Weight Stigma Responses: Patient Perceptions and Experiences of Interactions With Healthcare Professionals Across Healthcare Settings—A Qualitative Evidence Synthesis Protocol

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Abstract

Background: Weight stigma is enacted by healthcare providers across healthcare settings where it has been consistently shown to contribute to poor physical health outcomes and the maintenance of obesity via physiological, cognitive, emotional and behavioural pathways. Despite key stakeholders identifying obesity as a disease, people with obesity continue to experience denigration and discrimination, particularly in healthcare settings. Qualitative studies which capture the experience of enacted weight stigma from the patient perspective can increase awareness of how stigma presents within patient-provider interactions and ultimately inspire change in healthcare provision. The current review aims to systematically search for and synthesise enacted weight stigma experienced in primary, secondary and tertiary healthcare settings, explicitly from the patient perspective. Methods: Electronic searches will be conducted in PubMed, Medline, PsycInfo, Cinahl, Embase and Scopus to locate relevant studies published in English from May 2011. Two reviewers will independently conduct title and abstract screening and full text screening, any disagreements will be resolved through discussion with a third reviewer. The methodological quality of the included studies will be appraised using the critical appraisal skills programme (CASP) check list. A thematic synthesis will be conducted by the lead author in collaboration with the review team. Confidence in the review findings will be assessed by the review team using GRADE CERQual. Discussion: It is anticipated that the findings of the review will facilitate a deep and broad understanding of the patient experience to inform best practice and future intervention design.

Keywords

weight stigma, weight-based discrimination, weight bias, obesity, patient-provider interactions, qualitative research, qualitative studies, qualitative synthesis

Introduction

Rationale

Obesity is a chronic relapsing disease typified by the accumulation of excess adiposity which is associated with acute health burdens including cardiovascular disease (Heslehurst et al., 2015), type 2 diabetes mellitus, hypertension and premature mortality (Guh et al., 2009). According to the World Health Organisation (2020) the risk of comorbidities associated with obesity (body mass index (BMI) ≥ 30 kg/m²)
increases with BMI. However, research has shown that the widespread stigma and discrimination experienced by those living with obesity is a stronger predictor of poor health outcomes than BMI (Tomiyama et al., 2018; Pearl et al., 2017).

Stigma is a complex construct to describe given the variability of its definition in the literature (Goffman, 1963; Jones, 1984; Crocker et al., 1998). For the purpose of this review we refer to Link and Phelan’s (2001) conceptualisation of stigma which describes stigma as the simultaneous occurrence of four interacting components that exist in the context of a power differential which facilitates stigma to unfold. The first component is the distinguishing and labelling of a person as ‘different’. The second component occurs when these labelled differences are associated with undesirable attributes influenced by cultural beliefs and linked to negative stereotypes. This stage reflects Goffman’s seminal work where stigma is observed as a “relationship between an attribute and a stereotype” (1963) leading to the third component, the ‘othering’ of those perceived to be different. The fourth component is the accumulation of the previous components (Abu-Odeh, 2014) resulting in the moralisation of obesity which facilitates the denigration and devaluation of the stigmatised person incurring a loss of status and discrimination leading to unequal outcomes (Link et al., 2001; Puhl & Heuer, 2009; Thiel et al., 2020; Hunger et al., 2015).

Weight bias is described as having negative beliefs and attitudes towards people living with overweight and obesity (Andreyeva et al., 2008). It is theoretically understood as originating from false and negative attributions around the causality and controllability of weight (Puhl et al., 2015). Weight stigma is instigated by weight bias and facilitated by social norms resulting in the social devaluation and denigration of people living with obesity (Phelan et al., 2008). Weight stigma is manifested through actions that can be exclusionary and discriminatory resulting in the marginalisation of people living with obesity.

Weight stigma is prevalent across healthcare settings (Lawrence et al., 2021; Puhl et al., 2021) where it has been consistently shown to contribute to poor physical health outcomes and the maintenance of obesity via physiological (Daly et al., 2019) cognitive, emotional and behavioural pathways (Tomiyama et al., 2018; Sarwer & Heinberg, 2020; Gerend et al., 2020). In addition to physical ill health, experiencing weight stigma is associated with poor psychosocial outcomes (Puhl et al., 2020) and an increased risk of depression, anxiety and suicidality (Hunger et al., 2015). A scoping review on the effects of weight bias experienced in primary healthcare settings reported that enacted weight stigma can influence patients expectation of differential healthcare treatment which negatively impacts healthcare utilisation, ultimately resulting in poor health outcomes (Alberga et al., 2019). Additionally, research highlighted perceived weight stigma as a barrier to both the prescription and uptake of alternative interventions to lifestyle interventions such as medications and metabolic surgery which may be more beneficial to patient outcomes (Grannell et al., 2021).

Weight stigma research is largely driven by theory (Link et al., 2001) and focused on quantifiable outcomes (Puhl et al., 2021; Bidstrup et al., 2021; Lee et al., 2021) with inadequate representation of the perspectives of those that are afflicted by it (Puhl & Heuer, 2009). This can lead to a misrepresentation of the phenomenon under review (Heslehurst et al., 2015). Qualitative studies which capture the experience of enacted weight stigma from the patient perspective can increase awareness of how stigma presents within patient-provider interactions and ultimately inspire change in healthcare provision. Previous reviews conducted from the patient perspective have focused on the views and experiences of weight management (Garip & Yardley, 2011) and the patient experiences of outcomes of bariatric surgery (Coulman et al., 2017). Most recently a review reporting the lived experience of people living with obesity explored concerns around the health risks associated with obesity and patient aspirations for future obesity treatment (Farrell et al., 2021). To the best of our knowledge this will be the first review to systematically search for and synthesise enacted weight stigma experienced in primary, secondary and tertiary healthcare settings, explicitly from the patient perspective. This will facilitate a deep and broad understanding of the patient experience to inform best practice and future intervention design.

**Method**

The review protocol was registered on the PROSPERO International prospective register of systematic reviews on the 12th of September 2021 (CRD42021273286). The current review protocol was written following the Preferred Reporting for Systematic review and Meta-Analysis Protocol (PRISMA-P) guidelines (Moher et al., 2015).

The SPIDER tool (Cooke et al., 2012) was used to generate the following research question (Table 1) to frame the focus of the review

1. What are the perceptions and experiences of patients living with obesity of weight-based stigma enacted by healthcare providers across healthcare settings?

**Objectives**

The aim of the review is to systematically locate and synthesise the best available primary qualitative research investigating the perceptions and experiences of weight-stigma enacted by healthcare professionals across healthcare settings from the perspective of the patient living with obesity. The objectives of the research are:

1. To explore the perceptions and experiences of enacted weight-stigma by healthcare providers across healthcare
settings from the perspective of the patient living with obesity
(2) To gather suggestions for reducing weight stigma across healthcare settings
(3) To develop recommendations for future weight stigma reduction strategies informed by the patient experience.

Eligibility Criteria

Inclusion and exclusion criteria were defined using the PICoS tool (Methley et al., 2014; Table 2). Studies that collect primary qualitative data focusing on the perceptions and experiences of enacted weight stigma across healthcare settings from the perspective of adult patients living with obesity (BMI $\geq 30$ kg/m$^2$) will be included. Mixed methods studies will be considered for review where the data has been collected and analysed using qualitative methods and the findings are reported separately to the quantitative results. Quantitative studies will be excluded. Peer reviewed and grey literature studies reported in English after May 2011 will be included. A previous meta-ethnography exploring obesity in healthcare found that perceptions of treatment responsibility were mediated by stigmatising patient-provider interactions (Malterud & Ulriksen, 2011). The perspective of practitioners was disproportionately represented which was reflective of the amount of available qualitative research undertaken with patients living with obesity at that time. Thus, the time limit incurred has been set to align with and capture the increase in qualitative research from the patient perspective in the last decade.

Table 1. SPIDER Tool for framing the research question.

| SPIDER Concepts | Justification |
|-----------------|---------------|
| S-sample        | Qualitative studies typically include smaller groups of participants than quantitative studies, the term sample reflects this difference. The sample in this review is adults (18+ years) living with obesity (BMI $\geq 30$ kg/m$^2$) |
| PI-phenomenon of interest | This term supports the searching of qualitative research aiming to gain a deeper understanding of individual experiences, behaviours and decisions (Cooke et al., 2012). The phenomenon of interest in this review is the perceptions and experiences of enacted weight stigma in healthcare settings from the perspective of patients living with obesity. Weight stigma for the purpose of this review is operationally defined as the denigration and devaluation of obesity within the context of a power differential (patient-provider interactions) that incurs unequal outcomes for the patient living with obesity (Link & Phelan, 2001) |
| D-design        | This term refers to the theoretical frameworks and methods used in qualitative research. In lieu of inferential statistics in qualitative research, congruence across the study design, data collection method and analysis are used to determine the robustness of a study (Cooke et al., 2012). Qualitative designs employing qualitative research methods (interviews, focus groups, observational studies) and analysis will be included in the review |
| E-evaluation    | This term refers to the identification and interpretation of subjective outcome measures (attitudes, beliefs, etc) in qualitative research. For the purpose of this review, we are interested in exploring the experiences and perceptions of enacted weight stigma in healthcare from the patient perspective |
| R-research type | This refers to the types of research to be included in a review. For the purpose of this review, qualitative and mixed-methods studies will be included |

Table 2. PICoS tool (Methley et al., 2014) for defining the inclusion and exclusion criteria.

| PICoS          | Inclusion Criteria                                                                 | Exclusion Criteria                                   |
|----------------|-------------------------------------------------------------------------------------|------------------------------------------------------|
| Population     | Patients living with obesity (BMI $\geq 30$ kg/m$^2$) Adults (18 years of age or older) | Patients that do not live with obesity Adolescents and children will not be included (<18 years of age) |
| Phenomenon of interest | Patients' perceptions and experiences of weight-based stigma enacted by healthcare professionals | The perceptions and experiences of enacted weight-based stigma from a person living with obesity outside of primary, secondary and tertiary healthcare settings Non-healthcare settings |
| Context        | Primary, secondary and tertiary healthcare settings. All geographical locations     | Studies that employ quantitative methods only Studies prior to May 2011 |
| Study type     | Primary qualitative research. Mixed methods studies will be considered where the data has been collected and analysed using qualitative methods and the findings are reported separately to the quantitative results |
Information sources and Search Strategy

Electronic searches will be conducted in PubMed, MEDLINE, PsycInfo, CINAHL, EMBASE and Scopus to locate relevant studies published in English from May 2011. Forward and backward citation searches of the included full papers will be conducted as well as hand searches of reference lists (Booth, 2016). Where identified studies are not accessible, key authors and field experts will be contacted to obtain full-text papers (Noyes et al., 2019). A 2 week deadline for response will be set, studies not retrieved within this timeframe will be omitted (Soilemez & Lineviciute, 2018).

To minimise publication bias, systematic searching of the databases will be supplemented with grey literature searches (PsycExtra, Google Scholar). To optimise the inclusion of rich qualitative data, unpublished studies, theses, and dissertations that collect primary qualitative data relevant to the research question will be included (Toews et al., 2017). Editorials, conference abstracts and reviews will be excluded. A re-run search will be completed prior to the final synthesis to ensure that all the relevant and up to date studies are included. All findings and interpretations will be discussed in collaboration with a patient representative (SB) and an expert clinical consultant (MC).

The search strategy was developed in collaboration with an information specialist (RD) who assisted in refining the search terms using a combination of keywords, MeSH, free-text terms and methodological filters to capture the constructs under review (Flemming & Noyes, 2021). The search strategy was developed in PubMed (Table 3) and will be adapted as necessary to facilitate literature searches in additional databases. The literature searches will be conducted by one reviewer (LR) in consultation with an information specialist (RD).

Study Records

Relevant search results will be imported into Endnote X20 where duplicates will be retrieved and removed. Automated removal of duplicates in Endnote X20 will be reviewed, any remaining duplicates will be manually removed by one reviewer (LR). Title and abstract screening will be conducted by two independent reviewers (LR and RC) using the Rayyan data screening tool (Ouzzani et al., 2016). This process will be piloted referencing the eligibility criteria to ensure that screening is clear to all reviewers. Any disagreements in judgement will be resolved through discussion with a third reviewer (CH). Abstracts that do not meet the inclusion criteria will be excluded, recorded and reported as per the PRISMA guidelines. Articles that are deemed eligible for full text screening will be independently reviewed by two reviewers (LR and RC). Any disagreements in judgement will be resolved through discussion with a third reviewer (CH). Forward and backward citation searches of the included full papers will be conducted by one reviewer (LR). Articles identified through forward and backward citation searching will be screened by one independent reviewer (LR), with a second independent reviewer (RC) screening a random 20%. Any disagreements will be resolved through discussion until consensus is achieved.

Data extraction will be conducted by two independent reviewers (LR and RC) using a modified data extraction form (Noyes & Lewin, 2011). The following data will be extracted: citation, geographical location, aims of study, ethics, theoretical background of study, study setting, participant characteristics, recruitment strategy, data collection methods, data analysis approach, key themes identified in the study (relevant to the research question), data extracts related to key themes, recommendations made by the author, recommendations made by the patient and limitations. The data will be organised in an Excel sheet and exported into NVivo 20 for qualitative data analysis (Flemming & Noyes, 2021). NVivo provides a robust platform to store large quantities of data for synthesis that facilitates a clear record of the process, this will enhance the rigour and transparency of the findings (Houghton et al., 2017).

Assessing Methodological Limitations

To maintain the rigour and transparency of the analysis and the interpretation of the synthesis, all included studies will be submitted to a quality assessment using the critical appraisal skills programme checklist (Critical Appraisal Skills Programme, 2020). The CASP checklist is comprised of 10 questions that assist in identifying the methodological limitations of a study. Items render a broad scope of issues

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Table 3. PubMed search string draft.

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“Weight stigma” [MeSH] OR “weight prejudice” OR “weight-based discrimination” OR “fat shame” OR “fat-shaming” OR “obese stigma” OR “obesity stigma” OR “anti-fat”
AND
“Interview” OR “interview as topic” [MeSH] OR “experience” OR “experiences” OR “personal narrative” OR “personal narratives as topic” [MeSH] OR “biography” OR “biography as topic” OR “narrative” OR “narration” OR “qualitative”
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*Truncation will be adapted as required to retrieve root terms within the individual databases (*is applicable in MEDLINE and CINHAL, $ is applicable to EMBASE).
necessary to consider when appraising qualitative research: 1) Are the aims and the research question clear? 2) Are the research aims congruent with the research design and methodology? 3) Are the results valid? 4) Has author reflexivity been considered? (Flemming & Noyes, 2021). The appraisal will be conducted independently by two reviewers (LR, RC). Any disagreements in judgement will be resolved through discussion with a third reviewer until consensus is reached (OC or JW). A sensitivity analysis will be conducted to evaluate the contribution of meaningful data within methodologically inferior studies prior to making a decision to remove them from the synthesis (Thomas & Harden, 2008). All decisions will be recorded and documented according to the ENTREQ checklist and PRISMA guidelines.

Data Synthesis

The RETREAT framework outlines seven domains for consideration when selecting an approach to synthesis: review question, epistemology, time/frame, resources, audience, purpose and type of data (Booth et al., 2018). The RETREAT framework was consulted a priori to choosing a method for conducting the qualitative evidence synthesis. Based on the resources available to the review team, logistical constraints and the level of expertise within the review team, thematic synthesis was determined to be the most appropriate method of analysis.

Thematic synthesis is an inductive approach useful for collating and integrating the findings of multiple qualitative studies while maintaining the integrity of the original findings (Thomas et al., 2008). It is a three step process that initiates with the line-by-line coding of the primary qualitative findings into ‘free codes’ to begin the translation of concepts across studies (Flemming & Noyes, 2021). The next step involves the iterative organisation and grouping of the ‘free codes’ into descriptive themes. The final step involves the development of analytical themes that ‘go beyond’ the content of the initial primary data and the descriptive themes to generate new interpretations guided by the research question. The analysis will be completed by one independent reviewer (LR) in close collaboration with the review team who will be consulted at each stage of the analysis as outlined by Thomas and Harden (2008).

Determining the Confidence in findings

The GRADE CERQual (confidence in the evidence from reviews of qualitative research) will be implemented to determine the author(s) confidence in the review findings. The CERQual tool is used to appraise four components of each review finding - methodological limitations, relevance, coherence and adequacy (Downe et al., 2019) to assess to what extent the phenomenon under review is being accurately represented (Lewin et al., 2018).

Each review finding will be independently appraised through the CERQual components and described initially through a level of concern ranging from ‘No, or very minor concerns’, ‘Minor concerns’, ‘Moderate concerns’ to ‘Serious concerns’. The overall confidence appraisal for each review finding will be evaluated and described in levels ranging from very low, low, moderate to high (Lewin et al., 2018).

The initial CERQual assessment for each review finding will be conducted by two reviewers (LR and RC). Judgements will be discussed with the review team (LR, RC, CH, RD, SB, MC, OC, JW) to promote transparency and to facilitate the teams reflexive appraisal on the formulation of the review findings (Lewin et al., 2018). A summary of each review finding, references to the studies that contribute to each review finding, the CERQual assessment for each review finding with an accompanying explanation for the overall CERQual evaluation will be compiled and presented in a summary table in the main body of the final review (Lewin et al., 2018).

Sampling

The aim of the review is to explore the patients’ perceptions and experiences of enacted weight stigma across primary, secondary and tertiary healthcare settings. In the event that an area of healthcare is disproportionately represented in the literature, purposive sampling (maximum variation) will be applied. A three step framework (Ames et al., 2019) comprised of three key sampling criteria specific to the review objectives will be discussed and generated by the review team and applied to eligible studies to prioritise the collection of rich data for inclusion in the review (Cochrane Effective Practice and Organisation of Care EPOC, 2017). This will assist in generating a spread and variation of the phenomenon under review while simultaneously maintaining a manageable number of studies to include in the synthesis.

Author Reflexivity

Reflexivity in qualitative research is essential in situating how the authors personal position and beliefs related to the phenomenon being explored may impact the design of the study, data collection, data analysis and the interpretation of the findings (Newton, Rothlingova, Gutteridge, LeMarchand, & Raphael, 2012; Gough, 2003). The review team is comprised of members with backgrounds in patient advocacy (SB), medicine (MC), information science (RD), an expert in computer science (OC), and four psychologists (LR, RC, CH, JW), two of whom have subject-area expertise (JW,CH) and expertise in qualitative research (CH). Team members will consider their positionality and beliefs related to the phenomenon being explored. As a team we will document any preconceptions in a reflexive journal and critically reflect on them at each stage of the process to mitigate the influence of bias on the interpretation and reporting of the review findings (Dodgson, 2019). A reflexivity statement will be included in the reporting of the final review.
Reporting

The findings of the qualitative evidence synthesis will be reported in line with the ENTREQ checklist (Tong et al., 2012) and PRISMA guidelines (Moher et al., 2015).

Dissemination of findings

The findings of the review will in part inform the design and development of a VR based education and training tool to reduce weight stigma in healthcare settings. The results will be disseminated in a peer-reviewed journal and presented at field specific academic conferences.

Declaration of Conflicting Interests

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References

Abu-Odeh, D. (2014). Fat stigma and public health: A theoretical framework and ethical analysis. Kennedy Institute of Ethics Journal, 24(3), 247–265. https://doi.org/10.1353/ken.2014.0024.

Alberga, A. S., Edache, I. Y., Forhan, M., & Russell-Mayhew, S. (2019). Weight bias and health care utilization: A scoping review (p. 20). Primary Health Care Research & Development.

Ames, H., Glenton, C., & Lewin, S. (2019). Purposive sampling in a qualitative evidence synthesis: A worked example from a synthesis on parental perceptions of vaccination communication. BMC Medical Research Methodology, 19(1), 1–9. https://doi.org/10.1186/s12874-019-0665-4.

Andreyeva, T., Puhl, R. M., & Brownell, K. D. (2008). Changes in perceived weight discrimination among Americans, 1995–1996 through 2004–2006. Obesity, 16(5), 1129–1134. https://doi.org/10.1038/oby.2008.35.

Bidstrup, H., Brennan, L., Kaufmann, L., & de la Piedad Garcia, X. (2021). Internalised weight stigma as a mediator of the relationship between experienced/perceived weight stigma and biopsychosocial outcomes: A systematic review. International Journal of Obesity, 46(1), 1–9. https://doi.org/10.1038/s41366-021-00982-4.

Booth, A. (2016). Searching for qualitative research for inclusion in systematic reviews: A structured methodological review. Systematic Reviews, 5(1), 74. https://doi.org/10.1186/s13643-016-0249-x.

Booth, A., Noyes, J., Flemming, K., Gerhardus, A., Wahlster, P., van der Wilt, G. J., Mozygemba, K., Refolo, P., Sacchini, D., Tummers, M., & Rehfuess, E. (2018). Structured methodology review identified seven (RETREAT) criteria for selecting qualitative evidence synthesis approaches. Journal of Clinical Epidemiology, 99(7), 41–52. https://doi.org/10.1016/j.jclinepi.2018.03.003.

Cochrane Effective Practice and Organisation of Care (EPOC) (2017). EPOC qualitative evidence syntheses guidance on when to sample and how to develop a purposive sampling frame. Available from https://epoc.cochrane.org/resources/epocresources-review-authors.

Cooke, A., Smith, D., & Booth, A. (2012). Beyond PICO: The spider tool for qualitative evidence synthesis. Qualitative Health Research, 22(10), 1435–1443. https://doi.org/10.1177/1049732312452938.

Coulman, K., MacKichan, F., Blazey, J., & Owen-Smith, A. (2017). Patient experiences of outcomes of bariatric surgery: A systematic review and qualitative synthesis. Obesity Reviews, 18(5), 547–559. https://doi.org/10.1111/obr.12518.

Critical Appraisal Skills Programme (2020). Critical appraisal skills programme. https://casp-uk.net/.

Crocker, J., Major, B., Steele, C., Gilbert, D. T., Fiske, S. T., & Lindzey, G. (Eds), (1998). The handbook of social psychology. McGraw-Hill.

Daly, M., Sutin, A. R., & Robinson, E. (2019). Perceived weight discrimination mediates the prospective association between obesity and physiological dysregulation: Evidence from a population-based cohort. Psychological Science, 30(7), 1030–1039. https://doi.org/10.1177/0956797619849440.

Dodgson, J. E. (2019). Reflexivity in qualitative research. Journal of Human Lactation: Official Journal of International Lactation Consultant Association, 35(2), 220–222. https://doi.org/10.1177/089034419830990.

Downe, S., Finlayson, K. W., Lawrie, T. A., Lewin, S. A., Glenton, C., Rosenbaum, S., Barreix, M., & Tunçalp, Ö. (2019). Qualitative Evidence Synthesis (QES) for Guidelines: Paper 1—Using qualitative evidence synthesis to inform guideline scope and develop qualitative findings statements. Health Research Policy and Systems, 17(1), 1–12. https://doi.org/10.1186/s12961-019-0467-5.

Farrell, E., Hollmann, E., Roux, C. W., Bustillo, M., Nadglowski, J., & McGillicuddy, D. (2021). The lived experience of patients with obesity: A systematic review and qualitative synthesis. Obesity Reviews, 22(12). https://doi.org/10.1111/obr.13334.

Flemming, K., & Noyes, J. (2021). Qualitative evidence synthesis: Where are we at? International Journal of Qualitative Methods, 20(4). https://doi.org/10.1177/1609406921993276.

Garip, G., & Yardley, L. (2011). A synthesis of qualitative research on overweight and obese people’s views and experiences of weight management. Clinical Obesity, 1(2-3), 10–126. https://doi.org/10.1111/j.1758-8111.2011.00021.x.
Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity*. Prentice-Hall.

Gough, B. (2003). *Reflexivity Deconstructing reflexivity*, 21–35.

Grannell, A., Fallon, F., Pourmanas, D., & le Roux, C. W. (2021). Exploring patient beliefs and perceptions regarding obesity as a disease, obesity causation and treatment. *Irish Journal of Medical Science*, 190(1), 163–168. https://doi.org/10.1007/s11845-020-02319-y.

Heslehurst, N., Russell, S., Brandon, H., Johnston, C., Summerbell, C., & Rankin, J. (2015). Women’s perspectives are required to inform the development of maternal obesity services: A qualitative study of obese pregnant women’s experiences. *Health Expectations*, 18(5), 969–981. https://doi.org/10.1111/hex.12070.

Houghton, C., Murphy, K., Meehan, B., Thomas, J., Brooker, D., & Casey, D. (2017). From screening to synthesis: Using nvivo to enhance transparency in qualitative evidence synthesis. *Journal of Clinical Nursing*, 26(5-6), 873–881. https://doi.org/10.1111/jocn.13443.

Hunger, J. M., Major, B., Blodorn, A., & Miller, C. T. (2015). Weighed down by stigma: How weight-based social identity threat contributes to weight gain and poor health. *Social and Personality Psychology Compass*, 9(6), 255–268. https://doi.org/10.1111/spp3.12172.

Jones, E. E. (1984). *Social stigma: The psychology of marked relationships*. W. H. Freeman.

Lee, K. M., Hunger, J. M., & Tomiyama, A. J. (2021). Weight stigma and health behaviors: Evidence from the eating in America study. *International Journal of Obesity*, 45(7), 1499–1509. https://doi.org/10.1038/s41366-021-00814-5.

Lewin, S., Booth, A., Glenton, C., Munthe-Kaas, H., Rashidian, A., Wainwright, M., Bohren, M. A., Tunçalp, Ö., Colvin, C. J., Garside, R., Carlsen, B., Fallon, F., Pournaras, D., & le Roux, C. W. (2021). Applying GRADE-CERQual to qualitative evidence synthesis findings: Introduction to the series. *Implementation Science*, 13(1), 2. https://doi.org/10.1186/s13012-017-0688-3.

Link, B. G., & Phelan, J. C. (2001). Conceptualizing stigma. *Annual Review of Sociology*, 27(1), 363–385. https://doi.org/10.1146/annurev.soc.27.1.363.

Malterud, K., & Ulriksen, K. (2011). Obesity, stigma, and responsibility in health care: A synthesis of qualitative studies. *International Journal of Qualitative Studies on Health and Well-Being*, 6(4), 8404. https://doi.org/10.3402/qhw.v6i4.8404.

Methley, A. M., Campbell, S., Chew-Graham, C., McNally, R., & Cheraghi-Sohi, S. (2014). PICO, PICOS and SPIDER: A comparison study of specificity and sensitivity in three search tools for qualitative systematic reviews. *BMC Health Services Research*, 14(1), 1–10. https://doi.org/10.1186/s12913-014-0579-0.

Moher, D., Shamseer, L., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., Shekelle, P., & Stewart, L. A. (2015). Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Systematic Reviews*, 4(1), 1–9. https://doi.org/10.1186/2046-4053-4-1.

Newton, B. J., Rothlingova, Z., Gutteridge, R., LeMarchand, K., & Raphael, J. H. (2012). No room for reflexivity? Critical reflections following a systematic review of qualitative research. *Journal of Health Psychology*, 17(6), 866–885. https://doi.org/10.1177/1359105311427615.

Noyes, J., Booth, A., Cargo, M., Flemming, K., Harden, A., Harris, J., Garside, R., Hannes, K., Pantoja, T., & Thomas, J. (2019). Chapter 21: Extracting qualitative evidence. In J. Higgins, & S. Green (Eds), *Qualitative evidence: Cochrane Handbook for Systematic Reviews of Interventions* (6, pp. 525–545). John Wiley & Sons.

Noyes, J., & Lewin, S. (2011). Chapter 5: Qualitative evidence. In J. Noyes, Booth, K. Hannes, A. Harden, J. Harris, S. Lewin, & C. Lockwood (Eds), *Supplementary guidance for inclusion of qualitative research in cochrane systematic reviews of interventions*. [Version 1].

Ouazzani, M., Hammady, H., Fedorowicz, Z., & Elmagarmid, A. (2016). Rayyan—a web and mobile app for systematic reviews. *Systematic Reviews*, 5(1), 1–10. https://doi.org/10.1186/s13643-016-0384-4.

Pearl, R. L., Wadden, T. A., Hopkins, C. M., Shaw, J. A., Hayes, M. R., Bakizada, Z. M., Alfaris, N., Chao, A. M., Pinkasavage, E., Berkowitz, R. I., & Alamuddin, N. (2017). Association between weight bias internalization and metabolic syndrome among treatment-seeking individuals with obesity. *Obesity*, 25(2), 317–322. https://doi.org/10.1002/oby.21716.

Phelan, J. C., Link, B. G., & Dovidio, J. F. (2008). Stigma and prejudice: One animal or two? *Social Science & Medicine*, 67(3), 358–367. https://doi.org/10.1016/j.socscimed.2008.03.022.

Puhl, R. M., & Heuer, C. A. (2009). The stigma of obesity: A review and update. *Obesity*, 17(5), 941–964. https://doi.org/10.1038/oby.2008.636.

Puhl, R. M., Himmelstein, M. S., & Pearl, R. L. (2020). Weight stigma as a psychosocial contributor to obesity. *American Psychologist*, 75(2), 274–289. https://doi.org/10.1037/amp0000538.

Puhl, R. M., Latner, J. D., O’Brien, K., Luedicke, J., Danielsdóttir, S., & Forhan, M. (2015). A multinational examination of weight bias: Predictors of anti-fat attitudes across four countries. *International Journal of Obesity*, 39(7), 1166–1173. https://doi.org/10.1038/ijo.2015.32.

Puhl, R. M., Lessard, L. M., Himmelstein, M. S., & Foster, G. D. (2021). The roles of experienced and internalized weight stigma in healthcare experiences: Perspectives of adults engaged in weight management across six countries. *Plos One*, 16(6), e0251566. https://doi.org/10.1371/journal.pone.0251566.

Sarwer, D. B., & Heinberg, L. J. (2020). A review of the psychosocial aspects of clinically severe obesity and bariatric surgery. *American Psychologist*, 75(2), 252–264. https://doi.org/10.1037/amp0000550.

Shamseer, L., Moher, D., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., Shekelle, P., the PRISMA-P Group, & Stewart, L. A. (2015). Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015: Elaboration
and explanation. *BMJ: British Medical Journal*, 349(jan02 1), g7647. https://doi.org/10.1136/bmj.g7647.

Soilemezi, D., & Linceviciute, S. (2018). Synthesizing qualitative research: Reflections and lessons learnt by two new reviewers. *International Journal of Qualitative Methods*, 17(1), 160940691876801. https://doi.org/10.1177/1609406918768014.

Thiel, A., John, J. M., Carl, J., & Thedinga, H. K. (2020). Weight stigma experiences and physical (In)activity: A biographical analysis. *Obesity Facts*, 13(3), 386–402. https://doi.org/10.1159/000507936.

Thomas, J., & Harden, A. (2008). Methods for the thematic synthesis of qualitative research in systematic reviews. *BMC Medical Research Methodology*, 8(1), 45. https://doi.org/10.1186/1471-2288-8-45.

Toews, I., Booth, A., Berg, R. C., Lewin, S., Glenton, C., Munthe-Kaas, H. M., & Meerpohl, J. J. (2017). Dissemination bias in qualitative research: Conceptual considerations. *Journal of Clinical Epidemiology*, 88(8), 133–139. https://doi.org/10.1016/j.jclinepi.2017.04.010.

Tong, A., Flemming, K., McInnes, E., Oliver, S., & Craig, J. (2012). Enhancing transparency in reporting the synthesis of qualitative research: Entreq. *BMC Medical Research Methodology*, 12(1), 181. https://doi.org/10.1186/1471-2288-12-181.

World Health Organisation (2020). *Fact sheet: Obesity and overweight*. Geneva: World Health Organisation.