 2019, the annual report by Canada's Chief Public Health Officer highlighted stigma, including weight stigma, as a priority issue. It defined weight stigma as the belief that people living with obesity are to blame for their weight and associated stereotypes regarding their behaviour or character. The report emphasized the necessity for systemic change in healthcare and education (Government of Canada, 2025). In parallel, scholarly interest in weight bias has intensified. Most previous reviews have synthesized findings across various health professions, including physicians, nurses, nutritionists, and physiotherapists (Cavaleri et al., 2016; Panza et al., 2018). However, the extent to which existing reviews have focused exclusively on nurses remains unclear. Given that nurses represent nearly half of the global healthcare workforce and are often the first point of contact for patients (World Health Organization, 2025), understanding their perceptions is crucial. Nurses provide care to PLLB, often with complex comorbidities (Barrea et al., 2021), and contribute to health promotion, public education, and intervention development (Lazarou and Kouta, 2010).

Considering the expanding research base and the evolving sociocultural landscape surrounding bias, there is a pressing need to reassess nurses' and nursing students' perceptions toward PLLB. A

preliminary search conducted before initiating this project revealed no systematic or scoping reviews on the topic, apart from Brown's review (2006), which documented widespread weight bias among nurses. However, since we published our protocol (Duval et al., 2023) and completed this manuscript, a new review by Fonoudi et al. (2025) has emerged. Nevertheless, our work remains distinct. This current study offers a more focused and complementary contribution. In contrast to Fonoudi et al., who adopted a broader scope, including various healthcare professionals and study designs, our review is nursing-specific and strictly limited to empirical studies targeting nurses and nursing students. Additionally, it introduces a concept-oriented mapping of the literature, incorporates temporal and geographical trends, and critically examines the theoretical underpinnings of the included studies. These methodological distinctions allow for a more detailed and discipline-relevant understanding of how weight bias is conceptualized and addressed within nursing research.

This scoping review aims to provide a comprehensive and structured synthesis of the peer-reviewed literature on weight bias among nurses and nursing students, identifying major conceptual trends and highlighting persistent gaps to inform future research and professional training initiatives.

Objectives

The objective of this scoping review is to review and map nurses' and nursing students' perceptions toward PLLB from available literature.

Specific Objectives

The specific objectives of this scoping review were to:

1. Identify the concepts related to weight bias that have been examined or measured among nurses and nursing students.
2. Identify the study designs used in the included studies.
3. Identify the methodological approaches employed (quantitative, qualitative, or mixed-methods).
4. Document the theoretical foundations guiding the studies.
5. Summarize whether the perceptions reported by nurses and nursing students toward PLLB tend to be negative, neutral, or positive.
6. Examine geographical and temporal trends in the studied concepts, study designs, methodological approaches, research settings, and theoretical foundations.

"Concepts" in this review, refer to any ideas related to weight bias assessed in the studies, including measurements of weight stigma, behaviours, quality of care toward PLLB, beliefs, or attitudes, consistent with how concepts are understood in scoping reviews as the central phenomena or topics guiding the mapping process (Peters et al., 2022). "Perceptions" refers broadly to beliefs, attitudes, feelings, and any other aspects of weight bias experienced by participants, whether assessed qualitatively or quantitatively. This understanding aligns with the American Psychological Association (APA) definition of perception as the process of interpreting information to make sense of experiences (APA, 2018).

Since the purpose of this review was to identify key characteristics and concepts reported across studies, and to map and describe these characteristics, a scoping review was the most appropriate methodological design (Munn et al., 2018).

This scoping review examined and mapped data from studies on nurses' and nursing students' perceptions toward PLLB. By mapping recent trends and identifying differences between regions, as well as identifying concepts related to weight bias that have been studied, this review sheds light on both commonalities and particularities of weight bias among nurses and nursing students. Additionally, it provides guidance to address research gaps in this area in terms of study designs and research recommendations.

Method

This scoping review was conducted in accordance with the Joanna Briggs Institute (JBI) methodology and is reported following the PRISMA-ScR checklist (Peters et al., 2022; Tricco et

al., 2018). A detailed protocol was developed and published prior to conducting the review (Duval et al., 2023), and guided all methodological steps outlined below. The present manuscript provides a summary of the procedures and emphasizes post-protocol adaptations undertaken to ensure the timeliness and comprehensiveness of the review.

Eligibility Criteria

Following the eligibility framework established in the protocol (Duval et al., 2023), we included empirical studies published in scientific journals investigating the perceptions of nurses or nursing students toward PLLB. Studies were included regardless of methodological approach (qualitative, quantitative, mixed-methods) or practice and training settings (e.g., hospital, community, academic), provided they focused exclusively on nurses or nursing students. Studies published in English, French, Spanish, Portuguese, or Italian were considered eligible, reflecting the language competences of the research team. All studies published between January 1, 2005, and June 10, 2025, which correspond to the date of the final screening, were considered eligible.

Studies were excluded if they were published before 2005, as earlier literature had been synthesized in Brown's review (2006). They were also excluded if they focused on pediatric obesity or obesity related to pregnancy, as these contexts involve distinct dynamics that fall outside the scope of this review. We also excluded studies that did not report data exclusively on nurses or nursing students. Non-empirical publications such as editorials, commentaries, opinion pieces, or protocols without results were not considered eligible. Finally, studies published in languages other than those mastered by the research team were excluded, acknowledging the potential for language bias.

Search Strategy and Study Selection

A comprehensive search strategy was developed in collaboration with a health sciences librarian. The initial search was conducted on January 11, 2024, across three databases: PubMed, CINAHL Plus with Full Text (EBSCOhost), and PsycINFO (OVID). The strategy combined indexed terms and free-text keywords related to weight bias and the nursing profession. No filter was used in the initial search. A second search, using the same databases and keywords but with a date limit from January 1, 2024, to June 10, 2025, was conducted to ensure the currency of our synthesis before publication. The search strategies for each database are available in the supplementary file (see end of the document).

Search results were managed using EndNote (The EndNote Team, 2013) and imported into the Covidence systematic review software (Veritas Health Innovation, 2023), where duplicates were automatically and manually removed. Title and abstract screening, followed by full-text assessment, were independently performed by two reviewers. Discrepancies were resolved through discussion. The search results and the study inclusion process are reported in a PRISMA flow diagram (Page et al., 2021).

Data Extraction

Data were extracted from papers included in the scoping review by two independent reviewers and compiled in an Excel extraction grid inspired by the data extraction tool developed by JBI (available at https://synthesismanual.jbi.global).

The extracted data included specific details about the participants, concept, context, study methods and key findings relevant to the review questions, such as the nurses' and nursing students' perceptions toward PLLB.

In addition to the standard information proposed by the JBI extraction tool, the following information was extracted: theoretical frameworks, methodological approaches, research settings (clinical or educational), and the studied concepts. The geographical origin of each study was also extracted to allow the description of geographical trends. The draft data extraction tool was revised through a pilot phase during which we extracted data from the first five included studies. The final data extraction tool and the complete extracted dataset are available in Borealis (Duval, 2025).

Data Synthesis

Extracted results were descriptively mapped. Frequency counts of concepts, populations, and study characteristics, such as methodological

approaches, research settings, geographical location, and nurses' and nursing students' perceptions toward PLLB, were calculated and presented in tabular form. An inventory of the identified theoretical frameworks was also compiled. Temporal and geographical trends were examined to explore how research on weight bias among nurses and nursing students has evolved over time and across regions. A narrative summary accompanies the tables to explain how the results address the objectives and research questions of this scoping review.

RESULTS

INCLUDED STUDIES

In total, after both searches, 34 studies were included in this scoping review. The complete study selection process, integrating both searches, is illustrated in a PRISMA flow diagram (see Figure 1). We identified 2,558 references across three databases (PubMed, CINAHL, and PsycINFO). After removing 816 duplicates, 1,742 studies were screened, and 67 full-text studies were assessed, of which 34 met the eligibility criteria and were included in this review.

CHARACTERISTICS OF THE INCLUDED STUDIES

A detailed summary of the characteristics of the 34 included studies is available in Borealis (Duval, 2025): 71% were quantitative (n=24); 21% mixed-methods (n=7) and 9% qualitative (n=3). Amongst the quantitative studies, most were descriptive/cross-sectional (n=16), followed by pre-post interventions (n=5), randomized controlled trials (n=2), and one non-randomized controlled trial. Mixed-methods studies included four descriptive/cross-sectional, and three pre-post intervention design. Of the qualitative studies, one adopted a hermeneutic approach, one discursive psychology, and one did not specify its methodology.

Regarding the research setting, 44% (n=15) were conducted in educational contexts, 41% (n=14) in clinical settings, and 6 % (n=2) in both clinical and educational environments. Additionally, two studies (6%) were conducted within nursing associations, and one (3%) took place during a professional conference.

Eight studies (24%) mentioned theories to support the intervention or specific claims, though not as guiding frameworks. For example, one study drew on the Fatphobic Tripartite Model (Benítez-Muñoz et al., 2025) and another referred to Goffman's concept of stigma, along with Billig et al.'s theory of ideological dilemmas (Härgestam et al., 2024). A complete list of studies that referenced theoretical concepts is available in Borealis (Duval, 2025). In contrast, five studies (14%) were explicitly grounded in one of four theoretical frameworks. Three came from social psychology: Lewin's three-step model for behavioural change (Barra & Singh Hernandez, 2018); the Theory of Planned Behaviour, linking intentions to action (Gormley & Melby, 2020); and the Attribution Theory, which connects negative stereotypes to perceptions of personal control and responsibility (Oliver et al., 2020). The fourth, from nursing, was the Theory of Cultural Humility, which emphasizes respect, shared power and openness to multiple perspectives (Llewellyn et al., 2023), which is particularly relevant in cross-cultural care contexts in which relational dynamics are critical to achieving equitable outcomes.

As shown in Figure 2, only three studies were published before 2012, with none from 2012 to 2014. Publication increased over time: four appeared between 2015 and 2017, ten between 2018 and 2020, eight between 2021 and 2023, and nine between January 2024 and June 10, 2025.

Geographically, half of the studies (n=17) were from the United States, nine (26%) from Europe, four (12%) from Turkey, three (9%) from Asia and one from Africa.

1) CONCEPTS UNDER STUDY AND KEY FINDINGS

Based on the analysis of the 34 included studies, a total of 82 concept occurrences were identified and categorized into six domains related to nurses' and nursing students' perceptions toward PLLB (see Table 1).

Figure 1

PRISMA Diagram from Covidence; January 1, 2005, to June 10, 2025

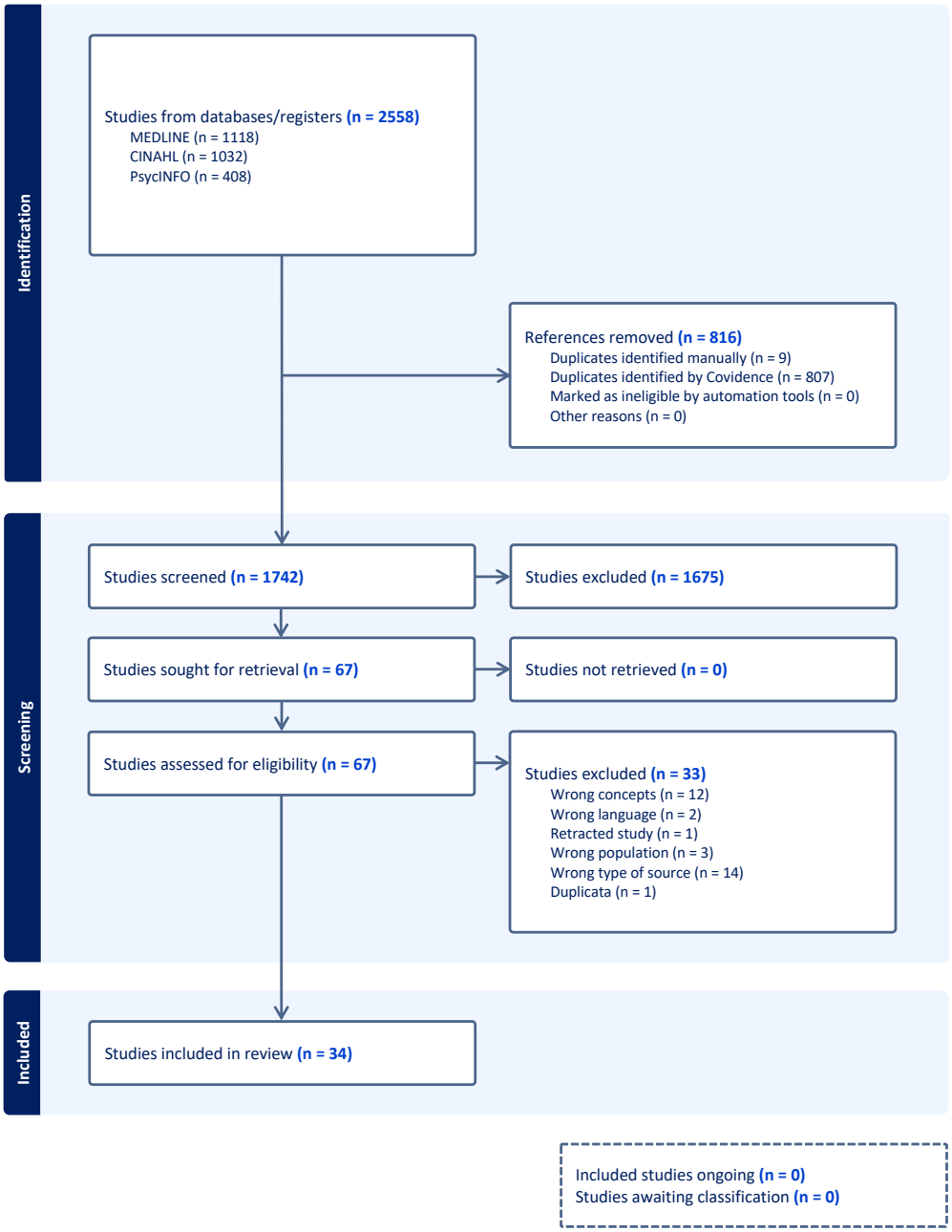

Figure 2

Temporal Distribution of the Included Studies

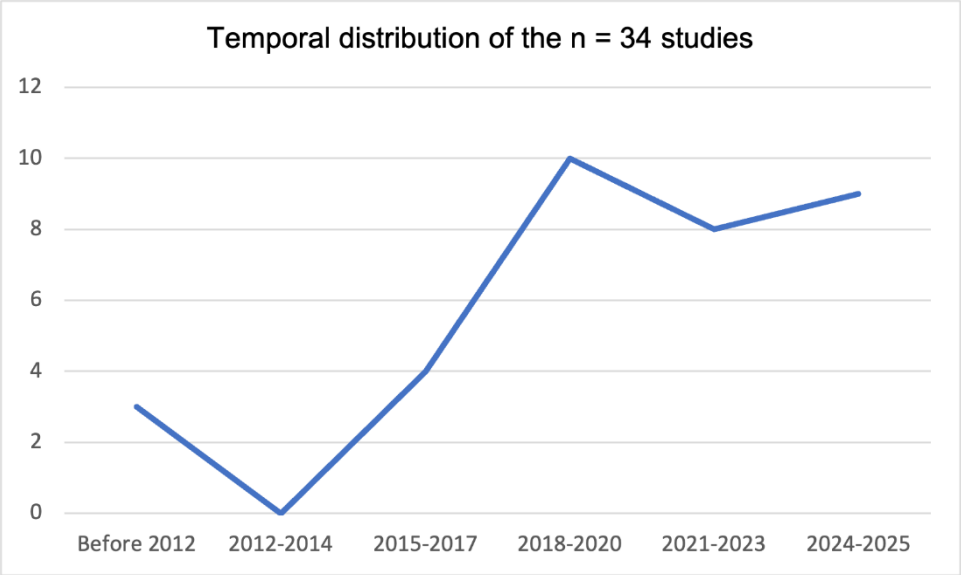

Table 1

Distribution of the Studies According to Publication Periods, Concepts, Identified Perceptions, Research Setting, and Use of Theoretical Frameworks

	Before 2012	2012-2014	2015-2017	2018-2020	2021-2023	2024-2025	Total: n (%)
Number of studies (n = 34)	3		4	10	8	9	34 (100%)
Study concepts (n = 82)							
Self-reported perceptions	5		6	12	13	16	52 (63%)
Influencing factors			1		4	5	10 (12%)
Implicit attitudes, stereotypes, and bias				5	2	1	8 (10%)
Professional competencies					1	4	5 (6%)
Intended and reported behaviours				2	2		4 (5%)
Experience				1		2	3 (4%)
Total: n (%)	5 (6%)	0 (0%)	7 (9%)	20 (24%)	22 (27%)	28 (34%)	82 (100%)
Identified perceptions by nurses or nursing students (n = 34)							
Negative	2		3	9	7	8	29 (85%)
Neutral			1	1		1	3 (9%)
Positive	1				1		2 (6%)
Total: n (%)	3 (9%)		4 (12%)	10 (29%)	8 (24%)	9 (26%)	34 (100%)
Research setting (n = 34)							
Educational			1	4	6	4	15 (44%)
Clinical	2		2	5	1	4	14 (41%)
Educational and clinical	1			1			2 (6%)
Nursing association					1	1	2 (6%)

	Before 2012	2012-2014	2015-2017	2018-2020	2021-2023	2024-2025	Total: n (%)
Conference			1				1 (3%)
Total: n (%)	3 (9%)	0 (0%)	4 (12%)	10 (29%)	8 (24%)	9 (26%)	34 (100%)
Theoretical framework (n = 34)							
Nursing theoretical framework guides the study					1		1 (3%)
Non-nursing theoretical framework guides the study				3		1	4 (12%)
No theoretical framework mentioned	3		4	7	7	8	29 (85%)
Total: n (%)	3 (9%)	0 (0%)	4 (12%)	10 (29%)	8 (24%)	9 (26%)	34 (100%)

Several concepts appeared repeatedly across the dataset. For example, the concept of "explicit attitudes" alone was measured 24 times across the studies. The conceptual domains are as follows: self-reported perceptions [n=52 (63%)], which encompass explicit attitudes, beliefs, feelings, and stigmatizing tendencies expressed by participants; influencing factors [n=10 (12%)], referring to internal or external elements that shape attitudes or behaviours; implicit attitudes, stereotypes, and bias [n=8 (10%)], which include unconscious or automatic associations and internalized social norms; professional competencies [n=5 (6%)], involving the development or assessment of communication skills, clinical confidence, and respectful care abilities; intended and reported behaviours [n=4 (5%)], capturing both planned and enacted behaviours toward PLLB; and experience [n=3 (4%)], which includes direct or observed encounters involving weight bias or stigma. Several studies addressed more than one concept, reflecting the multidimensional and interrelated nature of weight bias in nursing contexts. This mapping provides a structured response to our primary research question, revealing which aspects of nurses' and nursing students' perceptions have been most frequently explored in the nursing empirical literature.

The concepts were investigated through a variety of study designs, including quantitative, qualitative, and mixed-methods approaches. Detailed information on these methodological choices is presented in Table 2.

1.1 Self-Reported Perceptions

Thirty-one studies (91%) explored self-reported perceptions of nurses or nursing students toward PLLB. These perceptions encompass attitudes, beliefs, feelings, and tendencies that participants are consciously aware of and willing to disclose in response to direct questioning, consistent with definitions of explicit attitudes in the literature (Martinussen, 2018). Several validated instruments were used to assess self-reported perceptions, including the Nurses' Attitudes Toward Obesity and Obese Patients Scale (NATOOPS), the Attitudes Toward Obese Persons scale (ATOP), the Fat Phobia Scale, the Anti-Fat Attitudes questionnaire (AFA), and selected subscales of the Antifat Attitudes Test, among others. Questionnaires developed by research teams, interviews, focus groups, weekly meetings, vignettes, surveys and journal entries were also used.

For example, Ak et al. (2021) examined explicit attitudes using the NATOOPS and found that nurses generally held a positive perspective on PLLB whereas Benítez-Muñoz et al. (2025), using the AFA, identified moderate weight biased attitudes among Spanish nurses. For the full list of studies investigating self-reported perceptions, see Table 4, at the end of this document.

Overall, the literature consistently points to widespread negative self-reported perceptions of nurses and nursing students toward PLLB, with a few exceptions where interventions or educational progress seem to mitigate these attitudes (see Table 4).

1.2 Influencing Factors

Seven studies (21%) examined factors that influence nurses' or nursing students' attitudes and behaviours toward PLLB, with negative perceptions linked to professional strain, limited resources, and internalized blame, while positive attitudes were associated with greater knowledge, self-compassion, experience, and culturally sensitive education. For example, Moyo and Felix (2024) reported that nurses with greater knowledge about obesity were more likely to hold favorable attitudes (see Table 4).

1.3 Implicit Attitudes, Stereotypes and Bias

Five studies (15%) investigated implicit attitudes, stereotypes, and bias toward PLLB among nurses and nursing students. These constructs were primarily assessed using the Implicit Association Test (IAT), the Sociocultural Attitudes Towards Appearance Questionnaire – 4, a questionnaire measuring self-reported personal experiences of weight bias, and a qualitative analysis of diary entries. All five studies provided evidence of the presence of implicit weight bias among nurses and nursing students (see Table 4). For example, George et al. (2019) found that many participants held implicit anti-fat biases, despite believing they were unbiased.

1.4 Professional Competencies

Three studies (9%) from the United States highlighted limited competencies among nursing students in providing equitable care to PLLB, showing minimal effects from brief interventions, low confidence in using assistive devices, and persistent challenges in translating awareness into effective clinical communication (see Table 4). For example, Kerbyson and Clark (2024) found that witnessing weight stigma in clinical environments undermined students' sense of competence and readiness to deliver respectful care.

1.5 Intended and Reported Behaviours

Four studies (12%) revealed discrepancies between intentions and actual practices when caring for PLLB with nurses acknowledging increased strain, limited adherence to best practices, and subtle gender differences in willingness to provide immediate support (see Table 4). For example, Moore et al. (2025) found that although participants strived to provide equal care to PLLB, the additional burden, while often concealed from patients, was associated with increased stress and feelings of strain.

1.6 Experiences

Three studies (9%) showed that personal and clinical experiences with obesity influence nurses' and nursing students' attitudes, often generating ambivalence, emotional strain, or stigma, but also offering potential pathways for empathy, reflection, and advocacy (see Table 4). For example, Dunham (2024) found that nursing students with higher BMI reported significantly more personal experiences of weight bias, which may help explain why educational interventions designed for these students tend to produce greater reductions in bias.

Overall Trends in Perceptions

Following the mapping of these conceptual domains, we categorized the overall tone of perceptions as negative, neutral, or positive. Five studies (15%) concluded that nurses and nursing students did not have negative perceptions toward PLLB. Two studies (6%) conducted in Turkey and the United States identified positive perceptions, while three (9%) others from the United States, China, and the United Kingdom concluded that participants held neutral perceptions (see Table 3). The other 29 studies (85%) showed that nurses and nursing students had a negative self-reported perception toward PLLB. In this review, negative perceptions refer to explicitly expressed weight bias or to baseline attitudes identified prior to an intervention designed to reduce such bias.

2) Temporal Trends

Research on weight stigma in nursing has grown steadily, mirroring global increases in obesity and rising concern about healthcare equity. Three main trends emerge.

2.1 Growing Research Attention

Initial studies in the early 2000s focused on developing and validating instruments to assess nurses' attitudes toward PLLB. Since 2015, the field has expanded rapidly, with a marked increase in intervention studies (Oliver et al., 2020, 2024), simulations (Llewellyn et al., 2023), and mindfulness approaches (Joseph & Raque, 2023). The past five years have seen increased global contributions and greater methodological diversity.

2.2 Shift Toward Practice-Oriented Outcomes

Earlier research centered on explicit attitudes and psychometric assessment (e.g., ATOP, AFA, IAT). Recent studies increasingly examine behavioural intentions, clinical observations, and lived experiences of stigma (e.g., Kerbyson & Clark, 2024; Robstad et al., 2018), reflecting a shift toward applied and experiential perspectives.

2.3 Slow Progress in Perceptions

While some interventions have led to improved attitudes (e.g., Rodríguez-Gázquez et al., 2020), negative perceptions and implicit biases remain common, even in recent data (Dunham, 2024). Many nurses report ethical discomfort or structural constraints that hinder respectful care, highlighting the persistence of stigma despite growing awareness.

Table 2

Distribution of the Studies According to the Explored Concepts, Study Designs, use of a Theoretical Framework and Research Setting

Study Design	Self-reported perceptions	Influencing factors	Implicit attitudes, stereotypes, and bias	Professional competencies	Intended and reported behaviours	Experience	Total: n (%)
Quantitative (n = 58)							
Descriptive/cross-sectional	26	6	2		2		36 (44%)
Pre-post intervention	9		1	2		1	13 (16%)
Randomized controlled trial	1	3	2	1			7 (9%)
Non-randomized controlled trial	2						2 (2%)
Mixed-methods (n = 21)							
Descriptive/cross-sectional	5	1	3	2	1	1	13 (16%)
Pre-post intervention	7				1		8 (10%)
Qualitative (n = 3)							
Qualitative hermeneutic approach						1	1 (1%)
Other/not specified	2						2 (2%)
Total: n (%)	52 (63%)	10 (12%)	8 (10%)	5 (6%)	4 (5%)	3 (4%)	82 (100%)
Theoretical framework							
Attribution theory	2						2 (2%)
Lewin's three-step change theory	1						1 (1%)
Theory of cultural humility	2						2 (2%)
Theory of planned behaviour	1						1 (1%)
None mentioned	46	10	8	5	4	3	76 (93%)

Study Design	Self-reported perceptions	Influencing factors	Implicit attitudes, stereotypes, and bias	Professional competencies	Intended and reported behaviours	Experience	Total: n (%)
Total: n (%)	52 (63%)	10 (12%)	8 (10%)	5 (6%)	4 (5%)	3 (4%)	82 (100%)
Research setting							
Educational	24	3	2	4		2	35 (43%)
Clinical	19	3	4		4	1	31 (38%)
Educational and clinical	4						4 (5%)
Nursing association	3	4	2	1			10 (12%)
Conference	2						2 (2%)
Total: n (%)	52 (63%)	10 (12%)	8 (10%)	5 (6%)	4 (5%)	3 (4%)	82 (100%)

Table 3

Distribution of the Studies According to Regions, Concepts, and Perceptions

	Concepts							Perceptions			
	Self-reported perceptions	Influencing factors	Implicit attitudes, stereotypes, and bias	Professional competencies	Intended and reported behaviours	Experience	Total: n(%)	Negative	Neutral	Positive	Total: n (%)
North America	27	5	4	5	1	2	44 (54%)	15	1	1	17 (50%)
Europe	15	2	4		2	1	24 (29%)	8	1		9 (26%)
Middle East	5	1					6 (7%)	3		1	4 (12%)
Asia	4	1					5 (6%)	2	1		3 (9%)
Africa	1	1			1		3 (4%)	1			1 (3%)
Total: n (%)	52 (63%)	10 (12%)	8 (10%)	5 (6%)	4 (5%)	3 (4%)	82 (100%)	29 (85%)	3 (9%)	2 (6%)	34 (100%)

3) Geographical Trends

The 34 studies included in this review show a clear geographical imbalance, with half conducted in the United States and a small number from Turkey, Norway, and Spain. While recent years (2024 - 2025) have seen new contributions from countries like Sweden, Namibia, and Poland (including Nigerian participants), most research still originates from Western contexts or select East Asian countries. This narrow geographical scope raises concerns about the global applicability of findings, especially considering cultural influences on weight bias. Notably, regions such as Latin America, much of Africa, South and Southeast Asia, and the Middle East remain underrepresented, underscoring the need for more inclusive and culturally diverse research. No studies originated from Canada, highlighting a surprising gap given the country's prominence in nursing education and public health.

4) Gaps in Research

This scoping review highlights several persistent research gaps limiting the generalizability, depth, and impact of findings on weight stigma in nursing. These gaps fall into five key categories.

4.1 Geographical and Population Gaps

Research remains heavily concentrated in the United States, with limited representation of regions such as Latin America, most of Africa, and South/Southeast Asia. Canada is notably absent despite its proximity to the United States. Samples are often homogeneous, primarily young, women, White participants, which neglects diversity in gender, ethnicity, experience, and professional roles.

4.2 Methodological Limitations

Most studies use cross-sectional designs and self-reported measures, limiting causal inference and raising concerns about social desirability bias. Implicit bias measures and culturally validated instruments remain underused. Longitudinal and qualitative approaches are rare but needed to capture changes over time and deepen understanding.

4.3 Intervention Limitations

Few robust interventions exist, and long-term effects are rarely evaluated. Interventions are often short, didactic, and lack experiential components. Studies call for integrating bias reduction throughout the nursing curriculum, combining simulation, reflection, and education on obesity's complexity.

4.4 Conceptual and Theoretical Gaps

Many studies lack clear conceptual frameworks. The role of personal factors, such as nurses' own body image, cultural norms, and systemic constraints, such as equipment access, in shaping stigma is underexplored. The link between nurse attitudes and actual care practices remains insufficiently studied.

4.5 Outcome Gaps

Research rarely assesses the impact of bias reduction on patient outcomes or care quality. Patient perspectives are also missing, leaving unclear whether changes in nurse attitudes translate into better clinical experiences. These gaps emphasize the need for more rigorous, inclusive, and practice-oriented research to guide effective stigma reduction in nursing.

Discussion

This scoping review synthesized findings from 34 studies published since 2005 on nurses' and nursing students' perceptions toward PLLB. The results confirm that weight bias remains widespread in nursing, although four recent studies suggest a modest shift toward more neutral or positive attitudes. While most included studies reported negative self-reported perceptions, a handful of intervention or reflective studies documented attitudinal improvements, indicating an emerging openness to stigma reduction. This emerging openness is consistent with broader patterns reported by Fonoudi et al. (2025), whose interdisciplinary review found that nurses tend to exhibit more favourable attitudes toward PLLB than physicians, physiotherapists, dietetics students and medical students. This

relative advantage does not imply the absence of bias, but it suggests that nurses may be particularly receptive to stigma reduction initiatives.

Weight bias in healthcare has gained increasing attention in recent years, paralleling broader public denunciations of weight-based stigma through policies and social media (Chivers et al., 2022; Puhl, 2022). In 2020, a multidisciplinary group of international experts published a consensus statement to eliminate weight bias in healthcare, calling for increased research funding and enhanced education to challenge dominant public narratives about PLLB (Rubino et al., 2020).

In Canada, the 2024 International Weight Bias Summit highlighted the need to better understand the consequences of weight bias, strengthen conceptual and methodological clarity, and advance implementation-focused research to translate attitudinal change into practice (Côté et al., 2025). Our findings suggest that nursing research is beginning to respond to these imperatives, though progress remains uneven and slower than hoped. These findings complement and extend the recent scoping review by Fonoudi et al. (2025), which examined weight stigma across various health professions. In contrast, the present review focuses exclusively on nursing, offering a detailed mapping of concepts, methodologies, and regional trends within this discipline. It also includes nine additional studies from our updated search, reflecting the rapidly evolving nature of this research area.

Geographically, research on weight bias is highly concentrated in the United States, followed by clusters in Norway and Turkey. However, multiple studies from the same first authors may inflate perceived national engagement. Notably, no studies were conducted in Canada, despite the country's rising obesity rates and differences from the United States in health inequities and healthcare structures (Siddiqi et al., 2015). Furthermore, Canadian public health messaging continues to emphasize individual responsibility, potentially reinforcing negative stereotypes. For instance, the Public Health Agency of Canada (2018, p. 232) states: "[a]t the individual level, obesity is caused by a sustained consumption of too many calories or expenditure of too few calories". This type of messaging may inadvertently contribute to weight bias. More research is needed in underrepresented regions, including Canada, to identify sociocultural determinants of bias and guide locally relevant interventions. Advocacy organizations such as *Collectif Vital* (https://collectifvital.ca) and *Équilibre* (https://equilibre.ca) challenge these narratives by promoting non-stigmatizing approaches to health.

Disparities in research output across countries may also be partially explained by the multifactorial causes of obesity, which include not only individual behaviours and biological factors, but also psychological, environmental, social, and structural determinants such as socioeconomic status, healthcare access, and educational inequality (Safaei et al., 2021). These factors shape both the lived experience of PLLB and the academic priorities of different regions, helping explain why certain contexts are more represented in the literature than others.

Across most studies, perceptions toward PLLB were negative, regardless of geographic origin. That said, emerging findings suggest that change is possible. Several studies highlighted more favorable attitudes among nurses with greater clinical experience, exposure to diversity, or higher levels of education, which may, in turn, be associated with greater knowledge (see Table 4; Ak et al., 2021; Moyo & Felix, 2024; Styk et al., 2024; Wang et al., 2016; Willenbrock & Rose, 2024). Such patterns point to promising directions for educational interventions. These results underscore the importance of integrating weight bias awareness and stigma reduction strategies into nursing curricula and continuing education. In clinical practice, unaddressed weight stigma may compromise the quality of care provided to PLLB, reinforcing disparities that nursing as a discipline seeks to reduce. This aligns with extensive evidence showing that weight stigma in healthcare reduces patient trust, delays care seeking, worsens cardiometabolic outcomes, and erodes therapeutic relationships (Fruh et al., 2021; Rubino et al., 2020). Other influencing factors, such as internalization of the thin ideal, positive affect, and cognitive flexibility, were also examined (Joseph & Raque, 2023), though more robust research is

needed to clarify their impact and identify mechanisms for stigma reduction.

Explicit attitudes were the most frequently studied concept, typically assessed using cross-sectional surveys. By contrast, implicit attitudes, behaviours, professional competencies, and lived experiences were less investigated. Despite growing awareness of weight stigma, only a third of the included studies tested interventions. Most of these had limited effects, often short-term or non-significant, and suffered from small, unrepresentative samples and methodological constraints. These limited effects mirror findings from a systematic review of weight-bias interventions, which reports short-term change but little evidence of durable shifts in implicit attitudes or behaviour (Alberga et al., 2016). Also, these methodological limitations echo prior calls for more longitudinal, experiential, and theoretically grounded interventions (Alberga et al., 2019; Rubino et al., 2020).

Theoretical guidance was notably sparse. Only five studies employed theoretical frameworks, and just one drew from nursing science. While conceptual models from psychology may offer explanatory value, discipline-specific frameworks could foster interventions more aligned with nursing values and practice. As Dallaire (2015) suggests, using nursing theories supports the design, application, and evaluation of interventions tailored to nursing realities and philosophies. This gap is consistent with work showing that nursing interventions grounded in theory tend to produce better patient outcomes, even though their use in research and practice has declined over time (Younas & Quennell, 2019). Re-engaging with nursing theory may, therefore, be an avenue for developing more coherent and effective stigma-reduction interventions. Brydges and Batt (2023) also note that, across health disciplines, studies lacking clear theoretical or conceptual foundations struggle to build cumulative knowledge, maintain methodological coherence, and develop interventions that can be meaningfully adapted to different contexts.

In summary, although negative perceptions toward PLLB remain prevalent in nursing, the recent emergence of more reflective, theory-informed, and solution-focused research signals cautious progress. To move beyond documenting the problem, future studies must prioritize theoretical depth, intervention durability, and inclusivity in geographical, methodological, and demographic terms. Collaborations with PLLB in the design, implementation, and evaluation of research and interventions will also be essential to ensure relevance, impact, and equity.

LIMITS

This scoping review has several limitations. First, the search was limited to three databases, which may have led to the omission of relevant studies indexed elsewhere. Nonetheless, the inclusion of 34 studies and the high number of duplicates removed suggest that the search captured a substantial portion of the available literature. Furthermore, a comparison with the recent review by Fonoudi et al. (2025) revealed that seven studies included in our review were not identified in theirs. This suggests that our more focused search strategy was sufficiently sensitive to detect relevant nursing-specific literature, and that our findings complement rather than replicate those of Fonoudi et al., thereby enriching the current evidence base. Second, we adopted a broad definition of “negative perceptions,” encompassing both explicitly documented biases and reductions in bias reported through intervention studies. As this is not a systematic review, we cannot quantify the extent or significance of those perceptions and may have overstated their prevalence. Third, several included studies were conducted by the same research teams in similar settings, potentially influencing the overall depiction we have presented of the current state of research. Finally, in keeping with the scoping review methodology, we did not assess the quality of the included studies. As such, we cannot comment on the strength of the evidence or make graded recommendations for practice or policy.

CONCLUSION

This review highlights the persistence of weight bias in nursing and the limitations of existing research in addressing its complex and

systemic roots. To move the field forward, future studies must embrace theoretical depth, methodological inclusivity, and greater geographical and demographic diversity. Integrating equity, diversity, and inclusion principles is not optional. It is essential to design interventions that are both contextually relevant and ethically grounded. As trusted care providers, nurses are uniquely positioned to lead this shift. Advancing research in this area is not merely about changing attitudes; it is about transforming practice to ensure that all patients, including those living in larger bodies, receive care that is equitable, compassionate, and just.

Authors' contribution: MCL and KD collaboratively developed the comprehensive search strategy. The initial search was conducted by MCL and the update was carried out by KD. Study selection and data extraction were performed by KD and EB. EB drafted the initial version of the results section, while KD authored the first drafts of all other sections and revised the results. KD prepared the final manuscript. All authors critically reviewed and approved the final version of the manuscript.

Acknowledgments: No acknowledgment.

Funding: The authors received no funding to conduct the project reported in this manuscript or to draft this manuscript.

Statement of conflict of interest: The authors declare no conflict of interest.

Generative Artificial Intelligence (AI) and AI-assisted technologies statement: The authors declare that no generative AI tools and AI-assisted technologies were used in the creation of this manuscript.

Ethical considerations: An ethics certificate is not required for a synthesis of existing literature, as it does not involve human participants or primary data collection.

Reçu/Received: 25 Juil/July 2025 **Publié/Published:** 15 Jan/Jan 2026

REFERENCES

Ak, E. S., Türkmen, A., Özbaş, A., & Fındık, Ü. Y. (2021). Examination of Attitudes of Nurses Working in Surgical Services Toward Obesity and Obese Patients. *Bariatric Surgical Practice and Patient Care*, *16*(3), 147–152. https://doi.org/10.1089/bari.2020.0072

Alberga, A. S., Edache, I. Y., Forhan, M., & Russell-Mayhew, S. (2019). Weight bias and health care utilization: a scoping review. *Primary Health Care Research & Development*, *20*, e116. https://doi.org/10.1017/s1463423619000227

Alberga, A. S., Pickering, B. J., Alix Hayden, K., Ball, G. D., Edwards, A., Jelinski, S., Nutter, S., Oddie, S., Sharma, A. M., & Russell-Mayhew, S. (2016). Weight bias reduction in health professionals: a systematic review. *Clinical Obesity*, *6*(3), 175–188. https://doi.org/10.1111/cob.12147

American Psychological Association. (2018). *Perception* (Updated April 19, 2018). In *APA dictionary of psychology*. https://dictionary.apa.org/perception

Barra, M., & Singh Hernandez, S. S. (2018). Too big to be seen: Weight-based discrimination among nursing students. *Nursing Forum*, *53*(4), 529–534. https://doi.org/10.1111/nuf.12282

Barrea, L., Framondi, L., R, D. I. M., Verde, L., Vetrani, C., Graziadio, C., Pugliese, G., Laudisio, D., Vitale, G., Iannicelli, A. M., Savastano, S., Colao, A., & Muscogiuri, G. (2021). The role of the nurse in the Obesity Clinic: a practical guideline. *Panminerva Medica*, *63*(4), 539–546. https://doi.org/10.23736/s0031-0808.21.04540-7

Benítez-Muñoz, J., Aguarón-García, M. J., Malagón-Aguilera, M. D. C., Cuesta-Martínez, R., Reig-Garcia, G., & Solà-Miravete, M. E. (2025). Weight Bias in Nursing: A Pilot Study on Feasibility and Negative Attitude Assessment Among Primary Care Nurses. *Nursing reports (Pavia, Italy)*, *15*(5), 168. https://doi.org/10.3390/nursrep15050168

Brown, I. (2006). Nurses' attitudes towards adult patients who are obese: literature review. *Journal of Advanced Nursing*, *53*(2), 221–232. https://doi.org/10.1111/j.1365-2648.2006.03718.x

Brydges, M., & Batt, A. M. (2023). Untangling the web: The need for theory, theoretical frameworks, and conceptual frameworks in paramedic research. *Paramedicine*, *20*(4), 89–93. https://doi.org/10.1177/27536386231177348

Cavaleri, R., Short, T., Karunaratne, S., & Chipchase, L. S. (2016). Weight stigmatisation in physiotherapy: a systematic review. *Physical Therapy Reviews*, *21*(1), 1–9. https://doi.org/10.1080/10833196.2016.1213976

Chivers, E. A., Yogeeswaran, K., Zubielevitch, E., & Sibley, C. G. (2022). Change in weight-based bias over a decade: A longitudinal nationally representative survey. *The Lancet Regional Health – Western Pacific*, *23*, 100450. https://doi.org/10.1016/j.lanwpc.2022.100450

Clark, B. (2021). Weight Is a Social Justice Issue. *Social Work Today*, *21*(2), 5-7.

Côté, M., Forouhar, V., Sacco, S., González-González, M., Baillot, A., Himmelstein, M., Hussey, B., Incollingo Rodriguez, A. C., Nagpal, T. S., Nutter, S., Patton, I., Puhl, R. M., Ramos Salas, X., Russell-Mayhew, S., & Alberga, A. S. (2025). Results of the 2024 International Weight Bias Summit: Establishing future research directions in the field. *International Journal of Obesity*. https://doi.org/10.1038/s41366-025-01975-3

Dallaire, C. (2015). La difficile relation des soins infirmiers avec le savoir. *Recherche en Soins Infirmiers*, *121*(2), 18–27. https://doi.org/10.3917/rsi.121.0018

Dunham, M. (2024). Obesity bias awareness decreases nursing students' bias toward patients with obesity. *Nursing*, *54*(2), 56–60. https://doi.org/10.1097/01.Nurse.0000998024.65699.09

Duval, K. (2025). *Complete Data Extraction Dataset for the Scoping Review on Nurses' and Nursing Students' Perceptions Toward People Living in Larger Bodies* (Version V1) Borealis. https://doi.org/doi:10.5683/SP3/4HAGJZ

Duval, K., Couturier, É., Laferrière, M.-C., Gagnon, M.-P., & Gallani, M. C. (2023). Nurses' and Nursing Students' Perceptions Toward People Living with Obesity: A Scoping Review Protocol. *Science of Nursing and Health Practices / Science infirmière et pratiques en santé, 6*(2), 77–90. https://doi.org/10.7202/1108910ar

Edache, I. Y., Kakinami, L., & Alberga, A. S. (2021). Weight bias and support of public health policies. *Canadian journal of public health = Revue canadienne de sante publique*, *112*(4), 758–765. https://doi.org/10.17269/s41997-020-00471-7

Fishbein, M., & Ajzen, I. (2010). *Predicting and changing behavior the reasoned action approach*. Psychology Press.

Fonoudi, M., Ewens, B., & Towell-Barnard, A. (2025). Weight Stigma Amongst Nurses and Nursing Students: A Scoping Review of Direct and Comparative Evidence. *Journal of advanced nursing*, *81*(9), 5806–5823. https://doi.org/10.1111/jan.16843

Fruh, S. M., Graves, R. J., Hauff, C., Williams, S. G., & Hall, H. R. (2021). Weight Bias and Stigma: Impact on Health. *Nursing Clinics of North America*, *56*(4), 479–493. https://doi.org/10.1016/j.cnur.2021.07.001

Fulton, M., Dadana, S., & Srinivasan, V. N. (2023). Obesity, Stigma, and Discrimination (Archived). In *StatPearls*. StatPearls Publishing.

George, T. P., DeCristofaro, C., & Murphy, P. F. (2019). Unconscious Weight Bias Among Nursing Students: A Descriptive Study. *Healthcare (Basel, Switzerland)*, *7*(3), 106. https://doi.org/10.3390/healthcare7030106

Gormley, N., & Melby, V. (2020). Nursing students' attitudes towards obese people, knowledge of obesity risk, and self-disclosure of own health behaviours: An exploratory survey. *Nurse Education Today*, *84*, 104232. https://doi.org/10.1016/j.nedt.2019.104232

Government of Canada. (2025, April 7). *Addressing Stigma: Towards a More Inclusive Health System*. https://www.canada.ca/en/public-health/corporate/publications/chief-public-health-officer-reports-state-public-health-canada/addressing-stigma-toward-more-inclusive-health-system.html

Gujral, H., Tea, C., & Sheridan, M. (2011). Evaluation of nurse's attitudes toward adult patients of size. *Surgery for obesity and related diseases : official journal of the American Society for Bariatric Surgery*, *7*(4), 536–540. https://doi.org/10.1016/j.soard.2011.03.008

Härgestam, M., Lindgren, L., & Jacobsson, M. (2024). Can equity in care be achieved for stigmatized patients? Discourses of ideological dilemmas in perioperative care. *BMC health services research*, *24*(1), 210. https://doi.org/10.1186/s12913-024-10580-5

Huizinga, M. M., Cooper, L. A., Bleich, S. N., Clark, J. M., & Beach, M. C. (2009). Physician respect for patients with obesity. *Journal of General Internal Medicine*, *24*(11), 1236–1239. https://doi.org/10.1007/s11606-009-1104-8

Joseph, E. C., & Raque, T. L. (2023). Feasibility of a Loving Kindness Intervention for Mitigating Weight Stigma in Nursing Students: A Focus on Self-Compassion. *Mindfulness*, *14*(4), 841–853. https://doi.org/10.1007/s12671-023-02094-8

Kerbyson, M., & Clark, K. D. (2024). Clinical observations of weight stigma among nursing students: A descriptive approach. *Obesity science & practice*, *10*(5), e70008. https://doi.org/10.1002/osp4.70008

Lacroix, E., Alberga, A., Russell-Mathew, S., McLaren, L., & von Ranson, K. (2017). Weight Bias: A Systematic Review of Characteristics and Psychometric Properties of Self-Report Questionnaires. *Obesity facts*, *10*(3), 223–237. https://doi.org/10.1159/000475716

Lawrence, B. J., Kerr, D., Pollard, C. M., Theophilus, M., Alexander, E., Haywood, D., & O'Connor, M. (2021). Weight bias among health care professionals: A systematic review and meta-analysis. *Obesity (Silver Spring, Md.)*, *29*(11), 1802–1812. https://doi.org/10.1002/oby.23266

Lazarou, C., & Kouta, C. (2010). The role of nurses in the prevention and management of obesity. *British journal of nursing (Mark Allen Publishing)*, *19*(10), 641–647. https://doi.org/10.12968/bjon.2010.19.10.48203

Le Bodo, Y., Blouin, C., Dumas, N., De Wals, P., & Laguë, J. (2017). The Quebec experience in promoting healthy lifestyles and preventing obesity: how can we do better?. *Obesity reviews : an official journal of the International Association for the Study of Obesity*, *18*(9), 967–986. https://doi.org/10.1111/obr.12559

Llewellyn, S., Connor, K., Quatraro, M., & Dye, J. H. (2023). Changes in weight bias after simulation in pre-license baccalaureate nursing students. *Teaching and Learning in Nursing*, *18*(1), 148–151. https://doi.org/10.1016/j.teln.2022.07.006

Martinussen, L. M., Petranca, L., & Sømhovd, M. J. (2018). The relationship between explicit and implicit attitudes towards drunk driving. *PloS One*, *13*(10), e0206124. https://doi.org/10.1371/journal.pone.0206124

Molloy, M. A., Sabol, V. K., Silva, S. G., & Guimond, M. E. (2016). Using Trigger Films as a Bariatric Sensitivity Intervention: Improving Nursing Students' Attitudes and Beliefs About Caring for Obese Patients. *Nurse Educator*, *41*(1), 19–24. https://doi.org/10.1097/nne.0000000000000225

Moore, C. H., Oliver, T. L., Dowdell, E. B., Randolph, J., & Davis, A. (2025). An Assessment of the Long-Term Efficacy of an Undergraduate Curriculum-Embedded Weight Bias Intervention in Practicing Registered Nurses. *Obesity science & practice*, *11*(2), e70072. https://doi.org/10.1002/osp4.70072

Moyo, P., & Felix, R. (2024). Nurses' obesity knowledge, attitudes and practices in private facilities in Oshana, Namibia. *Health SA = SA Gesondheid*, *29*, 2385. https://doi.org/10.4102/hsag.v29i0.2385

Munn, Z., Peters, M. D. J., Stern, C., Tufanaru, C., McArthur, A., & Aromataris, E. (2018). Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. *BMC Medical Research Methodology*, *18*(1), 143. https://doi.org/10.1186/s12874-018-0611-x

Oliver, T. L., Burrell, S. A., Furman, G. E., Diewald, L. K., Mariani, B., Starck, M. R., & Shenkman, R. (2023). Weight bias reduction intervention among nurse practitioner students using simulation-based experiences. *Journal of the American Association of Nurse Practitioners*, 10.1097/JXX.0000000000000956. Advance online publication. https://doi.org/10.1097/JXX.0000000000000956

Oliver, T. L., Furman, G. E., Shenkman, R., Diewald, L. K., Brace, M., & Mariani, B. (2024). Cultivating Inclusivity: A Pilot Study Utilizing Simulation-Based Approaches for Weight Bias Mitigation. *Clinical Simulation in Nursing*, *91*, N.PAG-N.PAG. https://doi.org/10.1016/j.ecns.2024.101551

Oliver, T. L., Qi, B. B., Diewald, L. K., Shenkman, R., & Kaufmann, P. G. (2022). Development of a weight bias reduction intervention for third-year nursing students. *Clinical Obesity*, *12*(2), e12498. https://doi.org/10.1111/cob.12498

Oliver, T. L., Qi, B. B., Shenkman, R., Diewald, L., & Smeltzer, S. C. (2020). Weight Sensitivity Training Among Undergraduate Nursing Students. *Journal of Nursing Education*, *59*(8), 453–456. https://doi.org/10.3928/01484834-20200723-06

Oliver, T. L., Shenkman, R., Diewald, L. K., & Smeltzer, S. C. (2021). Reflective journaling of nursing students on weight bias. *Nurse Education Today*, *98*, 104702. https://doi.org/10.1016/j.nedt.2020.104702

Ozaydin, T., & Kaya Tuncbeden, M. M. (2022). An investigation of the prejudice and stigmatization levels of nursing students towards obese individuals. *Archives of Psychiatric Nursing*, *40*, 109–114. https://doi.org/10.1016/j.apnu.2022.06.002

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., McGuinness, L. A., … Moher, D. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ (Clinical research ed.)*, *372*, n71. https://doi.org/10.1136/bmj.n71

Panza, G. A., Armstrong, L. E., Taylor, B. A., Puhl, R. M., Livingston, J., & Pescatello, L. S. (2018). Weight bias among exercise and nutrition professionals: a systematic review. *Obesity reviews : an official journal of the International Association for the Study of Obesity*, *19*(11), 1492–1503. https://doi.org/10.1111/obr.12743

Pearl, R. L. (2018). Weight Bias and Stigma: Public Health Implications and Structural Solutions. *Social Issues and Policy Review*, *12*(1), 146–182. https://doi.org/10.1111/sipr.12043

Peters, M. D. J., Godfrey, C., McInerney, P., Khalil, H., Larsen, P., Marnie, C., Pollock, D., Tricco, A. C., & Munn, Z. (2022). Best practice guidance and reporting items for the development of scoping review protocols. *JBI evidence synthesis*, *20*(4), 953–968. https://doi.org/10.11124/JBIES-21-00242

Poon, M.-Y., & Tarrant, M. (2009). Obesity: attitudes of undergraduate student nurses and registered nurses. *Journal of Clinical Nursing*, *18*(16), 2355–2365. https://doi.org/10.1111/j.1365-2702.2008.02709.x

Powell-Wiley, T. M., Poirier, P., Burke, L. E., Després, J. P., Gordon-Larsen, P., Lavie, C. J., Lear, S. A., Ndumele, C. E., Neeland, I. J., Sanders, P., St-Onge, M. P., & American Heart Association Council on Lifestyle and Cardiometabolic Health; Council on Cardiovascular and Stroke Nursing; Council on Clinical Cardiology; Council on Epidemiology and Prevention; and Stroke Council (2021). Obesity and Cardiovascular Disease: A Scientific Statement From the American Heart Association. *Circulation*, *143*(21), e984–e1010. https://doi.org/10.1161/CIR.0000000000000973

Public Health Agency of Canada. (2018, May 28). *Key Health Inequalities in Canada: A National Portrait.* https://www.canada.ca/en/public-health/services/publications/science-research-data/key-health-inequalities-canada-national-portrait-executive-summary.html

Public Health Agency of Canada. (2025, June 5). *Obesity statistics in Canada: Report*. Government of Canada https://www.canada.ca/en/public-health/services/publications/healthy-living/obesity-statistics-canada.html

Puhl, R. M. (2022). Weight stigma, policy initiatives, and harnessing social media to elevate activism. *Body Image*, *40*, 131–137. https://doi.org/https://doi.org/10.1016/j.bodyim.2021.12.008

Robstad, N., Siebler, F., Söderhamn, U., Westergren, T., & Fegran, L. (2018). Design and psychometric testing of instruments to measure qualified intensive care nurses' attitudes toward obese intensive care patients. *Research in Nursing & Health*, *41*(6), 525–534. https://doi.org/10.1002/nur.21914

Robstad, N., Söderhamn, U., & Fegran, L. (2018). Intensive care nurses' experiences of caring for obese intensive care patients: A hermeneutic study. *Journal of Clinical Nursing*, *27*(1-2), 386–395. https://doi.org/10.1111/jocn.13937

Robstad, N., Westergren, T., Siebler, F., Söderhamn, U., & Fegran, L. (2019). Intensive care nurses' implicit and explicit attitudes and their behavioural intentions towards obese intensive care patients. *Journal of Advanced Nursing*, *75*(12), 3631–3642. https://doi.org/10.1111/jan.14205

Rodríguez-Gázquez, M. L. A., Ruiz-Iglesias, A., & González-López, J. R. (2020). Changes in anti-fat attitudes among undergraduate nursing students. *Nurse Education Today*, *95*, 104584. https://doi.org/10.1016/j.nedt.2020.104584

Rubino, F., Puhl, R. M., Cummings, D. E., Eckel, R. H., Ryan, D. H., Mechanick, J. I., Nadglowski, J., Ramos Salas, X., Schauer, P. R., Twenefour, D., Apovian, C. M., Aronne, L. J., Batterham, R. L., Berthoud, H. R., Boza, C., Busetto, L., Dicker, D., De Groot, M., Eisenberg, D., . . . Dixon, J. B. (2020). Joint international consensus statement for ending stigma of obesity. *Nature Medicine*, *26*(4), 485–497. https://doi.org/10.1038/s41591-020-0803-x

Rubino, F., Cummings, D. E., Eckel, R. H., Cohen, R. V., Wilding, J. P. H., Brown, W. A., Stanford, F. C., Batterham, R. L., Farooqi, I. S., Farpour-Lambert, N. J., le Roux, C. W., Sattar, N., Baur, L. A., Morrison, K. M., Misra, A., Kadowaki, T., Tham, K. W., Sumithran, P., Garvey, W. T., . . . Mingrone, G. (2025). Definition and diagnostic criteria of clinical obesity. *The Lancet Diabetes & Endocrinology*, *13*(3), 221–262. https://doi.org/10.1016/s2213-8587(24)00316-4

Safaei, M., Sundararajan, E. A., Driss, M., Boulila, W., & Shapi'i, A. (2021). A systematic literature review on obesity: Understanding the causes & consequences of obesity and reviewing various machine learning approaches

used to predict obesity. *Computers in Biology and Medicine*, *136*, 104754. https://doi.org/10.1016/j.compbiomed.2021.104754

Sang-Sook, H. A. N., Jeong-Won, H. A. N., & Jung-Min, L. E. E. (2015). Development of an instrument for assessment of Korean nurses' attitudes toward obese patients. *Japan Journal of Nursing Science*, *12*(3), 249–257. https://doi.org/10.1111/jjns.12064

Shelton, S. A. (2016). "As their waistlines recede": Tracing and challenging the fat quest in young adult literature. *Fat Studies*, *5*(2), 172–190. https://doi.org/10.1080/21604851.2016.1146117

Siddiqi, A., Brown, R., Nguyen, Q. C., Loopstra, R., & Kawachi, I. (2015). Cross-national comparison of socioeconomic inequalities in obesity in the United States and Canada. *International Journal for Equity in Health*, *14*, 116. https://doi.org/10.1186/s12939-015-0251-2

Styk, W., Samardakiewicz, M., & Zmorzynski, S. (2024). Weight biases, body image and obesity risk knowledge in the groups of nursing students from Poland and Nigeria. *Scientific reports*, *14*(1), 4383. https://doi.org/10.1038/s41598-024-54904-1

Tanneberger, A., & Ciupitu-Plath, C. (2018). Nurses' Weight Bias in Caring for Obese Patients: Do Weight Controllability Beliefs Influence the Provision of Care to Obese Patients? *Clinical Nursing Research*, *27*(4), 414–432. https://doi.org/10.1177/1054773816687443

The EndNote Team. (2013). *EndNote* (Version EndNote X9) [Computer software]. Clarivate Analytics.

Tomiyama, A. J., Carr, D., Granberg, E. M., Major, B., Robinson, E., Sutin, A. R., & Brewis, A. (2018). How and why weight stigma drives the obesity 'epidemic' and harms health. *BMC Medicine*, *16*(1), 123. https://doi.org/10.1186/s12916-018-1116-5

Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., Moher, D., Peters, M. D. J., Horsley, T., Weeks, L., Hempel, S., Akl, E. A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A., Wilson, M. G., Garritty, C., . . . Straus, S. E. (2018). PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. *Annals of Internal Medicine*, *169*(7), 467–473. https://doi.org/10.7326/M18-0850

Usta, E., Bayram, S., & Altınbaş Akkaş, Ö. (2021). Perceptions of nursing students about individuals with obesity problems: Belief, attitude, phobia. *Perspectives in Psychiatric Care*, *57*(2), 777–785. https://doi.org/10.1111/ppc.12613

Veritas Health Innovation. (2023). *Covidence systematic review software*. www.covidence.org

Wang, Y., Ding, Y., Song, D., Zhu, D., & Wang, J. (2016). Attitudes Toward Obese Persons and Weight Locus of Control in Chinese Nurses: A Cross-sectional Survey. *Nursing Research*, *65*(2), 126–132. https://doi.org/10.1097/nnr.0000000000000145

Ward-Smith, P., & Peterson, J. A. (2016). Development of an instrument to assess nurse practitioner attitudes and beliefs about obesity. *Journal of the American Association of Nurse Practitioners*, *28*(3), 125–129. https://doi.org/10.1002/2327-6924.12281

Willenbrock, D., & Rose, S. (2025). Validation of the Nurse Practitioner Knowledge and Attitudes of Patient Obesity Scale: A pilot study. *Journal of the American Association of Nurse Practitioners*, *37*(1), 21–28. https://doi.org/10.1097/JXX.0000000000001097

World Health Organization. (2025, July 17). *Nursing and midwifery*. https://www.who.int/news-room/fact-sheets/detail/nursing-and-midwifery

Wu, Y. K., & Berry, D. C. (2018). Impact of weight stigma on physiological and psychological health outcomes for overweight and obese adults: A systematic review. *Journal of Advanced Nursing*, *74*(5), 1030–1042. https://doi.org/10.1111/jan.13511

Younas, A., & Quennell, S. (2019). Usefulness of nursing theory-guided practice: an integrative review. *Scandinavian journal of caring sciences*, *33*(3), 540–555. https://doi.org/10.1111/scs.12670

Yılmaz, H. Ö., & Yabancı Ayhan, N. (2019). Is there prejudice against obese persons among health professionals? A sample of student nurses and registered nurses. *Perspectives in Psychiatric Care*, *55*(2), 262–268. https://doi.org/10.1111/ppc.12359

Zuzelo, P. R., & Seminara, P. (2006). Influence of registered nurses' attitudes toward bariatric patients on educational programming effectiveness. *Journal of Continuing Education in Nursing*, *37*(2), 65–73. https://doi.org/10.3928/00220124-20060201-02

Table 4

Concepts Under Study and Key Findings

Self-reported Perceptions (n=31 studies)				
Authors	Title	Year	Country	Main Findings
Ak, E. S., Türkmen, A., Özbaş, A., & Fındık, Ü. Y.	Examination of Attitudes of Nurses Working in Surgical Services Toward Obesity and Obese Patients	2021	Turkey	Nurses generally held a positive perspective on obesity and PLLB.
Barra, M., & Singh Hernandez, S. S.	Too big to be seen: Weight-based discrimination among nursing students	2018	United States	Most nursing students initially held biased perceptions, which improved after an intervention. Some students expressed regret and remorse regarding their initial biases after receiving the intervention.
Benítez-Muñoz, J., Aguarón-García, M.J., Malagón-Aguilera, M.d.C., Cuesta-Martínez, R., Reig-Garcia, G., & Solà-Miravete, M.E.	Weight Bias in Nursing: A Pilot Study on Feasibility and Negative Attitude Assessment Among Primary Care Nurses	2025	Spain	They identified moderate weight-biased attitudes among Spanish nurses, particularly among men and normal-weight individuals, while personal experiences of weight discrimination were associated with greater sensitivity.
Gormley, N., & Melby, V.	Nursing students' attitudes towards obese people, knowledge of obesity risk, and self-disclosure of own health behaviours: An exploratory survey	2020	United Kingdom	Nursing students expressed neutral attitudes toward PLLB despite limited knowledge about obesity.
Gujral, H., Tea, C., & Sheridan, M.	Evaluation of nurse's attitudes toward adult patients of size	2011	United States	While bariatric sensitivity training could positively influence attitudes, it did not affect underlying beliefs.
Härgestam, M., Lindgren, L., & Jacobsson, M.	Can equity in care be achieved for stigmatized patients? Discourses of ideological dilemmas in perioperative care	2024	Sweden	They described an ideological dilemma among nurse anesthetists in Sweden who intended to provide equitable care but expressed frustration toward PLLB, whom they viewed as atypical and resource-demanding.

Joseph, E. C., & Raque, T. L.	Feasibility of a Loving Kindness Intervention for Mitigating Weight Stigma in Nursing Students: A Focus on Self-Compassion	2023	United States	The authors reported no significant change in attitudes following an intervention and suggested that their participants may have endorsed higher levels of weight stigma than they would have prior to the pandemic.
Kerbyson, M., & Clark, K. D.	Clinical observations of weight stigma among nursing students: A descriptive approach	2024	United States	More than half of the nursing student participants exhibited a high level of weight bias, indicating a significant presence of fat phobia within their sample.
Llewellyn, S., Connor, K., Quatraro, M., & Dye, J. H.	Changes in weight bias after simulation in pre-license baccalaureate nursing students	2023	United States	Nursing students may have had a negative or judgmental view toward PLLB that shifted toward cultural humility, indicating that nurses started to recognize body size diversity and power imbalances toward PLLB by the end of their study.
Molloy, M. A., Sabol, V. K., Silva, S. G., & Guimond, M. E.	Using Trigger Films as a Bariatric Sensitivity Intervention: Improving Nursing Students' Attitudes and Beliefs About Caring for Obese Patients	2016	United States	An educational intervention improved attitudes temporarily but highlighted the need for reminders to maintain these improved perceptions over time.
Moore, C. H., Oliver, T. L., Dowdell, E. B., Randolph, J., & Davis, A.	An Assessment of the Long-Term Efficacy of an Undergraduate Curriculum-Embedded Weight Bias Intervention in Practicing Registered Nurses	2025	United States	Reduced weight bias was sustained among practicing nurses up to six years after intervention, though no significant differences were found between groups.
Moyo, P., & Felix, R.	Nurses' obesity knowledge, attitudes and practices in private facilities in Oshana, Namibia	2024	Namibia	Less than half of nurses in Namibia displayed positive attitudes, and knowledge and practices related to obesity were generally low.
Oliver, T. L., Burrell, S. A., Furman, G. E., Diewald, L. K., Mariani, B., Starck, M. R., & Shenkman, R.	Weight bias reduction intervention among nurse practitioner students using simulation-based experiences	2023	United States	The Attitudes Towards Obese Persons scores were unchanged from before intervention to after intervention. No significant differences existed between preintervention and postintervention Beliefs About Obese Persons scores.

Oliver, T. L., Furman, G. E., Shenkman, R., Diewald, L. K., Brace, M. & Mariani, B.	Cultivating Inclusivity: A Pilot Study Utilizing Simulation-Based Approaches for Weight Bias Mitigation	2024	United States	They did not achieve statistically significant improvements in all areas, including beliefs and attitudes.
Oliver, T. L., Qi, B. B., Diewald, L. K., Shenkman, R., & Kaufmann, P. G.	Development of a weight bias reduction intervention for third-year nursing students	2022	United States	Results showed improved attitudes and beliefs toward PLLB post intervention.
Oliver, T. L., Qi, B.-B., Shenkman, R., Diewald, L., & Smeltzer, S. C.	Weight Sensitivity Training Among Undergraduate Nursing Students	2020	United States	A weight sensitivity training in undergraduate nursing programs could improve students' attitudes and beliefs toward PLLB.
Oliver, T. L., Shenkman, R., Diewald, L. K., & Smeltzer, S. C.	Reflective journaling of nursing students on weight bias	2021	United States	Reflective journaling increased students' awareness of their own biases.
Ozaydin, T., & Kaya Tuncbeden, M. M.	An investigation of the prejudice and stigmatization levels of nursing students towards obese individuals	2022	Turkey	The authors found a high level of prejudice and stigmatization among nursing students.
Poon, M., & Tarrant, M.	Obesity: attitudes of undergraduate student nurses and registered nurses	2009	China	Both registered nurses and nursing students were unlikely to attribute positive characteristics to PLLB. Most participants believed that PLLB enjoy food excessively, overeat, and are shapeless, slow, and unattractive. Many also believed that hospitalized PLLB should be placed on a restrictive diet.
Robstad, N., Siebler, F., Söderhamn, U., Westergren, T., & Fegran, L.	Design and psychometric testing of instruments to measure qualified intensive care nurses' attitudes toward obese intensive care patients	2018	Norway	Intensive care nurses have been shown to prefer thin patients over thick patients.
Robstad, N., Westergren, T., Siebler, F., Söderhamn, U., & Fegran, L.	Intensive care nurses' implicit and explicit attitudes and their behavioural intentions towards obese intensive care patients	2019	Norway	Men nurses were more inclined to believe that weight can easily be controlled. They would also express their negative feelings more readily toward PLLB as compared to women nurses.

Rodríguez-Gázquez, M. d. l. A., Ruiz-Iglesias, A., & González-López, J. R.	Changes in anti-fat attitudes among undergraduate nursing students	2020	Spain	Anti-fat prejudices among nursing students declined progressively throughout their training but persisted even after the completion of their undergraduate program.
Sang-Sook, H. A. N., Jeong-Won, H. A. N., & Jung-Min, L. E. E.	Development of an instrument for assessment of Korean nurses' attitudes toward obese patients.	2015	South Korea	Nurses perceived PLLB as passive and socially maladapted, often feeling repulsed, stressed and burdened by the care demands.
Styk, W., Samardakiewicz, M., & Zmorzynski, S.	Weight biases, body image and obesity risk knowledge in the groups of nursing students from Poland and Nigeria	2024	Poland	While cultural differences influenced attitudes in Poland and Nigeria, negative views remained prevalent.
Tanneberger, A., & Ciupitu-Plath, C.	Nurses' Weight Bias in Caring for Obese Patients: Do Weight Controllability Beliefs Influence the Provision of Care to Obese Patients?	2018	Germany	Nurses held strong stereotypes and some admitted to differential treatment.
Usta, E., Bayram, S., & Altinbas Akkas, O.	Perceptions of nursing students about individuals with obesity problems: Belief, attitude, phobia	2021	Turkey	They reported moderate levels of fat phobia and negative beliefs, noting that students attributed obesity to individual responsibility and were less inclined to take care of PLLB.
Wang, Y., Ding, Y., Song, D., Zhu, D., & Wang, J.	Attitudes toward obese persons and weight locus of control in Chinese nurses: A cross-sectional survey	2016	China	While stigmatizing attitudes were present among Chinese nurses, their overall perceptions were relatively neutral or even slightly positive compared to Western counterparts.
Ward-Smith, P., & Peterson, J. A.	Development of an instrument to assess nurse practitioner attitudes and beliefs about obesity	2016	United States	Nurses held negative attitudes and beliefs toward overweight individuals and PLLB, perceiving them as less suitable for marriage, disordered, less healthy, and generally inferior and less successful than those of normal weight.
Willenbrock, D., & Rose, S.	Validation of the Nurse Practitioner Knowledge and Attitudes of Patient Obesity Scale: A pilot study	2024	United States	Nurse practitioners generally held non-stigmatizing views toward PLLB, reflecting neutral to slightly positive perceptions overall.

Yılmaz, H. Ö., & Yabancı Ayhan, N.	Is there prejudice against obese persons among health professionals? A sample of student nurses and registered nurses	2019	Turkey	Both students and registered nurses had negative attitudes, especially those without lived experience of obesity.
Zuzelo, P. R., & Seminara, P.	Influence of registered nurses' attitudes toward bariatric patients on educational programming effectiveness	2006	United States	Nurses generally held positive attitudes toward obese adult patients and were keenly concerned with providing respectful patient care, although they also noted concerns about safety and workload.

Influencing factors (n=7 studies)				
Authors	Title	Year	Country	Main Findings
Ak, E. S., Türkmen, A., Özbaş, A., & Fındık, Ü. Y.	Examination of Attitudes of Nurses Working in Surgical Services Toward Obesity and Obese Patients	2021	Turkey	They identified several sociodemographic and professional characteristics associated with more negative attitudes. Nurses aged between 40 and 49, women nurses, those with 16 years or more of experience, those working in clinical training units, and those caring for more than three PLLB daily expressed more negative views. By contrast, nurses over 50 showed more positive attitudes, which may reflect greater maturity and tolerance.
Joseph, E. C., & Raque, T. L.	Feasibility of a Loving Kindness Intervention for Mitigating Weight Stigma in Nursing Students: A Focus on Self-Compassion	2023	United States	Self-compassion was significantly associated with lower levels of weight bias, suggesting that incorporating such practices into nursing education could reduce stigma.
Kerbyson, M., & Clark, K. D.	Clinical observations of weight stigma among nursing students: A descriptive approach	2024	United States	Exposure to weight stigma in clinical settings negatively affected nursing students' ability to provide affirming care. Over a quarter of participants stated that observing stigmatizing behaviors from healthcare professionals hindered their capacity to deliver respectful care and influenced their feelings toward patients, including apprehension, guilt, and dread. They also highlighted that limited access to assistive devices, such as gait belts and Hoyer lifts, contributed to a work environment where nurses' fear of injury could be redirected toward patients themselves. In this

				context, resource constraints fostered perceptions of patients with obesity as burdensome.
Moyo, P., & Felix, R.	Nurses' obesity knowledge, attitudes and practices in private facilities in Oshana, Namibia	2024	Namibia	Nurses with greater knowledge about obesity were more likely to hold favorable attitudes. A significant correlation between knowledge and attitude scores supported the idea that better understanding of obesity's complexity helps counteract the tendency to blame patients and promotes more equitable care.
Styk, W., Samardakiewicz, M., & Zmorzynski, S.	Weight biases, body image and obesity risk knowledge in the groups of nursing students from Poland and Nigeria	2024	Poland	They explored how culture, knowledge, and psychosocial factors influence weight bias among nursing students in Poland and Nigeria. While no significant differences in fat phobia were found, Polish students demonstrated more positive beliefs and greater knowledge of obesity-related risks. Among Polish students, more knowledge correlated with more favorable attitudes and lower fat phobia scores. Beliefs about controllability and culturally shaped body image perceptions also influenced students' attitudes.
Wang, Y., Ding, Y., Song, D., Zhu, D., & Wang, J.	Attitudes toward obese persons and weight locus of control in Chinese nurses: A cross-sectional survey	2016	China	Nurses who believed obesity was caused by external factors such as genetics or the environment were more likely to express positive attitudes toward PLLB. Nurses with more experience caring for PLLB and those with specialist status also demonstrated more favorable views.
Willenbrock, D., & Rose, S.	Validation of the Nurse Practitioner Knowledge and Attitudes of Patient Obesity Scale: A pilot study	2024	United States	Nurse practitioners who had received continuing education held fewer stigmatizing views and demonstrated greater medical awareness of obesity, highlighting the effectiveness of targeted educational interventions in reducing bias.

Implicit attitudes, stereotypes and bias (n=5 studies)				
Authors	Title	Year	Country	Main Findings

Dunham, M	Obesity bias awareness decreases nursing students' bias toward patients with obesity	2024	United States	They observed a modest decrease in implicit bias following an educational intervention, although bias tended to increase with higher BMI levels.
George, T. P., DeCristofaro, C., & Murphy, P. F.	Unconscious Weight Bias Among Nursing Students: A Descriptive Study	2019	United States	Many participants held implicit anti-fat biases, despite believing they were unbiased.
Joseph, E. C., & Raque, T. L.	Feasibility of a Loving Kindness Intervention for Mitigating Weight Stigma in Nursing Students: A Focus on Self-Compassion	2023	United States	They evaluated the impact of a self-compassion loving kindness meditation on implicit bias and found no significant reduction in weight bias post-intervention. They suggested that the complexity and multiplicity of factors contributing to weight stigma may partly explain the intervention's limited effectiveness.
Robstad, N., Siebler, F., Söderhamn, U., Westergren, T., & Fegran, L.	Design and psychometric testing of instruments to measure qualified intensive care nurses' attitudes toward obese intensive care patients	2018	Norway	Intensive care nurses exhibited strong implicit preferences for thin individuals over PLLB. Their studies also indicated that nurses perceived PLLB as lazier than patients of average weight, further reinforcing implicit negative stereotypes.
Robstad, N., Westergren, T., Siebler, F., Söderhamn, U., & Fegran, L.	Intensive care nurses' implicit and explicit attitudes and their behavioural intentions towards obese intensive care patients	2019	Norway	Intensive care nurses exhibited strong implicit preferences for thin individuals over PLLB. Their studies also indicated that nurses perceived PLLB as lazier than patients of average weight, further reinforcing implicit negative stereotypes.

Professional competencies (n=3 studies)				
Authors	Title	Year	Country	Main Findings
Joseph, E. C., & Raque, T. L.	Feasibility of a Loving Kindness Intervention for Mitigating Weight Stigma in Nursing Students: A Focus on Self-Compassion	2023	United States	They assessed compassionate care using a standardized scale but found no significant difference between intervention and control groups, suggesting that a single session of Loving Kindness Meditation may be insufficient to affect deeper competencies.
Kerbyson, M., & Clark, K. D.	Clinical observations of weight stigma among nursing students: A descriptive approach	2024	United States	They explored students' confidence in using assistive devices and found particularly low levels of self-reported preparedness, especially regarding stand assist tools. They also reported that witnessing weight stigma in clinical environments undermined

				students' sense of competence and readiness to deliver respectful care.
Oliver, T. L., Furman, G. E., Shenkman, R., Diewald, L. K., Brace, M., & Mariani, B.	Cultivating Inclusivity: A Pilot Study Utilizing Simulation-Based Approaches for Weight Bias Mitigation	2024	United States	In their simulation-based intervention, the authors observed an improvement in communication self-efficacy but no measurable change in observed communication performance. Nevertheless, the opportunity to engage in simulated interactions allowed students to reflect on their own attitudes and develop strategies to provide more compassionate and inclusive care.
Intended and reported behaviours (n=4 studies)				
Authors	Title	Year	Country	Main Findings
Moore, C. H., Oliver, T. L., Dowdell, E. B., Randolph, J., & Davis, A.	An Assessment of the Long-Term Efficacy of an Undergraduate Curriculum-Embedded Weight Bias Intervention in Practicing Registered Nurses	2025	United States	Although participants strived to provide equal care to PLLB, they acknowledged that it required more resources, time, and effort. This additional burden, while often concealed from patients, was associated with increased stress and feelings of strain.
Moyo, P., & Felix, R.	Nurses' obesity knowledge, attitudes and practices in private facilities in Oshana, Namibia	2024	Namibia	While a majority stated they treated obesity like any other condition and regularly provided nutritional advice and obesity risk information, fewer than 40% demonstrated what the authors classified as "good" obesity practices.
Robstad, N., Siebler, F., Söderhamn, U., Westergren, T., & Fegran, L.	Design and psychometric testing of instruments to measure qualified intensive care nurses' attitudes toward obese intensive care patients	2018	Norway	Nurses in general intended to help PLLB immediately.
Robstad, N., Westergren, T., Siebler, F., Söderhamn, U., & Fegran, L.	Intensive care nurses' implicit and explicit attitudes and their behavioural intentions towards obese intensive care patients	2019	Norway	Men nurses showed a slightly lower intention to help compared to their women counterparts.
Experiences (n=3 studies)				

Authors	Title	Year	Country	Main Findings
Dunham, M	Obesity bias awareness decreases nursing students' bias toward patients with obesity	2024	United States	Nursing students with higher BMI reported significantly more personal experiences of weight bias. The study suggested that this experiential exposure may contribute to the observed reduction in weight bias following targeted educational interventions.
Kerbyson, M., & Clark, K. D.	Clinical observations of weight stigma among nursing students: A descriptive approach	2024	United States	Over half of nursing students had observed weight stigma behaviors in clinical settings, and a quarter admitted to personally engaging in such behaviors. These real-world encounters generated emotional reactions such as guilt, apprehension, or a push toward advocacy. However, students also reported that observing stigma negatively affected their ability to provide respectful care.
Robstad, N., Söderhamn, U., & Fegran, L.	Intensive care nurses' experiences of caring for obese intensive care patients: A hermeneutic study	2018	Norway	The findings were marked by ambivalence: nurses expressed a desire to provide equal and respectful care to all patients but described caring for PLLB as emotionally and physically demanding due to their vulnerability, size-related challenges, and perceived dissimilarity. Frustration emerged particularly from the belief that obesity was self-inflicted. Some participants even questioned whether patients with obesity were entitled to the same level of care, revealing a deep ethical discomfort shaped by stigma.

Supplementary file

The Search Strategies for Each Database

CINAHL Plus with Full Text (EBSCO)			
#	Question	January 11, 2024	June 10, 2025
S1	TI (weightism OR "anti-fat") OR AB (weightism OR "anti-fat")	131	144
S2	(MH "Weight Bias") OR (MH "Attitude to Obesity")	938	1,076
S3	S1 OR S2	1,023	1,165
S4	TI (fat OR weight OR obese* OR obesity* OR overweight* OR fatness OR "body size") OR AB (fat OR weight OR obese* OR obesity* OR overweight* OR fatness OR "body size")	323,968	332,271
S5	(MH "Obesity+")	115,904	120,384
S6	S4 OR S5	348,056	358,522
S7	TI (perception* OR attitude* OR stigma* OR prejudice* OR discrimination* OR belief* OR stereotype* OR phobia OR bias OR shaming) OR AB (perception* OR attitude* OR stigma* OR prejudice* OR discrimination* OR belief* OR stereotype* OR phobia OR bias OR shaming)	391,747	419,235
S8	(MH "Prejudice") OR (MH "Attitude") OR (MH "Stigma") OR (MH "Discrimination")	56,989	61,94
S9	S7 OR S8	415,387	444,991
S10	S6 AND S9	18,816	20,115
S11	S3 OR S10	19,143	20,466
S12	TI (nurse* OR "nursing student*" OR "nursing staff*") OR AB (nurse* OR "nursing student*" OR "nursing staff*")	420,296	416,199
S13	(MH "Nurses+") OR (MH "Nurse Attitudes") OR (MH "Students, Nursing+")	297,706	320,074
S14	S12 OR S13	547,565	558,376
S15	S11 AND S14	961	1,016
S16	S11 AND S14 Limiters - Publication Date: 20240101-20250610		71

PubMed			
#	Query	January 11, 2024	June 10, 2025
1	weightism[Title/Abstract] OR "anti-fat"[Title/Abstract]	204	246
2	"Weight Prejudice"[Mesh]	227	313
3	#1 OR #2	413	535
4	fat[Title/Abstract] OR weight[Title/Abstract] OR obese*[Title/Abstract] OR obesity*[Title/Abstract] OR overweight*[Title/Abstract] OR fatness[Title/Abstract] OR "body size"[Title/Abstract]	1,500,105	1,618,845
5	"Overweight"[Mesh]	278,140	296,154
6	#4 OR #5	1,536,591	1,656,122
7	perception*[Title/Abstract] OR attitude*[Title/Abstract] OR stigma*[Title/Abstract] OR prejudice*[Title/Abstract] OR discrimination*[Title/Abstract] OR belief*[Title/Abstract] OR stereotype*[Title/Abstract] OR phobia[Title/Abstract] OR bias[Title/Abstract] OR shaming[Title/Abstract]	1,020,867	1,139,939
8	"Prejudice"[Mesh:NoExp] OR "Attitude"[Mesh:NoExp] OR "Social Stigma"[Mesh]	90,766	94,513
9	#7 OR #8	1,058,767	1,177,898
10	#6 AND #9	42,468	47,619
11	#3 OR #10	42,502	47,663
12	nurse*[Title/Abstract] OR "nursing student*"[Title/Abstract] OR "nursing staff*"[Title/Abstract]	351,532	378,822
13	"Nurses"[Mesh] OR "Nursing Staff"[Mesh] OR "Students, Nursing"[Mesh]	190,770	198,57
14	#12 OR #13	433,498	461,571
15	#11 AND #14	1,002	1,113
16	#15 AND ("2024/01/11"[Date - Publication]: "3000"[Date - Publication])		116

PsycINFO (OVID)			
#	Query	January 11, 2024	June 10, 2025
1	(weightism or "anti-fat").ab,id,ti.	250	290
2	Obesity (Attitudes Toward)/	541	607
3	1 or 2	719	808
4	(fat or weight or obese* or obesity* or overweight* or fatness or "body size").ab,id,ti.	127,183	133,887
5	overweight/ or obesity/	31,015	32,821
6	4 or 5	127,313	134,021
7	(perception* or attitude* or stigma* or prejudice* or discrimination* or belief* or stereotype* or phobia or bias or shaming).ab,id,ti.	918,743	979,421
8	stigma/ or prejudice/ or implicit attitudes/ or social discrimination/ or explicit attitudes/ or Discrimination/	39,074	43,355
9	7 or 8	920,805	981,573
10	6 and 9	19,388	20,729
11	3 or 10	19,466	20,814
12	(nurse* or "nursing student*" or "nursing staff*").ab,id,ti.	88,156	94,390
13	exp nurses/ or nursing students/	45,171	49,837
14	12 or 13	90,085	96,500
15	11 and 14	398	431
16	limit 15 to yr="2024 -Current"		10