

# RISK FACTORS FOR DIABETES-RELATED DISTRESS IN PEOPLE LIVING WITH TYPE 1 DIABETES –LESSONS FROM THE ASSOCIATION OF BRITISH CLINICAL DIABETOLOGISTS (ABCD) FREESTYLE LIBRE AUDIT



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## Background and Objectives

Diabetes-related distress (DRD) is increasingly being recognized in patients with Type 1 diabetes and is an important determinant of poor glycaemic control and complications in people living with Type 1 diabetes

There are extremely limited population-based studies looking at the prevalence of DRD in people living with T1D. Most of the data are reported from small cross-sectional studies which are not representative of the whole population

The objective of this study was to identify the baseline demographic and clinical characteristics associated with Diabetes-related distress in people living with Type 1 diabetes

## Methods

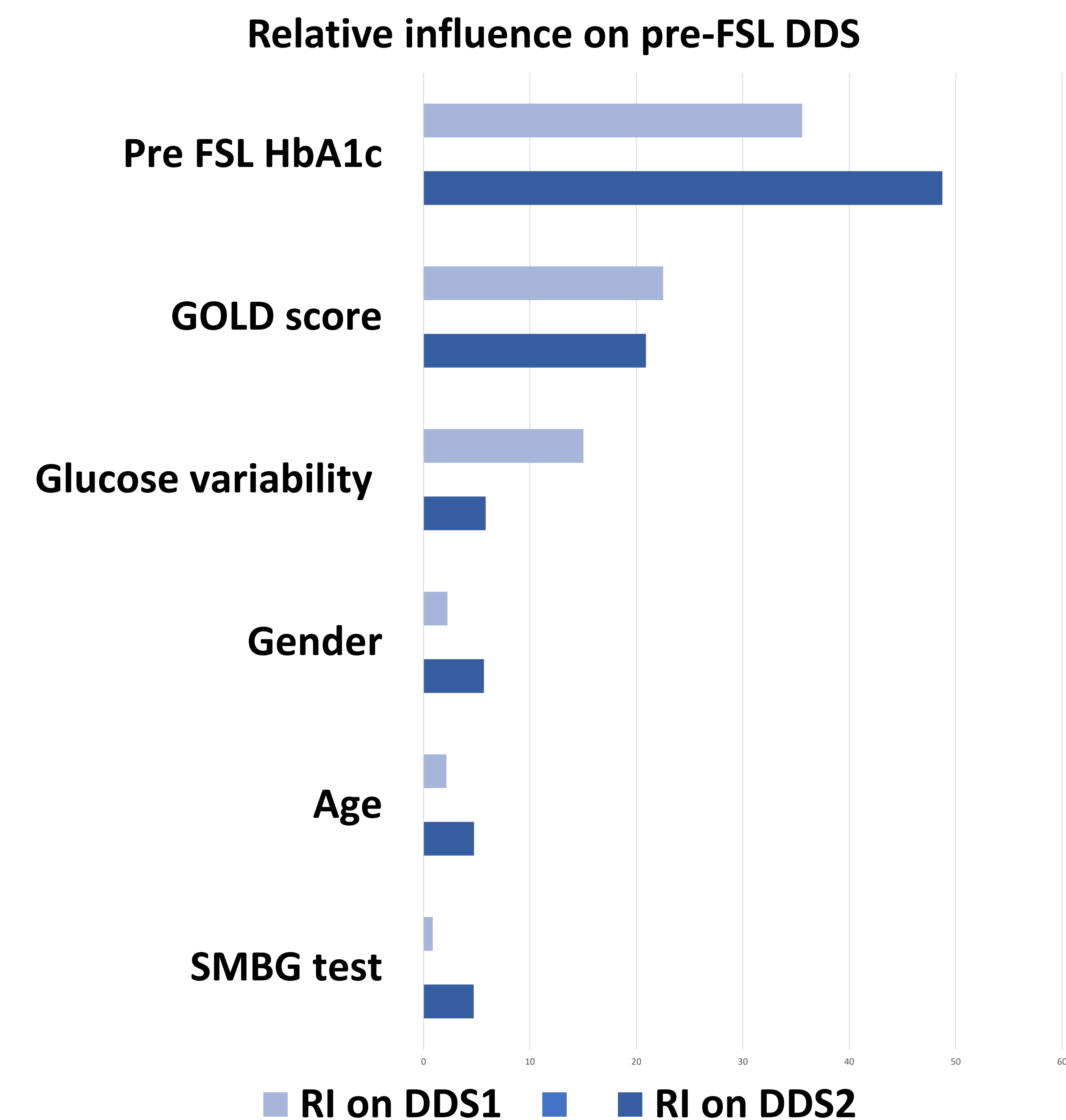
The study was performed using baseline data from the ABCD nationwide FreeStyle Libre audit. We collected diabetes-related distress scores at baseline with two items diabetes-related distress score (DDS) and follow up. An average item score of  $\geq 3$  (moderate distress) discriminated high from low-distressed subgroups. We used an unsupervised gradient boosting machine learning model (GBM) to identify the relative influence of baseline parameters on two components of DDS.

## Results

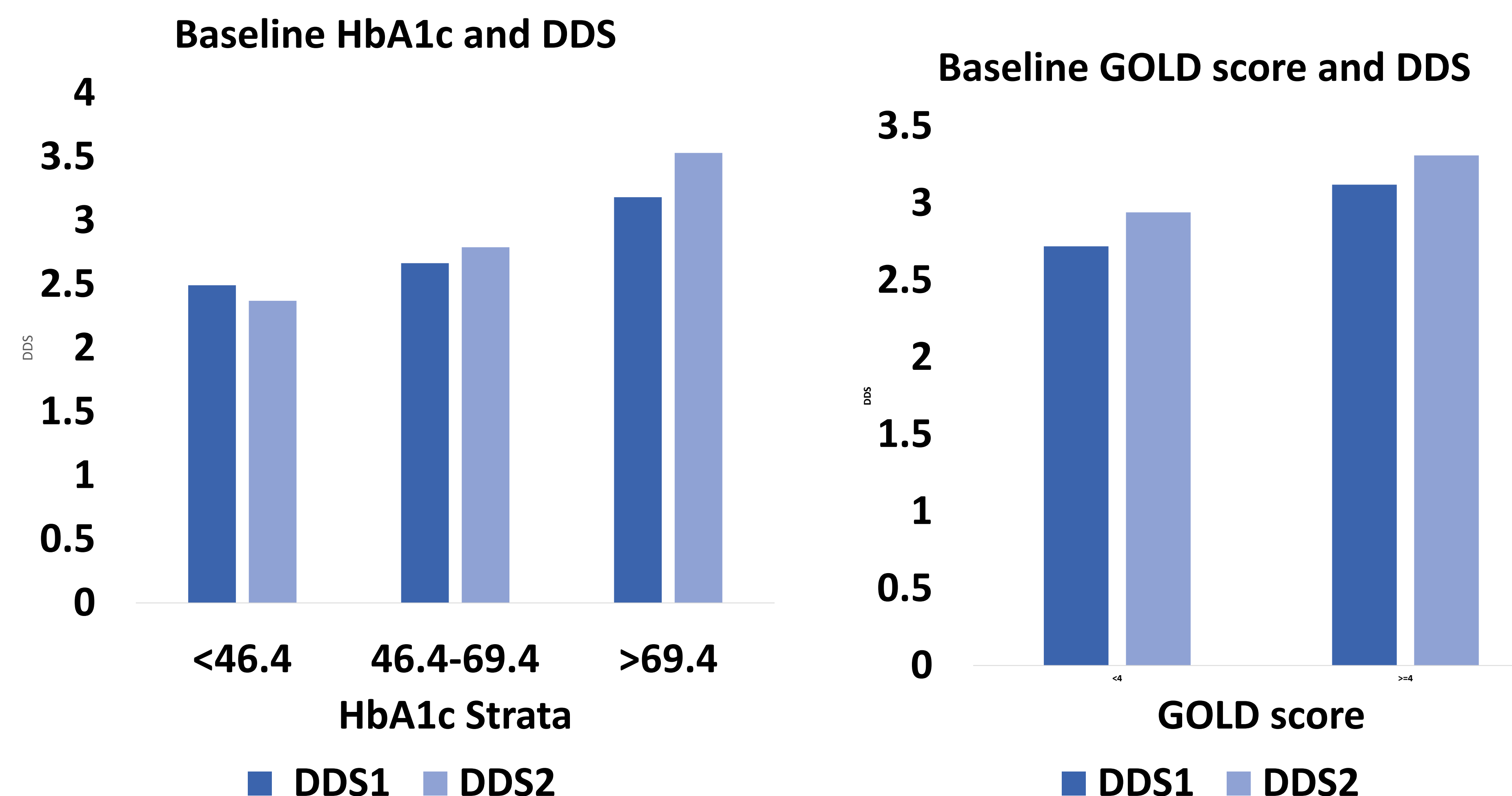
### Demographics (n=9124)

N=9124	
Age (years)	45.1(±15.3)
Sex, % females	4573 (±50.1%)
Baseline BMI (kg/m <sup>2</sup> )	26.7(±6.2)
Duration of diabetes (years)	23.7(±51.7)
Type 1 diabetes	8816 (96%)
Insulin pump	2157 (23%)
White Caucasians	7303(80%)
Number of test strips used per day	7.4(±9.8)
Mean pre-FSL HbA1c (mmol/mol)	70.24 (±18.3)
Baseline Gold score	2.65(±1.72)
Mean DDS1	2.8(±1.4)
Mean DDS2	3.10(±1.4)

### Risk factors for baseline DDS in with machine learning (GBM) model



### Effect of Baseline HbA1c and GOLD score on mean DDS



## Conclusion

- The baseline prevalence of DRD was high in our cohort with up to 60% patients with moderate to severe distress.
- Baseline HbA1c, GOLD score, Glucose variability as an indication for starting FSL were important risk factors for DDS