

Preschool Teachers' and Parents' Understanding of Early Childhood Temperament in an Asian Culture – Implications on Child Health and Development

Dear Editor,

Temperament refers to constitutionally-based individual differences in emotional and attentional reactivity and self-regulation, influenced by genetics and experience.¹ It represents one's own style that determines how an individual behaves and interacts with others and defines how an individual would approach and react to a situation or a person. Distinct cultural and population differences in temperament exist, which are influenced by both genetic factors and cultural differences in values and methods of child-rearing.^{2,3} Individual temperament differences can explain the ease or difficulties of daily parenting around common childhood issues, for example: sleep, feeding, toileting, disobedience, tantrums, over-activity, shyness, excessive crying and school refusal.⁴ Thomas and Chess described 9 temperament traits which form the basis of our understanding of childhood temperament.⁵ Temperament is an integral factor influencing childhood emotional development, which in turn contributes to adult emotional and mental health.⁶ Little is known about temperament understanding in Asia.

Caregivers' understanding of temperament is crucial. Firstly, it reduces the likelihood of assigning pathology to behaviour variations. Secondly, caregivers can modify expectations and reactions to a child's behaviour, therefore reducing stress.² Finally, greater synchrony between a caregiver's parenting style and child's behavioural style, a concept termed 'parenting to the fit', positively impacts a child's development, learning and achievement.⁷ Within classrooms, goodness-of-fit between educator's teaching style and child's temperament improves social-emotional outcomes in younger children and educational achievement in older children.⁷

In Singapore, behavioural and emotional problems are estimated to occur in about 7% and 10% of children, respectively.^{4,8} Shaped by principles of Confucianism, "sound moral and social values" is one of the key aims in Singapore's Kindergarten Curriculum Framework (KCF). Given this context that emphasises discipline and teaching to collective benefit rather than individual differences, we hypothesised that the temperament model may be under-utilised in understanding children's behaviours locally.

The study aimed to: 1) assess parents' and teachers' beliefs and knowledge with regard to early childhood

temperament and to find out which traits were perceived as "difficult", 2) compare temperament scores of Singapore children with the originally normed Carey Temperament Scale (CTS),⁹ and 3) explore teachers' perceptions of their exposure to temperament teaching within the preschool teachers' curriculum.

Materials and Methods

This was a cross-sectional study. Data was collected over a year (2013-2014) using self-administered questionnaires after obtaining consent. Ethics approval was obtained.

English literate caregivers of children aged 3 to 6 years from 2 major public preschool organisations in Singapore were recruited.

Measures

Parents (pertaining to their own child) and teachers (without pertaining to any specific child), were asked to rate their perceived ease or difficulty in handling children using descriptions of behaviours based on each of the 9 temperament constructs.

Teachers were asked about their exposure to temperament teaching within the preschool teachers' curriculum and parents completed the Behavioural Style Questionnaire (BSQ) of the CTS.

Analysis

Chi-squared test was used to compare outcomes between parents and teachers. Descriptions of means and standard deviations of the CTS were examined, relative to published norms.

Results

Demographic Profiles

A total of 268 parents' and 104 teachers' responses were included (Table 1).

Knowledge and Understanding of Temperament

Parents and teachers had similar understanding of temperament. Most believed children have different temperaments and that a child's temperament affects how he or she is disciplined. Both groups had the perception that temperament is affected by gender and can be changed by discipline and environment. More parents than teachers

Table 1. Demographic Data of Parents and Teachers

Variable	No. (%)	
	Parents (n = 268)	Teachers (n = 104)
Gender		
Female	182 (67.9)	103 (99.0)
Male	86 (32.1)	
Age (yrs)		
21 – 30	39 (14.6)	54 (51.9)
31 – 40	171 (64.0)	21 (20.2)
41 – 50	52 (19.5)	18 (17.3)
51 and above	5 (1.9)	11 (10.6)
Highest academic qualification		
Primary School Leaving Exam	20 (7.5)	-
'O' Levels	53 (20.0)	-
'A' Levels	3 (1.1)	6 (5.8)
Diploma	76 (28.7)	56 (53.8)
Graduate	67 (25.3)	29 (27.9)
Others	46 (17.4)	13 (12.5)
Household income (Singapore \$)		
<1500	24 (9.1)	-
1500 – 4999	133 (50.6)	-
5000 – 10,000	85 (32.3)	-
>10,000	21 (8.0)	-
Time spent with child per day (hrs)		
<5	141 (52.6)	-
5 – 6	70 (26.1)	-
7 – 8	28 (10.4)	-
9 – 10	13 (4.9)	-
>10	16 (6.0)	-
Experience in teaching preschool (yrs)		
0 – 5	-	61 (58.7)
6 – 10	-	25 (24.0)
11 – 15	-	8 (7.7)
>15	-	10 (9.6)

Children (n = 268)

Age	
2 yrs 0 mths – 2 yrs 11 mths	1 (0.4)
3 yrs 0 mths – 3 yrs 11 mths	25 (9.5)
4 yrs 0 mths – 4 yrs 11 mths	71 (27.0)
5 yrs 0 mths – 5 yrs 11 mths	113 (43.0)
6 yrs 0 mths – 6 yrs 11 mths	53 (20.2)
Gender	
Female	129 (48.3)
Male	138 (51.7)

Table 1. Demographic Data of Parents and Teachers (Cont'd)

Variable	No. (%)
	Children (n = 268)
Order of child in family	
1	136 (54.0)
2	82 (32.5)
3	26 (10.3)
4	6 (2.4)
5	2 (0.8)

believed that temperament remains largely constant in spite of age (Fig. 1).

Few (11.5%) teachers reported receiving adequate training on temperament. Only 13.5% indicated they were taught specific methods to deal with children of different temperaments.

Manageability of Different Temperament Traits

Teachers generally perceived more difficulties managing children. Compared to parents, teachers found traits of high activity (28.6% vs 40.4%, $P = 0.002$), low mood (19.4% vs 31.0%, $P = 0.031$), and low sensory threshold (19.4% vs 34.6%, $P = 0.001$) more difficult to handle. Parents reported non-persistence (19.4% vs 29.2%, $P = 0.040$) more difficult to handle than teachers.

Overall Manageability of Child

Most parents (70.2%) and teachers (72.1%) rated that they were coping well with managing a child's behaviour. This correlated to the manageability score on the BSQ where 75.9% of the parents reported scores of 1-3 (ie. very easy to somewhat easy to manage the child).

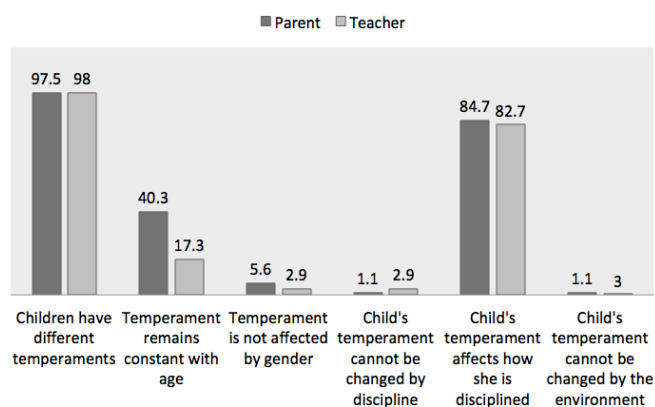


Fig 1. Chart showing comparison between parents' and teachers' understanding of temperament.

Temperament of Children Scored with the Carey Temperament Scales

Children studied mostly fell within 2 standard deviations (SD) of the mean for activity, approach, distractibility and threshold as per United States (US) norms. They appeared to be more arrhythmic, less adaptable, less intense, less persistent and having more negative mood (Table 2).

Discussion

This is one of the few Asian studies that highlights gaps in knowledge about temperament amongst carers, as well as differences in temperament of children in Singapore. It reveals that parents and teachers have limited understanding of temperament. This is of concern because teachers contribute significantly to the care of children in Singapore with over 90% of preschool children enrolled in

full-day programmes in childcare centres.¹⁰ Preschools in Singapore focus on an academic-driven curriculum, are more teacher-directed than child-centred and less customised for individual differences.¹¹ Our preschool teachers are diploma graduates with 1-3 years of training. Their training includes general aspects of socio-emotional development in children but does not address specific strategies in dealing with individual variations and styles. Since most teachers reported inadequate training in temperament, the temperament framework should be included within early childhood educators' curriculum—to equip preschool educators with classroom strategies for behavioural understanding and support.

For parents, enhancing this understanding potentially reduces blame and guilt on child and parent, especially if temperament is challenging and parents do not feel competent about parenting. By using the goodness-of-fit model in their parenting, they will be able to better appreciate their child's temperament as potential strengths, draw on the child's unique characteristics to impart skills, and enhance the parent-child relationship.

Distinctions between parents and teachers on traits perceived to be "difficult" can be attributed to the high (1:20) teacher-to-student ratio in Singapore, in comparison to the ratio in the top 10 countries in the Starting Well Index (1:5-11). The child with high activity, low mood (unfriendliness in words and behaviours) and low sensory threshold (easily disturbed by sensory stimulation) will require increased attention from the teacher in a packed classroom. Distinctions between parents and teachers on traits perceived to be "difficult" informs us that it would be helpful to customise management strategies for the classroom or home setting.

Interestingly, children in our study appeared less rhythmic (less regular in their basic functions), less adaptable (less adjustable to change or new situations), less persistent (easily distracted from a task), milder in intensity and slightly more negative in mood compared to children in the US. This may reflect an actual difference in the temperament of children of Asian ethnicity or a cultural difference where certain behaviours are more accepted hence encouraged.¹² Studies comparing school-aged children living in China, South Korea and India to those in the US showed that parents from all 3 Asian countries perceived specific temperament styles to be more desirable in comparison to those from the US.¹³

Limitations

The study was limited to mainly low to middle income families and English literate participants. Differences in understanding and management of temperament might exist between different income groups. Response to the survey was voluntary, creating a possible selection bias.

Table 2. Comparison of Carey's Score between Singapore and the Originally Normed Nine Domains of Temperament in the Carey's Questionnaire

Domains	Definition	Outside (-) 2SD (%)	Outside (+) 2 SD (%)
Activity	Motor component in a child's functioning	0.4 (low activity)	1.5 (high activity)
Approach	Initial response to novelty	0 (approachable)	1.1 (withdrawn)
Distractibility	Effectiveness of extraneous stimuli in altering the direction of ongoing behaviour	0 (non-distractible)	0 (distractible)
Threshold	The intensity level of stimulation that is necessary to evoke a discernible response	2.2 (high)	0.4 (low)
Rhythmicity	Regularity; predictability in daily functions	0 (very rhythmic)	7.8 (arrhythmic)
Adaptability	Behavioural flexibility in changing context	0 (adaptable)	5.2 (non-adaptable)
Intensity	Energy level of an emotional response	4.1 (mild)	0 (intense)
Mood	Tone of overall affect (positive or negative)	1.5 (positive)	3.0 (negative)
Persistence	Continuation of activity in face of obstacles	0 (persistent)	4.5 (non-persistent)

SD: Standard deviation

Locally, where up to 76% are dual-income families and at least 1 in 5 households employ foreign domestic workers (FDWs),¹⁴ FDWs are increasingly assuming the role of the main caregivers of our preschoolers. At least a quarter of our children grow up in a multicultural household and the majority spend most of their time with teachers or FDWs. It is unclear how this unique myriad of caregivers affects childhood temperament perception, although it raises the importance of identifying the key caregivers when seeking information on a child's temperament.

Recommendations and Implications for Future Research

It is encouraged that physicians use the temperament approach to explain behavioural differences among children. Physicians can address challenging temperaments that tip the parent-child dyadic relationship unfavourably.³

We hope to have a culturally-adapted version of the BSQ that would better reflect the distribution of temperament characteristics in our population.

This study serves as a platform for advocating greater awareness of temperament in caregivers to foster more nurturing relationships. There is a need for explanations of children's behaviours using a temperament framework, for better educational and mental health outcomes.

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