ID: 149

TITLE: GENDER AND VICTIMISATION, NOT PREMATURITY, PREDICTS SELF-ESTEEM TRAJECTORIES INTO ADULTHOOD

AUTHORS: Yiwen Liu 1; Marina Mendonça 2; Peter Bartmann 3; Dieter Wolke 4

AFFILIATIONS: 1 Department of Psychology, University of Warwick, United Kingdom
2 Department of Psychology, University of Warwick, United Kingdom
3 Department of Neonatology, University Hospital Bonn, Bonn, Germany
4 Department of Psychology, University of Warwick, United Kingdom; Division of Mental Health and Wellbeing, Warwick Medical School, University of Warwick, United Kingdom

CONTENT:

Self-esteem is an important predictor for mental well-being. Some studies have reported lower self-esteem in those born very preterm. However, it is unknown whether trajectories of self-esteem from childhood into adulthood are explained by premature birth or other individual or environmental risk factors.

The Bavarian Longitudinal Study (BLS; N=460) is a population-based very preterm (VP; <32 weeks gestation) or very low birth weight (VLBW; <1500g) birth cohort with term born controls. Self-esteem at 6, 8, 13 and 26 years were measured for three domains: body, peers and cognition. Latent class growth analyses were used to identify trajectories of self-esteem, and regression models were used to examine the effects of prematurity, as well as individual, social and parental factors.

Three classes were identified for body related self-esteem: a high group (class 1), medium-low group (class 2), and extremely low group with some catch-up (class 3). Two classes were identified for peer related self-esteem, an increasing group (class 1) and decreasing group (class 2). Two classes were also identified for cognition related self-esteem although differences were small. Being born VP/VLBW did not explain differences in self-esteem trajectories once the models were adjusted for individual differences, peer relationships and parenting. Being female was a significant predictor for worse body (OR=3.04, 95% CI: 1.18 – 7.81) and peers (OR=2.68, 95%CI: 1.50 – 4.79) but slightly better cognition (OR=2.57, 95%CI: 1.32 – 5.03) self-esteem, and being bullied was a significant predictor for worse body (OR=9.78, 95% CI: 2.31 – 41.47) and peers (OR=3.71, 95%CI: 1.65 – 8.35) self-esteem.

Children born VP/VLBW are not at more risk of having worse self-esteem once other individual, social and family factors are taken into account. Interventions should focus on enhancing self-esteem for females and in reducing bullying behaviours in schools with a focus on VP/VLBW children who are at increased risk of being bullied.

IMAGES:
https://www.eiseverywhere.com/eselectv3/v3/events/351149/submission/files/download?fileID=17c8a86c9e22c7b19662fd43ab924082-MjAxOS0wNSM1Y2UyNjJ2YmRmNDAw

Trajectories of self-esteem in body from 8 to 26 years, and in peers and cognition from 6 to 26 years.

COI: None declared.
ID: 209

**TITLE:** ASSOCIATION OF PRETERM BIRTH/LOW BIRTH WEIGHT WITH ROMANTIC PARTNERSHIP, SEXUAL INTERCOURSE AND PARENTHOOD IN ADULTHOOD: A META-ANALYSIS

**AUTHORS:** Marina Mendonça 1; Ayten Bilgin 2; Dieter Wolke 1,3

**AFFILIATIONS:** 1 Department of Psychology, University of Warwick, Coventry, UK
2 Department of Psychology, Istanbul Medeniyet University, Istanbul, Turkey
3 Warwick Medical School, University of Warwick, Coventry, UK

**CONTENT:**

Social relationships are important determinants of wellbeing, health and quality of life. There are conflicting findings regarding the association between preterm birth/low birth weight (PT/LBW) and experiences of social relationships in adulthood such as romantic partnership, sexual intercourse and parenthood. Furthermore, the quality of relationships with romantic partners or friends after being born PT/LBW has rarely been addressed. In this study we aimed to systematically investigate the association between PT/LBW birth and social outcomes in adulthood

In this systematic review and meta-analysis, we searched PubMed, PsycINFO, Web of Science, and Embase for observational studies reporting on social outcomes in PT/LBW adults – i.e., ever being in a romantic partnership, ever having experienced sexual intercourse, parenthood, quality of romantic relationship and peer social support - compared to full-term born controls. Pooled analyses were based on odds ratios (95% CIs) and Hedges’ g, which were meta-analysed using random-effects models.

Of the 1829 articles screened, 21 were selected for meta-analysis. Summary data describing a maximum of 4,423,798 adult participants (PT/LBW=179,724) were analyzed. PT/LBW born-adults were less likely to have ever experienced a romantic partnership (OR=0.74 [95% CI=0.66–0.83]; I²=94.4%), to have had sexual intercourse (OR=0.43 [95% CI=0.31–0.61]; I²=76.3%), or to have become parents (OR=0.78 [95% CI=0.67–0.90]; I²=98.2%), than full terms. A dose-response relationship according to degree of prematurity was found for romantic partnership and parenthood. Overall, effect sizes did not differ with age and gender. When PT/LBW born-adults were in a romantic partnership or had friends, the quality of relationships was not poorer compared to adults born full-term.

Our findings suggest that preterm/low birth weight born-adults are less likely to experience a romantic partnership, sexual intercourse, or to become parents, however preterm birth/low birth weight does not seem impair the quality of relationships with partners and friends. A lack of sexual or partner relationships might increase the risk of lower well-being, and poorer physical and mental health.

**COI:** None declared
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TITLE: SPECTRAL POWER, FUNCTIONAL CONNECTIVITY AND NETWORK ANALYSIS IN SCHOOL-AGED PRETERM BORN CHILDREN: AN EEG STUDY.

AUTHORS: Charlotte van ’t Westende 1; Cacha M. P. C. D. Peeters-Scholte 2; Lisette Jansen 3; Janneke C. van Egmond-van Dam 4; Martijn R. Tannemaat 2; Sica T. Wiggers-de Bruine 5; Annette A. van den Berg-Huysmans 5; Victor J. Geraedts 3,7; Alida A. Gouw 7; Sylke J. Steggerda 6; Cornelis J. Stam 7; Laura A. van de Pol 1

AFFILIATIONS: Department of Child Neurology (1) and Clinical Neurophysiology (7), VU University Medical Center, De Boelelaan 1118, 1081 HZ, Amsterdam, The Netherlands; Department of Neurology (2), Psychology (3), Physiotherapy (4), Radiology (5) and Neonatology (6), Leiden University Medical Center, Albinusdreef 2, 2333 ZA, Leiden, The Netherlands

CONTENT:

In the past decades, survival rates of prematurely born children have increased significantly due to improved neonatal care. Extremely (EP) and very prematurely (VP) born children have an increased risk of long-term adverse motor and cognitive outcomes. In contrast to structural changes, little is known about how differences in functional brain activity in preterm born children at school age relate to neonatal variables and cognitive and motor outcome. The aim was to study quantitative EEG (analysed at the level of oscillatory activity, functional connectivity and brain network variables) and its relationship with cognitive and motor outcome in EP and VP born children at 9-10 years of age.

Participants were involved in a prospective longitudinal cohort of 113 preterm infants (GA<32 weeks) born between May 2006 and October 2007. At 9-10 years of age these children were invited for neurodevelopmental follow-up at the outpatient department of the LUMC as part of clinical care. Sixty-six prematurely born children were analysed for brain activity (EEG), motor development (MABC) and cognitive outcome (WISC-III). The oscillatory activity of the brain was analysed with the power spectrum of the recorded EEG signal, functional connectivity was quantified with the Phase Lag Index (PLI) and functional networks were constructed using the Minimum Spanning Tree (MST) method.

Relative power and functional connectivity were significantly higher in VP compared to EP children in the upper alpha frequency band (U = 478.5, p = 0.016 and U = 492.5, p = 0.008, respectively). Based on the significant results in relative power and functional connectivity in the A2 frequency band, differences in MST networks in the upper alpha frequency band between the EP and VP group were explored. VP children had more integrated networks than EP children (Degree: U = 491.5, p = 0.008; Leaf fraction: U = 473.0, p = 0.020). In the total group, a strong positive correlation was found between relative upper alpha power and motor outcome at 9-10 years of age (p=0.560, p<0.001).

These results suggest that 9-10 years after birth, the effects of prematurity can be observed in terms of alterations in functional brain activity. Functional brain activity in VP children seem to have more alpha power and higher functional connectivity, and functional networks seem to be more integrated than networks in EP children. In addition, motor deficits are related to alterations in alpha activity.

IMAGES:
https://www.eiseverywhere.com/eselectv3/v3/events/351149/submission/files/download?fileID=c77b322a8ec0b56cb14463861d8d5595-MjAxOS0wNSM1Y2UyNjY2YzMyYWVk

Group-averaged MST networks are projected on the scalp for the VP group (n=36) (A) and the EP group (n=19) (B). MST = Minimum Spanning Tree, EP = extreme prematurely born, VP = very prematurely born.

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TITLE: FOLLOW-UP OF CHILDREN BORN VERY PRETERM UNTIL 5 YEARS OF AGE IN EUROPE
AUTHORS: Anna-Veera Seppanen 1, 2
Elizabeth Draper 3
Henrique Barros 4
Stavros Petrou 5
Jennifer Zeitlin 1
AFFILIATIONS: 1.INSERM U1153, Obstetrical, Perinatal and Pediatric Epidemiology Research Team (EPOPé), Center for Epidemiology and Statistics Sorbonne Paris Cité (CRESS), Paris, France
2. Sorbonne Université, Collège Doctoral, F-75005 Paris, France
3. University of Leicester, Leicester, UK
4. Institute of Public Health University of Porto, Portugal
5. The University of Warwick, Coventry, UK

CONTENT:
Infants born very preterm are at risk of developing multiple health and developmental problems. Because the prognosis of each individual child is unknown at discharge, follow-up programs are essential for identifying health needs early and enabling timely intervention. Despite their recognized importance, little is known about whether children are being followed up, for how long, and how perinatal risk and social factors are related to the use of these follow-up services. We aimed to describe use of follow-up services in a European cohort of very preterm births.

We used data from the Screening to improve Health In very Preterm infants (SHIPS) study, which followed up the area-based EPICE cohort of births before 32 weeks’ gestation in 2011/12 in regions from 11 European countries. Perinatal data were abstracted from medical records. Socioeconomic and child health data were collected with parent-report questionnaires at 2 and 5 years, where parents were also asked whether their child was receiving follow-up for their prematurity (never had follow-up, had follow-up before 5 years, or continued follow-up at 5). We assessed differences in follow-up by country, sociodemographic characteristics and child characteristics using logistic regression models and estimated adjusted follow-up rates for key sub-groups.

Parents of 3095 children participated in the study at 2 and 5 years. A majority (94%) had received preterm-related follow-up since discharge. The percentage of children who were still in follow-up at 5 years varied by country from 11% to 62%: <15% in regions in Germany, UK, Italy, Estonia and Poland; 27% to 33% in France, Denmark and Sweden; and >40% in Portugal, the Netherlands and Belgium. The probability of still having follow-up at 5 was inversely related to gestational age but was not related to maternal age, educational level or migration status. In contrast, the latter two factors were related to never having follow-up, in addition to higher gestational age. Adjusting for maternal and child characteristics had little impact on the differences between countries in follow-up (range from 11% to 61% for children still followed and from 0% to 15% for children who had no follow-up).

Large disparities by country in the percentages of children still receiving follow-up at 5 years of age raise questions about the optimal follow-up duration after very preterm birth. Social factors were not related to follow-up at 5, but affected the probability of receiving no follow-up, suggesting that social barriers may be most important for initial contacts with follow-up services.

COI: None declared