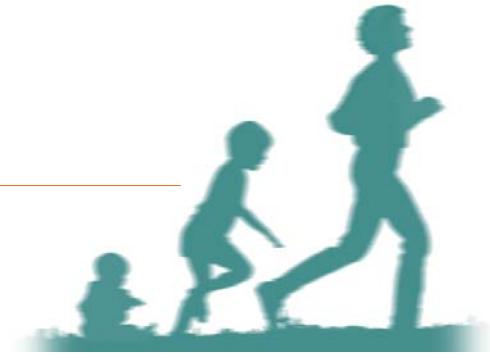


## 11 Adolescent issues



### Temperament and personality

Temperament is sometimes considered as the early form of personality, the biological blueprint perhaps. Personality is a more elaborated development as it incorporates the effects of experience and learning over time, in the development of a more mature and expanded characteristic individual style. At the adolescent stage of development, we assessed the relationships between temperament and personality, and between personality and psycho-social adjustment. In the first study (a sub-sample of 148 members of the cohort) mothers reported on both temperament and personality of their child at age 13–14 years, while at the same time, both child and mother reported on emotional and behavioural adjustment.

The personality measure we used was based on the personality system of Goldberg (1992). The dimensions are Extraversion (out-goingness); Agreeableness; Emotional Stability; Conscientiousness/Self-Control; and Intellect/Openness to Experience (creativity, imagination and open mindedness). The temperament measure was the School-Age Temperament Inventory (SATI: McClowry 1995), with the four dimensions of Activity; Negative Reactivity; Persistence, and Approach (sociability)/Withdrawal.

At 13–14 years we found many relationships between specific temperament and personality dimensions. Extraversion or out-goingness was related to temperamental sociability and to Activity. Agreeableness was related in a negative direction to temperamental Reactivity, that is, a negatively reactive temperament style was associated with a lesser degree of Agreeableness, as one might expect. Negative Reactivity was also related to anti-social behaviour and to total behaviour problems as reported by the mother. Emotional Stability was positively related to Approach, and negatively associated with Reactivity, anxiety and total behaviour problems. Correlations between temperament dimensions and Openness to Experience were very modest, but there was some association with Reactivity and Persistence dimensions. Conscientiousness was also related to the temperament dimensions of Persistence and Reactivity. It was also negatively related to attention problems, to behavioural difficulties as reported by mother, and to hyperactivity as reported by the child. This dimension of Conscientiousness was the most strongly related to the child-rated behavioural measures and is clearly associated with children's capacity to self-regulate their behaviour and to adapt to the social and task demands of the environment in which they live.

Overall, each individual personality dimension showed some relationships to specific aspects of temperament and to behavioural difficulties. The most substantial relationships were between: Approach and Extraversion; Persistence, attention problems and Conscientiousness; and anxiety and Emotional Stability. All these connections are reasonably to be expected given the content of the temperament and the personality measures.

In the second study, from the 1998 survey, when adolescents were aged 15–16 years, we asked parents to again rate the personality of their children. We included the whole sample this time, thus providing a substantial data set with which we could look at personality and temperament associations. We examined both concurrent associations between temperament and personality (same point in time); and also the extent to which previous childhood temperament characteristics could predict adolescent personality. In summary, for the concurrent data, we found:

- Agreeableness in personality was strongly associated with temperamental Negative Reactivity and Persistence, and to a small extent with Approach;
- Extraversion was strongly associated with Approach and Activity, and more weakly with Persistence;
- Conscientiousness was closely related to Persistence;
- Emotional stability was associated with Approach and Negative Reactivity;
- The personality dimension of Openness to Experience showed only weak relationships with temperament dimensions, particularly with Persistence and Approach.

What is perhaps of greatest interest is how well we can predict personality at 16 years from temperament measured earlier in development. We looked at the temperament data from the 11–12 and 13–14 year-old surveys to assess these relationships across time. In summary:

- Agreeableness at 16 years was predicted by the temperament dimensions of Negative Reactivity at 13–14 years and Persistence at 11–12 years;
- Extraversion was predicted by Approach and Activity at 13–14 years and Persistence at 11–12 years;
- Conscientiousness was predicted by Persistence at both 11–12 and 13–14 years (this was the most substantial association);
- Emotional Stability was predicted by Approach and Negative Reactivity at 13–14 years;
- Openness to Experience was only very weakly predicted, by Persistence and Approach at 11–12 years.

This study showed that there are long-term relationships between temperament and personality; these are strongest for Extraversion and for Conscientiousness with the expected relationship between temperamental Approach (Extraversion), and Persistence (Conscientiousness). There are two temperament dimensions which appear almost every time. Persistence appears as a predictor of almost every personality dimension except Emotional Stability (which is related to anxiety and Negative Reactivity), while Approach is related to three of the five personality dimensions (Extraversion, Emotional Stability, and Openness to Experience). Temperamental Persistence emerges as an important dimension so frequently in our studies from school-age onwards, that it is clearly a very salient attribute in many domains of development.

## Pathways to the development of eating problems

Having longitudinal data gave us the opportunity to investigate early signs of dieting and any risk factors for later eating problems. While we expected very few of our children to have serious eating disorders, it is likely that childhood experience and perhaps temperament may dispose some children to such problems in late adolescence

or adulthood. With LaTrobe University colleagues, Simone Blaney, Geoff Martin and Eleanor Wertheim, we explored the relationship between childhood temperament and the later development of eating and body size worries in adolescence.

In a study of 1228 12–13 year old project children, we found that girls with higher scores on a scale measuring ‘drive for thinness’ were more likely to have shown higher levels of the temperament dimension called Emotionality from 3–4 years onwards. This temperament dimension is made up of attributes such as the propensity to get very angry when frustrated, to respond negatively and intensely, and being moody or cranky. Those girls who were the most dissatisfied with their bodies were the ones showing the highest levels of negative Emotionality at 12–13 years of age. There were no consistent patterns of relationships between temperament and eating/body concerns for boys. This is perhaps not surprising since boys reported significantly fewer dieting behaviours and body concerns compared with girls.

We also examined some aspects of the transmission of values from parent to child, which may provide some explanation of the way in which eating concerns develop during childhood and adolescence. In our sample, encouragement to diet on the part of either mother or father was associated with a daughter’s body dissatisfaction and drive for thinness. The 49 per cent of girls who had reached puberty were at somewhat higher risk for eating problems if their mother was dieting. However, only a minority of parents reported that they encouraged their children to diet, and there was no greater pressure on girls versus boys to diet. In addition, it was the larger children whose parents were more likely to be concerned about their weight, hence watching food intake may have been a rational health concern. It should be noted that these studies were concerned with a community sample of children who did not have eating disorders, hence the focus was only on possible precursors to potential later problems.

Negative Emotionality and lower Persistence at 3–4 years also predicted higher ‘drive for thinness’ among girls at 15–16 years of age. Additionally, these same two temperament dimensions measured at 15–16 years predicted higher ‘drive for thinness’. Thus high levels of negative Emotionality seem to be one of the major risk factors for eating problems, just as they do for a range of other problems.

When assessing stability of eating concerns from 12–13 and 15–16 years, we found:

- more girls at age 15–16 years than at 12–13 years reported wanting to be thinner, binge-eating behaviour, more frequent dieting, and more concerns with body shape;
- girls who reported a high level of concern about body shape and size, at 12–13 years tended also to report similar degrees of concern at ages 15–16 years.

## Pathways to adolescent anti-social behaviour and depression

Our longitudinal study gives us the opportunity to chart the development of teenage anti-social behaviour and depression and to look at pathways to these two types of problems. Table 4 shows how often the teenagers in our study had engaged in anti-social behaviours.

We examined the precursors to depression and anti-social/delinquent behaviour at 15–16 years. At 15–16 years we found that:

- 14 per cent of teenagers reported involvement in 4 or more anti-social acts (such as theft, vandalism, assault) during the past 12 months (See Table 4 below for examples). Of these young people, 62 per cent were boys and 38 per cent were girls. These

adolescents were judged to have a significant level of anti-social behaviour. About 20 per cent of this group also had depressive symptoms.

- Fifteen per cent of teenagers overall reported symptoms which indicated that they had a serious level of depression. The gender ratio was quite different here, with 75 per cent of this group being girls. About 20 per cent of this group also had anti-social problems.

For our analyses of these pathways, we selected out the 640 project members for whom we had absolutely complete data from parents, teachers and children at 15–16, 13–14, 11–12, and 7–8 years, thus allowing us to look back at earlier factors in their development. We checked our full longitudinal data set and ascertained that this group of 640 young people was representative of, and similar to, the total sample. The nature of the pathways leading to depression and anti-social behaviours was analysed using earlier measures of temperament, behaviour problems, socio-economic status, mother-child relationships, association with ‘deviant peers’ (this refers to other adolescents/friends who engage in anti-social behaviour or use drugs), parenting practices, family attachment, and school achievement.

In the pathways to anti-social behaviour at 15–16 years of age, the strongest risk factors were previous oppositional behaviour, poor school adjustment and association with ‘deviant peers’ at 13–14 years. A low level of parental monitoring of behaviour was also influential in this pathway. Temperament dimensions, including low Persistence and Negative Reactivity, did not contribute directly to anti-social behaviour at 15–16 years, but were important further back in the chain, in their associations with earlier externalising behaviour problems. These problems had persisted through to adolescence and contributed to current anti-social problems. The mother-child relationship measure also featured in the developmental pathway as did earlier academic achievement across the years from 7–14. Low socio-economic status was predictive at 7–8 years but not thereafter. Hence for this study it appeared (yet again) that previous maladjustment predicted current maladjustment, with additional contributions from peer influences, temperament dimensions, school factors and to a lesser extent, parenting factors.

In the pathways to depression in adolescence, the best predictors were earlier anxiety problems and low attachment to family (this refers to low levels of communication and less closeness); along with poor school adjustment at 13–14 years of age. Temperament

**Table 4** Frequency of anti-social behaviours at 13-14 and 15-16 years

Anti-social Behaviour	13-14 years		15-16 years	
	1 time percentage	2+ times percentage	1 time percentage	2+ times percentage
in a physical fight	21	13	19	13
damaged something in a public place	11	3	13	8
stolen something	11	5	11	9
driven car without permission	2	1	4	3
suspended/expelled from school	3	1	5	2
graffiti in public place	6	2	6	3
carried weapon	4	2	4	1
wagged school	7	3	11	16
shoplifted	not asked		6	7
run away from home	not asked		2	1
contact/cautioned by police	not asked		11	3
charged by police	not asked		1	0.5
been to court as offender	not asked		0.4	0.2

Source: Australian Temperament Project 1983–2000.

dimensions including low Sociability, and Negative Reactivity were important predictors earlier in the child’s history. Academic difficulties, and peer relationships problems were also part of the pathway leading to depression.

## Prediction and patterns of substance use

Some level of experimentation with drugs during adolescence and even later appears to be a fairly normal aspect of development in Western society at least. We have assessed this phenomenon in our sample from the age of 13–14 years. Self-report and parent-report data on use of tobacco, marijuana, alcohol, and other substances were collected at ages 13–14 years and 15–16 years (see Table 5 for details). This has allowed us to look at rates of substance use at both these stages, trends in use across this period, early and current predictors of substance use, the characteristics of teenagers who use hard drugs, and evidence for theories about how drug use develops over time.

Relatively few teenagers were using substances at 13–14 years, with cigarettes (around 10 per cent) and alcohol (about one-quarter of teenagers) being the most frequently used substances ‘in the previous month’. At 15–16 years, there was an increasing pattern of substance use. While almost half the sample reported that they had never smoked, some had experimented with smoking, approximately one-third were recent or ongoing smokers, and 15 per cent reported that they smoked every day. With regard to alcohol, 75 per cent said yes when asked if they had ever had alcohol in their lifetime. Of those who had tried alcohol, 15 per cent had not drunk at all in the past month, 45 per cent had drunk alcohol on one or two occasions and 40 per cent had drunk alcohol on three or more occasions. Thus, half the sample were social or experimental drinkers. A moderate level of drinking to intoxication was reported. However, there was a small group of heavy and chronic drinkers who may have had some degree of alcohol dependence.

Marijuana had been tried by 25 per cent at some time, while 11 per cent had used this substance recently, with 4.5 per cent using often. Other substances used by a number of teenagers included anti-depressants (3 per cent), sniffing (7.4 per cent), and a range of other substances including acid, stimulants, heroin and cocaine (2 per cent). Notably, all members of this latter group had also used other drugs. This particular finding may

**Table 5** Patterns of substance use at 13-14 and 15-16 years as reported by teenagers

	13-14 years percentage	15-16 years percentage
Smoked 3+ cigarettes in life	21	44
Smoked in last month	12	27
Drank 3+ alcoholic drinks in life	42	74
Drank alcohol in last month	25	59
Intoxicated 1+ time in last month	7	38
1+ day binge drinking in last month	not measured	30
Tried marijuana 1-2 times	5	not measured
Tried marijuana 3+ times	1	not measured
Tried marijuana in life	not measured	25
Smoked marijuana 1+ day in last month	not measured	13
Tried sniffing 1-2 times	7	7
Tried sniffing 3+ times	1	0.7
Tried other non-medical drugs	0.3	2
Anti-depressants	not measured	3

Source: Australian Temperament Project 1983–2000.

support the 'gateway' theory of substance use; that is, any drug use increases the chance of trying other types of drugs, or, to put this another way, the use of 'softer' drugs opens the possibilities of use of 'harder' drugs. In general, these data suggest that by 15–16 years of age, a moderate degree of substance use is relatively normative.

We investigated the predictors of substance use in the mid-teens by examining characteristics of the sample two years earlier at 13–14 years of age. The most significant predictor of use at 15–16 years was the adolescent's report of anti-social behaviour at 13–14. Substance usage was also associated with maternal smoking and drinking; being a later-born child in the family; having a higher attraction to thrill and adventure seeking; showing more aggressive and hyperactive behaviour; higher sociability; poorer quality of friendships; less attachment to family; and being male. Having a high level of emotional control was a protective factor, i.e. decreased the chances of using substances. Having friends who engaged in anti-social behaviour or used substances was a strong risk factor for substance use.

Within a small group of multi-substance users from the sample (used four or more substances at 15–16 years), their earlier histories had shown that temperamental features of high Reactivity, high Sociability and low Persistence, along with higher aggression, mother-rated difficultness, poorer school attitudes and relationships, and 'deviant' friendships were risk factors for later substance use.

We compared the 28 teenagers who reported hard-drug usage (heroin, amphetamines, speed, Ecstasy) with the rest of the sample. The hard-drug users showed a range of more problematic personal, family, and social characteristics, compared with non-users. These included: more difficult temperament characteristics by mother report, with greater Irritability (Negative Reactivity), and lower Persistence; less Agreeableness and Conscientiousness; more depressive symptoms, delinquency and aggression; and associations with peers with similar behaviours. These studies are helpful in clearly delineating the individual and social factors which signal high risk for problems with substance use in adolescence. They also suggest points for intervention in our attempts to reduce these health risk behaviours.

## Relationships between temperament, parenting style and emotional and behavioural problems at 13–14 years of age

Understanding the complex relationships between the characteristics of the child and the effects of parenting styles on psychological adjustment is a major challenge. In one of our studies we attempted to analyse our data in a way that would help us understand these associations. We selected the five outcomes of Oppositional and Conduct Disorder (CD); Hyperactivity/Attention Deficits (ADHD); Depression; Anxiety; and Substance Use (alcohol, tobacco, marijuana, and sniffing). We then asked which temperament dimensions and parenting styles were particularly associated with risk for these five outcomes in early adolescence.

The parenting scales included were: 'warmth of relationship', 'use of inductive reasoning' (use of explanation, discussion), 'physical punishment', and 'parental monitoring' (knowing whereabouts and activities of the child). We found differing associations between these factors and the kinds of adjustment problems reported. In summary:

- the temperament dimensions of Negative Reactivity, low Persistence, and high Activity were associated with externalising behaviour problems (CD and ADHD) at 13–14 years;
- low Sociability and Negative Reactivity were associated with internalising problems (Depression and Anxiety);

- parenting styles of low warmth, high use of punishment and low monitoring of the child's behaviour, were associated with externalising behaviours and with substance use;
- no parenting scales predicted anxiety, and low warmth was the only one associated with depression.

Finally, we looked at the combined influence of temperament and parenting in predicting the problem outcomes. Our analyses indicated that in a situation where a child was temperamentally 'at risk', that is, had some of the more 'difficult' temperamental characteristics such as low persistence, then their risk of CD was further increased by the use of parenting practices such as punishment, low monitoring and low warmth. However if they were not temperamentally 'at risk', but were average or highly persistent, then variations in parenting practices made little difference to outcome. Experimenting with alcohol, and smoking, was more likely to occur in children who were low in persistence and whose parents reported low monitoring, that is, not keeping a close eye on their activities.

Overall, it appeared that if children already had more 'difficult' temperament qualities (especially those involving self-regulation dimensions such as Reactivity and Persistence), which put them at risk for emotional and behavioural difficulties, then parenting appeared to have more impact on their outcome. In other words, the style of parenting used seemed to matter much more for these temperamentally 'at risk' children.

## School adjustment during the adolescent years

Our questionnaires from Year 7 onwards asked for parent and child ratings of school adjustment, including reports of how well the children got on with peers and teachers; understood class work; managed school rules and routines; homework and assignments; achieved a satisfactory standard of work; and how children felt about life at school. The data are very consistent across the period 12–16 years and can be summarised thus:

- generally boys experienced more problems than girls: they enjoyed school less, got into trouble with teachers more often, and felt less confident about their ability. Around one-third of boys at each survey point were having problems with completing homework and assignments;
- one-third of children did not rate school as being enjoyable for them in year 10, and reported negative feelings about a number of facets of school life;
- generally, teenagers felt positive about their relationships with peers. Most felt they could talk about their concerns with friends and felt that their friends were understanding and respected their point of view. A small number (4 per cent), reported that they did not have a best friend;
- there were no gender differences in the teenagers' capacity to make and keep friends, with 80 per cent saying this was not a problem for them;
- around 25 per cent of teenagers reported the experience of being bullied between 12 and 14 years of age, more commonly boys; and 5–6 per cent noted that this was quite a serious problem for them.

These findings are somewhat troubling with regard to boys' feelings about how they were coping with the demands of secondary education. However, as with the findings for psychological adjustment reported in previous pages, we should not forget that the majority of boys and girls felt positive about school and valued the learning opportunities provided.

## Parent-adolescent communication

When the teenagers were 12–13 years of age, we asked both them and their parents how often they discussed, or felt they could discuss, topics such as the teenager's feelings about him/herself, problems with friends, school, smoking, drinking, puberty, sex, and health.

First, *for parents*, we found that:

- about two-thirds to three-quarters felt that their teenager would 'definitely' or 'probably' talk with them about personal issues, friendships, body changes, smoking and drinking, sexual and health issues;
- almost all felt that their teenager would talk with them about schoolwork difficulties and career aspirations;
- slightly more parents of girls than parents of boys thought their teenagers would discuss problems with them.

Secondly, *for teenagers*, we found that:

- about half had talked with their mother, one-quarter with their father, and about half with their friends, about personal concerns. Girls were more likely to talk with their friends about how they were feeling than were boys. Most teenagers felt that they could talk with their mothers about their feelings, and a slightly lower number felt they could talk with their fathers about this (more boys than girls);
- teenagers were more likely to talk about friendships and peer problems with their parents than with their friends;
- most had talked with their mother, and about half with their father, about school issues and schoolwork and what they might do when they left school;
- a minority had talked with their parents about smoking cigarettes and drinking alcohol. However most felt they could talk about this with either parent;
- about half had talked with their mother, and one-quarter with their father, about puberty changes. About three-quarters felt they could talk with their mother, and just under half with their father, about this;
- just under half had talked with their mother, and one-fifth with their father, about sex and sexual diseases, while three-quarters felt they could talk with their mother, and about half with their father, about this. Not surprisingly, more girls felt they could talk with their mothers, and boys with their fathers, about these issues.

Overall, most parents and teenagers believed they could talk to each other about a range of personal and social issues, and that they had good communication, particularly about the teenager's friendships, personal wellbeing, and long-term aspirations.

## Year 1999 Family Study

In 1999, more than 600 project families from metropolitan and country areas took part in a home-visit study, in which a parent and teenager were video-taped while they talked about their day-to-day lives (what they enjoy doing together, family rules and expectations, use of free time, and accomplishments and disappointments). The teenagers were also interviewed about how they would manage some particular social situations, about their current life, and their future hopes and dreams. Important recent life events included starting VCE, getting L plates for driving, leaving school and looking for work, having a girl/boy friend, and going out/socialising more. Some teens were clear about their career aspirations, others were still undecided; a number already had apprenticeships or traineeships.

One part of the home-visit study focused on communication patterns and parenting styles and how they are related to adolescent wellbeing. We found considerable diversity in styles of communication. Using both the questionnaire data and video-taped interactions, we found a trend for adolescents with adjustment difficulties to experience less warmth in their relationships with their parents, and their families appeared less cohesive than adolescents who did not have adjustment difficulties. It seemed that the styles of parenting experienced by teenagers with anti-social problems were somewhat harsher and more inconsistent, and parents monitored their behaviour less. Teenagers with depression problems were less likely to have warm, close relationships with parents. Of course, any influences are likely to be two-way: parents are as likely to be responding to their teenagers' behaviour as much as influencing it.

More analyses of these data are currently underway, and will be reported in later publications and newsletters.

## Parent-adolescent conflict

In another part of the 1999 Family Study, we asked parents and teenagers to fill out questionnaires about the types of issues they had disagreements about, and the intensity of such disagreements. They then took part in a discussion (which was video-taped) about the three most troublesome topics they had identified. They were asked to share their perceptions of the problem and to try agree on a solution to the issue. There has been great variety in the way parents and adolescents approached this task, and we are still analysing this information.

Table 6 shows the six most common areas of disagreement (in order of importance).

Teenagers	percentage	Parents	percentage
School grades or homework	18	School grades or homework	22
Fighting with brothers/sisters	18	Chores	17
Chores	11	Fighting with brothers/sisters	14
Money	8	Attitudes, respect	6
Attitudes, respect	7	Money	5
Transportation	5	Swearing/talking back	4

*Source: Australian Temperament Project 1983–2000.*

### Frequencies of disagreement

#### For teenagers:

- around 25 per cent of teenagers and parents disagreed 'quite often' or 'all the time' about school grades/homework and attitudes/respect;
- about 30 per cent of teenagers and parents disagreed 'quite often' or 'all the time' about fighting with brothers/sisters and doing chores;
- about 20 per cent of teenagers and parents disagreed 'quite often' or 'all the time' about money and transportation.

#### For parents:

- around 33 per cent of parents and teenagers disagreed 'quite often' or 'all the time' about school grades/homework, and doing chores;
- about 25 per cent of parents and teenagers disagreed 'quite often' or 'all the time' about fighting between brothers and sisters;

- about 20 per cent of parents and teenagers disagreed 'quite often' or 'all the time' about attitudes/respect and money;
- about 15 per cent of parents and teenagers disagreed 'quite often' or 'all the time' about swearing or talking back.

Overall, it seemed that for the majority of parents and teenagers in this home-visit study, the degree of family conflict and disagreement was mild, since 60 per cent to 70 per cent of parents and adolescents seldom or never had disagreements.

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***Further reading:***

See items 6, 61, 63, 69, 70, 72, 74, 76, 80 and 81 in the list of Australian Temperament Project publications at the end of this book.