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**In Collaboration with
Jaffna Medical Faculty Overseas Alumni**

"TRAINING THE DOCTORS FOR TOMORROW'S CHALLENGES"

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Association Between Risk Factors And Developmental Outcome Of Preterm Babies At 12 And 18 Months Of Age Born At Teaching Hospital Jaffna

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Introduction : Developmental anomalies occur in preterm babies and no published studies on neuro-developmental outcome in preterm babies from Jaffna district are available. The objectives were to describe the developmental pattern of preterm babies at 12 and 18 months of age with the risk factors such as gestational week, birth weight, gender, mode of delivery, APGAR (Activity, Pulse, Grimace, Appearance, Respiration) and special neonatal care provided to the babies born preterm.

Methodology: A longitudinal study was conducted among 135 preterm babies born between 28+1 - 36+6 weeks of gestation and the development was assessed by using Bayley Scales of Infant and Toddler Development, Third Edition (Bayley-III). The raw scores were calculated for five skill domains such as Cognitive, Receptive Communication, Expressive communication, Fine motor and Gross motor. The scaled scores, derived from the total raw scores on each of the subtests were transferred to composite score. Data were analysed using SPSS-16.0. Paired t- test was used to compare the composite scores at both assessments and significance of relationship to risk factors was analysed using by ANOVA test. A p-value <0.05 was taken as statistically significant.

Results: Of the 135 preterm babies assessed at 12 and 18 months of age 52.6% were males. The median gestational age and birth weight were 35.57(±1.85)weeks and 2.24 (±0.57)kg respectively. Cesarean section was carried out in 55.6% of deliveries. APGAR score of 9/10/10 was obtained by 68.9% of babies. Fifty-six babies (41.5%) were admitted for special neonatal care. A significant increase (p<0.000) was observed in motor scores from 12 (92.6 ±8.9) to 18 month (96.0 ±6.9) while cognitive (94.4 ±7.1 and 93.4 ±9.7) and language scores (102.9 ±99.7 and 94.3 ±6.4) decreased. At 12 month, significant relationships between cognitive domain and gestational week (p=0.009) and mode of delivery (p=0.044), and between motor domain and mode of delivery (p=0.011) were observed. At 18 months, statistically significant relationship between language domain and gender (p=0.014) and APGAR score (p=0.029), and between motor domain and gender (p=0.036), birth weight (p=0.018) and APGAR score (p= 0.003) were observed.

Conclusion: The significant associations between risk factors and the developmental domains were more evident at 18 months of age.