

Parental Assessment of Temperamental Behavioural Style of Australian Children

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ABSTRACT The present study was conducted in Brisbane, Australia. One hundred mothers and 55 fathers of 4 to 6 year old children assessed temperament of their children using Behavioural Style Questionnaire (McDevitt and Carey, 1975). The results revealed that parental perceived highly active children were arrhythmic, slow to adapt, more intense, negative in mood, and distractible. Arrhythmic children were withdrawn, slow to adapt, more intense, non-persistent and low on threshold. Children who were withdrawn and slow to adapt were more likely to be negative in mood and distractible. Intense children were also likely to be negative in mood, non-persistent, highly distractible and low on threshold. Children perceived low on threshold were non-persistent and distractible. Results also revealed sex differences in temperamental dimensions.

INTRODUCTION

Temperament is considered as a biological variable influencing the social behaviour and personality of children. Thomas and Chess (1977) have described nine dimensions of temperament. On the bases of these dimensions-activity level, rhythmicity, approach/withdrawal, adaptability, mood, intensity of reactions, distractibility, persistence, and threshold, children can be categorised in any one of the three, easy, slow-to-warm-up, and difficult, temperamental styles. Children with easy temperament are always happy, adapt to new situations easily, and are regular in their habits. Children with slow-to-warm-up temperaments are slow to adapt, show mild resistance to new situations and changes in routine; are moody and quite active. Children with difficult temperament are highly active, irritable, negative in mood, and irregular in their habits. Children with difficult temperament are more likely to display behaviour problems at home, school and in peer relations.

Three main ways of measuring children's temperament are parental reports, observations in home and observations in laboratory situations. Bates (1989) has reported that parental report, including questionnaire and structured interview of the parent is most widely used method of measuring children's temperament. In the present research structured questionnaire was used to assess parental perception of their children's temperamental behavioural style.

METHODOLOGY

Participants

The participants of this study were parents of 100 four to six year old pre-school children (100 mothers and 55 fathers) from Brisbane, Australia. Mothers of 45 girls and 55 boys; and fathers of 29 girls and 26 boys participated. The feasibility of the research necessitated nonprobability sampling.

Measures and Procedure

The Behavioural Style Questionnaire (McDevitt and Carey, 1975) was used to assess parental perceptions of their children's temperament. Parents were requested to rate temperamental characteristics of their children on a 6-point scale. The measure covers nine main dimensions of temperament - activity level, rhythmicity, approach or withdrawal, adaptability, intensity of reaction, quality of mood, persistence, distractibility and threshold of responsiveness. From scores on a number of these dimensions a categorisation of temperament is made. These styles are easy, slow-to-warm-up, and difficult. According to McDevitt and Carey (1978), test-retest reliability and alpha reliability

are both satisfactory, 0.89 and 0.84, respectively.

Scoring of Temperament Scale

For each of the nine subscales (activity level, rhythmicity, approach/withdrawal, adaptability, mood, intensity, distractibility, persistence, and threshold) on the Behavioural Style Questionnaire (McDevitt and Carey, 1975), negative statements were recoded and item responses were then totaled and divided by the number of items rated to get mean value for the subscale. This procedure was repeated for each of the nine categories.

Each child's mean item scores on subscales were plotted on a profile sheet. By visual inspection, the children were assigned to one of five temperamental categories (*difficult, intermediate high, slow-to-warm-up, intermediate low, and easy*), using criteria described by McDevitt and Carey (1975). Detailed procedure has been described by Balda and Irving (2000) in "Parental perception of preschool-aged children's temperament". Difficult children were very active, arrhythmic, non-approaching, slow to adapt, intense in reactions, and negative mood. Intermediate highs exhibited some of these traits, but to a lesser degree. Slow-to-warm-up children had a low activity level, were non-approaching, slow to adapt, negative in mood, but

mild in intensity. In between slow-to-warm-up and the easy category were the intermediate lows. Easy children were rhythmic, approaching, adaptable, mild in intensity, and positive in mood. To have a satisfactory number of subjects in each group for statistical analyses the difficult and intermediate high groups were combined and subsequently termed difficult; the easy and intermediate low groups were combined and subsequently termed easy in this research. This procedure has been used in previous studies when numbers in particular categories are low (e.g., Parker-Cohen and Bell, 1988).

Twenty percent of the profile sheets were rated by an independent rater. Inter-rater reliability was 100%.

RESULTS AND DISCUSSION

Correlational Analyses

Spearman correlations were computed to examine the associations among temperamental dimensions. Separate analyses were run for mothers and fathers. Two-tailed significance tests were used because expectations were not made in advance. As shown in table 1, mothers' and fathers' perceived high activity level was significantly positively associated with arrhythmicity, intensity, negative mood, and distractibility. Although

Table 1: Correlations among Temperament Dimensions of Children as Perceived by Mothers (above, $n = 100$); and Fathers (below, $n = 55$)

	Arrhythmicity	Withdrawal	Slow adaptability	Intensity	Negative Mood	Non-persistence	Distractibility	Low Threshold
High activity level	.21*	.20	.20	.21*	.21*	-.14	.50**	.04
	.28*	.15	.16	.29*	.31*	-.24	.50**	.21
Arrhythmicity		.23*	.22*	.23*	.12	.25*	.13	.30**
		.29*	.25*	.28*	.11	.24	.04	.30*
Withdrawal			.44**	.09	.34**	.04	.21*	.04
			.55**	.05	.46**	.04	.19	.10
Slow adaptability				.22*	.58**	.05	.21*	.01
				.14	.59**	.22	.09	.12
Intensity					.47**	.33**	.38**	.39**
					.47**	.29*	.40**	.50**
Negative mood						.08	.25*	.15
						.06	.28*	.24
Non-persistence							.03	.31*
							.06	.15
Distractibility								.22*
								.44**

Note: Significant at * $p < .05$ and ** $p < .01$. Two-tailed Spearman correlations. Higher scores on temperamental dimensions means high on activity level, slow to adapt, withdrawn, arrhythmic, negative in mood, intense, distractible, non-persistence and low on threshold

not significant, a similar positive trend was observed for withdrawal and slow adaptability.

Table further reveals that mothers' and fathers' perceived arrhythmicity was significantly positively associated with withdrawal, slow adaptability, intensity, non-persistence, and low threshold.

Positive correlations were evident between withdrawal, slow adaptability, and negative mood. Positive association was found between withdrawal and distractibility dimensions as perceived by mothers. Slow adaptability was positively associated with high intensity, negative mood, and distractibility as perceived by mothers; and positively with high intensity as perceived by fathers.

There existed significant positive associations between intensity, negative mood, non-persistent, distractibility and low threshold; and between negative mood and distractibility. Low threshold was positively correlated with non-persistent and distractibility.

Taken together mothers' and fathers' perception of temperament, the results suggest that highly active children were arrhythmic, slow to adapt, more intense, negative in mood, and distractible. These results get support from Stevenson-Hinde and Simpson (1982) indicating that more active children were more likely to show behaviour that was difficult to manage. In an Indian study, similar results were obtained by Balda and Irving (2000).

The positive associations between arrhythmicity, withdrawal, slow adaptability, high intensity and low threshold; between withdrawal, slow adaptability, and negative mood; and between intensity and negative mood indicate that children with difficult temperament are, as described by Thomas and Chess (1977), arrhythmic, withdrawn, slow to adapt, intense and negative in mood. Correlational results can be interpreted the other way, that is, children with easy temperament are, as described by Thomas and Chess (1977), rhythmic, approaching, adaptable, less intense, positive in mood, and non-distractible. Similar results have been reported by Balda and Irving (2000).

Multivariate Analyses

Two-way MANOVA was computed taking

parent gender and sex of child as dependent variables and means of nine temperamental dimensions (activity level, rhythmicity, approach/withdrawal, adaptability, intensity, mood, persistence, distractibility and threshold) as dependent variables. The main effect of sex of child was significant, $F(9,143) = 2.37, p < .02$. The main effect of gender of parent and two-way interaction of parent gender by sex of child were not significant.

For the main effect of sex of child, univariate- F -tests were significant for activity level, rhythmicity, persistence, and distractibility.

As presented in table 2, parents perceived their sons more active and distractible as compared to daughters; while daughters were being perceived as arrhythmic and non-persistent.

As presented in table 3, the major proportion of boys and girls fell in the easy temperamental

Table 2: Means and Standard Deviations of Temperament Dimensions as Perceived Parents (Child Gender Differences)

	Sons		Daughters		BSQ	
	Mean	SD	Mean	SD	F	Mean
Activity	3.72	.70	3.54	.52	3.80*	3.54
Rhythmicity	2.86	.59	3.05	.63	3.82*	2.75
Approach/Withdrawal	3.16	.80	3.20	.68	0.75	2.99
Adaptability	2.89	.61	2.79	.53	2.46	2.55
Intensity	4.45	.53	4.36	.51	1.10	4.52
Mood	3.33	.68	3.26	.53	0.56	3.31
Persistence	3.63	.44	3.77	.44	3.72*	2.87
Distractibility	4.16	.58	3.91	.63	6.59*	3.89
Threshold	3.94	.47	3.97	.48	0.89	3.98

Note: Significant at * $p < 0.05$. Higher scores on temperamental dimensions means high on activity level, arrhythmic, withdrawn, slow to adapt, intense, negative in mood, distractible, non-persistent and low on threshold; BSQ-Behavioural Style Questionnaire

Table 3: Frequency Distribution of Children in Different Temperamental Styles

Temperamental Styles	Mothers (n = 100)		Fathers (n = 55)	
	Sons (n = 55)	Daughters (n = 45)	Sons (n = 26)	Daughters (n = 29)
Easy	34 (61.8)	34 (75.6)	20 (76.9)	20 (69.0)
Slow-to-warm-up	6 (10.9)	4 (8.9)	4 (15.4)	2 (6.9)
Difficult	15 (27.3)	7 (15.6)	2 (7.7)	7 (24.1)

Note: Figures in parentheses indicate percentages

style. Although for mothers percentage was higher for daughters; while for fathers percentage was higher for sons.

These results indicate that parents perceive their sons and daughters in a different manner. The discrepancies in the parental perception of their sons and daughters temperament might be affected by their relationship with the child as discussed by Hinde (1989). That boys were more active than girls get support from previous research indicating that boys are more active than girls (Balda and Irving, 2000; Buss, 1989; Kohnstamm, 1989; Prior, Sanson and Oberklaid, 1989).

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