Risk Management and Healthcare Policy

Dovepress

open access to scientific and medical research

Open Access Full Text Article

ORIGINAL RESEARCH

Attitudes of Medical Professionals Towards Discrimination of Patients with Obesity

Krzysztof Sobczak
Katarzyna Leoniuk

Department of Sociology of Medicine and Social Pathology, Medical University of Gdansk, Gdansk, Poland

Purpose: Many studies show that discriminatory practices are common in healthcare institutions, also in the form of medical staff's inappropriate behaviour. Weight stigma may not only become a source of unpleasant experience for the patients but also cause them to withdraw from the treatment, which may further exacerbate their condition.

Patients and Methods: In a nationwide study, we asked 184 medical professionals, about their experiences and opinions on the discrimination of patients with obesity. The study was conducted in 2020, with the use of CAWI method, based on an original survey created for this study.

Results: Most of the medical professionals (68.5%) estimated that the problem of worse attitudes towards patients suffering from obesity is a common phenomenon. About 48.4% witnessed medical staff's discriminatory behaviours. The most frequent forms of inappropriate behaviours pertained to interpersonal relations – mocking the appearance (96.6%), looks of disgust and repulsion (96.2%), lack of reaction to offensive remarks (92.0%) or scaring a patient with the necessity to lose weight (57.7%). The participants of the study pointed to limited access to dedicated medical equipment (62.4%) as a discriminatory systemic limitation.

Conclusion: Discrimination of patients with obesity is a social issue, which also occurs within the health care system. Limited access to medical resources, gaps in knowledge of obesity and an insufficient level of soft skills in health care professionals are the key deficiencies, which hinder effective treatment.

Keywords: obesity stigma, weight discrimination, health behaviours, health personnel

Introduction

Numerous studies show that obesity is one of the key factors connected with the occurrence of prejudice and stigmatization.[1] Although the knowledge of discrimination's negative impact on the health of patients with obesity is well documented,[2,3] weight stigma is a phenomenon, which still occurs commonly in healthcare centres.[2,4–7] Reports indicate that patients with obesity report a lower quality of healthcare than patients with normal BMI.[8] Many symptoms are automatically associated with obesity, which is why the scope of diagnostic tests they undergo is limited.[9] It was observed that an increase in BMI is connected with fear of being judged by health care professionals and leads to avoiding consultations.[10] Patients who suffer from obesity spend less time in doctors' offices.[9] Health care professionals' prejudices, which are rooted in social stereotypes, additionally cause a decrease in patients' active engagement in health care.[11] Especially, as these inappropriate attitudes were also observed in specialists who treat obesity.[12]

Correspondence: Krzysztof Sobczak
Email krzysztof.sobczak@gumed.edu.pl

Received: 27 April 2021
Accepted: 16 September 2021
Published: 7 October 2021

We are also aware that health care professionals' education, which refers to understanding the perspective of the difficulties the patients face leads to a decrease in the prejudices' scale.[11] Besides engagement and empathy, a proper way of communicating is a significant element, which may significantly mitigate the stigma of obesity and be an effective support of the treatment.[13] Building particular therapeutic solutions adjusted to the abilities and preferences of the patients not only increases the effectiveness but also eliminates negative attitudes to medical interventions.[11] It was also indicated that the strategies based on health care professionals extending their knowledge with the aspects connected with the disease and the patients' emotional needs are effective.[14,15]

To get a better idea of the scale of discriminatory behaviours in Poland, and understand the character of these phenomena, we asked health professionals about their experiences in the relations and attitudes towards patients who suffer from obesity. Our previous research referred to the analysis of the experiences of patients with obesity in contact with medical staff.[4] Our assumption was that a comparison of the patients' and health care professionals' perspectives may contribute to a better identification of the areas, which need interventions and the development of solutions could result in increasing the quality of health services in the aspect of providing care to patients with obesity.

Patients and Methods

Study Design

The aim of the nationwide study was to analyse the attitudes and experiences of the employees of medical institutions in their contacts with patients who suffer from obesity. We directed the questions to professionally active doctors, nurses, midwives, physiotherapists, paramedics and other health professionals who have direct contact with patients. We were interested in the level of knowledge connected with obesity, medical staff's opinions on the patients' situations in medical institutions and the indicators of the relations between the patients and the medical staff. This article presents partial results of the study on selected aspects of the situation and the relations and it takes into account the issue of social discrimination.

Setting

The quantitative data were gathered with the use of the Computer-Assisted Web Interview (CAWI) method. The field stage lasted from January to September 2020. The original e-survey prepared by the authors specifically for this study was a research tool. After it was digitalised, it was published on a dedicated website for sociological studies. Due to the pandemic, the information about the study was provided to the medical professionals through the websites and social media accounts of professional self-governing organisations. The study was held under the patronage of the Commissioner for Patient's Rights and received the support of the Team Against Discrimination of Patients with Obesity at the office of the Commissioner for Patient's Rights.

The questionnaire consisted of 24 questions: closed-ended, semi-open and open-ended ones as well as 10 questions, which referred to the social, demographic and professional variables. Anonymity among the respondents was ensured. They could withdraw from the study at any point. We also made sure the data collected were safe. No sensitive data were collected during the study.

Participants

In the inclusive study, random sampling of respondents was applied. The inclusion criteria referred to: education preparing for a medical profession and licence to practice the profession of physician, nurse, midwife, physiotherapist or paramedic and professional activity at the moment of participating in the study, as well as voluntary consent to participate in it. The statements of 184 medical professionals were taken into account in the final analysis.

From the analysis of the distribution of density, we found gender, age and residence over-representation typical of studies conducted with the CAWI technique. The study took into account sociodemographic variables: gender, age, residence, as well as professional ones: profession, work experience, title or degree. To calculate the BMIs, we asked the respondents about their weight and height. More than half of them (61%) were within the healthy weight range. Two individuals got results, which were below the recommended values (BMI > 18.50) and 38% above the optimum (BMI > 24.99). Table 1 contains data referring to the sociodemographic and professional variables.

Statistical Methods

The data underwent a collective statistical analysis with the use of the IBM SPSS v.26 software. Pearson's Chi-squared test was used to analyse the correlations between discontinuous variables and the statistic heterogeneity of

Table 1 Characteristics of the Respondents (N = 185)

Categories	% (n)	Categories	% (n)
Gender		Work experience	
Woman	65.7 (121)	Up to 5 years	47.3 (87)
Man	34.3 (63)	From 6 to 10 years	9.8 (18)
Age		From 11 to 20 years	14.1 (26)
18–29 years	42.4 (78)	From 21 to 30 years	13.6 (25)
30–45 years	30.4 (56)	From 31 to 40 years	12.5 (23)
46–60 years	23.4 (43)	Over 41 years	2.7 (5)
Over 61 years	3.8 (7)	Profession	
Residence		Nurse	14.7 (27)
City over 100k	55.4 (102)	Midwife	6.0 (11)
City between 20k and 100k	20.1 (37)	Physiotherapist	19 (35)
City over 20k	8.7 (16)	Paramedic	3.3 (6)
Village	15.8 (29)	Physician	52.2 (96)
Main workplace		Other	4.9 (9)
Public polyclinic	14.4 (32)	Title or degree	
Private polyclinic	5.4 (10)	Technician	3.8 (7)
Public hospital	50.5 (93)	Bachelor	38.6 (71)
Private hospital	1.1 (2)	Master Degree/Physician	45.7 (84)
Public clinic	2.2 (4)	Doctor of Philosophy	8.7 (16)
Private Clinic	1.1 (2)	Post-doctoral degree	2.7 (5)
Private practice	8.7 (16)	Professor	0.5 (1)
Other	13.6 (25)		

the groups. Due to the large sample, in the analysis, the categories, which referred to the age (up to 29 years old as well as 30 years old and more), professional experience (up to 5 years as well as 6 years and more) and workplaces (hospitals as well as primary and outpatient health care) were collapsed after the data collection. The difference for $p < 0.05$ was assumed to be statistically significant.

Results

Obesity Disease as a Source of Social Discrimination

As many as 68.5% of the respondents admitted that the discrimination of patients who suffer from obesity is a common phenomenon, which occurs as a part of the healthcare system's functioning. 30% of the participants regarded the problem as marginal – almost non-existent, 1% thought there was no such problem at all. Women evaluated the discrimination of patients with obesity as a common phenomenon more frequently than men. It was stated by 75.2% of women and 55.6% of men (statistics: chi ^ 2 = 7.412; *df* = 1; p = 0.006). Respondents below 29 years old (80.2%) compared to people ≥30 years old (59.4%; statistics: chi ^ 2 = 9.476; *df* = 1; p = 0.002) and health professionals with the smallest work experience (77.0%) compared to people who had worked for ≥6 years (60.8%; statistics: chi ^ 2 = 5.567; *df* = 1; p = 0.018).

Table 2 Forms of Inappropriate Behaviour Towards Patients with Obesity (n = 89)*

Forms of Behaviour	Yes	No
	% (n)	
Disgruntled grimace	88.8 (79)	11.2 (10)
Unpleasant, judgmental comments	89.9 (80)	11.1 (9)
Gestures showing disapproval	57.3 (51)	42.7 (38)
Expression of surprise	66.3 (59)	33.7 (30)
Ironic smirks	80.9 (72)	19.1 (17)
Raised voice	40.4 (36)	59.6 (53)
Disdainful remarks	65.2 (58)	34.8 (31)
Mocking	43.8 (39)	56.2 (50)
Insulting/Name-calling	27 (24)	73 (65)
Refusal to perform a test or another medical service	19.1 (17)	80.9 (72)
Complaining about a larger amount of responsibilities connected with taking care of a patient with obesity	68.5 (61)	31.5 (28)

Notes: *The question was aimed at the respondents who stated they had witnessed medical staff's inappropriate behaviour in contact with patients with obesity.

Situation of Patients with Obesity in Medical Institutions

To evaluate the situation of the patients, we asked the health professionals about their experience when it came to participation or observation of medical staff's inappropriate behaviour towards patients with obesity. Exactly 48.4% revealed (n = 89) that they had witnessed such situations. They were asked to indicate a form of the inappropriate behaviour. The respondents said that most often they had been witnesses to unpleasant judgemental comments, a grimace of disgust or ironic smirks (Table 2).

Medical Staff's Perception of Patients with Obesity

The respondents were asked to indicate examples of behaviours, which could, in their opinion, serve as examples of discrimination in patients with obesity (Table 2). Most of the respondents indicated the following behaviours as unfair: making fun of a patient's appearance (96.6%), looking at the patient with repulsion and disgust (96.2%) and lack of reaction to offensive remarks from other people (92.0%). Over half of the respondents pointed to scaring a patient that him or her losing weight was the condition of starting treatment (57.7%). Health professionals also pointed to the lack of proper equipment for diagnosing, treating and taking care of patients with obesity (62.4%) as a discriminatory systemic limitation. This kind of limitation was indicated the most often (70.8%) by doctors (Chi^2 = 4.396; *df* = 1; p = 0.036).

We asked health professionals to describe feelings they experienced in the situation of contact with patients with obesity. Among the ones declared the most often there were: compassion (45.7%), desire to help (41.8%) and sense of helplessness (21.7%). The desire to help was declared by the employees of medical institutions with work experience ≤5 years (49.4%) compared to those with work experience ≥6 years (35.1%; statistics: Chi^2 = 3.894; *df* = 1; p = 0.048). Hospital employees (34.7%) declared feeling the desire to help less often, compared to the primary care staff (49.4%; statistics: Chi^2 = 4.081; *df* = 1; p = 0.043). Additionally, hospital staff (28.4%) felt helpless in the relations with patients with obesity twice as often as the employees of clinics, polyclinics or doctor's private offices (14.6%; statistics: Chi^2 = 5.154; *df* = 1; p = 0.023).

Discussion

In the nationwide studies on the experience of patients who suffer from obesity in contact with medical staff, as many as 82.6% of the patients declared that they had personally experienced discrimination from medical staff.[4] When we asked health professionals to evaluate the incidence of discriminatory behaviours in their environments, as many as 68.5% of the respondents confirmed the patients' stance. The fact that stigmatization's occurrence was reported more often by women could be justified with their higher susceptibility to bias and stigmatization resulting from obesity.[1] We have also noticed a correlation between shorter work experience and a higher level of sensitivity to stigmatization. The results we have received in this field diverge from the results of other researchers. There are reports, which indicate that the level of stigmatizing behaviours drops as the health professionals' age increases.[16,17] Almost half of our respondents (48.4%) revealed that they had personally witnessed discriminatory behaviours of medical staff towards patients with obesity. This is an alarming discovery, especially as its scale is revealed by many other reports as well.[18,19] What is more, Schwartz et al emphasize the fact that even obesity and overweight treatment experts represent attitudes that stigmatize their patients.[12]

Wanting to analyse the sources and indicators of discriminatory behaviours, we asked health professionals about their personal experience in this respect. The most frequent answers we get can be classified as referring to the interpersonal, therapeutic, and systemic spheres. While evaluating verbal communication, medical professionals identified the most frequently witnessed expressions of stigmatisation they had encountered: offensive comments, making fun of someone's appearance and health care staff being passive in the face of verbal abuse aimed at the patients. When it came to non-verbal behaviours, facial expressions of disgust or repulsion and ironic smirks were the most frequent expressions of disapproval. As many examples of studies show, discrimination in the interpersonal sphere is one of the most frequent forms patients with obesity encounter.[8,20,21] What is more, patients notice the stigma. In the studies which analysed their experiences, they confirmed the forms of discrimination as the most frequently presented by medical staff.[4] In the light of the well-documented analyses of the effects of bias and stigmatization on patients with obesity, such attitudes of health professionals should be deemed iatrogenic. So should the inappropriate behaviours, which occur on the therapeutic level, such as conditioning the start of treatment on the reduction of a patient's weight.

The last sphere our respondents paid attention to refers to systemic discrimination connected with the lack of proper medical equipment for diagnostics, therapy and care of patients with obesity. As many as 62.4% of the health professionals who participated in the study see limitations of this kind in their work. And most often, the problem was noticed by doctors. Deficiencies in basic medical equipments (like bariatric scales, dedicated blood pressure monitors or bariatric beds) may not only, obviously, be the expression of inequality in the access to medical services. It seems that this may also be indirectly connected with the medical staff's feeling of helplessness (21.7%) in spite of wanting to help (41.8%). The problem is definitely complex. The feeling of helplessness and ineffectiveness of medical activities undertaken is an experience revealed by health professionals in many reports.[12] Our study has revealed a correlation between this internal experience and the workplace. It most often accompanied those who worked in hospitals, which probably resulted from the kind of medical care provided by them. During a hospitalization, it is relatively short. As a result, the change in quality of life after a medical intervention comes later and the visible results of medical help are not witnessed directly by doctors or nurses who work in hospitals.

The structure of factors that contribute to discrimination of patients with obesity is complex and multidimensional (Table 3). Creating mechanisms that allow to eliminate the undesirable discriminative behaviours of medical staff requires, above all urgent changes in training. Educational programmes dedicated to health professionals do not provide sufficient knowledge of the subject of obesity.[23] Deficiencies in knowledge when it comes to obesity treatment are one of the major causes of the negative perception of overweight patients.[6] Gaps in education during the basic training for medical professions

Table 3 Limitations Which Contribute to the Discrimination of Patients with Obesity

Limitations Which Induce Discrimination	
Interpersonal	Sense of lack of self-effectiveness in health professionals[6,22] Negative and stereotypical attitude towards a patient, deficiencies in the abilities to manage one's own emotions[7,12,16–18] Low level of empathy in medical staff[25] Tiredness from taking care of patients with obesity[18,26]
Educational	Gaps in education preparing for medical professions[18,22,23] Insufficient knowledge concerning obesity in health professionals[19,22,27] Lack of access to information (eg, handbooks on obesity treatment)[16] Lack of knowledge of guidelines in medical procedures[6]
Systemic	Shortage of dedicated medical equipment[26] Lack of guidelines (eg, nationwide ones) Little time for a patient[6,16,26] Low salaries of medical staff[6] Medical staff's workload[18,27]

cause a domino effect, which translates into inappropriate behaviours of medical staff and deepening of the systemic inequalities in the access to health services for people with obesity. Having taken into account the social context in which our study was conducted, we must point out that there is a deficiency of access to national guidelines, which would define standards on supporting patients who suffer from obesity in Poland.

With reference to the research perspective we adopted, it is worth noting the limitations of the presented study. The significant overrepresentation of women and people from large cities is typical of studies completed with the CAWI technique. This results in the impossibility to achieve representativeness or draw general conclusions in inclusive group studies.[24] Being aware of these limitations, we decided to use the chosen technique because it provides the possibility of complete anonymity and allows to eliminate the presence of a researcher when the questionnaire is being filled in. We expected that this would give us more openness on the part of the respondents, which is so significant in surveys of attitudes and opinions that may be considered difficult or embarrassing. Thanks to this, the applied technique could contribute to raising the effectiveness of the study by resulting in answers with a higher level of accuracy. The relatively small group of health professionals who decided to participate in the study remains a problem.

Conclusion

The examples of medical staff's discriminatory attitudes towards patients with obesity noted in the study may, primarily, result from ineffective education during the preparation for medical professions. These deficiencies are connected with a low level of knowledge concerning obesity management. The low level of soft skills is also an important element of inappropriate behaviours. Though medical staff want to help its patients, it often scares and insults them, which is caused by underdeveloped communication skills. Negative communication does not modify patients' behaviour the right way. On the contrary, it becomes iatrogenic.

Limited access to medical resources, which either enable or, at least, facilitate diagnostic and therapeutic processes, also constitutes a barrier to an adequate delivery of healthcare.

Equipment shortages may lead to a sense of helplessness among health professionals treating patients affected by obesity. Development of a holistic educational programme for obesity treatment would improve the quality of patient care significantly. National guidelines should also define principles of communication and supporting of the patient. Such recommendations would be a significant element of support for medical professionals. Guidelines should also define the principles of access to medical equipment, so that equal access to healthcare is guaranteed for all patients.

Data Sharing Statement

The datasets used and/or analyzed during the current study are available from the corresponding authors on reasonable requests.

Ethics Approval and Informed Consent

The study was approved by the Independent Bioethics Committee for Scientific Research at Medical University of Gdańsk (NKBBN/694/2019–2020). All data are kept anonymous. All methods were carried out in accordance with relevant guidelines and regulations. All participants gave informed consent to participate in the study. The study was conducted in accordance with the Declaration of Helsinki.

Acknowledgments

We would like to thank the Ombudsman, the Commissioner for Patient's Rights, the Polish Association for the Study on Obesity, OD-WAGA Foundation for People with Obesity as well as the media patron "poradnikzdrowie.pl".

Author Contributions

All authors contributed to the data analysis, drafting and revising of the article; agreed on the journal to which the article would be submitted; approved the final version to be published and agreed to be accountable for all aspects of the work.

Funding

The authors declared that there was no funding.

Disclosure

The authors report no conflicts of interest in this work.

References

1. Puhl RM, Andreyeva T, Brownell KD. Perceptions of weight discrimination: prevalence and comparison to race and gender discrimination in America. *Int J Obes*. 2008;32(6):992–1000. doi:10.1038/ijo.2008.22

2. Tomiyama AJ, Carr D, Granberg EM, et al. How and why weight stigma drives the obesity 'epidemic' and harms health. *BMC Med*. 2018;16(1):123. doi:10.1186/s12916-018-1116-5
3. Udo T, Purcell K, Grilo CM. Perceived weight discrimination and chronic medical conditions in adults with overweight and obesity. *Int J Clin Pract*. 2016;70(12):1003–1011. doi:10.1111/ijcp.12902
4. Sobczak K, Leoniuk K, Rudnik A. Experience of Polish patients with obesity in contacts with medical professionals. *Patient Prefer Adherence*. 2020;14:1683–1688. doi:10.2147/PPA.S270704
5. Budd GM, Mariotti M, Graff D, Falkenstein K. Health care professionals' attitudes about obesity: an integrative review. *Appl Nurs Res*. 2011;24(3):127–137. doi:10.1016/j.apnr.2009.05.001
6. Bocquier A, Verger P, Basdevant A, et al. Overweight and obesity: knowledge, attitudes, and practices of general practitioners in France. *Obes Res*. 2005;13(4):787–795. doi:10.1038/oby.2005.89
7. Hebl MR, Xu J. Weighing the care: physicians' reactions to the size of a patient. *Int J Obes Relat Metab Disord*. 2001;25(8):1246–1252. doi:10.1038/sj.ijo.0801681
8. Puhl RM, Heuer CA. The stigma of obesity: a review and update. *Obesity*. 2009;17(5):941–964. doi:10.1038/oby.2008.636
9. Gomez-Perez D. [The effects of weight stigmatization on obese people and health care professionals]. *Rev Med Chil*. 2017;145 (9):1160–1164. Estigma de obesidad, su impacto en las victimas y en los Equipos de Salud: una revision de la literatura. Spanish. doi:10.4067/s0034-98872017000901160
10. Drury CA, Louis M. Exploring the association between body weight, stigma of obesity, and health care avoidance. *J Am Acad Nurse Pract*. 2002;14(12):554–561. doi:10.1111/j.1745-7599.2002.tb00089.x
11. Spooner C, Jayasinghe UW, Faruqi N, Stocks N, Harris MF. Predictors of weight stigma experienced by middle-older aged, general-practice patients with obesity in disadvantaged areas of Australia: a cross-sectional study. *BMC Public Health*. 2018;18 (1):640. doi:10.1186/s12889-018-5556-9
12. Schwartz MB, Chambliss HO, Brownell KD, Blair SN, Billington C. Weight bias among health professionals specializing in obesity. *Obes Res*. 2003;11(9):1033–1039. doi:10.1038/oby.2003.142
13. Albury C, Strain WD, Brocq SL, Logue J, Lloyd C, Tahrani A. The importance of language in engagement between health-care professionals and people living with obesity: a joint consensus statement. *Lancet Diabetes Endocrinol*. 2020;8(5):447–455. doi:10.1016/s2213-8587(20)30102-9
14. Phelan SM, Burgess DJ, Yeazel MW, Hellerstedt WL, Griffin JM, van Ryn M. Impact of weight bias and stigma on quality of care and outcomes for patients with obesity. *Obes Rev*. 2015;16(4):319–326. doi:10.1111/obr.12266
15. Bucher DT, Courvoisier DS, Saldarriaga A, Martin XE, Farpour-Lambert NJ. Knowledge, attitudes, representations and declared practices of nurses and physicians about obesity in a university hospital: training is essential. *Clin Obes*. 2018;8(2):122–130. doi:10.1111/cob.12238
16. Schwenke M, Luppa M, Pabst A, et al. Attitudes and treatment practice of general practitioners towards patients with obesity in primary care. *BMC Fam Pract*. 2020;21(1):169. doi:10.1186/s12875-020-01239-1
17. Sikorski C, Luppa M, Glaesmer H, Brahler E, Konig HH, Riedel-Heller SG. Attitudes of health care professionals towards female obese patients. *Obes Facts*. 2013;6(6):512–522. doi:10.1159/000356692
18. Keyworth C, Peters S, Chisholm A, Hart J. Nursing students' perceptions of obesity and behaviour change: implications for undergraduate nurse education. *Nurse Educ Today*. 2013;33(5):481–485. doi:10.1016/j.nedt.2012.05.016
19. Mullaney K. Weight stigma in healthcare: utilizing an educational presentation to reduce potential obesity bias in nursing students. 130. State University of New York; 2016. Available from: https://digitalcommons.brockport.edu/honors/130. Accessed September 28, 2021.
20. Malterud K, Ulriksen K. Obesity, stigma, and responsibility in health care: a synthesis of qualitative studies. *Int J Qual Stud Health Well-Being*. 2011;6(4):8404. doi:10.3402/qhw.v6i4.8404
21. Puhl R, Brownell KD. Bias, discrimination, and obesity. *Obes Res*. 2001;9(12):788–805. doi:10.1038/oby.2001.108
22. Fogelman Y, Vinker S, Lachter J, Biderman A, Itzhak B, Kitai E. Managing obesity: a survey of attitudes and practices among Israeli primary care physicians. *Int J Obes Relat Metab Disord*. 2002;26 (10):1393–1397. doi:10.1038/sj.ijo.0802063
23. Poon MY, Tarrant M. Obesity: attitudes of undergraduate student nurses and registered nurses. *J Clin Nurs*. 2009;18(16):2355–2365. doi:10.1111/j.1365-2702.2008.02709.x
24. Best SJ, Krueger B, Hubbard C, Smith A. An assessment of the generalizability of internet surveys. *Soc Sci Comput Rev*. 2001;19 (2):131–145. doi:10.1177/089443930101900201
25. Ferrante JM, Seaman K, Bator A, et al. Impact of perceived weight stigma among underserved women on doctor-patient relationships. *Obes Sci Pract*. 2016;2(2):128–135. doi:10.1002/osp4.40
26. Mold F, Forbes A. Patients' and professionals' experiences and perspectives of obesity in health-care settings: a synthesis of current research. *Health Expect*. 2013;16(2):119–142. doi:10.1111/j.1369-7625.2011.00699.x
27. Pervez H, Ramonaledi S. Nurses' attitudes towards obese patients: a review of the literature. *Nurs Times*. 2017;113(2):42–45.