

# Association between Socioeconomic Status and Glycemic control in Type 1 Diabetes Mellitus

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## Background :

- Socioeconomic status (SES) is inversely associated with many chronic diseases, with disadvantaged individuals faring worse than the others.
- In Diabetes Mellitus, however, studies evaluating the relationship between SES and the glycaemic control have shown variable results.

## Objective and hypotheses:

- To understand the effect of SES on the long term glycemic control in children with Type 1 Diabetes Mellitus (T1DM) at a tertiary centre in India.

## Methods:

- In this retrospective study, clinical data was collected from 78 children with T1DM and their SES calculating using widely accepted modified Kuppuswamy scale (2012).

## Results:

- The mean age at diagnosis of T1DM was 7.09 ( $\pm 3.7$ ) years.
- The mean HbA1c concentration on admission & subsequent follow up were ( $12.12 \pm 2.69\%$ ) and ( $9.09 \pm 2.05\%$ ) respectively.
- Majority (88.31%) of the children were on mixed split regimen and only 9 patients (11.69%) were on basal bolus regimen.
- The mean HbA1c in children using mixed split regimen was  $9.10 (\pm 2.12)\%$ , and it was  $9.58 (\pm 1.84)\%$  for those on basal bolus [ $P=0.111$ ].
- As per modified Kuppuswamy scale, the number of children in class 1, 2, 3 and 4 (class 1 being the upper SES) were 6(10.1%), 19 (32.2%), 17(28.81%) & 17(28.81%) respectively.
- Mean HbA1c for SES class 1, 2, 3 & 4 were 8.15, 8.84, 9.66, 9.54 respectively (using Independent Samples "t" test, no significant difference in HbA1c was noted between the upper (class 1 & 2) & lower (class 3 & 4) socio-economic groups [ $P=0.64$ ]).
- There was no significant correlation between SES and HbA1c on follow up by using Pearson's test of Linear correlation ( $P=0.10$ ).

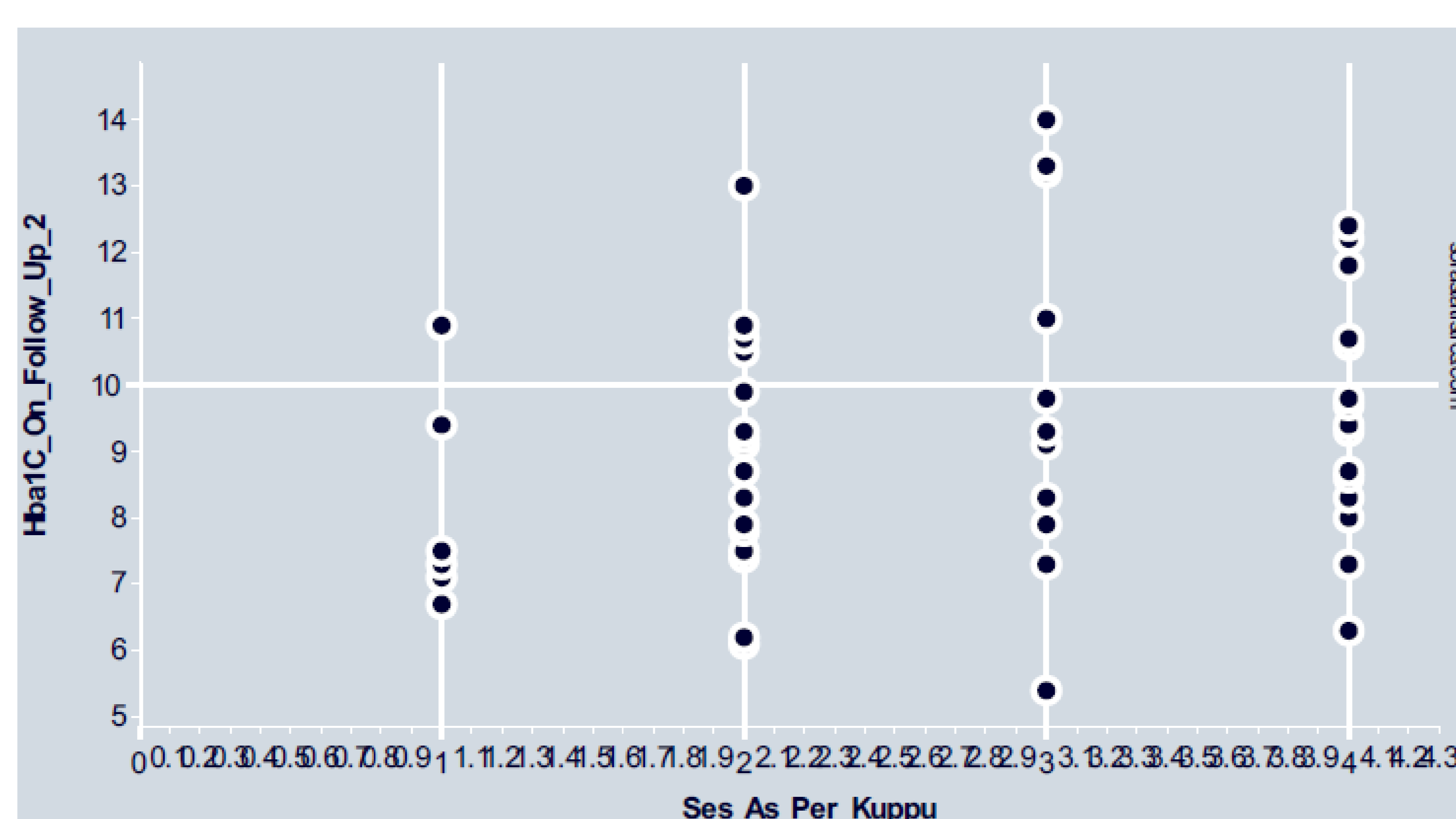


Fig-1 correlation between Different socioeconomic class (1,2,3& 4) & HbA1C on follow up

## Conclusion:

- In our study, we did not find any evidence to suggest that the glycaemic control in T1DM is influenced by SES in Indian population.
- Further studies are needed to understand the other factors that impact on the long term glycaemic control.

**Conflict Of Interest:** None Stated.

## Reference:

Secrest AM et al . Associations between Socioeconomic Status and Major Complications in Type 1 Diabetes: The Pittsburgh Epidemiology of Diabetes Complication (EDC) Study. *Annals of epidemiology*. 2011;21(5):374-381.

