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history of preterm delivery. Multiple logistic regression and gener-
ated additive models were used to explore the effect of covariates
including area deprivation, smoking status, BMI, parity and ethnicity.
Results The proportion of PTB was significantly different in the
three groups: 1.58% (95% CI 1.24 to 1.47, n=38 994) in the low risk
group, compared to 6.55% (CI 6.09 to 7.05, n=10 760) in the medical
disorder group and 9.2% (CI 7.39 to 11.61, n=732) in the previous
preterm group. 64% of the women delivering at LWH were in
the most deprived quintile relative to the English population. The
unadjusted odds of preterm delivery in the most deprived quintile
compared to the least was 1.60 (CI 1.28 to 2.00) in the uncom-
licated group. In a multiple regression model, ever having smoked
(OR 1.68 CI 1.35 to 2.08), underweight (OR 1.65 CI 1.005 to 2.56)
and highest quintile of area deprivation (OR 1.59 CI 1.19 to 2.11)
were associated with increased risk of PTB. Being overweight
decreased the risk of PTB (OR 0.76 CI 0.59 to 0.97). In the medical
disorders group, age (OR 1.02 CI 1.011 to 1.04), highest quintile of
area deprivation (OR 1.46 CI 1.14 to 1.83), underweight (OR 1.68 CI
1.09 to 2.51), ever having smoked (OR 1.19 CI 1.00 to 1.44), NULL
parity (OR 1.57 CI 1.13 to 1.66) and black ethnic group (OR 1.61 CI
1.00 to 2.45) were associated with PTB.

Conclusions Preterm delivery contributes to inequalities in infant
mortality. In a cohort of women with no identifiable risk factors for
PTB at booking, deprivation of area of residence is associated with
higher risk of PTB, even with adjustment for smoking and under-
weight, which are also important independent risk factors. Depriva-
tion of area of residence needs to be considered when comparing
obstetric outcomes in units around the UK.

P17 BIRTH SIZE DIFFERENCES BETWEEN WHITE AND
PAKISTANI ORIGIN INFANTS BY GENERATION: RESULTS
FROM THE BORN IN BRADFORD COHORT STUDY

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Background Previous studies have shown marked differences in birth
weight between babies born in the UK of South Asian origin and
those of UK origin. Whether such differences persist across gener-
ations in contemporary populations, the mechanisms underlying
them and the extent to which other dimensions of birth size vary
between these two groups is unclear.

Objective To describe differences in term birth weight, head, arm
and abdominal circumference and skinfolds between Pakistani origin
and white British infants and to investigate whether the
magnitude of any differences reduces depending on whether the
parents and grandparents of Pakistani infants are born in the UK or
Pakistan.

Design Birth cohort study (born in Bradford (BiB)).

Setting Bradford, UK.

Participants 1838 white British and 2222 Pakistani mothers
recruited to BiB who completed a questionnaire at 26 weeks gesta-
tion and their babies born between September 2007 and November
2009.

Main Outcome Measures Birth weight, head, arm and abdominal
circumference and skinfolds.

Results Pakistani babies were lighter (mean difference 227.6 g, 95% CI
198.3 to 256.8), had smaller head, arm and abdominal circum-
fferences (mean differences 0.45 cm, 95% CI 0.30 to 0.56; 0.22 cm,
95% CI 0.10 to 0.34; 1.25 cm, 95% CI 1.02 to 1.59, respectively) and
smaller subscapular and triceps skinfold thickness (mean differences
0.22 mm, 95% CI 0.12 to 0.32 and 0.21 mm, 95% CI 0.13 to 0.29)
than white British infants. Differences remained significant
following adjustment for deprivation. Mean birth weight
was highest in Pakistani infants when both parents were born
in Pakistan (3206 g) and was lowest when both parents were UK born
(3165 g).

Conclusions These results reaffirm that significant differences in
birth size exist between white British and Pakistani origin infants
in the UK. Despite the assumption that differences will reduce over
successive generations, mean birth weight has not increased in
infants of UK born Pakistani origin parents compared with infants
of Pakistani born parents. This suggests that differences may be
genetically determined or are affected by epigenetic or persisting
behaviour characteristics. Further analysis will include adjust-
ment for additional socioeconomic variables, other maternal and family
characteristics and birthplace of maternal and paternal grandparents.

P18 CHILD MALTREATMENT CO-OCCURRENCE AND
ASSOCIATIONS WITH HOUSEHOLD DYSFUNCTION:
EVIDENCE FROM THE 1958 BRITISH BIRTH COHORT

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Background Child maltreatment has been associated with adverse
health outcomes, including risk of mental health problems and
cardiovascular disease. Little is known about how different forms of
maltreatment co-occur and whether different patterns are asso-
ciated with household dysfunction. Delineation of co-occurrence is
important to establish in order that long-term health outcomes can
be better identified and understood.

Objective To investigate (1) to what extent specific maltreatment
subtypes co-occur in a British birth cohort and (2) how these
patterns were associated with household dysfunction.

Design Longitudinal survey; the 1958 British birth cohort.

Setting England, Scotland and Wales.

Participants Individuals born during 1 week in March 1958. At age
45 y, 78% of the remaining cohort (11 971) completed questions on
childhood experiences.

Outcomes Child maltreatment before age 16, including psycho-
logical, physical and sexual abuse and witnessing intimate partner
violence, collected at age 45 y. Eleven indicators of parental
neglectful behaviour, collected at 7, 11, 16 and 45 y, were aggregat-
ed to derive a cumulative neglect score. Information on household
dysfunction (eg, parental mental health, alcohol/drug misuse,
povety) was collected during childhood and at 45 y. OR presented
were adjusted for sex and social class at birth.

Results Psychological abuse (10.0%) was the most commonly
reported maltreatment, followed by physical abuse (6.1%),
witnessing abuse (6.0%) and sexual abuse (1.6%). 24% had a neglect
score ≥3. 14% of participants experienced any one subtype of abuse.
Of these, almost two thirds (64%) experienced further abuse
subtypes and/or had a neglect score ≥3. Witnessing or experiencing
abuse increased odds of reporting another maltreatment, for
example, psychological and physical abuse OR 57.9 (95% CI 30.8 to
46.5). The odds of reporting any abuse increased with neglect score;
for example, for sexual abuse OR ranged from 1.5 (0.9 to 2.6) to 4.5
(2.5 to 8.1). Common household dysfunction variables (eg, conflict
and physical punishment) were strong predictors for all abuse
subtypes. Other dysfunction measures most strongly associated
with maltreatment differed, for example, odds of psychological
abuse were increased in association with mother/father with

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