

14 Summary: temperament and developmental pathways



Does temperament matter?

One of the original aims of this project was to discover to what extent temperament influenced development in both positive and negative ways. The studies reported in this book have shown that temperament does exert effects on children's propensities to develop particular kinds of adjustment difficulties. These effects are seen in both home and school settings, and are apparent across time. Temperament has also a significant long-term influence on positive adjustment and socially adaptive behaviour, as shown particularly in the studies of resilience in the face of adversity.

Few other studies of development over time have consistently collected detailed information on children's temperament, although some have used global concepts like 'difficult temperament' at one or two time points. Several of our studies document the value of measuring and analysing temperament dimensions separately, since specific dimensions have specific influences. For example, while inflexibility in temperament appears to relate to a wide range of later adjustment difficulties, non-persistence is linked specifically to later acting-out problems, while shyness or inhibition in early childhood is specifically linked to internalising (inward-directed) problems. These findings suggest that it is important to look at specific aspects of temperament and not just at global concepts.

The particular features of temperament which have proved to be of notable influence in the long term in the Australian Temperament Project, are persistence, flexibility, and reactivity or emotionality. An important component of these dimensions can be called temperamental 'self-regulation'. This is the capacity to regulate or self-manage one's physiological reactions to demands, environmental events, and interpersonal interactions, and to regulate and control one's outward responses and behaviours, which arise as a result of these events. At least in our society, it is clearly important to be able to regulate and control reactions, in order to fit comfortably within the social environment, and to adapt successfully to life tasks and challenges, which are part of the growing up process. Failure to develop both emotional and behavioural self-regulation skills can put the individual at odds with the expectations and values of society. There are, of course, cultural differences in these expectations and values which will affect the degree to which self-regulation is important, as we have seen in some of our cross-cultural comparisons.

So temperament matters in the developmental process, with negative, over-reactive, and non-persistent characteristics likely to put children at risk for the development of behavioural maladjustment. Such findings demonstrate the importance of attending to the individual characteristics of the child and responding to them with flexibility and understanding. For example, some children will need more support when entering new situations such as school, while others will revel in the novelty and challenge. Some will need to recognise their tendency to react to stress and frustration in a strong and

negative way, and to develop strategies to manage their reactions in a more acceptable style. Management strategies used by parents and teachers need to be responsive to these individual differences.

Temperament also works in context; it is almost never a simple or even powerful predictor of adjustment. It often impacts on development not directly but through its effect on parent-child and family interaction. An inflexible child finds it difficult to adapt to change and is irritable and resistant to control efforts. If parents fail to find an effective way of dealing with these predispositions, negative interactions which have been described as ‘coercive cycles’ are likely to develop, where both the parent and the child escalate their negative behaviours (yelling, tantruming, smacking) in their attempts to control each other. These patterns can then lead on to the development of aggressive behaviour problems.

Similarly, a child low in persistence finds it hard to stay on-task, which may pose direct limitations on their learning capacity but is also irritating to parents and teachers, and can lead to a negative perception of the child. So again this temperamental trait can lead the child onto a developmental pathway towards maladjustment. It is these interactional processes which we think explain much of the predictive power of child temperament.

For parents, clinicians and educators, it is important to take individual differences seriously, and to try to improve the ‘fit’ between a child and their social context to facilitate positive psycho-social outcomes.

Temperament matters too because its effects on adaptation emerge very early in life, and these effects are relatively stable. We have shown that by 2–3 years of age, the seeds are sown for good versus poor adjustment. This is not to say that behaviour is not going to change and develop in every child, but the risk factors are evident early for those children who are prone to a problematic developmental pathway. The positive aspect of such a finding is that it encourages us to plan appropriately targeted early intervention, which can help avoid later difficulties. This can be focused on both enhancing parenting strategies to help families to cope more effectively with the individual characteristics of the child, and on fostering and teaching self-regulation capacities in the child, in ways which will lead to more socially adaptive behaviour.

From a practical and policy point of view, these conclusions suggest that communities should be resourced to develop good support and services for families with young children. These need to be easily accessible, well accepted and sought after, and recognised as essential features of a healthy community. They would be best targeted at critical transition points in child and family development such as around the time of birth, entry to pre-school, primary school, and secondary school, and the middle-adolescent period. Parental guidance and support in the context of socially cohesive and strong communities can help to foster healthy physical, mental, and social development for children, and to prevent undesirable outcomes such as school drop-out, substance abuse and delinquency.

Benefits of our studies

Longitudinal studies are critically important in understanding child development. Looking at one point in time in development provides valuable descriptive data, but cannot provide information on pathways across time, and on relationships between various influences as they develop and interact throughout development. Longitudinal designs provide a method in which one can ask questions about possible causes of particular kinds of behaviour: how early do patterns become apparent, how stable are

they, what leads to what, what kinds of factors influence changes in pathways, how do risk and protective factors operate over time? Once developmental links are established in longitudinal studies such as the Australian Temperament Project, they can be tested by intervention studies which attempt to evaluate what happens if you make changes in children's circumstances, and in parenting.

The Australian Temperament Project has made a major national and international contribution to the understanding of temperament in childhood, and how it affects child development in different environments in both positive and negative ways.

Before the initiation of the Australian Temperament Project we had little knowledge of temperament and its role in development for our own Australian child population. Our cross-cultural comparisons showed that there are national differences in temperament dimensions and in their relative significance in children's development, as well as in their family settings. This study has emphasised the importance of temperament in context and has provided data useful for understanding many aspects of child development in the Australian culture. And, of course, it provides internationally comparative data, which can contribute to a broader body of knowledge in psychology, paediatrics, and education.

An important outcome from the project is that we have developed research and clinical methods and procedures which can be used by other researchers in Australia who are interested in infant, child, and adolescent development. We have developed measures which we know work well for Australian families at least at this point in time. This again allows comparisons with other similar research in child development, helping to build a body of comparable knowledge. Future research in child development can benefit from our contributions to the measurement of various aspects of child and family functioning. Our short temperament scales for various age groups, which are now being used in many parts of Australia, represent just one example of this contribution.

For the children and parents participating in our project, the experience has been of great interest. They have been active recorders of child development over time, and have been exposed to ways of looking at individuals which can help in understanding the particular characteristics of each child. Some parents and children have reported to us how much they have enjoyed completing the questionnaires, and talking to the various researchers who have visited them over the years. They report that they have been sensitised to a number of issues, such as the individual temperamental characteristics of the project child, the changes in behaviour and understanding at various developmental phases, and ways of describing the capacities of the child. Some families have benefited from help which followed the identification of learning or adjustment problems at some stage of development in their child.

From the point of view of helping parents with their task of child-rearing, our research provides insights into how temperamental attributes which are hard to deal with (such as a very high level of reactivity) may be recognised and described; and how they will need to be taken into account when observing, interpreting and modifying family interaction. This kind of understanding helps parents to decide, or if necessary to seek professional advice, about how such temperament and behavioural characteristics might be managed in an adaptive and harmonious way to improve the wellbeing of the child in their particular family, school, and wider environment.

The project research has also helped in the understanding of the early origins of both adaptive and maladaptive behaviours, and what kinds of factors influence their persistence or remission over time. It contributes to our capacity to predict risk for persisting problems in individual children, and shows that this is feasible from quite early in life.

The evidence about the close relationships between behavioural and learning difficulties in the school years has significant implications for education. It provides new knowledge and understanding for teachers, and can assist in the planning of interventions for both behavioural and learning problems which should improve outcome for children at risk in the school years. For example, we have demonstrated that early hyperactivity and attention problems are strong risk factors for the development of learning difficulties in boys, and that phonological skills are very important in helping children at risk for reading failure to overcome their problems. This has policy implications in the education field in highlighting the desirability of early intervention in both behavioural and language learning spheres in children at risk.

Analysis of the factors in peer relationships which affect, and are affected by, child and adolescent adjustment can provide indications of helpful and unhelpful influences, which can affect outcome, as well as highlight avenues for peer-focused intervention to improve adjustment. For example, peer relationships appear to be a crucial factor in the commencement and continuance of substance use.

Understanding of temperament, family, and other factors which are related to adjustment difficulties and risk taking behaviour during adolescence adds to the growing literature emphasising the need for appropriate and carefully designed approaches to enhancing positive development through this important life stage. In this era of considerable community concern for the health and wellbeing of adolescents, especially the need to reduce risk factors for mental health problems in this group, our studies of pathways to depression, anti-social behaviour, and substance use can offer significant insights into these problems. The important influence of success at school, positive relationships with peers, strong family attachment, and positive parenting practices for healthy outcomes are clearly identified for this Australian cohort, and indicate avenues for the development of programmes to maximise positive adjustment through adolescence and young adulthood.

The Australian Temperament Project provides insights into the psycho-social outcome of children who suffer from particular disadvantaged circumstances during the childhood period; these can inform community-based and clinical interventions designed to improve outcome for families at risk. Findings from the project can be used to inform and advise governments on significant factors in child development and family functioning which can be important in policy formation regarding family and social welfare in Australia. They can also offer pointers to family policy areas needing further exploration and research support.