

**First Social and Family Research Network (SFRN) Forum**  
**Protecting our Children—Research on Child Abuse and Protection in Singapore**

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Presentation 1

**Developmental Aspects of Child Maltreatment Syndrome**

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**Defining Child Maltreatment Syndrome**

Dr Kang Ying Qi explained child maltreatment syndrome and its consequences for child development. Child maltreatment syndrome (CMS), more commonly known as child abuse and neglect, involves physical, sexual, emotional, and psychological abuse or neglect that “results in actual potential harm to a child’s health, survival, development or dignity in the context of a relationship of responsibility, trust or power” (Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002). Common problems of children admitted for CMS include developmental delays, delayed immunisations, poorly regulated sleep hours, poor nutrition and eating habits, difficulties with emotional regulation, and lack of developmentally appropriate stranger anxiety. These issues may also be present in siblings of victims of child maltreatment.

Research on child abuse and neglect began as early as the 1960s. A 1987 study found that a child’s individual characteristics, environment, and relationships mediates outcomes of maltreatment (Augoustinos, 1987). More recently, a 2005 paper found that although young children in foster care were at high risk for developmental delays, many of them do not receive services to prevent or treat the delays, suggesting that preschool children should be screened and evaluated for developmental delays (Pears & Fisher, 2005). Experts have also observed a bidirectional relationship where children with disabilities or developmental delays are also more likely to suffer child abuse and neglect.

A key consequence of child maltreatment is the weakening of children’s brain development. Maltreated children are exposed to intense and persistent stress that affects neuronal connection. Hence, child maltreatment changes the cortical network architecture. The altered connectivity among brain regions can diminish maltreated children’s ability to develop social skills and self-regulation.

**Study on Understanding the Profile of Child Maltreatment Cases in Singapore**

Ying Qi proposed that a paediatrician’s role in cases of child abuse and neglect should go beyond managing physical or emotional injuries. It involves identifying existing developmental delays, reacting to emerging ones, taking a tighter rein on well child health and supporting parenting competency in families, especially for preschool children. To do so, in 2013, her team set up a developmental surveillance program for preschool children admitted to NUH for maltreatment.

The team conducted a study, published in 2015, to better understand the profile of children admitted for maltreatment in Singapore, so as to identify their needs, improve interventions and preventive measures. The researchers collected inpatient records of consecutive children aged 0-16 years admitted to the National University Hospital for alleged CMS from 2010 to 2012, and analysed their demographic, socioeconomic, medical, developmental and mental health data.

The study found that there were 90 admissions involving 89 children. About 70% of the children were of school-going age, and 53% of the alleged child abuse perpetrators were the fathers, which is consistent with earlier reports from MSF and the former Ministry of Community Development, Youth and Sports. The peak ages of the children coincided with the typical ages of transitions to primary and secondary school. The researchers suggested that school transitions might be a significant stressor for parents and children.

Consistent with international research literature, the children had significant socioeconomic risk factors in their family such as prior history of domestic violence, financial difficulty, and divorced or separated parents. The prevalence of divorced families was also higher for the cases in the study than in the Singapore population. Physical abuse was the most frequently reported form of maltreatment, followed by neglect. Victims of neglect were often admitted with their siblings due to circumstances such as abandonment or neglectful parenting. Abused children were more likely to come from families with a history of domestic violence, while neglected children were more likely to come from families with financial difficulties.

Results further showed that the prevalence of developmental difficulties in the CMS cases was 15.7% and was higher than that in the Singapore population. Developmental difficulties were also more common in children of parents with mental health disorders. Attention deficit hyperactivity disorder (ADHD) was the most common developmental disorder found in the study, which is consistent with other studies in different settings. About 10% of the children also had a positive Axis I mental health diagnosis before the age of 16 years, suggesting that they have a higher lifetime risk of mental health disorders.

Regarding discharge plans, the study found that most children were returned to their families of origin or relatives, while about a quarter of them were placed in foster care or institutions. About 29% of the children were also previously known to child protection officers, suggesting that they are repeated victims. Limitations of the study include its retrospective approach, the inconsistent quality of patient records, cases where developmental and mental health disorders were not diagnosed by a clinician, and inconsistency in the extent of evaluation for disorders.

### **Implications for Intervention**

CMS is an adverse childhood event that disrupts the nurturing of children in the areas such as health, nutrition, responsive care giving, security, safety, and early learning, leading to social emotional cognitive impairment. As these children mature into teenagers and adults, ~~this further results in~~ adoption of health risk behaviours can, culminate in greater disease, disability, and social problems. Finally, CMS contributes to transgenerational effects when victims become parents. Complex factors such as the interaction between a child's genetic predispositions interacting with his or her

environmental influences determine the outcomes. Beyond affecting individuals and families, CMS leads to significant social and financial cost for society.

Nevertheless, Ying Qi highlighted that there is a window of opportunity in early childhood to intervene in the cycle of CMS. Research has shown that plasticity of the brain is higher in early childhood, while neural connections for the main functions of the brain are largely developed by six years of age. As age increases, the brain's ability to change in response to life experiences decreases and the amount of effort required for any change increases. Hence, the benefits of early interventions are amplified and negative effects of CMS can be most effectively reduced in early childhood. This is especially important as local reports show that preschool children are a significant group among maltreated children.

### **Policy Recommendations**

In conclusion, Ying Qi suggested that systematic developmental assessment and management can be implemented for preschool children with CMS, so as to provide anticipatory guidance and manage developmental delays in a timely manner. It would also be a cost-efficient method for CMS treatment because the Enabling Masterplan: Child Development Programme provides the existing infrastructure to do so such as in tertiary hospitals, Early Intervention for Programme for Infants and Young Children (EIPIC) centres, and Development Support Programme (DSP) teams. This might first require medical professionals and policymakers to recognise that, in addition to genetic causes of developmental delays, environmental causes of developmental delays like CMS are also significant and these services can be extended to families of children with CMS.

### **References**

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