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Fasting Blood Sugar Levels, Fasting Practices and Associated Factors among Hindu Patients with Diabetes Mellitus at a Primary Care Centre in Jaffna

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Background: Most Hindu households in Jaffna practice fasting during the festival season. Fasting or abstinence from certain foods and feasting are known to be associated with changes in the level of blood sugar.

Objectives: To assess fasting blood sugar (FBS) levels, Hindu festival fasting practices and associated socio-demographic and lifestyle factors among Hindu patients with diabetes mellitus attending the Family Health Centre (FHC), Kondavil, Jaffna, during the Hindu festival season

Methods: A cross-sectional study was carried out among patients with diabetes mellitus attending FHC Kondavil from September to November 2022. An interviewer-administered questionnaire was used to collect data on fasting practices during the past 24 hours. FBS data were extracted from the FHC laboratory register. Mann-Whitney U test was used to test for differences in FBS by fasting practices, socio-demographic and lifestyle factors. $p<0.05$ was considered as statistically significant.

Results: Of total, 102 (80.9%) out of 126 patients with diabetes registered at the FHC participated. Mean(±SD) age was 60.4(±11.3) years; 57.8% were ≥60 years. Majority was females (68.6%), married (98.0%), without GCE O/L qualifications (58.9%), unemployed (75.5%), with a monthly household income of <LKR 50,000 (91.2%). In the sample, 23.5% (n=24) reported fasting during the past 24 hours; all (n=24) had skipped breakfast; six (5.9%) skipped breakfast and lunch; 18 (75%) skipped only breakfast, and none skipped dinner. Among those who fasted, one (4%) did not take prescribed medication. FBS did not differ significantly between those who fasted and those who did not (median 119.3 vs. 105.0 mg/dL; $p=0.338$). FBS was higher among those <60 years compared to those above 60 (median 130.8 vs. 100 mg/dL; $p<0.001$); and the married compared to others (median 119.4 vs. 101.4 mg/dL; $p=0.032$). Although males, those with ≥O/L qualifications and the employed had higher median FBS, the differences were not significant ($p>0.05$).

Conclusions: Hindu fasting practices were not associated with FBS. As median FBS was higher among the fasting group, a longitudinal study is needed to explore the effect of fasting and feasting during Hindu festivals.

Keywords: *Diabetes mellitus, Fasting blood sugar, Hindu festival, Primary care*