Implicit and explicit attitudes towards Type-2 diabetes mellitus (T2DM) versus typical health

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Rationale

- T2DM accounts for 90% of diabetes cases worldwide, with an estimated 3.4 million adults diagnosed in the UK (Diabetes UK, 2018).
- Self-management is crucial to effectively manage the condition and avoid complications, however negative attitudes towards people with T2DM may act as a barrier (e.g. reduce the amount of social support received; people unwilling to disclose their condition or access healthcare).
- There is a paucity of research investigating people's attitudes towards people with T2DM.

Aim

- To investigate explicit and implicit attitudes towards T2DM and typical health in people without a diagnosis of T2DM.

Research questions

1. Will participants demonstrate an explicit diabetes bias by rating people with diabetes as less positive compared to people with typical health?

2. Will participants demonstrate an implicit diabetes bias and will this bias be primarily diabetes-negative and typical health-positive ?

Method

- 37 participants; 23 females and 14 males with a mean age of 28.97 years (SD = 9.5).
- Participants completed both implicit and explicit measures of attitude, in a counterbalanced order.

Explicit: 3 self-report explicit measures were developed
1) Attitudes-towards-T2DM questionnaire
2) Attitudes-towards-typical health questionnaire
3) Feeling thermometer for T2DM and typical health

Implicit: The Implicit Relational Assessment Procedure (IRAP) (Barnes-Holmes et al. 2006) was used.

- Involves responding to relations that are consistent or inconsistent with the identified diabetes-negative/typical health positive stereotype (See Figure 2 for the 4 trial types).
- Response latency scores (D-IRAP) on each trial-type were calculated.
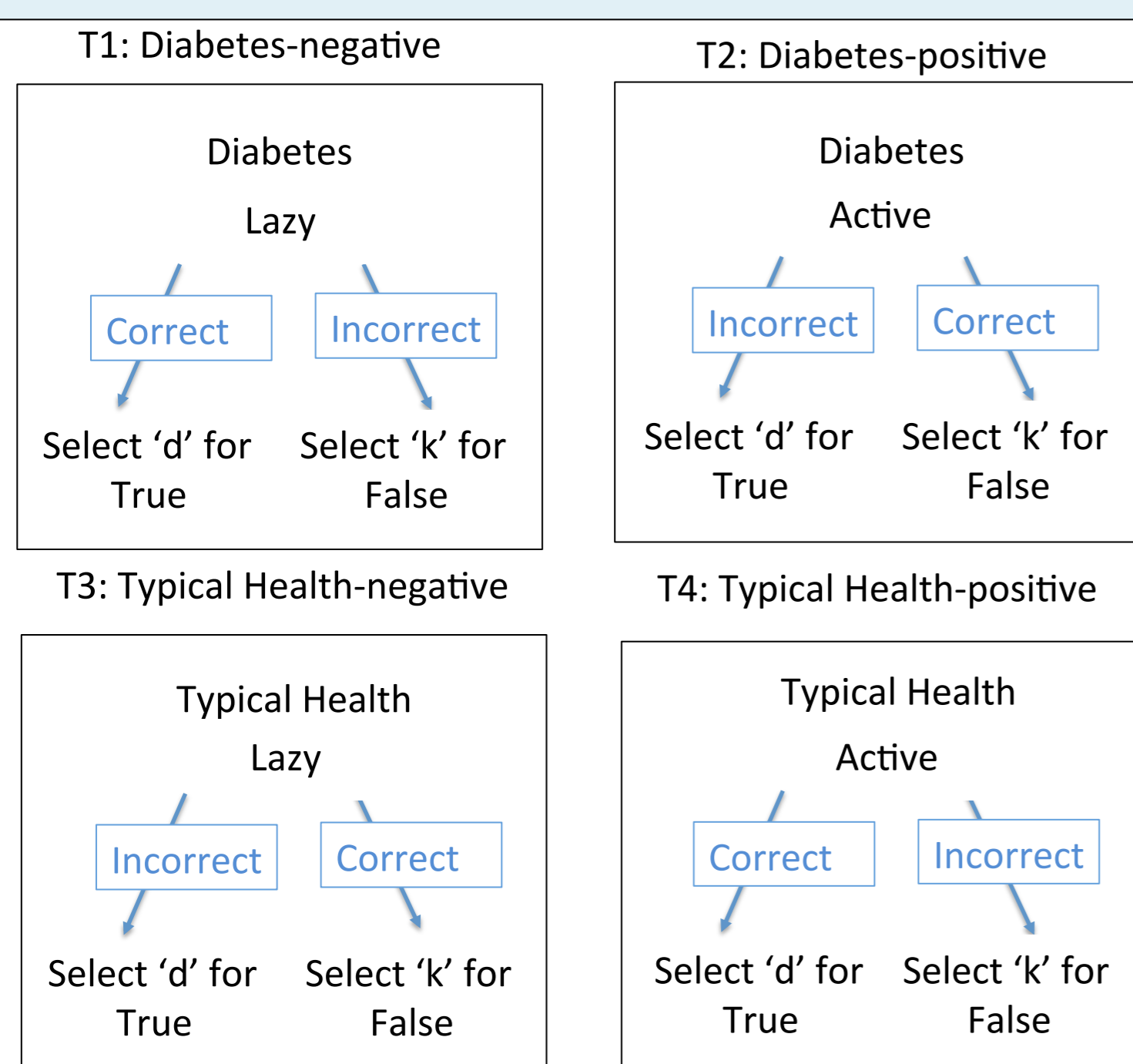
Figure 1. Examples of the 4 trial-types and how they are displayed on screen during the IRAP. Arrows and text boxes indicate the correct response for each trial-type on a **consistent block** (e.g. diabetes negative/typical health positive stereotype)
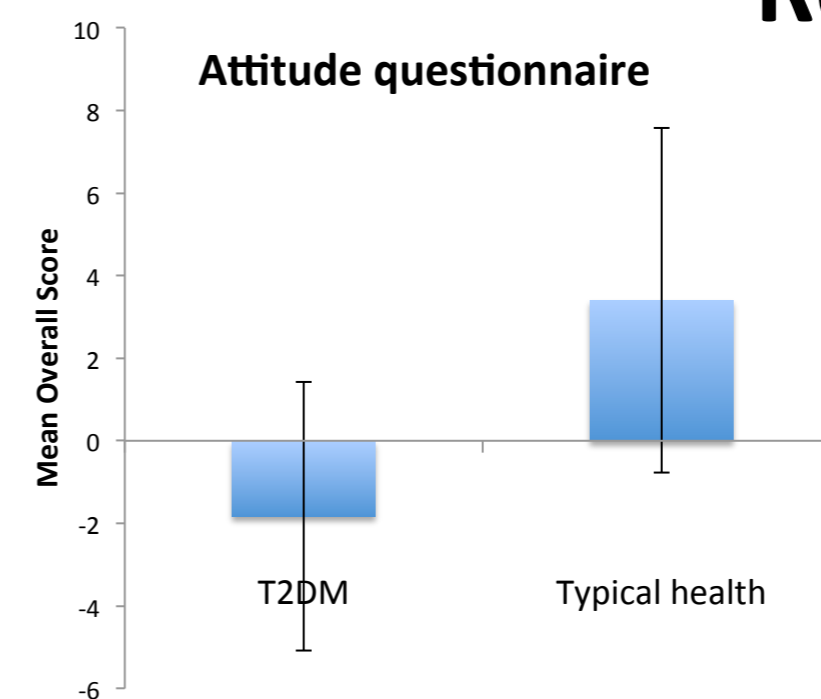
Results

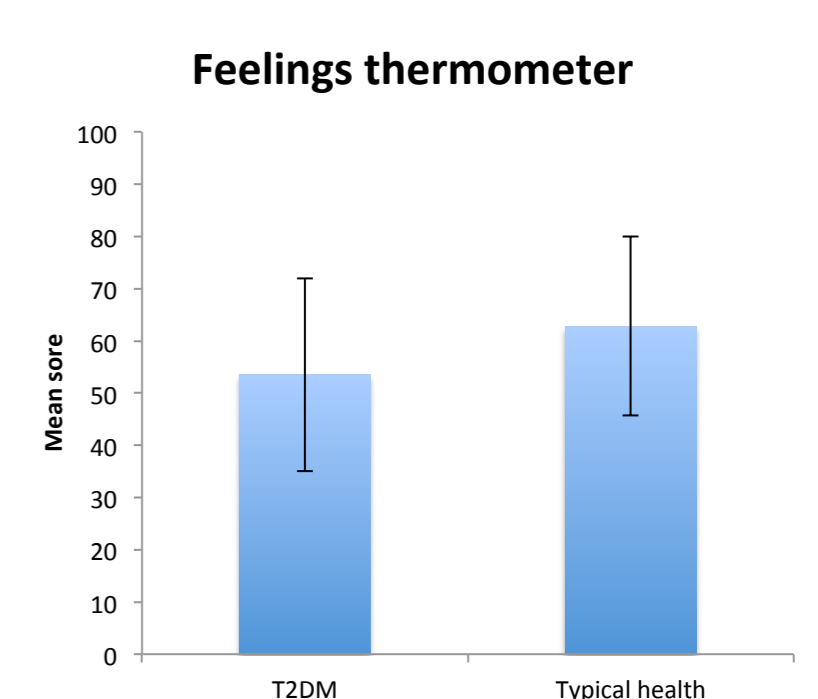**Figure 2**. Mean overall scores on the attitude questionnaires

Figure 3. Mean T2DM and typical health scores on the feeling thermometer

- 7 pts failed the IRAP (3 during practice and 4 during test phase).
- T2DM is rated significantly more negatively than typical health $t(29)=-4.86, p<0.01$.
- T2DM is judged significantly less warmly than typical health, $t(29)=-2.68, p = 0.012$.
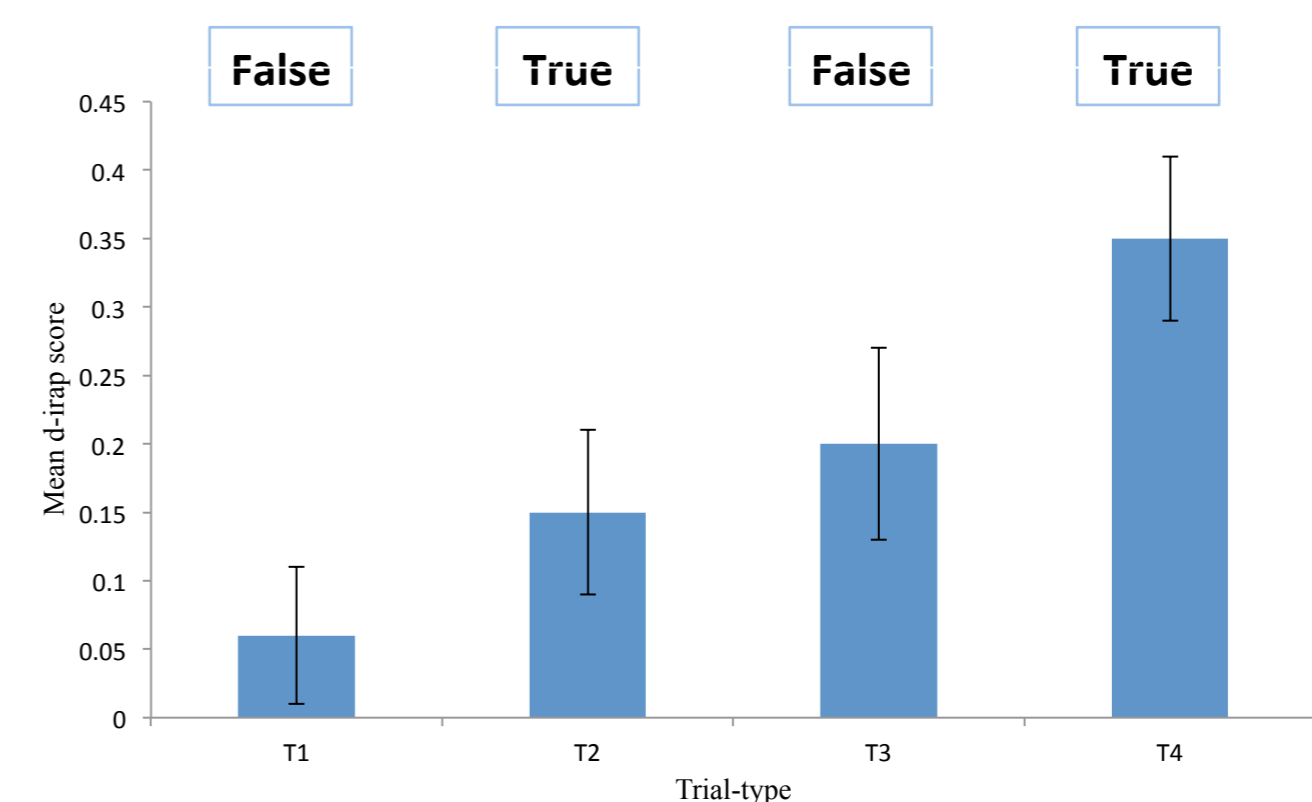
Figure 4. Mean scores on each IRAP trial-type (T1 = Diabetes-Neg, T2 = Diabetes-Pos, T3 = Health-Neg, T4 = Health-Pos). 'False and 'true' indicate the response option chosen fastest across the blocks. Positive scores indicate pts are faster on consistent blocks (e.g. diabetes negative/typical health positive) than inconsistent blocks

- Overall D-IRAP score mean trial-type score of 0.19 (SD = 0.17).
- Only positive bias was identified (See Figure 4). Significant on all trial-types (p's < .015) except trial-type 1.
- Main effect of trial type, $F(3, 87) = 3.81, p = 0.013$. In particular between trial-type 1 & 3, 1 & 4 and 2 & 4.

Conclusion

- Preliminary evidence that negative attitudes exist towards T2DM.
- Participants rated people with diabetes more negatively and less warmly than people with typical health on explicit self-report attitude measures.
- IRAP effect consistent with the diabetes-negative/typical health-positive stereotype.
- People were faster at refuting 'typical health-negative' than 'diabetes-negative' and at confirming 'typical health-positive' than 'diabetes-positive.
- However, no bias for diabetes-negative trial type was found.

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Diabetes UK (2018). *Diabetes UK: key facts and stats.* Retrieved 1/8/2015 from Diabetes UK: https://www.diabetes.org.uk/professionals/position-statements-reports/statistics/diabetes-prevalence-2018