



Weight Stigma in the Diabetes Clinic: Measured Consequences for Attendance and Self-Management

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Abstract

Weight stigma is discussed in diabetes care mainly as a matter of courtesy. The published evidence describes something with measurable clinical consequences. In a weight management clinic followed for six months, a third of patients did not return after the first consultation, and those who dropped out had higher internalised weight bias scores at that first visit. In a survey of 857 adults with type 2 diabetes, those with an elevated HbA1c reported greater weight and diabetes stigma than those within the standard-of-care range. In 3,821 adults, enacted weight stigma was associated with delay or avoidance of health care after adjustment for body mass index, and a six-country study of 13,996 adults found the effect of experienced stigma on care avoidance ran partly through internalised bias. Two problems limit what can be concluded. Almost all of this evidence is cross-sectional and self-reported, so the direction of the association with HbA1c is unresolved. And every study recruits people still engaged with services, which excludes precisely those in whom avoidance is complete.

Keywords: Weight stigma; Internalised weight bias; Diabetes stigma; Clinic attendance; Health care avoidance

Introduction

Weight stigma is the social devaluation of people because of body weight, expressed as negative stereotypes, prejudice and discrimination [1,2]. Internalised weight bias is the further step in which a person applies those stereotypes to themselves [3,4].

Both are common among people with type 2 diabetes, who may encounter diabetes stigma in addition, expressed as blame for having developed the condition [5,6]. International consensus statements have been issued calling for an end to both obesity and diabetes stigma [28,30], and psychosocial moderators of its impact have been examined directly [29]. Weight bias has been documented among health professionals specifically, which matters because the clinic is where treatment decisions are made [7,8,34]. Scoping review of weight bias and health care utilisation describes avoidance across several care settings [25,26,27].

Attainment of treatment targets in diabetes is poor: roughly half of people reach the HbA1c standard of care and about one in five reach the combined targets for HbA1c, blood pressure and

lipids (Figure 2) [9,10]. This review asks whether stigma is one of the reasons, and how firmly the available evidence supports that.

Material and Methods

Search strategy: PubMed and the archives of the major diabetes, obesity and behavioural medicine journals were searched for studies of weight stigma in clinical settings. Search terms combined weight stigma, weight bias internalisation and diabetes stigma with health care avoidance, attendance, attrition, HbA1c and self-management. Reference lists of review articles [2,11] were screened by hand for primary sources.

Eligibility: Studies were included if they measured stigma with a validated instrument and related it to a clinical or utilisation outcome. Instrument validation studies are cited where they bear on the comparability of estimates and are identified as such.

Data extraction and handling: Design, sample, recruitment route, instrument and the reported estimate were extracted as

published. The recruitment route is stated alongside every estimate, because all of these studies sample people who are still attending, which bears directly on what can be inferred about avoidance. This review reports measured associations only and makes no dietary, caloric or exercise recommendations. No pooling or re-analysis was performed. Figures 1 to 6 and Tables 1 to 3 reproduce published values only. This is a narrative synthesis and was not registered as a systematic review.

Results

Attendance: In a medical weight management clinic combining pharmacological and behavioural treatment, patients were monitored for six months after an initial consultation. Two thirds, 66 per cent, returned for follow-up; 34 per cent did not return at all (Figure 1). Those who did not return had higher scores on the Modified Weight Bias Internalization Scale at that first consultation than those who continued (chi-square 4.56, $p < 0.05$) [12].

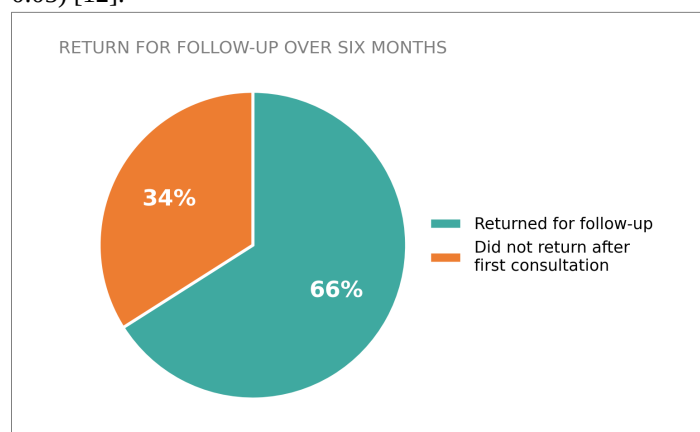


Figure 1: Return for follow-up over six months in a weight management clinic [12]

Why attendance matters: The clinical context is a population in which target attainment is already poor. Approximately half of people with diabetes reach the HbA1c standard of care, and only about one in five reach the cumulative standard for HbA1c, blood pressure and cholesterol together (Figure 2) [9,10]. A third of patients not returning after a first appointment is therefore not a minor operational loss.

Table 1: Principal studies reviewed, with the finding as reported by the original investigators

Table 2: Constructs measured in this literature and the instruments used [3,4,13,16]

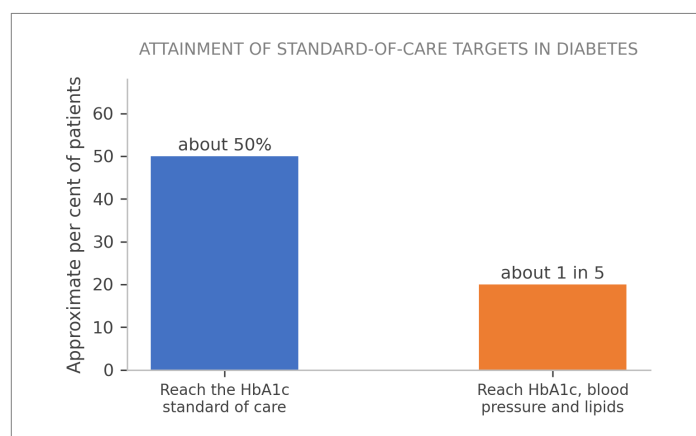


Figure 2: Attainment of standard-of-care targets in diabetes [9,10]

Glycaemic control: A web-based survey of 857 adults with type 2 diabetes collected self-reported HbA1c alongside the Modified Weight Bias Internalization Scale, the Weight Self-Stigma Questionnaire and the Type 2 Diabetes Stigma Assessment Scale. Participants with an elevated HbA1c reported greater weight stigma and greater diabetes stigma than those whose HbA1c fell within the standard-of-care range [13]. Hispanic participants reported higher degrees of bias and stigma and were the least likely of the groups studied to report an HbA1c at all, which is itself a form of missing data that is unlikely to be random [13].

Health care avoidance: In 3,821 adults surveyed online, enacted weight stigma was significantly associated with delay or avoidance of health care and with sedentary behaviour after controlling for body mass index and demographic characteristics [14]. A multinational study of 13,996 adults enrolled in a behavioural weight management programme across Australia, Canada, France, Germany, the United Kingdom and the United States tested mediation models and reported that the effect of experienced stigma on general avoidance of the doctor and on avoidance of needed health care ran in part through internalised weight bias (Figure 3) [15].

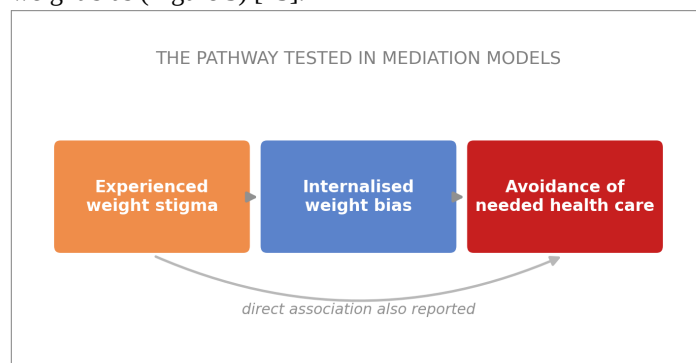


Figure 3: The pathway tested in mediation models across six countries [15]

Study	Sample and recruitment	Principal reported finding
Clinic attrition study [12]	Weight management clinic, 6 months	34% did not return; higher internalised bias among them

Study	Sample and recruitment	Principal reported finding
HbA1c survey [13]	857 adults, web-based survey	Elevated HbA1c associated with greater weight and diabetes stigma
Health outcomes survey [14]	3,821 adults, online	Enacted stigma associated with care delay or avoidance
Six-country study [15]	13,996 adults, weight programme	Avoidance mediated partly by internalised bias
Instrument comparison [16]	78 prebariatric patients	WBIS and WSSQ measure related but distinct constructs
Healthcare interactions study [6]	Adults with type 2 diabetes	Weight and diabetes stigma shape perceived interactions

The evidence base and its shape: The studies are large but uniformly cross-sectional and dependent on self-report (Figure 4) [12,13,14,15]. Two instruments are in common use for internalised stigma, the Weight Bias Internalization Scale and the Weight Self-Stigma Questionnaire, and a direct comparison in 78 patients awaiting bariatric surgery found both acceptable but not interchangeable, with differing internal consistency and differing predictive value for psychosocial outcomes [16].

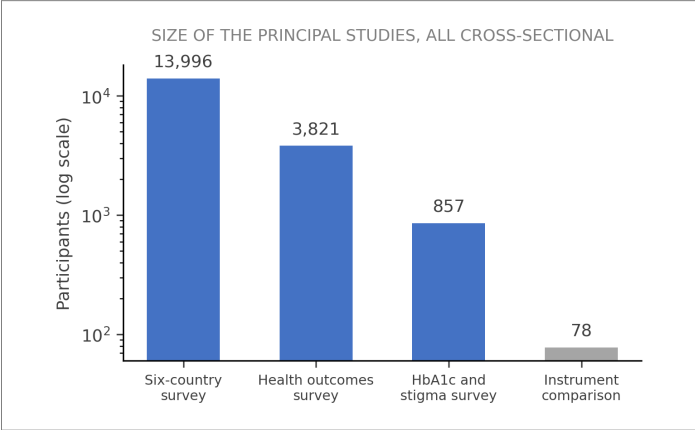


Figure 4: Size and design of the principal studies reviewed [12,13,14,15,16]

Proposed mechanisms: Reviews describe several routes by which stigma in a clinical encounter might affect outcomes. Acute stigmatisation provokes a stress response that lowers cognitive capacity and impairs the ability to take in and retain new information, which is a problem in a consultation whose purpose is education [2,11]. Over time, repeated experience is associated with avoidance of follow-up care. Weight stigma has also been reported in association with disordered eating patterns, avoidance of physical activity, and depression and anxiety symptoms (Figure 6) [2,11,17,18,24]. A cyclical model has been proposed in which stigma generates stress, stress shapes behaviour, and the resulting weight change invites further stigma [22].

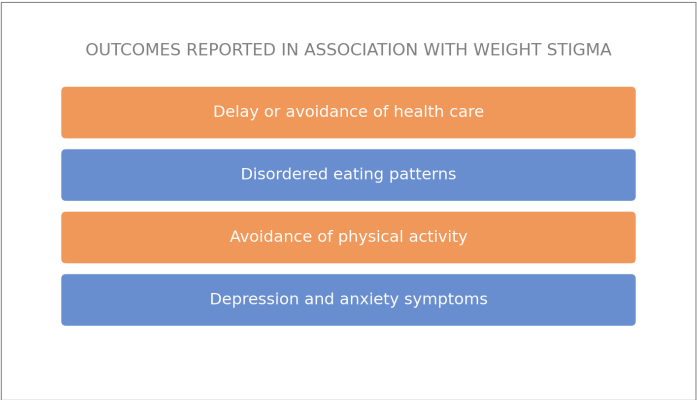


Figure 6: Outcomes reported in association with weight stigma [2,11,17,18]

Construct	What it measures	Common instrument
Enacted or experienced stigma	Stigmatising events a person has encountered	Survey items
Internalised weight bias	Applying the stereotypes to oneself	WBIS-M, WSSQ
Diabetes stigma	Blame and judgement for having diabetes	DSAS-2

What clinicians say and what patients hear: Language used in the consultation has been examined directly. Public perception studies report that weight-related terms differ substantially in how stigmatising they are judged to be, and that terms intended by clinicians as neutral and clinical are not always received that way [34]. Consensus statements from both the obesity and diabetes fields have converged on the same recommendation, that language should describe the condition rather than define the person [28,30].

Beyond the clinic encounter: Associations have also been reported outside health care use. Perceived weight discrimination was found to amplify the relationship between central adiposity and glycaemic control in people without diabetes [31], and internalised bias has been associated with metabolic syndrome among treatment-seeking adults with obesity [32]. Longitudinal analysis has reported that perceived discrimination predicts subsequent weight change rather than only accompanying it [33]. These findings are consistent with a physiological pathway through chronic stress, though they remain observational [22,24].

Discussion

The attendance finding is the most directly useful in this literature. A third of patients did not return after a single consultation, and the score that distinguished them was recorded before they left, at the first visit [12]. That is a measurement taken at a point where something could still be done, which is more than can be said for most of the associations reported here.

The glycaemic association is weaker than it first appears, and the reason is direction. People with elevated HbA1c reported more stigma, and there are at least three readings [13]. Stigma may impair self-management and control. Poorer control may

itself provoke stigmatising responses from clinicians and families. Or a person struggling with control may perceive and recall neutral interactions as judgemental, which is a real phenomenon rather than a dismissal. Cross-sectional data cannot separate these, and the papers reporting the association say so. Population work has reported that perceived weight discrimination amplifies the association between central adiposity and glycaemic control in people without diabetes [31], and internalised bias has been linked to metabolic syndrome among treatment-seeking adults [32,33].

The more fundamental limitation is one of sampling, and it runs through every study here. Care avoidance is measured by surveying people who are attending a clinic or enrolled in a management programme (Figure 5) [12,14,15]. Anyone whose avoidance is complete, who has not seen a clinician for years because of how a previous consultation went, is by construction absent. If stigma drives disengagement, then the effect is largest in exactly the group the research cannot reach, and every estimate here is therefore a lower bound of unknown size.

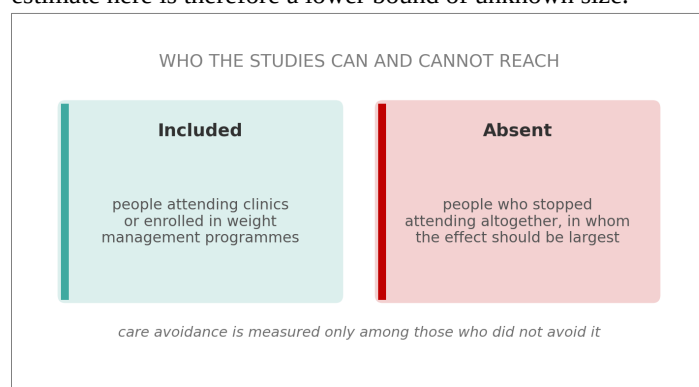


Figure 5: Who the available studies can and cannot reach [12,14,15]

What follows for practice is narrower than the literature's tone often suggests, and still worth acting on. Internalised weight bias can be measured at a first consultation with a short validated instrument, and it identified the group that did not come back [12,16]. Whether measuring it and responding to it improves attendance is untested; pilot trials addressing internalised bias alongside weight management are only now reporting, and in adolescents rather than adults with diabetes [19,20]. The honest position is that the association is established, the mechanism is plausible, and the intervention is not yet evidenced. Systematic review of weight bias internalisation and health reaches a compatible conclusion: the associations are consistent, the trials are scarce [21,23].

A reasonable objection to this literature is that it risks explaining poor outcomes by clinician conduct when the more parsimonious explanation is disease severity and social disadvantage. That objection has force, and none of the studies reviewed here can dispose of it, because none randomises anything [13,14,15]. What can be said is that the associations survive adjustment for body mass index in the studies that adjusted for it, and that the attrition finding used a measurement

taken before the outcome occurred rather than after it [12,14].

The practical conclusion is correspondingly narrow. Consensus statements calling for an end to weight and diabetes stigma are unambiguous about what should change in clinical language and conduct, and they do not depend on the glycaemic evidence being causal [28,30]. Treating people without contempt requires no trial. What does require evidence, and does not yet have it, is the stronger claim that a stigma-reduction intervention delivered in a diabetes clinic will improve attendance or HbA1c, and that claim should not be made until the trials now under way in adolescent populations report [19,20,21].

There is also a question about who is being asked to change. Much of the practical literature addresses clinician language and conduct, which is appropriate, but the measured predictor of non-return in the attrition study was internalised bias, something the patient brought into the room [12]. Those are different targets requiring different responses, and conflating them risks an intervention aimed at staff training being evaluated against an outcome driven by patient self-perception. The instruments distinguish the constructs clearly enough for studies to keep them apart [3,4,16].

Finally, the size of the literature should not be mistaken for its strength. Nearly fourteen thousand participants across six countries is an impressive denominator, and it remains a cross-sectional survey of people enrolled in a commercial weight management programme answering questions about their own behaviour [15]. Scale reduces random error and does nothing about selection or recall, and both are the dominant threats here [14,25].

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Study limitations

The limitations belong to the underlying literature and are substantial. Every principal study is cross-sectional, so no causal direction can be established between stigma and either glycaemic control or attendance [13,14,15]. Stigma, HbA1c and avoidance are all self-reported in the largest surveys, and self-reported HbA1c is subject to both recall and differential willingness to disclose, which the study reporting ethnic differences in disclosure demonstrates directly [13]. Samples are drawn from people engaged with clinics or commercial weight management programmes and are not representative of the diabetes population [12,15]. The two internalisation instruments are not interchangeable, so estimates across studies are not strictly comparable [16]. The attrition study is single-centre with a six-month window and cannot distinguish disengagement from transfer of care elsewhere [12]. Effect estimates are frequently reported as associations without adjusted effect sizes. And the evidence is overwhelmingly from high-income Western settings [15].

What would settle it

Three studies would move this field considerably. A prospective cohort measuring internalised bias at a first diabetes clinic appointment and following attendance and HbA1c for a year would establish temporal order, which no current study does [12,21]. A sampling frame drawn from primary care records rather than from clinic attenders would include people who have disengaged, the group the present evidence structurally excludes [25,26]. And a randomised evaluation of a stigma-reduction intervention with attendance as the primary endpoint would test the claim that the literature already implies. Trials of that shape are beginning in adolescent weight management and have not yet reported in adults with diabetes [19,20].

Conclusion

Weight stigma in diabetes care has measurable correlates: a third of patients not returning after a first consultation, with internalised bias higher among them; greater reported stigma among those with elevated HbA1c; and an association between enacted stigma and delay or avoidance of care that persists after adjusting for body mass index. None of it establishes direction, and all of it is drawn from people who were still attending something, which means the group in whom avoidance is complete is absent from every dataset. The practical implication is modest and specific: the measure that predicted non-return was taken at the first visit, while the patient was still in the room.

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Conflict of Interest

The authors declare no competing interests.

Ethics Statement

This article reviews previously published studies only. No new patient data were collected and no participants were recruited, so ethical approval was not required.

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