Examining the Relationship Between Weight Stigma, Diabetes Stigma, and HbA1c in Adults with Type 2 Diabetes

Tracy J Sims[1], Chanadda Chinthammit[1], Melissa L Constantine[2,3], Donald M Bushnell[3], Erik Spaepen[4]

[1]Eli Lilly and Company, Indianapolis, Indiana, USA, [2]University of Minnesota School of Public Health, Minneapolis, MN, USA, [3]Thermo Fisher Scientific, Wilmington, NC, [4]USAHaaPACS GmbH, Schriesheim, Germany

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OBJECTIVE

- To investigate associations between experienced and internalized weight stigma, diabetes stigma, and self-reported HbA1c levels in adults with T2DM.

CONCLUSION

- Weight stigma and diabetes stigma may contribute to suboptimal diabetes outcomes, including elevated HbA1c or inability to report HbA1c. Reducing stigma and improving supportive healthcare interactions may enhance diabetes self-management and glycemic outcomes.

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BACKGROUND

Type 2 diabetes mellitus (T2DM) remains a significant public health challenge, with many adults unable to achieve recommended glycemic targets despite well-established clinical guidelines and effective treatments. Suboptimal glycemic management increases the risk of diabetes-related complications. While biological and treatment-related factors are important, psychosocial influences on diabetes management have received increasing attention.

Weight and diabetes stigma are common among people with T2DM and are associated with psychological distress, reduced engagement in self-care behaviors, and poorer healthcare experiences. Individuals with T2DM may be particularly vulnerable to stigma due to the emphasis on body weight in diabetes management and societal perception that attribute blame or personal responsibility for the condition. Although prior research has linked stigma to adverse health behaviors, limited work has examined the relationship between weight and diabetes stigma, and glycemic outcomes.

This study examined associations between experienced and internalized weight stigma, diabetes stigma, and self-reported HbA1c levels in adults with T2DM.

HIGHLIGHTED RESULT

Self-report of HbA1c Percentage

Characteristic	4.0-20.0% *N*=575	4.0-8.0% *N*=505	>8.01-20.0% *N*=70	No report or out of range *N*=282	*p-value
WBIS-M, mean (SD)	3.2 (1.5)	3.1 (1.5)	3.7 (1.4)	3.6 (1.5)	1: 0.0153 2: 0.0002 3: 0.9145
WSSQ-Total, mean (SD)	29.1 (11.0)	28.6 (11.0)	33.3 (10.4)	31.3 (10.7)	1: 0.0037 2: 0.0044 3: 0.3973
WSSQ-Self-devaluation, mean (SD)	15.0 (5.5)	14.7 (5.5)	16.7 (5.6)	16.0 (5.5)	1: 0.0187 2: 0.0119 3: 0.5852
WSSQ-Fear of Enacted Stigma, mean (SD)	14.1 (6.1)	13.8 (6.1)	16.5 (5.7)	15.5 (6.1)	1: 0.0030 2: 0.0013 3: 0.4632
DSAS-2 Total, mean (SD)	38.3 (15.4)	37.4 (15.1)	44.7 (16.3)	41.5 (16.9)	1: 0.0019 2: 0.0035 3: 0.3381
DSAS-2-Treated Differently, mean (SD)	10.2 (4.8)	9.9 (4.6)	12.3 (5.6)	11.4 (5.6)	1: 0.0014 2: 0.0006 3: 0.4109
DSAS-2-Blame and Judgement, mean (SD)	16.3 (7.0)	16.0 (6.9)	18.6 (7.0)	16.7 (6.8)	1: 0.0151 2: 0.3648 3: 0.1434
DSAS-2-Self-stigma, mean (SD)	11.8 (5.7)	11.5 (5.5)	13.9 (6.2)	13.6 (6.1)	1: 0.0047 2: ≤0.0001 3: 0.8880

WBIS-M, Weight Bias Internalization Scale – Modified; WSSQ – Weight Self Stigma Questionnaire; DSAS-2 – Diabetes Stigma Assessment Scale
*Pairwise comparisons of HbA1c (1: 4–8% vs. 8–20%, 2: 4–8% vs. DNR, 3: 8.01–20% vs. DNR)

METHODS

Design

- Observational, survey-based study.

Participants

- 857 U.S. adults with T2DM
- 61.6% were men,
- Mean (SD) age 57.4 (15.7) years
- Mean (SD) BMI of 33.4 (8.4)kg/m2
- Mean (SD) HbA1c of 7.0% (1.5%)

Measures

- WBIS-M, Weight Bias Internalization Scale-Modified; WSSQ, Weight Self Stigma Questionnaire; DSAS-2, Type 2Diabetes Stigma Assessment Scale

Analyses

- Mean scores and subgroup comparisons based on measure score levels.

FINDINGS

- Participants with elevated HbA1c reported higher levels of weight stigma and diabetes stigma compared to those within standard of care range.
- Higher self-reported HbA1c was associated with greater weight and diabetes stigma, particularly: fear of enacted weight stigma and being treated differently due to diabetes
- Participants who did not report an HbA1c showed elevated levels of experienced and internalized stigma, like those with elevated HbA1c.
- Cannot draw conclusions on causes or their directionality for nonreporting of an HbA1c level. However, there may be 5 reasons:
  1. the participant had not recently engaged a healthcare provider enabling an HbA1c order;
  2. an HbA1c was not ordered for the participant when engaged with their healthcare provider
  3. the participant was not told their HbA1c
  4. the participant did not understand the meaning of the HbA1c
  5. the participant did not remember the HbA1c
- Efforts to improve T2DM outcomes should explicitly address stigma at multiple levels including:
  - Social and structural systems, healthcare settings, and directly with HCPs
- Reducing weight and diabetes stigma may:
  - Enhance agency and engagement, improve glycemic outcomes, advance health equity, and quality of life
- Future research is needed to:
  - Clarify causal pathways between stigma and HbA1c, examine reasons for HbA1c non-reporting, evaluate stigma-reduction interventions, particularly in clinical care, address intersecting stigmas (e.g., racial/ethnic discrimination)

References
For full paper, including study limitations, and complete list of references please use QR code for access.

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