FACTORS AFFECTING FETAL FRACTION IN A SOUTHEAST ASIAN POPULATION

INTRODUCTION
Maternal weight, BMI and gestational age are established factors known to affect fetal fraction. However, there exists a paucity of research into the influence of factors affecting fetal fraction in the Southeast Asian population. This is a pilot study designed to explore the possible factors in this specific population.

METHOD
This is a retrospective analysis of samples submitted for Harmony Prenatal Testing. Anonymised data from 3179 samples were analysed and of which, a subset of 1202 samples were also tested for the correlation between serum βhCG and PAPP-A on fetal fraction. Fetal fraction was determined as part of the Harmony test. Multiple linear regression analysis was used to determine correlation coefficients of the various factors.

RESULTS
Multiple linear regression analysis showed increased fetal fraction with increasing GA and decreasing BMI. Both correlations are statistically significant. Similar results were obtained from the second set of 1202 samples. In addition, increasing both biomarkers, βhCG and PAPP-A, led to an increase of fetal fraction.

CONCLUSION
Fetal fraction increases with increasing βhCG, PAPP-A and GA and decreases with increasing BMI. In future, a larger sample size can be used to accurately quantify these factors’ impact on fetal fraction, and possibly finding other small but significant factors’ association with fetal fraction.