DWELLING ON THE RIGHT SIDE OF THE CURVE:
AN EXPLORATION OF THE PSYCHOLOGICAL WELLBEING
OF PARENTS OF GIFTED CHILDREN

A thesis submitted

for the degree of

Doctor of Philosophy (Clinical Psychology)

of the

The Australian National University

by

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DECLARATION

This thesis describes original research undertaken in the Department of Psychology at The Australian National University. Apart from the usual support and advice provided by my supervisor, Dr Phillipa Butcher, the ideas and research detailed in this thesis are solely my own, except where otherwise indicated. To the best of my knowledge, any theories and techniques that are not my own have been properly acknowledged within the text. The work contained in this thesis has not been submitted for a higher degree at any other institution.

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Natalie Anne Rimlinger

March 2016
“The greatness comes not when things go always good for you. 
But the greatness comes when you’re really tested, when you take some knocks, some disappointments, when sadness comes. Because only if you’ve been in the deepest valley can you know how magnificent it is to be on the highest mountain.”

Richard M. Nixon
Dedicated to my Dad - Tony de Bont

There is no doubt in my mind that this thesis is now completed because of your continued support, gentle encouragement, unwavering patience, wise counsel, and tough love.

Thank you for believing in me.

Nat
In memory of Dr Glenison Alsop of the CHIP Foundation.

Thank you for ‘passing the baton’ to me Glen.

I wish that you were here to see the finished product.

And in loving memory of Bert Hagel

for giving me the push in the direction that I needed

right when I needed it.
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ABSTRACT

Research has shown that parenting a child who is exceptional is difficult. Gifted children by statistical definition are exceptional and therefore, the experience of their parents should be an area of potential concern. The existing literature has largely overlooked the psychological wellbeing of the parents of gifted children. It has highlighted the concerns of the parents about their child, however the impact of these concerns on the parents’ psychological wellbeing has not been investigated systematically. Further, much of the literature has explored the lives of gifted children and their family using qualitative methods. This makes it difficult to compare the experiences of the children and parents to normative samples and to then draw conclusions as to whether there are measurable differences between the populations.

In a cross-cultural (Australian and USA) study, parents who considered their child gifted were asked to complete an online survey. The behavioural characteristics of gifted children were examined with a commonly used standardised psychological measure of child behaviours. The parents of the children reported higher levels of a range of problematic behaviours including conduct, emotional difficulties, peer problems, and hyperactivity/inattention, and lower scores on prosocial behaviours. When twice exceptional children were removed from the analysis the results remained largely unchanged.

In both countries, parents reported a moderate level of confidence in their child’s teacher and a moderate degree of satisfaction with the frequency of contact and nature of their relationship with their child’s teacher. Across all aspects of school experience as investigated by this study, the majority of parents were ambivalent.
Problematic child behaviours have been shown to be negatively associated with parental psychological wellbeing and results showed this was true in the current sample. The parents completed standardised measures of mental health and parenting stress. They reported significantly higher levels of anxiety and higher scores on parenting stress. Multiple regressions showed that child behaviour was a key predictor for both measures of parental psychological wellbeing. Child conduct problems were strongly associated with parental anxiety. For parenting stress child conduct was again a significant predictor as were peer problems and poor prosocial behaviours. Lower levels of trust in the child’s classroom teacher were also a significant predictor of increased parenting stress. Again, removal of parents of twice exceptional children from the analysis had little impact on results.

Findings of psychological distress in parents that was associated with their children’s problematic behaviour suggest a need to investigate the wellbeing of both parents and children more deeply. The high frequency of behaviour problems in the children suggests a need to broaden the definition of “gifted” so that it encompasses social, emotional, and intellectual characteristics. The findings also raise the question whether standardised psychological measures developed for the full range of intellectual ability are appropriate for the assessment of the social and emotional needs in this population.
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CHAPTER 1

Overview and Aims

Reading furnishes the mind only with materials of knowledge; 
it is thinking that makes what we read ours.

John Locke

In his seminal work “Hereditary Genius,” Francis Galton (1869) put forward the idea that intelligence was passed down from parent to child, and coined the term ‘gifted’ when discussing men of “eminence” or outstanding reputation. Since these early days, a plethora of studies have been carried out investigating who are the gifted children, how to identify them, what their social, emotional, and educational needs are, and how parents can best support their wellbeing and long term academic outcomes (Litster & Roberts, 2011). When the parents are mentioned, the focus is usually on the characteristics that will help them to effectively parent their child (Freeman, 2013; Huey, Sayler, & Rinn, 2013; Olszewski-Kubilius, 2002; Olszewski-Kubilius, Lee, & Thomson, 2014; Weber & Stanley, 2012).

Only a handful of studies have looked at who the parents of gifted children are or the impact that having a gifted child has on the family. Many of these parents expected to be raising a child “just like the child next door” but were quickly confronted with a raft of characteristics in their gifted child they may feel unprepared to deal with. Gifted children tend to sleep less as infants, are more active, require more stimulation as toddlers, and can be more intensely sensitive than typically developing children (Lovecky, 1992). Their divergent thinking can lead to novel solutions to day to day problems, some of which may displease their parents and could result in them struggling to fit in to the confines of traditional education. Peer relationships can also be problematic for the gifted child.
Giftedness can also complicate relationships within their own family with both parents and siblings (Distin, 2006). It is the parent’s responsibility to navigate their gifted child through the maze of psychologists, teachers, and peers who they are likely to encounter while seeking positive outcomes for their child. In some cases, the parents of gifted children may find themselves tired, frustrated, socially isolated, and misunderstood by those around them (Silverman, 2000). There are numerous articles and books available for parents of gifted children that suggest ways to cope with the child’s needs and advise parents on how best to navigate the education system so as to find a school that is a good fit for their child (for example see Besnoy, 2005; Jolly, Treffinger, Inman, & Smutny, 2001; Klein, 2007; Smutny, 2015).

In the literature, it is typically the needs of the child that are put at the forefront with the parent’s needs, concerns, and wellbeing taking a back seat. For example, books such as “A parent’s guide to gifted children” (Webb, Gore, Amend, & DeVries, 2007) dedicate a chapter to parenting problems. Parental self-care is discussed however, it receives just two pages in the whole book. Some books go so far as to say that raising a gifted child will be challenging (Distin, 2006; Kay, Robson, & Brenneman, 2007), but most then state that advocating for the gifted child is paramount and appear to disregard the experience of the parent.

To date, no articles could be found which have investigated whether raising gifted children leads to increased levels of parenting stress or higher than expected rates of psychopathology such as anxiety or depression. One study by Morawska and Sanders (2008) looked at the psychological wellbeing of the parents of gifted Australian children. However, rather than examine whether the demands of the child impacted upon the parent, they investigated the impact of the parent on the child. A lack of focus on the psychological wellbeing of parents of gifted children has resulted in limited
understanding of aspects of the parents beyond basic sociodemographics such as class (Morawska & Sanders, 2009), age (Gross, 2004), education (Gross, 2004), and parenting style (Huey et al., 2013).

This is not a new problem. Alsop (1994) cites a 1959 paper by Fleigler and Bisch where the authors list future directions for research in the field of gifted children. Fleigler and Bisch argue for further research of the individual characteristics of the child, gifted education and curriculum changes, leadership, and the best cost effective way of maximising potential in these children. Alsop (1994, p. 59) writes “Family environment and parenting may have suffered the fate of the obvious, and been forgotten.”

Gifted children are generally recognised to be exceptional in as much as they are not the same as typically developing children. Parenting a child who does not follow a typical developmental course is challenging (Baker et al., 2003; Baker, Blacher, & Olsson, 2005; Estes et al., 2009; Sanders & Morgan, 1997). For example, the parents of children with complex or chronic medical conditions (Whittemore, Jaser, Chao, Jang, & Grey, 2012), physical disabilities (Gallagher & Whiteley, 2013), and low IQ (Sanders & Morgan, 1997) have received considerable attention in the literature. Google Scholar is accessible to both parents and professionals who have no way to access scientific journals directly. Using a search tool such as this parents and professionals working with these families would be able to readily access literature that would highlight the difficulties parents face when raising exceptional children.

A search of Google Scholar (2016) using the search string “autism parent wellbeing” returned over 26,000 results. Journal articles have investigated aspects of wellbeing such as coping (Abbeduto et al., 2004), social support and satisfaction with services (Bromley, Hare, Davison, & Emerson, 2004), daily stress (Pottie & Ingram,
2008), parenting stress and psychological functioning (Estes et al., 2009). Similarly, replacing “Autism” with “Down syndrome “or “Chronic Health” and undertaking the same search through Google Scholar returns 22,200 articles for Down syndrome and 8, 500 for chronic health conditions, with journal articles and books covering similar aspects of parenting as to those found for parents of children with Autism (e.g. see Abeduto et al., 2004; Barlow & Ellard, 2006; Cadman, Boyle, Szatmari, & Offord, 1987; Dabrowska & Pisula, 2010; Hastings, 2002; Raina et al., 2005). An examination of results in any of the three categories shows that the bulk of the articles pertain specifically to the wellbeing of the parents of the children.

Using the same search items and the word “gifted” returns a promising 27,500 articles, however perusal of the titles shows the parents are of interest because of their role in raising and advocating for these children. The first four articles centre on the psychological wellbeing of the gifted child (Neihart, 1999), parental personality and the creative potential of exceptionally gifted boys (Runco & Albert, 2005), parenting styles and mental health of Arab gifted adolescents (Dwairy, 2004) and “Being Smart about gifted children: A guide for parents and educators” (Matthews & Foster, 2005). While three of the four items explicitly mention parents, their focus is helping educators and parents meet the needs of the child. While the research has provided valuable knowledge on how the parents can most effectively support their child’s development, no articles examine the psychological health, stress levels, or support of the parents of the gifted.

In the absence of literature directly assessing the psychological wellbeing of the parents of the gifted existing investigations of their concerns provides a useful starting point.
What is known about the concerns of parents of gifted children

A handful of studies have examined the concerns of the parents of gifted children. When Hackney (1981) informally spoke to parents of gifted children, parents reported five key areas that were affected by the existence of a gifted child within the family:

1. changed roles within the family
2. parents feeling differently about themselves
3. families needing to adapt to accommodate the needs of the gifted child
4. problems with family members and other support people such as neighbours
5. problems between the family and the school.

Hackney went on to describe the key issues within each of these domains.

Parents reported the changed roles within the family, especially when it came to parenting the child. They described a struggle remembering that the child was a child, not another adult in the house, especially when the child was able to enter into discussions with adult like verbal skills. Parents also spoke of increased sibling difficulties and the tension this created within the home.

For their own self-concept, Hackney (1981) reported a strong sense of responsibility for enabling their child to meet their full potential. The parents also thought that others, including other parents and the school, thought they were fortunate to have a gifted child. Emotions described by the parents included guilt and fear. These two emotions are indicators of an increased psychological burden for the parents.

Parents also described having to change their lifestyle to accommodate their gifted children (Hackney, 1981). They reported making extreme sacrifices for the sake of their child and for being unsure as to how far to go in order to have their child’s needs met. Hackney goes so far as to state that “giftedness becomes a phantom family
member” (p. 53) and suggests parents are willing to take accommodation to the extreme and are overly child-centred.

The impact on the child of potential bullying and not fitting in with other children in their neighbourhood was also of concern to these parents. Some parents stated they wished they could move neighbourhoods to find a place where their child fit in. Hackney highlights the social consequences for the child if they either reject or are rejected by their peers and states the impact of these worries on the family ought not be minimised.

Finally, the difficulties that arise with meeting the educational needs of these children were discussed. Hackney states the parent-school relationship can become adversarial. Importantly this does not occur in all cases, however, it does happen and is of concern for those working with these families. The context of the child, school, and home are important and the bi-directional relationship between all is something to be held in mind when working with the families. In summary, Hackney (1981) identified characteristics of the child, the family, and the education system as domains of concern for the parents of the gifted. The study was opportunistic and not designed as a research project. However, it recognised that the parents do have concerns. While the parental wellbeing was not directly explored, the behaviours, experiences, and feelings that Hackney describes suggest that these parents are more vulnerable than the parents of typically developing children are.

The pattern of concerns involving the child, the family, and the school can be seen across the few other studies that have focused on the experience of the parent. Huff, Houskamp, Watkins, Stanton, and Tavegia (2005) used semi-structured interviews with fifteen African-American families to capture the experience of raising a gifted African-American child. Results showed that the parents felt marginalized not only
because of their race but also because of their gifted child. Key issues, again, revolved around the child’s psychological wellbeing and academic success as well as social connections with family and friends and interactions with the education system (Huff et al., 2005). Parents reported being dissatisfied with the educational accommodations that were being offered to their children. Some spoke of the educational neglect their child had suffered due to inadequate programs for the gifted. Many used the word ‘frustrated’ when speaking of the experience of meeting their child’s educational needs and working with the schools.

Parents also spoke of social isolation, a key factor in negative psychological wellbeing outcomes (Huff et al., 2005). They described children who were ostracised from both the white and black community because of their intellectual gifts. Interestingly, the concern was around their child’s social isolation and their own potential isolation was not discussed.

Anecdotal evidence of racism towards both the parent and the child was also presented. The perception of the parents was that bright, African American children were often overlooked and they saw the need to take an active role in the schooling of their children as the way of ensuring the best possible outcomes for their children. Their concerns were similar to those reported by Hackney (1981). Again, the impact of these concerns, if any, and the general psychological wellbeing of the parents themselves is left largely unexamined.

Fisher, Kapsalakis, Morda, & Irving (2005) provide further evidence that parents of different cultures share these concerns. They investigated the support mechanisms for parents of gifted children in the Western Suburbs of Melbourne, Victoria, Australia. Results showed that parents received little social support from professionals, including psychologists and schools, other parents, or their own family. Many reported that they
had experienced negative interactions with both the education system and other parents due to their child’s high intellectual potential. This often resulted in the parents feeling isolated, disempowered, and unable to ask for help from those around them.

In an earlier Australian study, Alsop (1994) investigated the experience of 42 families of gifted children in Melbourne in order to determine whether the suggestion that these families would find counselling helpful was upheld. Parents were asked to describe their experience of three specific support networks; family and friends, community support, and educational professionals. Most of these parents reported negative experiences across all of these domains and these had a direct impact on the psychological wellbeing of the parents. Parents also reported an expectation that schools would be equipped to deal with their children and to meet their academic needs however, their experience was dramatically different with less than 20% regarding teachers as helpful and supportive. Alsop concluded that some families experienced a lack of support from expected sources of social support. She concluded that these parents could benefit from supportive counselling.

While these four studies investigated the concerns of the parent of gifted children only Alsop’s touches upon the parent’s psychological wellbeing. The others sought to discover what the concerns were and do not take the further step of asking whether these concerns had an impact on the parent. This is consistent with the focus in the field on the gifted children themselves, rather than their parent’s experience.

How well the results can be generalised to the gifted parent population at large is not clear. These studies have focused on small geographically specific samples, and “data” have been collected through informal gatherings of parents or semi-structured interviews. This means that they rely upon anecdotal or narrative evidence rather than the use of psychometrically sound measures. Narrative evidence captures the
experience effectively but does not allow comparison with other groups of parents in the way that standardised measures would.

The available literature on the experience of the parents of the gifted child suggests they have concerns that focus on the child, the family, and the educational environment. However, whether the concerns of the parents of the gifted are comparable to those of parents of a typically developing child is unknown. Therefore, the first question that needs to be asked is “Is the experience of the parents of the gifted different to the experience of parents of typically developing children?” Using normed psychological tests to compare the parents and their children to a typical sample will determine whether there is something different about their experience that warrants further investigation.

**Theoretical Framework - Bioecological Theory of Human Development**

The existing literature gives us guidance as to where the concerns might lie and these areas – the child, the family, and the school environment – fit well with Bronfenbrenner’s bioecological theory of human development.

In the 1970’s, Urie Bronfenbrenner (1979) devised a theory of human development which took into account the multiple environmental contexts in which human development takes place. Bronfenbrenner reviewed and refined his theory until his death in 2005. His updated theory, the bioecological theory of human development, is considered a “mature” version. It places a stronger emphasis on process, person, context, and time (Bronfenbrenner, 2005). However, the core elements are present in both as will be discussed. Figure 1 is a graphical representation of the various systems in the model.
Bronfenbrenner’s original Ecological Systems Theory (1979) states there are a number of systems that move outwards in a circular fashion, each one larger and more distal from the developing human than the last. The theory’s five systems (microsystem, mesosystem, exosystem, macrosystem, and chronosystem) form the context within which development occurs. Interaction between the systems is bidirectional.

At the centre of the system is the developing human who dwells within the microsystem. This is normally representative of the child. The microsystem describes the pattern of regular activities, social roles and interpersonal relations the developing person has with physical, social, and symbolic settings. While the most central setting
is the family, others such as peer networks, neighbourhoods, schools, and classrooms also effect development. The child directly influences and is directly influenced by those immediately around him. The family is the most influential of these microsystems. Individual differences within these families will influence the way innate characteristics of the child –such as their intelligence and temperament– are expressed. Bidirectional arrows show that these child characteristics will also affect those around them. The classroom, neighbourhood, and peers are also at this microsystem level. The arrows are not only bidirectional from the child to the microsystems but also within the microsystem. Each aspect of the microsystem also has the power to influence other microsystems and these bidirectional linkages were termed mesosystems by Bronfenbrenner (1979).

If we take the example of the gifted child, this child will have characteristics that will interact with their family and their classroom. The parent will then have dealings with the class teacher. Thus the classroom and the family are two microsystems which, when interacting in response to the child’s needs, are a mesosystem.

At the next level is the exosystem (Bronfenbrenner, 1979). The exosystem does not have a direct impact on the individual however, it does have a bi-directional relationship with the microsystems. The parent’s workplace, educational authority, and extended family and friends can all contribute to how the individual develops but not directly. Following on from the example of a gifted child, the family having financial security may mean that decisions can be made regarding choice of school for the child, but it does not directly add to the development of the child.

The macrosystem is symbolic of the culture the individual finds themselves in (Bronfenbrenner, 1979). The implications of this level are particularly important for the families of the gifted and the gifted child themselves. Cultural beliefs around
intelligence and support for children with special needs may greatly impact upon the opportunities presented to the children. For example, the extent to which different means special is culturally determined and will influence the resources made available to gifted children and their parents. Further, the parent’s experience of raising a gifted child may have a strong cultural component such as whether achievement is valued more than potential.

Finally, the chronosystem highlights the time driven qualities of development. This includes major life transitions for individuals and for those systems around them. It can include such things as world events, changes in family structures such as divorce, and other transitions that occur during an individual’s life. Events that occur in the chronosystem affect all other systems.

In his updated theory, Bronfenbrenner (2005) paid closer attention to the individual’s characteristics and potential. Bronfenbrenner used the term “proximal processes” to describe the mechanisms by which an individual influences their own development. He put forward two propositions that detail these processes. Briefly, Bronfenbrenner believed that the interactions the individuals have with their microsystems become more complex over time as the organism develops. He went on to say that aspects of these proximal processes would vary in their influence, form, content, and direction depending upon the person, the environment within which the interaction occurs, the ongoing developmental outcomes for the person, and time itself.

For the gifted child this might mean that randomly occurring negative interactions with a single teacher that were limited by time to one year may not have a lasting influence on the expression of the child’s innate abilities. This would be especially true if the child was receiving ongoing positive reinforcement of their abilities from their parents over a longer period. Similarly, a series of positive
experiences with good teachers is likely to have ongoing positive benefits for the child and by extension their family.

At the person level, Bronfenbrenner acknowledged that age, gender, and physical appearance are important aspects that influence social interactions. The individual also has ‘resources’ that affect development such as intelligence, personal experience, emotionality, and skills. An individual’s innate determination, resilience and persistence will also have an important role to play in development.

Bronfenbrenner also saw a need to expand on the idea of time in his bioecological theory and suggested three levels: micro, meso, and macro (Bronfenbrenner, 2005). Each of these has a different, yet important, connection to proximal processes for the individual. Micro-time describes what is happening interaction to interaction thus it is focused on specific episodes. Meso-time captures the idea that these proximal processes can occur in an environment over days, weeks or years. Macro-time looks at changes at a cultural level. Changes across generations such as the emergence of the internet, will affect proximal processes across the lifespan and at each level of system.

This model provides a conceptual framework, which can guide investigations into the families of gifted children. Existing research on the parents of the gifted suggest that the child characteristics, family issues, and the educational difficulties are of key concern. Bioecological theory is sensitive to the individual differences of the child and then seeks to understand how these characteristics affect the major systems around it. The microsystems of the classroom and the family are the predominate influences in a child’s life and these are the systems identified in the concerns expressed by the parents above. Bioecological theory also brings with it the ideas of context, of
Definitions of Gifted

Before examining the psychological wellbeing of parents of “gifted” children, a definition of gifted must be set out for the purpose of this study. It is impossible to find a definition that is universally agreed upon and this presents difficulties for researchers, educators, and parents alike. This is a long standing problem and appears to be one exacerbated by a shift from the psychological perspectives of gifted in the early days to the educational perspectives that dominate the literature today as educators seek to provide challenging opportunities for the top 5% to 10% of the school population.

It might be said that Terman (1925) set the stage for gifted children based upon the work of Galton (1869) and the new understandings that Darwin and Mendel had brought to the nature versus nurture debate. With the rise of intelligence testing and formalised schooling in the USA, Terman set out to examine how the gifted children differed from their typically developing peers. This was in response to the societal belief of the time that the gifted child was “classed with the abnormals, depicted as neurotic and alleged, if he survived at all, to be headed for post-adolescent stupidity or insanity.” (Terman & Oden, 1947, p. 1).

Selection of the children was complex with the final step being administration of a modified Binet intelligence test (Terman, 1925). A sliding scale of IQ scores was then used to retain children in the study (see Terman, 1925, p. 26 for a full explanation). Terman investigated the family background of the children as well as their health, academic endeavours, general interests, personality, and whether they had any special abilities. He found that the gifted were largely healthy, socially well-adjusted, able children, many of who were taller than the average. For the most part, Terman’s
operationalisation of gifted was based purely on the new IQ tests, their hereditary, and school performance.

Leta Hollingworth (1926) writes that she “arbitrarily” (p. 43) chose to define intellectually gifted children as those who were beyond the 99th percentile with FSIQ scores that would place them above 145 on today’s tests. Her seminal work “Gifted children: Their nature and nurture.” (1926) highlighted a need for nurturing the children’s emotional education as well as pure academics. Hollingworth also discussed the difficulties faced by gifted children in the classroom if their academic needs were not being met. Thus for Hollingworth, as well as an intellectual being, the gifted child was also a social and emotional being.

While Hollingworth could be seen as extending upon the picture of the gifted child first drawn by Terman, both used cut-offs on intelligence tests that only included children that we would expect to occur less than once or twice in every 100. Since these early beginnings, there has been a noticeable shift in the focus from psychological and emotional characteristics of these children, to one of education and achievement as educators take an increasingly active role in the field.

Numerous theories regarding gifted children and giftedness have been put forward in an effort to understand who these children are and how to serve them in an educational environment (for an overview see for example Jolly, 2004; Tannenbaum, 1993). New definitions of gifted have been proposed in an effort to understand how best to meet the needs of these children in the school system.

Howard Gardner’s (2011) theory of multiple intelligences asserts that a single type of intelligence as measured by IQ tests is too limiting. Rather, Gardner outlines eight categories of intelligence and states that every child is born with a unique array of all eight and has the capacity to develop their individual strengths to a high level. As
Gardner’s definition of intelligences is more akin to abilities or talents, it is not necessarily aimed just at the gifted. Despite a lack of focus on the child of high intellectual capacity, it is a well-recognised theory in today’s climate and can be found in texts relating to gifted education (Fasko, 2001; Karolyi, Ramos-Ford, & Gardner, 2003).

Renzulli’s (2005) three rings of giftedness describes three clusters of traits that together, when given the right environment, develop into creative accomplishment, or behaviour that may be identified as gifted. These traits are above average ability, creativity, and task commitment. Renzulli also acknowledges that there are personality and environmental factors that provide the context through which the three rings develop. Such factors include optimism, physical/mental energy, love of a topic or discipline and a vision.

The currently popular theory in Australia and the US is that put forward by Francoys Gagné: The Differentiated Model of Giftedness and Talent (DMGT) (Gagné, 2013). The DMGT is based on two key understandings. First, that gifted means a child with “outstanding natural abilities or aptitudes”. Gagné goes on to describe the four different facets, which can be considered as ‘gifts’. Secondly, talent is the mastery of these natural abilities or competencies, to a point where they can be considered to be in the top 10% of the population for the competencies as they are expressed in achievement. Development to a high level of achievement is again central to the theory.

Key to these three theories is performance or measurable achievement. A number of more recent theories (for example Sternberg, 2001; Ziegler & Phillipson, 2012) share this emphasis on talent development and achievement. While innate characteristics are mentioned, the child’s gifted behaviours are seen as important. The
importance of the socioemotional aspects of the gifted child as described by Hollingworth (1926) has received some attention. These include such constructs as self-esteem (Rafati, Rafati, Mashayekhi, Pilehvarzadeh, & Mashayekh, 2014), self-efficacy (Pajares, 1996), and locus of control (Rinn, Boazman, Jackson, & Barrio, 2014). However, it appears these have received attention because of their clear association with achievement.

What the preceding theories rarely take into account is evidence of characteristics that extend beyond intelligence suggesting that being gifted is a trait that exists from birth and throughout the lifespan. As Jim Delisle states "Giftedness is not something you do. Giftedness is something you are." (1999, p. 145).

A Holistic Definition of Gifted

Educationally driven definitions with their focus on achievement seem to miss much of what parents anecdotally describe in relation to the social and emotional aspects of the gifted child and the child as described by Hollingworth, (1926). They do not account for the reports of the intensity of the children (Daniels & Piechowski, 2009) or of other characteristics such as the penchant for existential depression (Webb, 2013).

In 1982, Annmarie Roeper wrote of the emotional experience of the gifted child and defined giftedness as “a greater awareness, a greater sensitivity, and a greater ability to understand and to transform perceptions into intellectual and emotional experiences.” (p.21). In 1991, almost 10 years later, a group of psychologists, educators, theorists, and parents who were known as The Columbus Group (as cited in Tolan & Piechowski, 2012) expanded upon this definition. The Columbus Group defined ‘giftedness’ as follows:

Giftedness is asynchronous development in which advanced cognitive abilities and heightened intensity combine to create inner
experiences and awareness that are qualitatively different from the norm. This asynchrony increases with higher intellectual capacity. The uniqueness of the gifted renders them particularly vulnerable and requires modifications in parenting, teaching, and counselling in order for them to develop optimally. (The Columbus Group as cited in Tolan & Piechowski, 2012, p.21).

This definition emphasises two key areas of the experience of the gifted: the advanced cognitive abilities along with ‘heightened intensities’. The Columbus Group believe that it is a combination of intellect and intensity that changes the lived experience of the gifted individual. Importantly for the purpose of this thesis, the definition takes into consideration that this combination changes the qualitative experience of the individual. Further, it specifies that asynchrony in development impacts on an individual’s inner experience of the world in ways that make their experience different to their typically developing age peers.

The definition also posits that the further from the norm the intelligence of the individual sits, the more asynchronous the experience is for that person. For example, an 8-year-old child may think like most typically developing 12-year-old children. This asynchrony between the child’s chronological age and life experience, coupled with their heightened intellectual capacity and intensities will have a direct impact on how this child interacts with the world and conversely how the world interacts with this child.

It is this definition of gifted that is used as the underpinning of the current study as it moves away from definitions that are more narrowly focussed on the educational context and moves towards a more holistic view of the gifted as an individual. This holistic view is in keeping with Bronfenbrenner’s bioecological theory of development.
From this standpoint, children who are developing in ways and at a rate that is different to their age mates will elicit a response from the microsystems around them that is also different. This implies the parents of gifted children will have a parenting experience that is as exceptional as their children are.

**Research Questions**

As few studies have examined the socioemotional characteristics of gifted children and whether this affects the psychological wellbeing of their parents, this thesis is exploratory. There is a relative lack of background literature to inform specific research hypotheses, therefore the current study has broad aims that it seeks to address. Harnessing the bioecological theory of development and the Columbus group’s definition of giftedness, the overarching questions the thesis strives to answer is “Is the experience of the parents of the gifted different to that of a parent of a typically developing child and if so, does it have an influence on the psychological wellbeing of the parent?” This will be done by investigating the following in a stepped approach:

1. **The Families:** What are the characteristics of the families of the gifted? Are the families in the current study similar to those described in previous research on gifted children?

2. **The Children:** Are there behavioural characteristics of the children in this study that are quantifiably different to the behavioural characteristics of the children in the broader general population?

3. **The Educational Environment:** What is the educational environment of the gifted children in this study and how satisfied are the parents with this environment?
4. Parental Psychological Wellbeing: What is the state of the psychological wellbeing of the parents in this study, in particular levels of depression, anxiety, and life and parenting stress?

Questions and measures have been chosen based on tried and tested theories of parenting and individual psychology that have not previously been applied to this population.
CHAPTER 2

Methodology

“If we knew what it was we were doing, it would not be called research, would it?”

Albert Einstein

Participants

Participants in the study were 117 Australian and 265 US parents of intellectually gifted children who were following a primary school curriculum. Parents of children who were gifted in creative or performing arts, or those who were gifted athletes were specifically not targeted in an effort to protect the homogeneity of the sample. Participants self-selected to take part in an online survey investigating the experience of parents of gifted children. All parents from Australia and USA who completed the survey were included in the study.

Data were collected between 1 September 2011 and 15 March 2013. Any parent who had access to the internet in that period was able to participate. For a breakdown of total participants including responses from countries not included in the study, see Appendix A.

Recruitment

Australian National University Human Research Ethics Committee approval was sought and given. A webpage advertising the study was created and parents who landed at www.parentsofgiftedchildren.com were able to find out further information through navigating within the website. A commercial online survey company was used to host the survey (www.surveygizmo.com) and a link was embedded on the “Take Part” page of the website. A print copy of the electronic survey is attached at Appendix B.

Recruitment was through convenience and snowball sampling. Organisations within the gifted community were contacted and asked to advertise the study to their
members. Each state Gifted and Talented Association in Australia was contacted with varying levels of response. Representatives from South Australia, Tasmania, New South Wales and Northern Territory agreed to advertise the study, however, no response was received from Western Australia, Queensland, and Victoria. The “Gifted Newsletter” (Frietag, 2011) also advertised the study in their monthly newsletter for three months from September to November 2011.

In the USA, one of the most widely accessed webpages devoted to gifted children and their families, www.hoagiesgifted.com, shared a link for the study on their home page from September 2011 to January 2012. From this, a snowball effect saw links to the study appear on forums dedicated to gifted children, such as the Davidson Young Scholar’s forum, various Twitter accounts, blogs authored by parents of gifted children, and small gifted advocacy groups.

**Appropriateness of Design**

While the internet based nature of this study allowed a substantial sample size in two distinct geographical locations, it does limit the study to those who had access to the internet. The internet was the only method used to recruit participants for the study and this would have precluded parents without internet access from taking part in the research.

Using the internet to administer questionnaires for psychological research is a relatively new area for the field. Riva, Teruzzi, and Anolli (2003) suggest there are a number of benefits to placing surveys online. These include such things as the purely voluntary nature of participation thereby increasing motivation, lowered research costs, and the ability to capture large cross-cultural populations as mentioned earlier. For example, the parents in the current study were able to take their time answering and in fact were able to save their responses and return later. Further, in a number of places,
parents were invited to give open ended responses and this gave parents the opportunity to expand on their answers to the more tightly structured measures. However, these benefits come with associated costs that will affect the extent to which the results can be generalised and these will be discussed in the limitations, see Chapter 7.

**Measures**

**Parent, family, and child sociodemographics questionnaire.**

A questionnaire asking parent’s general sociodemographics relating to themselves, their family, and the target child was presented at the first step of the online survey. For both parents, data were collected on gender, age, marital status, family composition, ethnicity, location, education, occupation, and family income.

For the child, information was collected on gender, age, birth order, health, learning and/or behavioural difficulties, and educational environment. The full list of questions for both parents and children can be found in the copy of the survey at Appendix B.

**Open answers.**

When “Other” was selected as a response by the parents, for example, when the school type was not one of the alternatives listed, parents were asked to explain their response in an open text box. On some questions parents were directly asked to explain their answer in an open text box, such as when they indicated they were homeschooling their child or their child had changed schools.

**Free response.**

At the end of the battery of questionnaires, parents were given the opportunity to share any other concerns or comments relating to their child that they might wish to share with the researcher.
Standardised measures.

A number of standardised psychometric measures were presented to the participants in electronic format as listed below. These measures will be described briefly with a more thorough description to be found in the relevant chapter.

*Strengths and Difficulties Questionnaire (SDQ) – Chapter 4.*

The Strengths and Difficulties Questionnaire (SDQ; Goodman, 2001) is a brief screening instrument that can be used with children and adolescents aged 3-16 years. Three versions are available with minimal difference in the questions thus enabling data to be completed through a self-report, parent report, and teacher report version. For the purpose of the current study, the parent report version was used. Developed in the UK, the SDQ is available in over 60 languages and has been widely used in Europe, Asia, Australia and the United States (Warnick, Bracken, & Kasl, 2008).

Reliability of the parent report version of the SDQ is satisfactory across all subscales and the Total Difficulties score with an average $\alpha$ of .73. The SDQ has also been validated against other instruments of child behaviour and adjustment and has shown substantial correlations with tests such as the Child Behaviour Checklist, the Rutter Questionnaire, and the Youth Self-Report (Becker, Woerner, Hasselhorn, Banaschewski, & Rothenberger, 2004; Goodman, 2001; Smedje, Broman, Hetta, & Von Knorring, 1999). The SDQ also displays the ability to discriminate between clinical and non-clinical populations (Goodman, 2001). A copy is shown at Appendix C.

*Family School Relationship Survey (FSRS) – Chapter 5.*

The Family School Relationship Survey (FSRS; Adams & Christenson, 2000) consists of three scales that aim to measure facets of the relationship between a parent and their child’s teacher. Facets measured are level of trust that parents have in their child’s teacher, frequency of their contact with their child’s teachers and satisfaction
with the relationship with their child’s teachers. Developed in the USA, the survey has been used in educational psychology research, however the psychometric properties of the FSRS have not been published. A copy of the FSRS is given at Appendix D.

**Depression Anxiety and Stress Scales (DASS) – Chapter 6.**

Developed in Australia, the Depression Anxiety and Stress Scales (DASS: Lovibond & Lovibond, 2004) was designed to measure the core symptoms of depression, anxiety, and stress. Reliability of the DASS is strong across the three main subscales (Anxiety: $\alpha = .897$, Depression: $\alpha = .947$, and Stress: $\alpha = .933$) and the total score ($\alpha = .966$) (Crawford & Henry, 2003). Convergent and discriminant validity is also good with the scales of the DASS correlating strongly with the Hospital Anxiety and Depression Scale (HADS: Crawford, Henry, Crombie, & Taylor, 2001), the Personal Disturbance Scale (SAD: Crawford & Henry, 2003), and the Positive and Negative Affect Schedule (PANAS: Watson, Clark, & Tellegen, 1988). The DASS is used widely in research settings across cultures and is a sound measure for both clinical and non-clinical populations (Crawford & Henry, 2003; Musa, Fadzil, & Zain, 2007; Nieuwenhuijzen, De Boer, Verbeek, Blonk, & Van Dijk, 2003; Page, Hooke, & Morrison, 2007). A copy of the DASS is given at Appendix E.

**Parental Stress Scale (PSS) - Chapter 6.**

The Parental Stress Scale (PSS: Berry & Jones, 1995) is a more narrowly focused measure of stress developed in the USA to measure potentially stressful facets of the parent-child relationship taking into account both positive and negative aspects of parenting. The PSS has sound psychometric properties ($\alpha = .83$, $N=233$) both internally and over time (Berry & Jones, 1995). The PSS also correlates strongly with other measures of perceived stress and with the widely used Parental Stress Index (PSI: Abidin, 1990). The PSS has been shown to successfully discriminate between clinical
and non-clinical samples, is brief, and is not as invasive as other measures of parental stress (Berry & Jones, 1995). A copy of the PSS is given at Appendix F.

Procedure

Parents accessed the online survey by following an embedded link on the www.parentsofgiftedchildren.com website. Introductory pages gave details of the study and contact information for the researcher and primary supervisor, information on the ethics approval, and important privacy information for participants as well as the risks and rewards associated with completing the study. Participants were then informed of the requirements for participation as follows:

“In order to take part in this study, at least one of your children must meet the following criteria:

- be currently undertaking primary/elementary school level curriculum. In some states/countries this may include children enrolled up to Year 7. The key element is that they mostly deal with the one classroom teacher;
- and must also be considered to be cognitively gifted.

There are many different ways that a child can be identified as being gifted. Perhaps they've been formally identified by taking an IQ test or they are enrolled in a gifted program at their school. However, there are some children who are never formally identified due to their backgrounds or the areas that they live in. As I hope to be as inclusive as possible, your child does not have to be formally identified to be considered as 'gifted'. If you or your family believe that your child is gifted or if the child’s teacher thinks your child is gifted, then you are able to participate.”

Parents were asked to confirm they had a gifted child who was undertaking a primary school curriculum. Participants were informed that beginning the survey was
taken as informed consent. The sociodemographic questions and standardised measures were then presented to the participants. Input was captured by keying in the required responses or selecting a radio button from a list of choices. At the completion of all questions, parents were thanked for their time and the data was stored on secure servers at Survey Gizmo.

**Data Analyses**

After the survey closed on 11 March 2013, all data were downloaded directly from Survey Gizmo as a comma delimited Excel spreadsheet. Scoring of the DASS and SDQ was undertaken in Excel 2010. Data was then exported and analysed using IBM SPSS Statistics 23. Descriptive statistics were conducted using frequency counts, means, standard deviations, and percentages. Multivariate analyses were carried out using SPSS 23. Chi-square analyses were undertaken using an Excel spreadsheet supplied by Dr Michael Smithson (Michael Smithson, personal communication, January 1, 2014) at Australian National University and is available upon request. The analyses carried out in each chapter will be explained in more detail in that chapter.

Anecdotal evidence was selected for the insights it offered in relation to the quantitative data. Participant responses have been de-identified to protect privacy however, correct demographic information has been given. A copy of the free responses can be made available upon request.
CHAPTER 3

The Families

“A family is a place where minds come in contact with one another.”

Buddha.

Numerous family characteristics have been identified as having an impact on the wellbeing of both the parents and children within a family. Characteristics such as stability of the family unit (Waldfogel, Craigie, & Brooks-Gunn, 2010), family income (Duncan, Morris, & Rodrigues, 2011), maternal age (McMahon et al., 2011) and parental occupation (Strazdins, Shipley, Clements, Obrien, & Broom, 2010) have all been shown to have an impact on the psychological wellbeing of the parents and children in a family. Given this, a better understanding of the attributes of the families that are raising gifted children will help understand the parents’ psychological wellbeing.

The literature offers some information on sociodemographics, such as those described above, of the families of gifted children. This chapter sets out first to describe key characteristics of the parents of gifted children in this study, and then to compare what was found to existing literature.

Methods

Participants.

One hundred and seventeen Australian and 265 US parents completed the online survey. In a small number of families, both parents took part in the study. Parents were matched so that characteristics of the family, reported by both parents, were included only once in the analysis. For both countries, parents were matched on sociodemographic information along with other family information such as the age of the target child and the number of children in the family. Location information was
then used to confirm that both parents were from the same family. Where responses from both parents were provided, the mothers’ data were retained. This was done as all but 33 of the 382 participants were mothers or female primary carers. Data were available for 109 Australian and 262 US families.

**Measures.**

*Parent sociodemographics questionnaire.*

Parents were asked to provide information for themselves and where appropriate, their partner. The full list of questions and answer choices can be found in the copy of the survey at Appendix B.

*Parent age, gender, marital status:* Parents were asked to respond with their age, gender and marital status.

*Ethnicity, geographical location, educational attainment, parental occupation, and family income:* Parents were asked to choose their ethnicity, geographical location, highest educational attainment, parental occupation, and annual family income from a list of options.

*Number of children in the family:* Parents were asked to indicate the number of children in their family.

**Procedure.**

As part of the online survey, parents completed questions on parent and family characteristics following the procedure set out in Chapter 2.

**Analysis.**

Descriptive statistics were conducted using frequency counts, means, standard deviations, and percentages.
Results: The Parents

Gender of participants.

One hundred and seventeen (Females = 104: 88.9%; Males = 13: 11.1%); Female to male ratio 8:1) Australian parents took part in the current study. The US sample had a similar over-representation of females to males 

\( N = 265: \text{Females: } N = 245: 92.5\% ; \text{Males: } N = 20: 7.6\% ; \text{Female to male ratio of } 12.25:1\). Lower male participation is not unusual in family research (Anthony et al., 2005; Pinderhughes, Dodge, Zelli, Bates, & Pettit, 2000). In their study of parenting and child behaviour of Australian gifted children, Morawska and Sanders (2008) showed a similar degree of over-representation of mothers with 91.6% of the 409 respondents being women.

For the current study, low paternal participation meant it was not possible to determine whether there were significant differences between the perceptions of mothers and fathers of gifted children. Therefore, the results given in this study are more indicative of maternal rather than paternal characteristics.

Parental ages.

The average age of the Australian participants \((N=117)\) at the time of the study was 40.48 years \((SD = 5.45; \text{Range } = 39 \text{ years})\). Fathers were slightly older \((N=13: \bar{X} =42.62, SD= 9.03)\) than mothers \((N=104: \bar{X} =40.21, SD= 4.82)\). At the birth of the child, mother’s mean age was 32.05 years \((SD=4.43)\) and fathers’ mean age was 34.54 years \((SD=8.55)\).

The average age of the US participants \((N=265)\) at the time of the study was 40.22 years \((SD = 5.29; \text{Range } = 31 \text{ years})\). Fathers who took part were marginally older \((N=20: \bar{X} =43.6, SD= 5.77)\) than mothers \((N=245: \bar{X} =39.94)\).
At the birth of the child, mothers were calculated to have a mean age of 32.12 years ($SD = 4.26$) and fathers’ mean age was 35.60 years ($SD=5.14$).

The literature suggests that parents of gifted children are significantly older than their compatriots (Terman, 1925; Silverman & Kearney, 1989) yet few studies have used a reference group to analyse this. In order to determine if the parents of gifted children are significantly older than other first time parents, it is important to compare them to other first time parents who gave birth in the same year as they did. Most existing studies have not precisely calculated the age at the birth of the first child, with some calculating the mean age of the group at the time the survey was completed (Morawska & Sanders, 2008).

Following Gross (2004), in order to determine whether the parents in the current study were significantly older than their reference group, cases were selected where the participant indicated the child was either an only child or the firstborn. This resulted in 78 Australian and 176 US mothers. Their average age at the birth of their first child was 32.18 years ($SD=4.25$) for the Australian sample and 31.45 years ($SD=4.78$) for the US mothers. Next, the average age of the participating firstborn or only children was calculated (Australia: $\bar{X} = 7.88$ years, $SD=2.08$. USA: $\bar{X} = 8.12$ years, $SD=2.07$).

These average ages were subtracted from the year in which most parents completed the study (2011), giving the ‘average’ year of birth of the children in both countries as approximately 2003. Therefore, the reference group that the first time mothers in the current study were compared to is women who became first time mothers in 2003 in their respective countries.

In comparison, the average age for all first time Australian mothers in 2003 was 27.6 years (Laws & Sullivan, 2004) with the US average being slightly lower at 25.1 years (Martin et al., 2003). As it was not possible to determine the standard deviation
for either population average, confidence intervals for the sample means were calculated. The resulting confidence interval for the Australian sample was CI_{95} [31.24, 33.12] and for the US sample CI_{95} [30.74, 32.16]. This shows that neither the Australian national average of 27.6 years nor the US national average of 25.1 years were plausible outcomes for the current sample.

For both countries, the mean age of the mothers whose child was their oldest or only child was significantly, and by several years, higher than the national average for their reference class. There were not enough fathers in either sample to allow this statistic to be calculated.

**Marital status.**

Ninety-six Australian participants (88.1%) stated they were married or in a de-facto relationship. Two hundred and forty-one US respondents (92.4%) stated they were married or in a de-facto relationship. These figures indicate that, across both countries, the parents who participated were partnered parents.

**Ethnicity.**

Most Australian families in the current study identified as Caucasian (N=94:86.2%). A further five (4.6%) stated they were multi-racial, and six (5.5%) either declined to respond or did not identify with a specific ethnicity. Only three (2.75%) stated they were Asian and two families (1.8%) identified as being Aboriginal or Torres Strait Islander. Australian Bureau of Statistics (2011c) data for the same year show that 92% of Australians identified themselves as Caucasian, 7% Asian, and 2.5% Aboriginal and Torres Strait Islanders.

The majority of US families identified themselves as Caucasian (N=228:87.0%). A further nine families (3.4%) stated they were Asian, five (1.9%) identified as African-American, five (1.9%) as Hispanic and one family (0.4%) stated that they were Pacific
Islanders. Eight families (3.1%) stated they were multi-racial, and six (2.3%) declined to respond. U.S. Census Bureau (2011b) for the same year data shows that 74.1% of US are Caucasian, 12.6% are African-American, and 4.8% are Asian.

Location.

One hundred and one respondents (92.7%) gave details of their location in Australia. The majority of participants came from the two largest Australian states: New South Wales ($N=34: 33.7\%$), and Victoria ($N=29: 28.7\%$). South Australia accounted for a further 20 respondents (19.8%). Appendix G gives a detailed breakdown of respondents by state. Most respondents gave postcodes classified as urban areas.

As the US participants were not asked to submit a postcode or other geographic information, data were extracted from the voluntary contact details given and were available for 111 (42.4\%) families. Of those who gave details, the greatest number of respondents came from Texas ($N=16: 14.4\%$) and California ($N=16: 14.4\%$) followed by Florida with 13 (11.7\%). At least one response was obtained from 54 states including Hawaii and Alaska. Appendix H shows a full listing of responses from each state.

Educational attainment.

Figure 2 shows the highest educational level reached by the parents as a percentage of all responses by country and gender. The majority of Australian parents in the current study were well educated. Data on the highest level of education was given for 107 mothers. One respondent gave her education as “Other” but did not indicate what her education level was, and one participant declined to respond. Approximately two thirds ($N=76: 71.0\%$) indicated that the mother held a Bachelor’s degree or higher. Data for the fathers of the children ($N=92$) was similar with 68 (73.9\%) holding a Bachelor’s degree or higher. Parental education attainment was
available for both parents in 92 families. Of these families, both parents held university level qualifications in 59 cases (64.1%).

Data on education was available for 260 mothers and 239 US fathers. As with the Australian sample, the vast majority of parents were well educated. Over three quarters of mothers (N=224:86.2%) held a Bachelor’s degree or higher. A slightly lower percentage of fathers (N=188:79.1%) held a Bachelor’s degree or higher.

Parental education attainment was available for both parents in 222 families. Of these families, both parents held university level qualifications in 160 cases (72.1%).

Figure 2: Highest educational level for all parents by gender and country

Parental occupation.

Occupational data were available for 110 mothers and 93 fathers from Australia. For mothers, the category of “Unemployed/retired/homemaker” (N=24:21.8%) was the most commonly chosen option, followed by “Education” (N=14: 12.7%) and then “Health Care – physical and mental” (N=12: 10.9%). A further 14 mothers (12.7%)
indicated “Other” as their occupational category with no further information. For fathers the largest occupation category was “Science/technology/programming” (N=24: 25.8%), followed by “Management – Senior/Corporate” (N=16: 17.2%). A further 18 fathers (20.2%) indicated “Other” as their occupational category but provided no further information. Detailed tables of all occupational responses for Australian mothers are shown at Appendix I and for Australian fathers at Appendix J. The data show that most of the parents in the current sample were white-collar workers with a majority having a professional career.

For the US, 256 mothers and 233 fathers gave occupational data. The category with the largest number of mothers was “Unemployed/retired/homemaker” (N=87:34.0%), followed by “Education” (N=52: 20.3%) and then “Health Care – physical and mental” (N=19: 7.4%). A further 20 mothers (7.8%) indicated “Other” as their occupational category with no further information. For fathers the largest occupation category was “Science/technology/programming” (N=62: 26.6%), followed by “Health Care – physical and mental” (N=19: 8.2%) and then “Education” (N=17:7.3%). Thirty-nine fathers (16.7%) indicated “Other” as their occupational category but provided no further information. Appendix K shows the detailed table of maternal occupations and Appendix L gives paternal responses. These show that US participants were largely white-collar workers with many having a professional career.

**Family income.**

Fifteen Australia respondents chose “unsure or would rather not say” and 94 families (86.2%) gave information on their household income. The median gross annual household income reported was between $125,000 and $149,999 Australian dollars (AUD). Gross household income for Australian participants’ is shown in Table 1.
Table 1

Annual gross household income: Australian participants (in AUD)

<table>
<thead>
<tr>
<th>Income Range</th>
<th>#</th>
<th>%</th>
</tr>
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<tbody>
<tr>
<td>Less than $25,000</td>
<td>6</td>
<td>6.4</td>
</tr>
<tr>
<td>$25,000 to $34,999</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>$35,000 to $49,999</td>
<td>5</td>
<td>5.3</td>
</tr>
<tr>
<td>$50,000 to $74,999</td>
<td>8</td>
<td>8.5</td>
</tr>
<tr>
<td>$75,000 to $99,999</td>
<td>15</td>
<td>16.0</td>
</tr>
<tr>
<td>$100,000 to $124,999</td>
<td>19</td>
<td>20.2</td>
</tr>
<tr>
<td>$125,000 to $149,999</td>
<td>18</td>
<td>19.2</td>
</tr>
<tr>
<td>$150,000 or more</td>
<td>23</td>
<td>24.5</td>
</tr>
</tbody>
</table>

N=94

Thirty-four US respondents chose “unsure or would rather not say” and 228 (87.0%) gave information on their household income. The median gross annual household income was between $100,000 and $124,999 United States dollars (USD). Gross annual household income for the US participants is shown in Table 2.
Table 2

Annual gross household income: USA participants (in USD)

<table>
<thead>
<tr>
<th>Income Range</th>
<th>#</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $25,000</td>
<td>10</td>
<td>4.4</td>
</tr>
<tr>
<td>$25,000 to $34,999</td>
<td>7</td>
<td>3.1</td>
</tr>
<tr>
<td>$35,000 to $49,999</td>
<td>8</td>
<td>3.5</td>
</tr>
<tr>
<td>$50,000 to $74,999</td>
<td>41</td>
<td>18.0</td>
</tr>
<tr>
<td>$75,000 to $99,999</td>
<td>45</td>
<td>19.7</td>
</tr>
<tr>
<td>$100,000 to $124,999</td>
<td>45</td>
<td>19.7</td>
</tr>
<tr>
<td>$125,000 to $149,999</td>
<td>24</td>
<td>10.5</td>
</tr>
<tr>
<td>$150,000 or more</td>
<td>48</td>
<td>21.1</td>
</tr>
</tbody>
</table>

N=228

Children in the family.

Across the 109 participant Australian families there were 231 children in total with 224 of these under the age of 18 years. This results in a mean of 2.12 children under the age of 18 years per family. One hundred and sixteen (51.8%) were males and 108 (48.2%) were females. Twenty-three families (21.1%) stated they had one child while the majority of families (N=62:56.9%) responded they had two children. In the US sample, there were 548 children in total across the 262 participant families with 528 of these under the age of 18 years. This results in a mean of 2.09 children under the age of 18 years per family. Genders given for these children showed that 301 (57.0%) were males and 227 (43.0%) were females. Seventy-four families (28.2%) stated they had just the one child while most families (N=120:45.8%) responded they had two children. Unlike the Australian sample, there were several large families in the US including a
single family with seven children. Other variables specific to the children will be
discussed in Chapter 4.

Summary of the samples.

It is now possible to describe the “average” Australian parents participating in
this study. Both the mother and father were in their early forties. Both she and partner
were likely to be highly educated and employed in a white collar, professional
occupation, earning above the national household median annual income. The family
identified as Caucasian and lived in one of the capital cities of Sydney, Melbourne, or
Adelaide. The family was likely to consist of a married or de-facto couple with two
children. Childbearing began later than in the population at large.

While the data showed that many of the Australian parents could be classified as
Caucasian, well educated, financially comfortable, living in large cities and therefore
arguably well placed to access necessary services for their children, the Australian
sample also contained a handful of young, single mothers who were living on under
$25,000 per annum in regional centres on the East coast. The experience of a parent
such as this is likely to be drastically removed from the “average” family in this sample.

The average US mother was in her early forties and as with the Australian
parents, both she and her partner were likely to be highly educated and employed in a
white collar, professional occupation, earning above the national household median
annual income. The family identified as Caucasian and was likely to consist of a
married or de-facto couple with two children. As with the Australian mothers,
childbearing began later than in the population at large.

However, again there were parents whose circumstances were vastly different
from the sample average. There were a number of women from ethnic minorities,
without a partner, and living on less than $25,000 USD per year. This is a reminder that
not all gifted children come from white, financially stable, educated families who have the means to meet the needs of these children. It highlights the importance of moving away from looking at the “average” family and relying solely on means as a way of describing the experience of these parents. Table 3 shows the comparison between the two samples on the sociodemographic characteristics measured.
Table 3

*Comparison of sociodemographic information across Australian and US samples*

<table>
<thead>
<tr>
<th></th>
<th>Australia</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>M</td>
</tr>
<tr>
<td># Participants</td>
<td>104</td>
<td>13</td>
</tr>
<tr>
<td>Mean age at participation (years)</td>
<td>40.21</td>
<td>42.62</td>
</tr>
<tr>
<td>Mean age at birth of child (years)</td>
<td>32.05</td>
<td>34.54</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family characteristics</td>
<td></td>
<td></td>
</tr>
<tr>
<td># of families</td>
<td>109</td>
<td>262</td>
</tr>
<tr>
<td>Marital Status – Married/de facto</td>
<td>88.1%</td>
<td>92.4%</td>
</tr>
<tr>
<td>Ethnicity – Caucasian</td>
<td>86.2%</td>
<td>87.0%</td>
</tr>
<tr>
<td>Maternal education –</td>
<td></td>
<td></td>
</tr>
<tr>
<td>degree or higher</td>
<td>71.0%</td>
<td>86.2%</td>
</tr>
<tr>
<td>Paternal education –</td>
<td></td>
<td></td>
</tr>
<tr>
<td>degree or higher</td>
<td>73.9%</td>
<td>79.1%</td>
</tr>
<tr>
<td>Both parents with degree or higher</td>
<td>64.1%</td>
<td>72.1%</td>
</tr>
<tr>
<td>#1 Maternal occupation –</td>
<td></td>
<td></td>
</tr>
<tr>
<td>unemployed/retired/homemaker</td>
<td>21.8%</td>
<td>32.4%</td>
</tr>
<tr>
<td>#1 Paternal occupation –</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Science/Tech</td>
<td>25.5%</td>
<td>26.6%</td>
</tr>
<tr>
<td>Median Household Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AUD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children per family</td>
<td>2.12</td>
<td>2.09</td>
</tr>
</tbody>
</table>
Discussion

The family characteristics described above enable us first to establish how representative the sample is, that is how comparable to samples reported in the literature. And second to identify and discuss the implications of the characteristics of the parents in this study for their psychological wellbeing.

The sociodemographic data for the majority of participants in both countries was in keeping with what has been found in previous studies (Alsop, 1994; Distin, 2006; Gross, 2004; Morawska & Sanders, 2008; Silverman, 2000). Unlike previous studies, however, there were also a few participants who had responses that were different from what has been previously reported.

When taken as a whole the characteristics described above can be assumed to protect the parents, and their children, from many of the stressors one might find in most modern families. However, it is plausible that these seemingly protective factors could also be putting some families at higher risk of stress depending upon individual parental differences. In the discussion, each of the characteristics will be explored one by one and an examination of how they could potentially protect some families from stress while putting other families at risk will be undertaken.

Parental age.

The parents in this study had their first child later than their average contemporaries did. This suggests that the mothers in both countries delayed the birth of their first child significantly longer than their contemporaries (Laws & Sullivan, 2004; Martin et al., 2003). That parents of the gifted are older appears to have become an accepted fact. The average age of the parents in this study is consistent with average ages found in previous research (Alsop, 1994; Morawska & Sanders, 2008; Terman, 1925).
Terman (1925) was the first to describe parents of gifted children as older than their contemporaries. In his sample of gifted Californian children, the mean age of fathers at the birth of the child was 33.6 years and for mothers the mean age was 29 years. While precise comparative data is difficult to find for the 1920’s, a report published by the Centre for Disease Control (National Centre for Health Statistics, 2011) states that half of the women in their study who entered child bearing years in 1925, had given birth to their first child at the age of 21.1 years. In comparison, the mothers in Terman’s study had delayed childbearing by 8 years. The current study’s figures show this trend of mothers of gifted children being older is persistent even as the average age of all mothers at the birth of their first child is increasing. In a study of intellectually gifted children in Colorado, Silverman and Kearney (1989) found that the mean age of the mothers at the time of the child’s birth was 29.6 years. Remarkably, this is almost the exact same age of the mothers in Terman’s sample 60 years previously.

However, while previous research has suggested that parents of gifted children are older, most research has failed to compare the age of the parents to an appropriate reference class. One exception is the study conducted by Gross (2004). Gross examined whether mothers were older than their peers were by calculating their age based on the age at the birth of their first child. The mothers in her sample, on average, had their first child 2 years and 6 months later than the average first time Australian mother in 1987 with participant mothers first birth at the approximate age of 27 years 3 months in comparison to the national average of 24 years 8 months (Gross, 2004). No analysis of statistical significance was conducted in Gross’ study.

Using a reference group that was calculated in the same way as Gross (2004), the current study found that parents whose gifted child was their only child or their first
born, did leave child bearing until later than their contemporaries. This was found for mothers in both Australia and the USA. It is not possible to determine whether the delay in child bearing seen in the current sample has been done intentionally, however it is a trend often seen in highly educated women (Mirowsky, 2005).

Delaying child bearing poses certain risks to and confers benefits on both the mother and child. Most of the risks encountered by older mothers are physical in nature. A woman who has delayed child bearing is more likely to experience difficulties conceiving and carrying the child to full-term. She also runs an increased risk of genetic abnormalities and complicated deliveries (e.g.; Mills, Rindfuss, McDonald, & Te Velde, 2011; Schmidt, Sobotka, Bentzen, & Andersen, 2011). Delaying childbearing may also have a negative impact on maternal psychological health with women over the age of 30 reportedly experiencing higher levels of depression (Mirowsky & Ross, 2002). However, this relationship is unclear as others suggest that it is only when the delay to childbearing is not chosen, that is to say it is ‘mistimed’, that an increase in depression is seen (Carlson, 2011).

Concurrently, delayed child bearing has benefits for both mother and child. Miller (2011) found that for every year that motherhood is delayed there is a potential increase in earnings of 9% and an increase in wages of 3%. This advantage is largest for those women, like the ones in the current study, who are well educated and work in professional and managerial roles. There are also health benefits associated with delayed child bearing. Mirowsky (2002) found that the optimum time for child bearing is approximately 31 years of age. This is when he calculated the women in his study to have the highest scores on six measures of wellbeing including perceived health, feeling energetic, and having fewer diagnoses of chronic health problems such as diabetes, high blood pressure, cancer, and heart disease. Other studies find that measures of child and
adolescent wellbeing, specifically academic achievement and behavioural problems, are positively influenced by maternal factors including delayed childbearing (Carneiro, Meghir, & Parey, 2013).

The available evidence only allows us to agree with Gross’ (2004) suggestions that these physical, emotional, and financial benefits may lead to a family environment that is more conducive to fostering the potential of the gifted child.

Family makeup.

Approximately 90% of parents reported being in a two-parent household in both countries. This was higher than that Australian national average of 79.2% (Australian Bureau of Statistics, 2011c) and the US average of only 73% (U. S. Census Bureau, 2011a), of children living in a household with two parents. The predominance of two-parent families in the current study is in keeping with previous research. In their Australian sample of 278 parents of gifted children, Morawska and Sanders (2008) found that most children lived in two-parent households (85.0%), which is comparable to results of the current study (see also Silverman, 2000).

There is convincing evidence that shows being raised in a two-parent family bestows certain benefits on the children including a higher standard of living, emotionally closer connection to their parents, and exposure to fewer stressful life events and circumstances (for a review see Amato, 2005). Conversely, numerous studies show that sole parent families face higher levels of disadvantage in the areas of employment, housing, income, and social participation (Robinson, 2009) and that their children experience lower levels of educational and occupational success (DeLaire & Kalil, 2002). While the disadvantages of being a sole-parent family clearly have an impact on children of average ability, the impact on the gifted child is potentially far greater. At the most basic level, the reduced income often associated with being a
single parent is likely to reduce the ability of the parent to support their gifted child especially when considering educational options and extra-curricular activities.

**Ethnicity.**

For both countries, most participants identify as Caucasian and ethnic minorities are less well represented. Potential reasons for this unrepresentative ethnic distribution are discussed later in the limitations in Chapter 7.

**Socioeconomic status - Parental education, occupation, and income.**

According to the Australian Bureau of Statistics (2011b) 24% of the general Australian population in 2011 held a Bachelor’s degree or higher. Comparable figures for the USA are 30.1% of women and 30.8% of men aged over 25 years hold a Bachelor’s degree or better (U.S. Census Bureau data, 2011c). This results in three times as many Australians parents and almost three times as many US parents holding a Bachelor’s degree or higher as the general population.

The link between education level of the parents and household income was clear. Across both countries, parents reported median family household income that was more than twice their respective national averages (Australian Bureau of Statistics, 2011a; United States Census Bureau, 2013).

Both the US and Australian parents were predominantly well educated, employed in professional occupations, and financially comfortable. These three factors – education, occupation, and income – are considered solid indicators of a person’s socioeconomic status (Bradley & Corwyn, 2002). While not directly calculated, it can be surmised that a high percentage of the families in the current study would be considered to be of middle to high SES. Higher parental socioeconomic status has been correlated with a range of positive life outcomes for children including better physical and mental health, educational attainment, social wellbeing, and occupational and
financial position in adulthood (Conger & Donnellan, 2007; Leo & Waite, 2005). Importantly, for parents of a gifted child, these indicators may have an influence on family life beyond what would usually be expected.

**Conclusion**

Sociodemographically, the parents studied here were similar to previous samples of parents of gifted children. However, they were significantly and meaningfully different from the broader population of parents of primary school aged children, with higher levels on a range of characteristics associated with higher levels of psychological wellbeing.

At face value, it could be argued that gifted children are fortunate to be born into households with these attributes. With parents who value intellectual potential, a good education, and have the financial wherewithal to nurture their child’s potential, it is difficult to imagine these factors as being anything other than protective. How could an older, Caucasian, middle to upper class, educated woman possibly find raising a child of high intellectual capacity to be an onerous task? In fact, this attitude is one that parents of gifted children can be confronted with as one Australian mother wrote:

“*My concerns are dismissed as I 'have nothing to worry about'. Very often you are made to feel that you and your child are just being 'precious'.* (Mary, 44, 9-y.o. son, NSW, Australia).

Mary’s statement indicates she does have concerns. Her concerns were shared by others in the sample and her contemporaries in the broader population (Women's & Children's Health Network, 2014). It is worth questioning whether these ‘protective’ factors – high levels of parental education, occupation, and income – might actually place some parents, especially mothers, under more pressure. High incomes can bring increased responsibility, longer working hours and consequently less energy and time
for building and maintaining meaningful relationships both inside and outside the home. Given how little we know about the psychological wellbeing of parents of gifted children it is important to ask whether the factors, which protect psychological wellbeing in the broader population, are necessarily protective in this population. With a description of the families who have taken part in the study, we now describe the children that are being parented.
CHAPTER 4

Characteristics of the gifted child

“Our kids are normal. They just aren't typical…”

*Jim Delisle*

Daniels and Meckstroth (2009) argue gifted children and adults experience the world in vastly different ways to more typically developing individuals. Moreover, gifted children are thought to be as different to one another as they are to typically developing children (Reis & Renzulli, 2009). It has been argued that great diversity in personality, interests, and abilities is to be expected within these children, perhaps more so than within the population of typically developing children (Daniels & Meckstroth, 2009). While this makes it difficult to describe a “typical” gifted child there is evidence that highlights clusters of developmental, behavioural, and emotional traits that tend to co-occur in this population. These suggest being gifted is not simply having an abundance of intellectual potential.

Gifted children tend to reach developmental milestones and begin to interact socially at a much younger age than is expected. Gifted children often smile, follow faces, verbalise and engage with others far earlier than their typically developing peers (Silverman, 1986). Early language development is also a common sign of giftedness (Distin, 2006). First words are spoken earlier and complex language develops faster. Motor development is usually advanced as well with many gifted children reaching gross motor milestones months ahead of their age peers. Hall and Skinner, (1980) give parents an indication of ages that a gifted child might reach early milestones in a number of areas if they were to achieve them at a 30% advanced rate. According to Hall’s suggestions, the gifted child is likely to walk alone 2 to 3 months earlier than a
typically developing child is (Hall & Skinner, 1980). Fine motor skills may also
develop at an advanced rate.

Advanced social, motor, and language skills enable the gifted child to interact
with the world around them in a way likely to elicit responses from caregivers that
further enhance their natural abilities. However, the research also points to specific
behavioural and emotional traits that may have a negative impact on the children’s
interactions with their parents, their peers, and their schools. Most frequently mentioned
are overexcitabilities, asynchronous development, intensity, and social isolation.

In his interest in the emotional development of gifted intellectual and artistic
children, a Polish psychologist and psychiatrist, Kazimierz Dabrowski, described five
“over-excitabilities” (OE’s: as cited in Daniels & Piechowski, 2009). The
overexcitabilities can be seen in sensual, psychomotor, intellectual, imaginational, and
emotional domains. Dabrowski believed they were an innate form of heightened
arousal that helped people reach their full developmental potential. Dabrowski’s theory
contained other elements and was not limited to people of high intellect, however the
gifted field has embraced the notion of heightened excitabilities to help explain the
intensity often seen in the gifted.

The areas of intellectual, imaginational and emotional OE’s (“The Big Three”:
Mendaglio & Tillier, 2006) have been central to the application of Dabrowski’s theory
to the gifted population. Research however has returned inconsistent results with some
studies supporting heightened levels of at least these three OE’s (Mendaglio & Tillier,
2006), and others finding no significant difference between the gifted and non-gifted
participants (Piirto, 2010). This has led authors such as Mendaglio and Tillier to state
there is only partial support for higher levels of OE’s in the gifted population with the
support appearing to be strongest for emotional, intellectual and imaginational OE’s in gifted adults.

Asynchronous development has also been used as a framework through which to understand the emotions and sensitives of the gifted. Silverman (1997) wrote, “to be gifted is to be vulnerable” (p. 37). She described how advanced cognitive capacity coupled with intense emotions might leave a child feeling helpless about the suffering seen in the world. Further, the combination of intensities and advanced development could isolate the gifted child from his or her age mates. These noticeable differences in development may lead to fewer opportunities for the gifted child to build friendships and experience normal childhood events such as invitations to parties or playdates. The result of this may be that the child is less practiced in social skills that more typically developing children acquire through daily interactions with age mates, thereby producing further isolation.

Silverman (1997) highlighted both internal and external asynchrony, arguing that both lead to vulnerability for the gifted child. Internal asynchrony is the way the child views how he or she fits into the world around them. External asynchrony describes the lack of fit, from an outward perspective, between the gifted child and age and culturally appropriate expectations. Internal asynchrony occurs when the children’s cognitive potential is significantly different to their physical development and chronological age, putting them out-of-sync with age mates and the education system. External asynchrony occurs when observable behaviours of the gifted serve to highlight the differences between those behaviours and behaviours that are expected of them by others such as teachers or parents.

Little empirical research has been undertaken to examine the claims made by the asynchrony theory with the author able to find just one by Alsop (2003). In a sample of
541 children with IQ scores that placed them in the top 5% (FSIQ above 126) Alsop found that children placed in a traditional school environment with chronological age mates showed behaviours that suggested they were struggling to adjust. Alsop concluded this was indicative of the tension felt by children recognising they are different to those around them. Interestingly while there has been little empirical research into asynchrony, Andronaco, Shute, and McLachlan (2014) suggest this adjustment tension might be seen as a special form of cognitive dissonance. This is a theory, which has substantial evidence to support it (Andronaco et al., 2014). In brief, cognitive dissonance theory proposes there is a resistance to changing cognitions to fit with behaviour that could be interpreted as a mismatch between internal beliefs and external realities (Festinger, 1962). The gifted child trying to connect socially with age mates by sharing their passion in an area that is not shared by many of their age peers, such as Egyptology, is likely to notice their age mates’ lack of enthusiasm for this topic. This could lead to the child wondering if there is something wrong with them, the way they think, or their interests. This mismatch between their internal view of self and the observed reaction of others can be thought of as external asynchrony or a form of cognitive dissonance (Gecas, 1982). Regardless of labels or theoretical standpoints, the gifted child is likely to sense they are different.

Heightened sensory sensitivities have also been suggested as a source of emotional and behavioural vulnerability for the gifted (Gere, Capps, Mitchell, & Grubbs, 2009). Eighty primary school children with IQ’s above 138 took part in a study designed to compare sensory processing in gifted children with published normative data. The researchers concluded that results show the gifted children were more sensitive to their environmental surrounds. They suggested that the children might process incoming sensory information in a way that is not typical and that this may lead
to sensory discomfort and resultant “peculiarity in behavioral and emotional responses.” (Gere et al., 2009, p.293).

There is a growing body of literature that describes gifted children as intense (Hollingworth, 1926; Neihart, Reis, Robinson, & Moon, 2002; Silverman, 1986). This intensity is seen both emotionally and behaviourally (Silverman, 1986; Daniels & Piechowski, 2009; Ruf, 2009). Parents describe their children as high energy, having a motor that does not switch off, constantly questioning and seeking to learn from the world around them (Silverman, 1986). They can also be argumentative, perfectionistic, rigid in their thinking, and have a need for justice at all costs (Daniels & Piechowski, 2009; Silverman, 1994). In keeping with the idea of asynchrony (see Chapter 1 and above), parents also describe children who have emotional meltdowns that fit with what would be expected of a much younger child and definitely one of less intellectual capacity. Other children may be withdrawn and quiet, however Daniels and Piechowski (2009) argued that these children are every bit as intense in their feelings while their behaviours might not be as overtly noticeable as those who act out.

Finding friends is often difficult for the gifted child and the psychosocial difficulties that come with being gifted have been well researched (Neihart et al., 2002). The gifted kindergarteners who have interests not in keeping with the ‘norm’ for their age are highly unlikely to find classmates that share their passions. While evidence relating to the gifted child’s emotional maturity is inconsistent (Altman, 1983), it is plausible that at least some gifted children are more emotionally mature than their peers are. In this case, their understanding of friendship is likely to be out of step with the understanding of those around them, again leading to difficulties in forming strong social ties especially in the early primary school years. There is also some evidence that gifted children may be the target of bullying and that they may externalise their
frustration at being victimised and thus display worrying behaviours including
becoming a perpetrator of bullying (Pelchar & Bain, 2014).

Such a broad range of concerns from a wide range of researchers suggests
heightened vulnerability. However, many of the preceding areas of research interest in
the gifted field tend to rely on information that is largely anecdotal. Interestingly,
literature that examines more academic achievement based constructs such as self-
esteem (Rafati et al., 2014), locus of control (Rinn et al., 2014), self-efficacy (Pajares,
1996), self-concept, and perceived competence (Litster & Roberts, 2011) tends to be
more systematic and more prolific. However, there are a few studies using
psychometrically sound, standardised instruments to measure problematic behaviour
that are consistent with the anecdotal evidence of behaviour that is different.

Guénolé and colleagues (2013) examined the scores on the Child Behaviour
Checklist (CBCL: Achenbach, 1991) for 143 clinically referred gifted 8-11-year-old
French children ( \( \bar{X} : 9.3 \) years). The gifted children were a clinical sample that had been
referred due to socioemotional problems or school underachievement or maladjustment.
Participants were matched one-to-one on age and gender with a control group. Parents
completed the French version of the CBCL and a brief questionnaire relating to
sociodemographic information.

While no gifted child in the study met criteria for a mental health disorder
according to DSM-IV (American Psychiatric Association, 2000), they did show
significant behavioural problems (Guénolé et al., 2013). Scores for the gifted children
were significantly higher than the control group across all domains measured by the
CBCL. The results placed the gifted children between the general population and a
psychiatric outpatient sample, with the gifted children obtaining scores that placed them
closer to the outpatient sample. The authors conclude that the possibility of
developmental asynchrony in the gifted needs to be taken into account when examining psychopathologies in this population (Guénolé et al., 2013).

In the only related Australian study the author could find, Morawska and Sanders (2008) studied 214 gifted children with a mean age of 8.49 years ($SD = 2.54$). To be included in the study the child must have obtained a score greater than 130 ($98^{th}$ percentile) on a standardised test of cognitive ability. Parents rated their child’s behaviour on the parent report form of the SDQ. Morawska and Sanders (2008) reported that the average scores obtained by the children in their study on the SDQ fell within the normal range of scores reported on the SDQ for Conduct, Pro-social and Hyperactivity subscales but were higher than the published norms for Emotional and Peer Relationship Problems.

However, across all subscales and the Total Difficulties, Morawska and Sanders (2008) also found more than the predicted 10% of children obtaining scores that placed them in the Borderline range. While differences in the frequencies in the Borderline range seem too small to be meaningful (Emotional Symptoms = 12.6%; Conduct Problems = 11.7%; Peer Relationship Problems = 11.2%; Total Difficulties = 15.0%) the frequencies in the Clinical range were disturbingly high (Emotional Symptoms = 34.3%; Conduct Problems = 20.1%; Hyperactivity = 22%; Peer Relationship Problems = 45.8%; Prosocial Behaviour = 15%; Total Difficulties = 28.5%).

Anecdotal evidence and findings from empirical research thus converge to suggest that gifted children are exceptional in ways other than intelligence. Given there is evidence amongst other populations (Sanders & Morgan, 1997; Anastopoulos, Guevremont, Shelton, & DuPaul, 1992) that raising exceptional children can make demands that have a negative effect on the wellbeing of their caregivers, it is of
importance to understand if characteristics of the gifted children are quantifiably
different to the general population on standardised tests of child behaviour problems.

The goal of the chapter is to determine if the gifted children in this sample score
differently to typically developing children on standardised, psychometrically sound
measures used to identify problematic child behaviour in psychology. The
demographics of the children, how the parents identified the child as gifted, and the
range of IQ scores for those children who have had cognitive tests are described first.
Twice exceptionalities identified by the parents will be briefly explored. Scores on the
SDQ will be compared to normative information.

Methods

Participants.

One hundred and seventeen Australian and 265 US parents completed the online
survey. In a small number of families, both parents took part in the study. Parents were
matched so that characteristics of the child were included only once in the analysis. For
both countries, parents were matched on sociodemographic information along with
other family information such as the age of target child and the number of children in
the family. Location information was then used to confirm that both parents were from
the same family. Where responses from both parents were provided, the mothers’ data
were retained. This was done as all but 33 of the 382 participants were mothers or
female primary carers. This provided information on 109 Australian and 262 US
children. Technical difficulties with the collection of responses for the SDQ resulted in
lost data for two Australian families and seven US families. In total, the final number
was 107 Australian and 255 US children.
Measures

*Child sociodemographics questionnaire.*

Parents were asked to provide information on specific sociodemographic characteristics of the child. The full list of questions and answer choices can be found in the copy of the survey at Appendix B.

*Gender, age, and birth order:* Parents were asked give details of the target child’s gender, age, and birth order.

*Identification of child as gifted:* Parents were asked on what basis they identified the target child as being gifted. They were requested to select as many of 12 examples of ways gifted children may be identified as they felt fit their particular circumstance.

*Results of IQ tests:* Parents who indicated that they identified their child as being gifted based upon Cognitive (IQ) test results were asked to share the details of the testing information. It must be noted that parents were not asked to provide proof of the results they provided for their child’s cognitive testing.

*Twice exceptional:* Parents were asked whether their child had a diagnosis of exceptionality in addition to cognitive giftedness and who had made the diagnosis. The International Statistical Classification of Diseases and Related Health Problems 10th Revision (World Health Organisation, 2013) was used to classify the diagnoses given to the children. Results are given for Australian children in Appendix M and for USA children in Appendix N.

*Standardised measures.*

*Strengths and Difficulties Questionnaire (SDQ).*

The Strengths and Difficulties Questionnaire (SDQ; Goodman, 2001) is a brief screening instrument for problematic child behaviours that can be used with children and adolescents aged 3-16 years.
The questionnaire asks 25 questions that relate to both positive and negative child attributes. Respondents are asked to indicate on a 3-point Likert scale (ranging from 0 = Not True to 2 = Certainly True) how much the attribute describes their child. The 25 questions are grouped into five subscales of five items each, which result in scores for Emotional Symptoms (e.g.; “Many worries or often seems worried”), Conduct Problems (e.g.; “Often loses temper”), Hyperactivity/Inattention (e.g.; “Easily distracted, concentration wanders”), Peer Relationship Problems (e.g.; “Gets along better with adults than with other children”) and Prosocial Behaviour (e.g.; “Considerate of other people’s feelings”) (Goodman, 2001). Higher scores indicate higher levels of difficulty except in the case of Prosocial Behaviour where lower scores are indicative of poorer social interaction abilities. Scores on the subscales sum to give Total Problems score.

Scores can be treated continuously, however normative information is given to categorise children by cut offs which results in three categories: Normal, Borderline/Medium Difficulties and Clinical/High Difficulties. These categories are considered clinically useful because they indicate when a child is likely to experience difficulties in development and/or daily life because of the cluster of problematic behaviours. The Borderline range would suggest the child’s behaviour should be watched with some concern whereas children scoring in the Clinical range are likely to require intervention (J. Webb, personal communication, September 1, 2011).

The 7 – 10-year-old Australian normative data was used for the Australian sample (Mellor, 2005) and the US normative data for 4 to 17 year olds was used for the US children (Bourdon, Goodman, Rae, Simpson, & Koretz, 2005) was used for the US children. The Australian normative information gives separate scores for boys and girls however, the US information is not split by gender. In the current study, the internal
consistency for subscales were acceptable (α ranges from .67 to .79) as was the Total Difficulties (α = .71). These were adequate for the purposes of this study and comparable to previous research (Bourdon et al., 2005; Goodman, 2001; Koskelainen, Sourander, & Kaljonen, 2000; Van Roy, Veenstra, & Clench-Aas, 2008).

Procedure.

As part of the online survey, parents completed the child sociodemographic questionnaire and standardised measures as described in Chapter 2.

Analysis.

For the SDQ, four Australian cases contained missing data, which were analysed and found to be random. For the US, nine cases contained missing data that were also analysed and found to be random. How the missing data were analysed for both countries and subsequently substituted is described in Appendix O.

Chi-square tests of independence were performed to determine whether there were significant differences in the number of children in the sample who obtained scores in the borderline/medium difficulties or clinical/high difficulties categories in comparison to what was predicted by the normative cut-off scores. Where expected cell sizes were below five, Fishers’ exact test was used.

Results: The Children

Gender and age of child.

Sixty-seven Australian children were male (61.5%) and 42 were female (38.5%). Of the 262 US children there were 164 males (62.6%) and 98 females (37.4%). The average age of the Australian children was 8.02 years (SD = 2.07; Range = 4 to 12). When grouped by gender, the average age of males was 7.97 years (SD = 2.12; Range = 4 to 12). Girls were slightly older (\( \bar{X} = 8.10, SD = 2.02; \text{Range} = 5 \text{ to } 12 \)).
The average age of the US children was 8.08 years ($SD = 1.98$: Range = 3 to 13). When grouped by gender, the average age of males was 7.97 years ($SD = 1.96$: Range = 3 to 13). Girls were slightly older ($\bar{X} = 8.39$, $SD = 1.983$: Range = 5 to 13).

Figure 3 shows the frequency of ages of the children by gender in both countries.

**Figure 3:** Age of children by gender and country

**Birth Order.**

Eighty-six (78.9%) Australian children came from a multiple child family. The child was the first born in 60 cases (69.8%). By gender, 35 males (58.3%) were the firstborn in their family and 25 females (41.7%). In the US sample, 188 (71.8%) came from a multiple child family. The child was the first born in 118 cases (62.8%). Males were the firstborn in 76 families (64.4%) and females were the first born in 42 families (35.6%).
How did parents identify their child as being gifted?

The most frequently chosen response by Australian parents was “Results on IQ tests”, which was checked for 85 children (78.0%). The next most frequently chosen indicator was “Reached developmental milestones early”, which was endorsed for 79 children (72.5%). The response chosen most frequently by US parents was “Reached many developmental milestones early”, which was checked for 184 children (70.2%). The next most frequently chosen indicator was “Results on IQ tests”, which was endorsed for 172 children (65.7%). Table 4 shows the frequency of endorsement for each option by gender for the Australian parents. Results for the US parents are shown in Table 5.
Table 4

Methods of identification of giftedness used by Australian parents

<table>
<thead>
<tr>
<th>Method of identification</th>
<th>Overall Sample</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N = 109</td>
<td>N = 67</td>
<td>N = 42</td>
</tr>
<tr>
<td></td>
<td>N  %</td>
<td>N  %</td>
<td>N  %</td>
</tr>
<tr>
<td>Cognitive (IQ) test results</td>
<td>85  78.0</td>
<td>53  79.1</td>
<td>32  76.2</td>
</tr>
<tr>
<td>Reached many developmental milestones early</td>
<td>79  72.5</td>
<td>50  74.6</td>
<td>29  69.1</td>
</tr>
<tr>
<td>Frequently spoken of by others as gifted</td>
<td>61  56.0</td>
<td>37  55.2</td>
<td>24  57.2</td>
</tr>
<tr>
<td>Identified for any form of gifted programming</td>
<td>60  55.1</td>
<td>39  58.2</td>
<td>21  50.0</td>
</tr>
<tr>
<td>Achievement test results</td>
<td>53  48.6</td>
<td>37  55.2</td>
<td>16  38.1</td>
</tr>
<tr>
<td>Biological relatives are gifted</td>
<td>50  45.9</td>
<td>29  43.3</td>
<td>21  50.0</td>
</tr>
<tr>
<td>Skipped one or more grades in school</td>
<td>27  24.8</td>
<td>16  23.9</td>
<td>11  26.2</td>
</tr>
<tr>
<td>Identified as twice-exceptional</td>
<td>18  16.5</td>
<td>13  19.4</td>
<td>5  11.9</td>
</tr>
<tr>
<td>Early entry into formal schooling</td>
<td>14  12.8</td>
<td>4  6.0</td>
<td>10  23.8</td>
</tr>
<tr>
<td>Is a member of a High IQ society</td>
<td>7  6.4</td>
<td>6  9.0</td>
<td>1  2.4</td>
</tr>
<tr>
<td>Other</td>
<td>6  5.5</td>
<td>4  6.0</td>
<td>2  4.8</td>
</tr>
<tr>
<td>Other talent search results</td>
<td>4  3.7</td>
<td>4  6.0</td>
<td>0  0</td>
</tr>
<tr>
<td>Attends a selective school</td>
<td>2  1.8</td>
<td>1  1.5</td>
<td>1  2.4</td>
</tr>
</tbody>
</table>
### Table 5

*Methods of identification of giftedness used by USA parents*

<table>
<thead>
<tr>
<th>Method of identification</th>
<th>Overall Sample</th>
<th>Males N = 164</th>
<th>Females N = 98</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reached many developmental milestones early</td>
<td>184 70.2</td>
<td>120 73.2</td>
<td>64 65.3</td>
</tr>
<tr>
<td>Cognitive (IQ) test results</td>
<td>172 65.7</td>
<td>106 64.6</td>
<td>66 67.4</td>
</tr>
<tr>
<td>Frequently spoken of by others as gifted</td>
<td>171 65.3</td>
<td>113 68.9</td>
<td>58 59.2</td>
</tr>
<tr>
<td>Biological relatives are gifted</td>
<td>171 65.3</td>
<td>106 64.6</td>
<td>65 66.3</td>
</tr>
<tr>
<td>Achievement test results</td>
<td>157 60.0</td>
<td>90 54.9</td>
<td>67 68.4</td>
</tr>
<tr>
<td>Identified for any form of gifted programming</td>
<td>154 58.8</td>
<td>91 55.5</td>
<td>63 64.3</td>
</tr>
<tr>
<td>Skipped one or more grades in school</td>
<td>67 25.6</td>
<td>39 23.8</td>
<td>28 28.6</td>
</tr>
<tr>
<td>Identified as twice-exceptional</td>
<td>55 21.0</td>
<td>39 23.8</td>
<td>16 16.3</td>
</tr>
<tr>
<td>Other talent search results</td>
<td>44 16.8</td>
<td>23 14.0</td>
<td>21 21.4</td>
</tr>
<tr>
<td>Early entry into formal schooling</td>
<td>31 11.8</td>
<td>17 10.4</td>
<td>14 14.3</td>
</tr>
<tr>
<td>Is a member of a High IQ society</td>
<td>30 11.5</td>
<td>17 10.4</td>
<td>13 13.3</td>
</tr>
<tr>
<td>Other</td>
<td>18 6.9</td>
<td>12 7.32</td>
<td>6 6.1</td>
</tr>
<tr>
<td>Attends a selective school</td>
<td>0 0</td>
<td>0 0</td>
<td>0 0</td>
</tr>
</tbody>
</table>

Six Australian parents listed reasons other than those in the survey, citing the child’s interests, advanced reading, parental research, and emotional sensitivities as indicators of their child’s giftedness. Eighteen US parents listed reasons other than
those in the survey, citing the child’s interests, advanced reading, parental research, level of achievement in homeschooling, and personal observations as indicators of their child’s giftedness. The Australian and US parents chose an average of five ways in which they identified their child as being gifted.

When the Australian sample is split by gender, the results remain largely the same. Only one method of identification chosen by parents, early entry into formal schooling, differed across genders. Parents of girls were far more likely to endorse early entry as an identification method than parents of boys. Overall, US parents seemed to identify a greater proportion of girls through methods that relied on measurable achievement.

**How gifted are the children?**

Forty-seven Australian parents (59.5%) reported their child had undertaken a cognitive test from the Wechsler range and 30 children (38.0%) were tested using the Stanford Binet V. One child was tested with the Woodcock Johnson Cognitive Abilities Test.

Of the 71 Australian parents who provided a FSIQ, GAI or percentile rank for their child, the scores ranged from the 94th percentile to beyond the 99.99th percentile. Sixty-six children (93.0%) reported scores at the 98th percentile or higher. Importantly, 55 children (77.5%) were reported to have an IQ at or above the 99th percentile. This means that almost 50% of the children in the total sample had an IQ score that placed them beyond 99% of their peers.

Ninety-eight US parents (69.5%) reported their child had undertaken a cognitive test from the Wechsler range and 15 children (10.6%) were tested using the Stanford Binet V. Two children were tested with the Woodcock Johnson Cognitive Abilities
Test. Parents of the US children also gave scores obtained on eight other cognitive tests. A full list of cognitive tests used in the US sample can be found at Appendix P.

One hundred and thirty-three parents provided either a FSIQ, GAI or percentile rank for their child with the range being from the 91st percentile to beyond the 99.99th percentile with the vast majority of parents \(N=124;94.7\%\) reported their children had scores at the 98th percentile or higher. One hundred and twelve US children (85.5\%) were reported to have an IQ at or above the 99th percentile. In comparison to the sample as a whole, 42.7\% of the children had an IQ score that placed them beyond 99\% of their peers.

**Twice exceptionalities.**

The parents of 17 Australian children reported a health condition, 27 a mental or behavioural disorder, and seven children with a diagnosis in both categories. Ten children reportedly suffered from sensory difficulties. Fourteen of the children had multiple diagnoses with the most listed by a parent for an individual child being five.

The parents of 23 US children reported a health condition, 58 with a mental or behavioural disorder, and 26 children with a diagnosis in both categories. Thirty children reportedly suffered from sensory difficulties. Forty-one children had multiple diagnoses with the most listed by a parent for an individual child being five. A complete list of diagnoses categorised within each of the ICD-10 block classifications is shown in Appendix M (Australia) and Appendix N (USA).

The five most frequently endorsed diagnoses for Australian children were: 11 children (15.5\%) coded F90: Attention-deficit hyperactivity disorders; ten children (14.1\%) had Sensory Issues (no ICD-10 code given); and nine children (12.7\%) children coded as F84.5: Asperger’s syndrome; seven children (9.9\%) suffered from Asthma (J45); and five children (7.0\%) had a diagnosis of Dyspraxia (F82).
For the US children, the most common diagnoses were: 30 children (19.0%) had sensory issues (no ICD-10 code given); 24 (15.2%) coded as F90: Attention-deficit hyperactivity disorders; 11 children (7.0%) children coded as J45: Asthma; nine children (5.7%) coded as Other Anxiety disorders (F41); and nine children (5.7%) reporting allergies (T78.4).

**Strengths and Difficulties Questionnaire.**

SDQ data were available for 107 Australian children (66 males: 41 females). The scores on each subscale of the SDQ and Total Problems by gender are shown in Table 6.
Table 6

*SDQ* chi-square results for Australian boys and girls – all children included

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Boys</th>
<th></th>
<th></th>
<th>Girls</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( N = 66 )</td>
<td>%</td>
<td>( \chi^2 )</td>
<td>( N = 41 )</td>
<td>%</td>
<td>( \chi^2 )</td>
</tr>
<tr>
<td>Emotional</td>
<td>80 – 89%</td>
<td>10.6</td>
<td>1.31\text{NS}</td>
<td>9.8</td>
<td>0.26\text{NS}</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt;90%</td>
<td>40.9</td>
<td>28.98\text{***}</td>
<td>53.7</td>
<td>44.20\text{***}</td>
<td></td>
</tr>
<tr>
<td>Conduct Problems</td>
<td>80 – 89%</td>
<td>21.2</td>
<td>10.27\text{**}</td>
<td>17.1</td>
<td>4.86*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt;90%</td>
<td>31.8</td>
<td>16.25\text{***}</td>
<td>36.6</td>
<td>19.06\text{***}</td>
<td></td>
</tr>
<tr>
<td>Hyperactivity</td>
<td>80 – 89%</td>
<td>33.3</td>
<td>25.49\text{***}</td>
<td>26.8</td>
<td>20.91\text{***}</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt;90%</td>
<td>24.2</td>
<td>7.80\text{**}</td>
<td>43.9</td>
<td>28.81\text{***}</td>
<td></td>
</tr>
<tr>
<td>Peer Problems</td>
<td>80 – 89%</td>
<td>31.8</td>
<td>36.19\text{***}</td>
<td>34.2</td>
<td>27.95\text{***}</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt;90%</td>
<td>42.4</td>
<td>31.33\text{***}</td>
<td>34.2</td>
<td>15.96\text{***}</td>
<td></td>
</tr>
<tr>
<td>Prosocial</td>
<td>11 – 20%</td>
<td>13.6</td>
<td>4.31*</td>
<td>7.3</td>
<td>1.00\text{NS}</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt; 10%</td>
<td>43.9</td>
<td>33.75\text{***}</td>
<td>22.0</td>
<td>4.42*</td>
<td></td>
</tr>
<tr>
<td>Total Problems</td>
<td>80 – 89%</td>
<td>18.2</td>
<td>9.15\text{**}</td>
<td>34.2</td>
<td>27.95\text{***}</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt;90%</td>
<td>40.9</td>
<td>31.86\text{***}</td>
<td>34.2</td>
<td>15.96\text{***}</td>
<td></td>
</tr>
</tbody>
</table>

*Note:* \( *p < .05 \) \( **p < .01 \) \( ***p < .001 \). When expected cells size <five, Fishers Exact test conducted and reported.

Strengths and Difficulties data were available for 255 US children (163 males; 92 females). The scores on each subscale of the SDQ and Total Problems by gender are shown in Table 7.
Table 7
*SDQ chi-square results for USA boys and girls – all children included*

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>(X^2)</td>
</tr>
<tr>
<td>Emotional</td>
<td>86-91%</td>
<td>12.9</td>
</tr>
<tr>
<td></td>
<td>&gt;92%</td>
<td>32.5</td>
</tr>
<tr>
<td>Conduct Problems</td>
<td>82-90%</td>
<td>14.7</td>
</tr>
<tr>
<td></td>
<td>&gt;91%</td>
<td>20.9</td>
</tr>
<tr>
<td>Hyperactivity</td>
<td>86 – 91%</td>
<td>9.2</td>
</tr>
<tr>
<td></td>
<td>&gt;92%</td>
<td>33.7</td>
</tr>
<tr>
<td>Peer Problems</td>
<td>80 – 90%</td>
<td>12.3</td>
</tr>
<tr>
<td></td>
<td>&gt;91%</td>
<td>48.5</td>
</tr>
<tr>
<td>Prosocial</td>
<td>8 - 22%</td>
<td>27.6</td>
</tr>
<tr>
<td></td>
<td>&lt; 7%</td>
<td>25.8</td>
</tr>
<tr>
<td>Total Problems</td>
<td>82 – 90%</td>
<td>20.8</td>
</tr>
<tr>
<td></td>
<td>&gt;91%</td>
<td>42.9</td>
</tr>
</tbody>
</table>

*Note: *p <.05   **p <.01   ***p <.001. When expected cells size < five, Fishers Exact test conducted and reported.*

For the Australian sample, there were significantly more males and females in the Borderline and Clinical categories for Conduct Problems, Hyperactivity, Peer Relationship Problems, and Total Difficulties, *p*’s ranged from <.001 to <.05. There were significantly more boys in the borderline range of the Pro-Social problems.
subscale and significantly more boys and girls in the Clinical Range of Emotional and Pro-Social subscales (See Table 6).

For the US sample, there were significantly more males in the borderline and clinical categories across all subscales and Total Problems (See Table 7). For US females there were significantly more children in the Borderline and Clinical categories for Emotional Problems, Hyperactivity, Peer Relationship Problems, and Total Problems, p’s ranged from <.001 to <.05. There were significantly more girls in the Borderline range of Conduct Problems and Pro-social problems (See Table 7).

Because SDQ items tap the same problematic behaviours as are characteristic of children with ADHD, ASD, or other diagnosed behavioural problem, the analysis was repeated with children whose parents reported one of these diagnoses removed.

For the Australian children, this resulted in 50 males and 36 females and for the US sample, 136 males and 82 females. Results for Australian children are shown in Table 8 and the US children are shown in Table 9.
Table 8

*SDQ* chi-square results for Australian boys and girls - twice exceptional children removed

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Boys</th>
<th></th>
<th>Girls</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N = 50</td>
<td>%</td>
<td>N = 36</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>$\chi^2$</td>
<td></td>
<td>$\chi^2$</td>
</tr>
<tr>
<td>Emotional</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>80 – 89%</td>
<td>7.6</td>
<td>0.61NS</td>
<td>11.1</td>
<td>0.24NS</td>
</tr>
<tr>
<td>&gt;90%</td>
<td>28.8</td>
<td>21.50***</td>
<td>50.0</td>
<td>35.41***</td>
</tr>
<tr>
<td>Conduct Problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>80 – 89%</td>
<td>13.6</td>
<td>5.38*</td>
<td>16.8</td>
<td>3.93*</td>
</tr>
<tr>
<td>&gt;90%</td>
<td>24.2</td>
<td>14.28***</td>
<td>36.1</td>
<td>16.87***</td>
</tr>
<tr>
<td>Hyperactivity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>80 – 89%</td>
<td>22.7</td>
<td>16.32***</td>
<td>30.6</td>
<td>22.29***</td>
</tr>
<tr>
<td>&gt;90%</td>
<td>16.7</td>
<td>4.90*</td>
<td>38.9</td>
<td>20.17***</td>
</tr>
<tr>
<td>Peer Problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>80 – 89%</td>
<td>36.0</td>
<td>32.63***</td>
<td>33.3</td>
<td>22.13***</td>
</tr>
<tr>
<td>&gt;90%</td>
<td>34.0</td>
<td>16.57***</td>
<td>30.6</td>
<td>10.99***</td>
</tr>
<tr>
<td>Prosocial</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>11 – 20%</td>
<td>8.0</td>
<td>0.75NS</td>
<td>8.3</td>
<td>1.00NS</td>
</tr>
<tr>
<td>&lt; 10%</td>
<td>42.0</td>
<td>26.88***</td>
<td>22.2</td>
<td>4.19*</td>
</tr>
<tr>
<td>Total Problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>80 – 89%</td>
<td>18.0</td>
<td>5.78*</td>
<td>33.3</td>
<td>22.13***</td>
</tr>
<tr>
<td>&gt;90%</td>
<td>34.0</td>
<td>16.57***</td>
<td>30.6</td>
<td>10.99***</td>
</tr>
</tbody>
</table>

*Note: *p<.05  **p <.01  ***p<.001. When expected cells size <five, Fishers Exact test conducted and reported.*
Table 9

*SDQ* chi-square results for USA boys and girls - twice exceptional children removed

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Boys N = 136</th>
<th></th>
<th></th>
<th>Girls N = 82</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>$\chi^2$</td>
<td></td>
<td>%</td>
<td>$\chi^2$</td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>86-91%</td>
<td>11.8</td>
<td>16.99***</td>
<td>6.6</td>
<td>10.66**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt;92%</td>
<td>31.6</td>
<td>98.38***</td>
<td>23.5</td>
<td>103.59***</td>
<td></td>
</tr>
<tr>
<td>Conduct Problems</td>
<td>82-90%</td>
<td>14.7</td>
<td>7.77**</td>
<td>8.8</td>
<td>3.32NS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt;91%</td>
<td>18.4</td>
<td>10.37**</td>
<td>6.6</td>
<td>0.09NS</td>
<td></td>
</tr>
<tr>
<td>Hyperactivity</td>
<td>86 – 91%</td>
<td>10.3</td>
<td>8.97**</td>
<td>7.4</td>
<td>5.67*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt;92%</td>
<td>27.2</td>
<td>53.08***</td>
<td>5.9</td>
<td>0.06NS</td>
<td></td>
</tr>
<tr>
<td>Peer Problems</td>
<td>80 – 90%</td>
<td>11.1</td>
<td>5.64*</td>
<td>11.1</td>
<td>20.32***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt;91%</td>
<td>44.1</td>
<td>167.05***</td>
<td>25.7</td>
<td>94.39***</td>
<td></td>
</tr>
<tr>
<td>Prosocial</td>
<td>8 - 22%</td>
<td>28.7</td>
<td>68.29***</td>
<td>15.4</td>
<td>22.07***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&lt; 7%</td>
<td>22.8</td>
<td>18.86***</td>
<td>6.6</td>
<td>0.00NS</td>
<td></td>
</tr>
<tr>
<td>Total Problems</td>
<td>82 – 90%</td>
<td>24.3</td>
<td>84.28***</td>
<td>15.4</td>
<td>46.71***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt;91%</td>
<td>34.6</td>
<td>87.46***</td>
<td>14.7</td>
<td>18.52***</td>
<td></td>
</tr>
</tbody>
</table>

*Note:* *p<.05** **p <.01 *** p<.001. When expected cells size <five, Fishers Exact test conducted and reported.

After twice exceptional children were excluded, there were still significantly more Australian males and females in the Borderline and Clinical range for Conduct Problems, Hyperactivity, Peer Relationship Problems, and Total Difficulties and
significantly, more in the Clinical range of Emotional and Pro-Social subscales (See Table 8).

After twice exceptional children were removed from the US sample, there were still significantly more males in the Borderline and Clinical categories across all subscales and Total Problems (See Table 9). For US females there were significantly more children in the Borderline and Clinical categories for Emotional Problems, Peer Relationship Problems, and Total Problems. There were significantly more girls in the Borderline range of Hyperactivity and Pro-social problems (See Table 9).

**Discussion**

The analysis of the demographics showed that on gender and birth order of the children this sample was highly comparable to previous research. Parents used a range of methods to identify their child’s giftedness with many relying on results from standardised cognitive tests along with behavioural observations and the opinion of others. Many of the parents identified their children before they entered formal schooling. The children represented an extremely gifted group with three quarters of those whose parents provided a FSIQ or GAI having a score that placed them at or above the 99th percentile. Results on the SDQ showed a striking over representation of children in the Borderline and Clinical ranges across all subscales and total difficulties. These differences in the clinical range largely persisted even after removal of twice exceptional children from the analysis. These points will be discussed in turn.

**Gender and birth order.**

The demographic data on gender and birth order for the children in both countries was in keeping with what has been found in previous studies (Gross, 2004; Morawska & Sanders, 2008; Silverman, 2000). As far back as Terman’s (1925) seminal study of gifted youth, samples have included more boys than girls and this trend is
continued in more recent studies (Morawska & Sanders, 2008). The literature shows competing standpoints as to whether or not there is a gender bias in the identification of children. Some researchers suggest that certain characteristics such as taking charge or being competitive are seen as signs of early leadership for gifted boys and signs of immaturity and bossiness in girls (for example see Bianco, Harris, Garrison-Wade, & Leech, 2011). Others find no difference in referrals to gifted programs (Siegle & Powell, 2004). Therefore, it is unclear as to why there is a predominance of boys in this study and other similar studies. Likewise, the firstborn child being identified as gifted is a commonly reported result in the gifted literature (Barbe, 1956; Freeman, 1986; Schachter, 1963; Silverman, 2015; Terman, 1925) so here too the present results are in keeping with previous studies.

**How do parents identify their child as being gifted?**

In both countries, the majority of parents used various sources of information to inform their initial belief that their child may be intellectually gifted. Results show they were more likely to base their decision on a combination of formalised testing results, behavioural information, the child’s achievements, and the opinion of others. This indicates that parents were not relying on a single piece of evidence to conclude that their child is gifted.

Research has found that parents are likely to use behavioural characteristics such as reaching gross motor milestones at an early age (Silverman, 2015) as an indicator of their child’s giftedness. This was also true of the participants in this study, where a significant proportion endorsed differences in their child’s developmental milestones as one of the indicators of their child’s giftedness. This means that parents observe their child’s potential and, sometimes, intensity from a very early age as this parents stated:
“My son has been a challenge from the start. He was a very needy baby, wanting constant attention. He had a long attention span very early. We have pictures of him laying on his back looking at books next to parents reading to him long before he could crawl. When he was a toddler, we found that we had to stop talking about meeting milestones with other parents, because our kid reached most milestones first, and we didn't want to seem like we were bragging. It was very lonely for awhile, not feeling comfortable sharing info about what my youngster was doing.” (Greta, 40, 7-y.o. son, USA).

This personal observation of development coupled with the opinion of others is likely to set up beliefs about the child’s cognitive abilities before the child enters formal schooling. This sets a baseline for parents that may then be quantified with results from cognitive or achievement tests later. Conversely, some parents may be somewhat oblivious to their child’s high intellect depending on their personal circumstances. One parent in the study shared the following:

“...I had no idea that she was gifted. We were the first of our social group to have children and I just thought that children were like this. .... When my child started school I still wasn't really aware of her giftedness.... It was the preschool teacher that my child had who first brought it to my attention that she was exceptionally bright. That she was having some difficulty with befriending the other children as she used words in her natural speech that they simply did not understand. Her language skills were always exceptional, even to me...” (Alison, 40, 11-y.o. daughter, NSW, Aus)

As is highlighted by the two parents previously quoted, each family will bring with them their own understanding of their child and the child’s abilities. The first time that a child enters childcare or school may be the first time that parents encounter a different viewpoint of their child’s abilities. The viewpoint may be confirmation of their
beliefs or they could be met with unexpected positive or negative opinions relating to
the child’s potential. How well the view of the parents’ matches that held by child
educators is likely to influence parental wellbeing.

**How gifted are the children?**

Based on their reported IQ scores, the majority of the children in the study were
undoubtedly intellectually gifted. Further, almost half of the Australian and US parents
were raising extremely (at or beyond the 98th percentile) gifted children. An IQ score at
the 98th percentile places the child two standard deviations above the mean. This means
that he or she is likely to think in a way that is profoundly different to his or her age
peers. Many of these children can be expected to have interests that are vastly different
to the other children in the standard classroom and this in turn has the potential to lead
to peer difficulties. It is also plausible that when a child thinks like children years ahead
in chronological age he or she may feel disconnected from classmates. Having a child
who struggles to make and maintain friendships with classmates is likely to be a source
of concern for both teachers and parents.

**Twice exceptionalities.**

The results given for the parental reports of twice-exceptionalities in the gifted
children will not be compared to prevalence estimates for the general population as
generally agreed upon prevalence rates of child behaviour problems is a highly
contested area with differing results across studies (Polanczyk, de Lima, Horta,
Biederman, & Rohde, 2007; Roberts, Attkisson, & Rosenblatt, 1998;). Rather, the data
is given to stress the fact that some parents believe their children have behaviours that
are significantly problematic and that require a diagnosis. The most frequently chosen
issues (ADHD, Asperger’s, and sensory issues) are the same across both countries.
Further, they were in keeping with the current literature (Webb et al., 2005). However, a wider range of difficulties were cited by the US parents.

**Strengths and Difficulties Questionnaire.**

Results for the Total problems and every subscale of the SDQ across both genders and both countries showed a significantly larger than expected number of children obtaining scores placing them not just in the Borderline range but above the Clinical cut off. These results largely hold true even when controlling for those children across the sample whose parents indicated they had a diagnosis of Attention Deficit/Hyperactivity Disorder, Autism Spectrum or Asperger’s Disorder, or some other behavioural difficulty not otherwise specified. Removing these children did reduce the significance of the chi-square results across both genders and countries. However, the frequencies in the Clinical range for the two subscales mentioned above, that is Emotional and Peer Relationship Problems, along with Total Difficulties were still significantly too high. These frequencies are highly similar to those found by Morawska and Sanders (2008) who investigated 214 Australian children broadly comparable in demographics to those in the current study. Age is the only variable where there may be a noticeable difference between the two studies. Participants in Morawska and Sanders (2008) study ranged in age from 2 to 16 years whereas ages in the current study range from 4 to 12 years across both countries.

As with the Morawska and Sanders (2008) study, the key difficulties that the parents were observing in their children were Emotional Symptoms, Peer Relationship Problems, and an increased level of Total Difficulties. The findings in both studies are consistent with the anecdotal data from parents within this sample and from information generally shared within the gifted community (for example see –Daniels & Piechowski, 2009; Silverman, 2000).
Parents of gifted children often speak of their child’s intensity and struggles across different domains and data from the current study add to this anecdotal evidence. The following highlight key child characteristics that parents see as problematic:

“Your questionnaire has addressed many areas of concern but I still felt a need to add something on the INTENSITY (sic) of parenting my child. She is constant. She moves constantly and talks constantly; she forgets constantly and makes constant errors despite my constant effort. It is endless and frustrating and rewarding and terrifying and lonely.” (Debbie, 36, 8-y.o. daughter, NSW, Aus)

This parent’s concerns appear to centre on her daughter’s need for constant movement and talking as well as attentional difficulties. Whereas the following parent homes in on her daughter’s emotional intensity and potential social difficulties:

“My daughter's emotional intensity is something that concerns me. She can feel deeply hurt by a classmate which leads her to say that everyone else has friends and she does not.” (Allie, 40, 7-y.o. daughter, IL, USA)

The parent below spoke of behavioural issues and a temperament that have led them to seek help through a psychologist:

“We had some behavioral issues with our oldest son (the target child) that got out of control when our youngest son was born, and these issues prompted his pediatrician to suggest that we take him to see a psychologist. It was there that we first heard the term 'Oppositional Defiant Disorder', but this is just a useless label. Six years and many parenting books later, we still don't really know how to deal with his temperament (sic) constructively.” (Robyn, 39, 9-y.o. son, WA, Aus)

Another parent shared her concerns about her son’s difficulty with peers:
“I worry that he will always have a hard time making friends. He seems to make friends easily, but I worry that some of his idiosyncrasies will drive people away.” (Cathy, 42, 7-y.o. son, GA, USA)

In contrast, this parent spoke of her child as having a great personality and having at least some friends, however she still reports feeling exhausted:

“My son is complex. He is exceptionally bright, but he is also kind and loving. He has a great personality and is very funny. He may be the next ‘Jim Carrey’. I am telling you this because he is not a social outcast, but yet he has not made deep friendships. Raising a kid like this is exhausting and rewarding.” (Jenny, 40. 9-y.o. son, USA).

The above quotes show the diversity of behaviours that concern the parents of these children and provide illustrations of the difference in behaviours tapped by the SDQ. What can be gathered from the quotes is the parents have very real concerns about their children’s emotional and behavioural intensity, attention, and peer relations.

Results from the current study are at odds with the results of much of the literature. There are several possible explanations for these differences. This sample consisted predominantly of children whose parents reported that they have IQ scores that placed them at or above the 98th percentile on a cognitive test. They were not selected based on membership in gifted programs at school, which often include children above the 95th percentile on a cognitive test, or on their achievement. The outcome measures were also behavioural characteristics known from the literature in psychology to cause parents difficulties rather than issues such as self-esteem or self-efficacy. Such differences in definition and outcomes were highlighted by Martin, Burns, and Schonlau (2010). These differences are unfortunately characteristic of the literature in this field and often make comparisons across studies difficult.
There are several plausible ideas that could be put forward from a clinical standpoint to explain the heightened frequencies. These children may have behavioural and emotional problems that increase their likelihood of reaching a clinical cut off and are at a greatly increased risk of these high scores than is the normal population. From an intervention perspective, this would mean that teaching these children, and their families, emotion regulation and social skills would go a long way towards remediating these problems.

Alternatively, this could be a case of the parents over-reporting their child’s problem behaviours. As was outlined in Chapter 1, the Columbus Group (as cited in Tolan & Piechowski, 2012) considers asynchrony as core to the definition of gifted. Briefly, asynchrony is when a person possesses advanced cognitive ability coupled with a heightened intensity. The child is out of sync within themselves and out of sync with their age mates. Think of a child who is six years old chronologically with the mental capacity of a nine-year-old and with intensities that by the Columbus Group’s definition are inherent with the gifted. The intensities could lead the child to have emotional outbursts more in keeping with a much younger child and this could lead the parents to be hypersensitive to what they see as the intensity of behaviour. It is possible the discrepancy between the child’s behaviour and their mental age is so asynchronous that it leads to the high scores. This seems plausible when quotes such as the following are considered:

“He reads at a 5th grade level, yet his emotions are still so raw/young. I think the toughest thing in raising a gifted child is the asynchronicity. It is easy to forget he is 5 or 6 when he is discussing the Big Bang, but then try to convince him to brush his teeth!” (Laila, 35, 6-y.o. son, SA, Aus)
A third alternative is that the observed intensities are simply a part of the gifted child. Evidence from almost 100 years of research (Terman, 1925; Hollingworth, 1926) and the definition of gifted that is guiding this thesis, suggest these intensities could simply be a part of these children. Children with lower cognitive capacities are expected to have challenging behaviours (for example; Freeman et al., 1981; Murphy et al., 2005). There is currently no evidence or argument that suggests this will not be the case with children of higher intelligence. As Webb (2011) has argued, if we have this understanding at the left end of the bell curve, why not at least entertain the idea that we should expect cognitive and behavioural differences in individuals found to the right. Therefore, the scores on the SDQ could be an indicator of an attempt to compare an exceptional population against measures that were designed for a normal one.

Returning to the goal of this chapter, the SDQ results of this study supported by those of Morawska and Sanders (2008), and Guénolé et al., (2013) along with the high prevalence of twice exceptionalities, all of which fit closely with anecdotal reports, are convincing evidence that behavioural characteristics of gifted children are quantitatively different to typically developing children.

The parents studied here speak of the constant intensity of their children and their own exhaustion. These parents are parenting children with characteristics that make the task of parenting more demanding. It is likely that the characteristics of these children will make it difficult to find an appropriate educational fit – academically, emotionally, and/or socially – and this will further increase demands on the parents. With that in mind, the following chapter will explore the education of the children in the sample and the relationship between the parent and the school.
CHAPTER 5

The Educational Environment

“… no school can work well for children if parents and teachers do not act in partnership on behalf of the children's best interests.”

Dorothy H. Cohen

According to Bronfenbrenner’s Bioecological Systems Theory (see Chapter 1) the school environment is both a microsystem and a mesosystem and is thus of paramount importance for the development of the child. The research is clear that a strong relationship between the parents and the school positively affects a child’s academic performance (e.g.; Bronfenbrenner, 2005; Booth & Dunn, 1996; Cavanagh & Fomby, 2012; Freeman & Viarengo, 2014).

Hollingworth (1926) was the first to note that superior intelligence alone was not enough for the child to be successful – that there needed to be support from both the child’s parents and the child’s school. She went on to say that unless the school met the academic, social and emotional needs of the gifted child, the child could become bored, disengaged, and socially isolated. To Hollingworth, the role of the school was pivotal to the intellectual and emotional wellbeing of the gifted child.

It would seem logical to think that schools are where a child with academic potential should thrive. For parents there is ample evidence available that educating gifted children is something that schools of all types are able and willing to do. For example, parents who visit the website of the Department of Education in New South Wales, Australia, looking for the current policy on gifted education, could feel confident that their child’s needs will be met when reading statements such as the following:
“The New South Wales government aims to identify gifted and talented students and to maximise their learning outcomes in all public schools.” (NSW Department of Education, 2015).

Coupled with reassurances such as this, is a vast literature on best practices for educating the gifted child (e.g.; Plucker & Callahan, 2008; Robinson, Shore, & Enersen, 2007; Rogers, 2002; Van Tassel-Baska & Brown E. F, 2007). Similarly, there are numerous websites to help parents understand the issues of gifted children and share helpful information on the schooling options available to them and advocacy techniques (e.g; hoagiesgifted.org, 2016; Ohio Association of Gifted Children, 2009; Shoplik, 2015). This may set up the expectation that their child will be well catered to at their school of choice. While the parent may also come across examples in the public domain where advocacy has failed to work and educating a child has been difficult for a parent, they may be rare enough that they could be dismissed, and the parents could continue to hold on to the hope of a good educational fit. One parent shared the following:

“It never occurred to me until my children went to school that we would have such issues.” (Michelle, 44, 10-y.o. son, USA)

The literature on the concerns of the parents of gifted children illustrates the vital role of the school and the education system for these families (for example see: Alsop, 1994; Fisher et al., 2005; Gross, 2004; Hackney, 1981; Jolly & Matthews, 2012). Seeking an appropriate educational fit for their child is a central concern for most parents and may become a driving force for the parents of gifted children. There is less evidence available as to whether a poor relationship between the family and the teacher and/or school has an influence on the wellbeing of the parent and perhaps, by extension, the relationship between the parent and the child. This chapter describes the educational
environment of the gifted children studied here and how satisfied the parents are with this environment.

Methods

Participants.

One hundred and seventeen Australian and 265 US parents completed the online survey. In a small number of families, both parents took part. Parents were matched so that characteristics of the child were included only once in the analysis. For both countries, parents were matched on sociodemographic information along with other family information such as the age of target child and the number of children in the family. Location information was then used to confirm that both parents were from the same family. Where responses from both parents were provided, the mothers’ data were retained. This was done as all but 33 of the 382 participants were mothers or female primary carers. This provided information on 109 Australian and 262 US children.

For the FSRS, having the opinion of both parents was deemed important and both parents were included in the analysis. However, given they did not have a relationship with a school, parents who indicated they were homeschooling their child were removed. This results in responses on the FSRS from 109 Australian and 194 US parents.

Measures.

Child sociodemographics questionnaire.

Parents were asked to provide information on aspects of the child’s educational environment. The full list of questions and answer choices can be found in the copy of the survey at Appendix B.
*Type of school:* Parents were asked to choose the type of school their child was enrolled in from a list of six options. They also had the opportunity to choose “Other” and enter a description of their child’s school in a text box if they believed their child’s school type was not listed. Four Australian parents and 21 US parents indicated their child’s school did not fall into one of the predetermined categories and gave details as to what type of school their child was enrolled at. These responses were re-coded and where appropriate entered into existing categories. A list of all “Other” responses is given in Appendix Q.

*Reason for Homeschooling:* Parents who indicated their child was being homeschooled were asked to give their primary reason for making this choice. Parent responses are shown in Appendix R.

*Year Enrolled:* Where the child was undertaking a traditional school program parents were asked to indicate which year the child was enrolled in.

*Forms of accommodation:* The parents who indicated their child’s school was offering accommodations were asked to choose the form/s of accommodation from a list of nine possibilities. Where parents indicated their child was receiving an accommodation they felt did not fit into one of the offered categories, they chose “Other” and were able to explain their response in a text box. Where possible “Other” was recoded to existing accommodations. A full list of “Other” responses is given in Appendix S. One Australian and five US parents indicated their child was receiving educational accommodation but failed to indicate what type.

*Parental satisfaction with educational accommodation:* Where accommodations were being offered, parents were asked to indicate how satisfied they were with the accommodations on a 5-Point Likert scale ranging from $1 = $Very Dissatisfied$ to $5 = Very Satisfied$. 

100
Number of school changes and reason for school change: Parents who indicated their child had changed schools were asked to choose the main reason for the changes from four possible options (1 = Needs not met; 2 = Family relocated; 3 = Moved schools to enter gifted class; 4 = other). Parents who chose “Other” were asked to share further information in a text box. The data were analysed and, where appropriate, recoded to existing choices. For ease of coding, only the reason for the first school move was coded. A list of all “Other” responses is given in Appendix T.

Standardised measures.

Family School Relationship Survey.

The Family School Relationship Survey (FSRS; Adams & Christenson, 2000) consists of three scales that aim to measure facets of the relationship between a parent and their child’s teacher. These are the level of trust that parents have in their child’s teacher, the frequency of contact with their child’s teacher, and their satisfaction with the relationship with their child’s teachers.

To measure the level of trust that parents had in their child’s teacher parents were asked to rate on a 5-point Likert scale (ranging from 1 = Strongly Disagree to 5 = Strongly Agree) how much they agree with each of nineteen statements. An example of a statement is “I am confident that my child’s teachers are doing a good job teaching my child academic subjects.”

Parents were then asked to rate the frequency of contact with their child’s teachers and how satisfied they were with the relationship with their child’s teachers. Psychometric properties of the FSRS have not been published, however the survey has been used in the educational psychology literature, in the USA. In the current study, the internal consistency for the scale was excellent (α=.95).
To examine the frequency of contact that parents have with their child’s teacher, they were asked to choose between the following five options: 1 = Very infrequently; 2 = Somewhat frequently, the bare minimum; 3 = Somewhat frequently, but less than I’d like; 4 = Very frequently; and 5 = Other. Parents who chose “Other” were asked to elaborate on their answer in a text box. A list of all “Other” responses is given in Appendix U.

Procedure.

As part of the online survey, parents completed questions on the child’s education and standardised measures following the procedure set out in Chapter 2.

Analysis.

To sketch the picture that emerged from an exploration of the data, descriptive statistics such as percentages, means, and frequencies, were used.

Results: The Educational Environment

Type of school and grade enrolled.

In the Australian sample, the majority of children ($N=60$: 55.0%) attended state schools with private – religious schools being the next most likely chosen response ($N=33$: 30.3%). A further five children (4.6%) attended a private non-religious school, nine (8.3%) were home-schooled, and two children (1.8%) attended an alternative school such as Montessori or Steiner.

As with the Australian sample, the majority of USA children ($N=138$: 52.7%) attended state schools with homeschooling being the next most commonly chosen response ($N=71$: 7.1%). Seventeen children were enrolled in private – non-religious schools (6.5%) and a further 14 children attended private – religious schools (5.3%). Seven children (2.7%) attended an alternative school such as Montessori or Steiner. Four children (1.5%) were enrolled in specific schools for the gifted as opposed to a
gifted program within a regular school. A further 11 children attended options not
given by the Australian parents: co-schooled (N=3: 1.1%), charter School (N=4: 1.5%),
charter school for home-schooleds (N=2: 0.8%) and E-school (N=2: 0.8%). Table 10
shows the type of school that the children attend across both countries.

Table 10

_Type of school children attend – Australia and USA_

<table>
<thead>
<tr>
<th>Type of School</th>
<th>Australia N = 109</th>
<th>USA N = 262</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Public</td>
<td>60</td>
<td>55.0</td>
</tr>
<tr>
<td>Private – religious</td>
<td>33</td>
<td>30.3</td>
</tr>
<tr>
<td>Home-schooled</td>
<td>9</td>
<td>8.3</td>
</tr>
<tr>
<td>Private- non-religious</td>
<td>5</td>
<td>4.6</td>
</tr>
<tr>
<td>Alternative</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td>Specialised school for the</td>
<td>4</td>
<td>1.5</td>
</tr>
<tr>
<td>gifted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-schooled</td>
<td>3</td>
<td>1.1</td>
</tr>
<tr>
<td>Charter school</td>
<td>4</td>
<td>1.5</td>
</tr>
<tr>
<td>Charter school for home-schooled</td>
<td>2</td>
<td>0.8</td>
</tr>
<tr>
<td>E-School</td>
<td>2</td>
<td>0.8</td>
</tr>
</tbody>
</table>

For those children across both countries who were not home-schooled, parents
gave the grade the child was enrolled in as shown in Figure 4 below. Australian children
were distributed relatively evenly across all grades while US children were mostly in Years 2 to 5.

![Graph: Grade of School Enrolment by Country](image)

*Figure 4: Grade of school enrolment – Australia and USA*

**Type of educational accommodation and parental satisfaction.**

Seventy-seven Australian parents (77.0%) stated their child was receiving at least one form of educational accommodation and one parent failed to answer what type of accommodation was being offered. One hundred and thirty-seven US parents (71.3%) stated their child was receiving at least one form of educational accommodation with five parents failing to indicate what type of accommodation was being offered. The different forms of accommodation and number of children who were receiving each type are shown in Table 11 for both countries.
Table 11

Forms of accommodation children are receiving - Australia and USA

<table>
<thead>
<tr>
<th>Form of accommodation</th>
<th>Australia</th>
<th></th>
<th>USA</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>$N = 77$</td>
<td>$N = 137$</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$N$</td>
<td>%</td>
<td>$N$</td>
<td>%</td>
</tr>
<tr>
<td>Ability or achievement grouping</td>
<td>44</td>
<td>44.0</td>
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<td>30.4</td>
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<td>Compacted curriculum</td>
<td>6</td>
<td>6.0</td>
<td>20</td>
<td>10.5</td>
</tr>
<tr>
<td>Enrichment activities</td>
<td>33</td>
<td>33.0</td>
<td>38</td>
<td>19.9</td>
</tr>
<tr>
<td>Grade Skipping</td>
<td>15</td>
<td>15.0</td>
<td>30</td>
<td>15.7</td>
</tr>
<tr>
<td>Differentiation of classroom work</td>
<td>40</td>
<td>38.5</td>
<td>47</td>
<td>24.6</td>
</tr>
<tr>
<td>Pull out groups</td>
<td>28</td>
<td>28.0</td>
<td>65</td>
<td>34.0</td>
</tr>
<tr>
<td>Specific gifted program</td>
<td>7</td>
<td>7.0</td>
<td>44</td>
<td>21.5</td>
</tr>
<tr>
<td>Subject acceleration</td>
<td>18</td>
<td>18.0</td>
<td>52</td>
<td>27.2</td>
</tr>
<tr>
<td>Telescoping</td>
<td>4</td>
<td>4.0</td>
<td>3</td>
<td>1.6</td>
</tr>
</tbody>
</table>

Note: Percentages do not add to 100 as children may be receiving more than one form of accommodation.

Both Australian and US parents reported a median of two interventions being offered to their children. One Australian and two US children were receiving eight different forms of accommodation, however 50% of US students and 60% of Australian students were receiving just one or two. As can be seen from Table 11, the most common forms of intervention for the Australian children were ability or achievement grouping, individualised differentiation of classroom work, and enrichment activities. For the US, children the top three interventions were pull out groups, ability or achievement grouping, and subject acceleration.
Seventy-seven Australian parents indicated their child was receiving educational accommodations. Seventy-six of these parents provided a response relating to their satisfaction level. The majority of parents were either satisfied (N=31; 40.8%) or very satisfied (N=11; 14.5%) with the educational accommodations their child was receiving. Thirteen parents (17.1%) stated they were unsure how satisfied they were with a further 15 (19.7%) indicating they were dissatisfied. Six parents (7.9%) were very dissatisfied with what the school was doing for their child.

One hundred and thirty-seven US parents stated their child was receiving at least one form of educational accommodation with five parents failing to indicate how satisfied they were with the accommodations. The majority of parents were either satisfied (N=43; 31.4%) or very satisfied (N=29; 21.2%) with the educational accommodations their child was receiving. Twenty-five parents (18.2%) stated they were unsure how satisfied they were. A further 27 (19.7%) were dissatisfied and eight parents (5.8%) were very dissatisfied with what the school was doing for their child.

**Change of schools.**

Thirty-three, a substantial majority, of the 47 Australian children who had changed schools, had changed just once. All but one of the remaining children had changed two (N=11) or three times (N=2), however, that one child had changed five times.

One hundred and eighteen US parents stated their child had changed schools, however only 81 parents stated how many changes had occurred. Of these, 43 children had changed just once. Fifteen had changed twice, another 20 had changed schools three times, two children had changed schools four times, and one child had five school changes.
The number of children who changed schools for each reason is shown in Table 12. The percentage given is based on the total number of children who changed schools.

Table 12

*Reasons for school changes – Australia and USA*

<table>
<thead>
<tr>
<th>Reason for change</th>
<th>Australia</th>
<th></th>
<th>USA</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N = 47</td>
<td>%</td>
<td>N = 118</td>
<td>%</td>
</tr>
<tr>
<td>Needs not being met</td>
<td>30</td>
<td>63.8</td>
<td>75</td>
<td>63.6</td>
</tr>
<tr>
<td>Geographic move</td>
<td>10</td>
<td>21.3</td>
<td>28</td>
<td>23.7</td>
</tr>
<tr>
<td>Moved to gifted class</td>
<td>3</td>
<td>6.4</td>
<td>8</td>
<td>6.8</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>8.5</td>
<td>5</td>
<td>4.2</td>
</tr>
<tr>
<td>Missing</td>
<td>3</td>
<td>2.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As can be seen from Table 12, the majority of children in both countries moved schools because their parents considered their educational needs were not being met. The next most frequent reason for school change was due to the family relocating geographically for reasons not related to the child’s educational needs. The most common reason given within this category was the family relocating due to a parent’s occupational demands. Parents of four Australian children (8.5%) stated they had other reasons for moving their child including financial reasons, school closure, a planned move to a high school that also covered primary Years 5 and 6, and a move to a local school to integrate into the community before attending a local high school. Three US parents did not give a reason for their child’s school change. Parents of five US
children (4.2%) stated they had other reasons for moving their child, which included financial, school closure, an incident the child witnessed, and the school not going beyond the end of Year 1.

**Family School Relationship Survey.**

The mean score on the FSRS for Australian parents was 3.57 ($N=100$: $SD = 0.73$) and for the US parents the average score was 3.58 ($N=191$ $SD= 0.72$).

Parents’ responses to the questions relating to the frequency of contact are displayed in Table 13. Positively, 30 Australian parents (30.0%) had very frequent contact and were assumed to be satisfied with this level of contact. However, over half of the sample ($N = 58$: 58.1%) indicated they would like more frequent contact with their child’s teachers. One third of parents ($N=33$: 33.0%) stated they had somewhat frequent contact with their child’s teacher but this was less than they would like, a further 15% ($N=15$) stated they had somewhat frequent contact and felt that it was the bare minimum, with 10% ($N=10$) indicating they had very infrequent contact. Twelve Australian parents (12.0%) indicated the level of contact they had with their child’s teacher was not covered by the options offered. Parental responses indicate a wide range of contact frequency and satisfaction levels and are included at Appendix U.

Seventy-two US parents (37.7%) had very frequent contact and were assumed to be satisfied with this level of contact. However, over half of the sample ($N= 103$: 53.9%) indicated they would like more frequent contact with their child’s teachers. Approximately one third of parents ($N=71$: 37.2%) stated they had somewhat frequent contact with their child’s teacher but this was less than they would like, a further 11.0% ($N=21$) stated they had somewhat frequent contact and felt that it was the bare minimum, with 6.3% ($N=11$) indicating they had very infrequent contact. Sixteen US parents (8.4%) indicated the level of contact they had with their child’s teacher was
not covered by the options offered. As with the Australian parents, responses indicate a wide range of contact frequency and satisfaction levels and these responses are included at Appendix U.

Table 13  
Frequency of contact with child’s teacher – Australia and USA

<table>
<thead>
<tr>
<th></th>
<th>Australia</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$N = 100$</td>
<td>$N = 191$</td>
</tr>
<tr>
<td>I have contact with teachers of my child’s teacher…</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very infrequently</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>Somewhat frequently, the bare minimum</td>
<td>15</td>
<td>21</td>
</tr>
<tr>
<td>Somewhat frequently, but less than I’d like</td>
<td>33</td>
<td>71</td>
</tr>
<tr>
<td>Very frequently</td>
<td>30</td>
<td>72</td>
</tr>
<tr>
<td>Other</td>
<td>12</td>
<td>16</td>
</tr>
</tbody>
</table>

For both countries, parent’s responses to the question asking them how satisfying they found the relationship with their child’s teacher are shown in Table 14. A sizeable minority of Australian parents ($N=24$: 24.0%) described their relationship with their child’s teacher as very satisfying. An even smaller minority ($N=6$: 6.0%) reported their relationship was very unsatisfying and this made it difficult to work with their child’s teachers. The majority of parents while not completely dissatisfied were also not completely satisfied with the relationship.

A sizeable minority of US parents ($N=60$: 31.4%) described their relationship with their child’s teacher as very satisfying. An even smaller minority ($N=17$: 8.9%) reported their relationship was very unsatisfying and this made it difficult to work with
their child’s teachers. The majority of parents while not completely dissatisfied were also not completely satisfied with the relationship.

Table 14

*Parental satisfaction with relationship with child’s teacher – Australia and USA*

<table>
<thead>
<tr>
<th></th>
<th>Australia (N = 100)</th>
<th>USA (N = 191)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I find the relationship with my child’s teacher…</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very unsatisfying, it is difficult to work with my child’s teacher</td>
<td>6 (6.0%)</td>
<td>17 (8.9%)</td>
</tr>
<tr>
<td>Somewhat unsatisfying, could definitely be improved</td>
<td>15 (15.0%)</td>
<td>34 (17.8%)</td>
</tr>
<tr>
<td>Somewhat satisfying, it’s ok</td>
<td>52 (52.0%)</td>
<td>73 (38.2%)</td>
</tr>
<tr>
<td>Very satisfying, it is easy for me to work with my child’s teacher</td>
<td>24 (24.0%)</td>
<td>60 (16.8%)</td>
</tr>
<tr>
<td>Other</td>
<td>3 (3.0%)</td>
<td>7 (3.7%)</td>
</tr>
</tbody>
</table>

**Homeschooling.**

Parents who indicated their child was being home-schooled were asked to give a reason for their choice. The parents of nine Australian children indicated their child was home-schooled. Eight of these parents stated they chose to homeschool their children because they believed traditional schools could not meet the academic, social, and emotional needs of their child. One parent was already homeschooling their older
child and believed it to be a superior educational method before they found their younger child was gifted.

Over a quarter of the US sample (N=71: 26.8%) were homeschooling their gifted child. Of these, an overwhelming majority (N=57: 80.3%) reported that traditional schools were unable to meet their child’s academic, social and emotional needs. A further 10 parents (14.1%) stated they were already homeschooling other children or had decided before discovering their child’s intellectual capacity that homeschooling was the best educational option for any child of theirs. Other reasons for homeschooling included religious reasons (N=2: 2.8%), parental work patterns (N=1: 1.4%), and severe food allergies (N=1:1.4%).

Discussion

Most of the Australian children in the study were attending a state primary school. They were likely to have changed schools at least once and this was probably due to their parent’s perception that their needs were not being met at their prior school. Their current school was, on average, responding to their needs through two accommodation methods. These were most often some form of ability or achievement grouping and individualised differentiation of classroom work. Their parents were relatively satisfied with this level of intervention. Parents had a moderate level of trust in their child’s classroom teacher and were ambivalent about their relationship with same, with the majority describing the relationship as only “Somewhat” satisfying. Many parents stated they would appreciate more communication from their child’s teacher.

The US children attended a state primary school. As was found with the Australian children, they were likely to have changed schools at least once and this was mostly often because of a poor academic fit. A quarter of US children were home-
schooled and the vast majority of these were home-schooled because their parents believed the “bricks and mortar” schools could not meet their child’s needs.

As was found in the Australian sample, the children in the US were likely to be accommodated by their school and they were, on average, receiving two interventions. For the US students, this intervention took the form of pull out groups, ability or achievement grouping, or subject acceleration with all three accommodations equally likely to be used by their school. Their parents were relatively satisfied with this level of intervention. As with the Australian, the US parents had a moderate level of trust in their child’s teacher. Although few US parents were negative about their relationship with their child’s classroom teacher, the majority were still ambivalent describing the relationship as only “Somewhat” satisfying. Many parents stated they would appreciate more communication.

Parents would like the teacher to be in touch with them more frequently and would like to be informed of how the child is performing more regularly. Parents’ description of their child’s schooling experience as described above showed that they were heavily invested in finding an appropriate educational fit for their child. These points will be discussed in turn below.

School type.

Given that there is no nationally mandated approach to gifted education in either Australia or the USA, the responsibility to meet the needs of the gifted child rests with the individual classroom teacher. However, the behaviours of many of the parents in this study show that they felt it was their responsibility to ensure they are aware of their child’s needs, what should be done for them in a classroom, what realistically can be done for them, and for continually monitoring what is being done for them. A large number of parents, especially in the USA, have felt so strongly about their level of
responsibility that they have assumed complete accountability for their child’s education. This was evidenced by the numbers of parents choosing to homeschool their children. Although lower in Australia, a quarter of the families were homeschooling in the USA. This was consistent with the broad literature showing that educating the gifted child is a key concern of the parents (Alsop, 1994; Fisher et al., 2005; Gross, 2004; Hackney, 1981; Jolly & Matthews, 2012).

A major distinction between the two countries was the array of educational options available to the parents with many more options being available to the US parents and their children. Of specific interest is the existence of specialist schools for the gifted in the USA and magnet schools that are specifically set up for children of high intellect. In Australia, some states offer selective entry primary and high school classes such as the “Opportunity Classes” for public primary school children in New South Wales (NSW Department of Education, 2016b) and selective entry high schools in several states (NSW Department of Education, 2016a; Victoria State Government Education & Training, 2015; Western Australia Department of Education, 2015). Australian parents have fewer choices when it comes to educating their gifted child than their US counterparts.

The clearest difference between the two samples was the number of families choosing to home school their child (Australia: N=9: 8.3%. USA: N= 71: 27.1%). Statistics on the prevalence of home schooling in both countries are not readily available. The reasons parents gave for homeschooling makes it clear that they chose to become their child’s educators in an effort to ensure their child’s individual needs were being met. Some parents made this choice without trying traditional schooling. The majority, however, tried traditional schooling first and then, based on their perception of how well their child’s needs were being met, they opted to homeschool. These are
parents who can be assumed to be heavily invested in meeting their child’s educational needs, as the decision to home school is not one to be taken lightly.

**Type of educational accommodation and parental satisfaction.**

A similar percentage of Australian (77.0%) and US children (71.3%) were receiving at least one intervention from their school and most children were given two forms of accommodation. Results show that educators in both countries preferred pull out groups, ability or achievement grouping, individualised in-class differentiation, and enrichment activities to other forms of accommodation. In comparison to the Australian sample, three times as many US children were enrolled in a specific gifted program, probably reflecting the greater availability of this type of program in the US. Grade acceleration was used equally across the two countries (Australia = 15.0% and USA = 15.7%) and was the third least likely intervention. Telescoping and curriculum compacting were the least favoured accommodations across both countries.

Of interest was the relative lack of the use of one of the most cost effective forms of intervention for gifted children (Fisvold, 2015). While research such as “A Nation Empowered” (Assouline, Colangelo, & VanTassel-Baska, 2015) advocates strongly for the use of acceleration/grade skipping, it was one of the least favoured forms of intervention for children in either country of the current sample. It is recognised that acceleration is not suitable for every child, however as outlined in Chapter 4, the vast majority of the children in this sample were in the top 2% of the bell curve and would therefore be considered highly likely to benefit from grade skipping (Assouline, Colangelo, Lupkowski-Shoplik, Lipscombe, & Forstadt, 2009).

**Change of schools.**

Almost half of both samples had changed schools at least once and some children had changed schools as many as five times. Most parents stated that the move
was undertaken as their child’s educational needs were not being met. A few also mentioned difficulties in having their child’s social and emotional needs catered to as well. Parents gave a range of reasons for the change in school some of which were distressing. Parents shared things such as children who had been bullied by teachers, ostracised by other children, disengaged from learning, poor educational attainment, teachers who did not understand the emotional intensity of these children, and broken promises. Other children were moved to enter special Gifted Education opportunities that would (hopefully) have seen them engaged and enjoying learning again.

Some parents stated they had tried advocating for their child and the decision to change schools was done after a considerable period of time as the following parent shares:

“1st change was because the public school was unable to meet his needs. We had 3 frustrating years after he was tested, during which the school did not follow through on what they said they would do, and lied to us about options available.”

(Helen, 45, 13-y.o. son, IL, USA)

For some families, the reality was that a single change of schools was not sufficient as the parent below shares after three school changes:

“poor educational fit. unwillingness to differentiate. lack of understanding of gifted children. same problems at each school.” (Rebecca, 34, 5-y.o. daughter, FL, USA)

It seems from these quotes that some of the parents have attempted to advocate for their child’s needs and been unsuccessful. They have then had to embark on the process of trying to find a new school that they feel will meet the needs of their child.

The parents now have two burdens. One, finding a new school that will better meet the needs of their child and once a school has been identified, managing their child
through the transition. There is a surprising lack of research on the social and emotional impact of school changes on primary school children. What is available focuses on the academic performance of the children rather than their wellbeing (Alexander, Entwisle, & Dauber, 1996; Heinlein & Shinn, 2000; Temple & Reynolds, 2000). It is likely that changing schools, as with any transition, is an event that a child would need support with.

While this change is physically happening to the child, the parents are the ones who will bear the psychological brunt of advocating for their child and then coming to a point where they feel a move is the best option. Potentially, the parents are then faced with new worries about uprooting a child who is already facing social and emotional difficulties and placing them in a new and unknown environment. For some, this will be a positive move while for others the search may have to start yet again.

**Family School Relationship Survey.**

While the proportion of parents who were clearly satisfied with the relationship with their child’s teacher was not overwhelming, the proportion who were clearly dissatisfied was small. The responses from most parents indicated they were “Somewhat” satisfied, suggesting most parents felt ambivalent about the relationship with their child’s teacher. As for the frequency of contact with their child’s teacher, again the number of parents who were clearly satisfied was not large however, those who were clearly dissatisfied was again small. More than half of parents again chose “Somewhat” to describe the adequacy of the frequency of contact with their child’s teacher. Across both Australia and the US, many parents reported they would appreciate more frequent contact with the teachers.

In individual comments, some parents seemed to desire what could be considered an unreasonable amount of contact, with one parent wishing for daily
interaction. Other parents stated the contact was made only when they initiated it and they were afraid of being seen as either pushy or hovering. So perhaps the parents want more – or a different type of – interaction but struggle to find that balance?

The relationship between the parent and teacher is a dynamic one. New relationships will be established at least annually as the child advances through primary school. Each new school year brings at least one teacher with whom the parent and child need to negotiate a new connection. The best-case scenario would be that the child has a caring, well informed teacher who both realises the child needs special attention and delivers this because they have received training. Sadly, many times the reality is an overworked and under resourced teacher with little training in the complex educational needs of the gifted child. Such teachers will be challenged to meet the needs of the child in a regular classroom and may not have the backing of the school executive to do so. One parent shared:

“It's really hard to see a child who is eager to learn not having an appropriate curriculum when he had one before that really suit his needs. He was so happy then and learning so much... I feel tired to try and explain the new teacher about what my son's needs are. She is very caring and willing to help, but I think she lacks understanding of what kind or type of program he really needs.” (Julie, 47, 7-y.o. son, Aus)

Other parent responses showed the importance of understanding from not just the classroom teacher but from the higher levels of the education system:

“The problem isn't necessarily with the teachers. My daughter has a fantastic teacher this year - unfortunately, he has no support from the school to support her. In the end he sends the work home and she does it in her own time after being bored in the classroom all day!” (Cathy, 39, 8-y.o. daughter, Qld, Aus)
And:

“I trust my child's teachers. It is the superintendent that I find has little knowledge of gifted learners.” (Rhonda, 38, 7-y.o. son, USA)

Being hopeful for an adequate education for one’s child is not a problem specific to the gifted. Exceptional children, including those who are gifted, are unlikely to have their academic needs met in a regular classroom without modification to the curriculum (Gross, 2004; Litster & Roberts, 2011; Rogers, 2002; van der Meulen et al., 2014). An exceptional child’s social and emotional needs are also likely to be different to that of a typical child (Alsop, 2003; Daniels & Piechowski, 2009; Distin, 2006; Neihart et al., 2002). This held true in the current group as was seen in Chapter 4. For some parents this can result in ongoing advocacy for the gifted child who does not have an adequate educational fit. Parents shared their struggles in attempting to advocate effectively for a group of children who are not necessarily understood by their teachers:

“"I think the core difficulty lies with the fact that being gifted is not seen as a special needs issue. If there was more official recognition of this as an issue then most people's problems would lessen overnight simply because they would not be perceived as pushy parents."” (Claire, 44, 9-y.o. son, NSW, Aus)

This highlighted a common theme of parents either being labelled, or fearing being labelled as pushy as this mother writes:

“… being labelled as pushy, having to put up with stuff from schools you wouldn’t take from anyone else, ever (like being called a liar), each new teacher patronising me and as good as telling me I've got tickets on myself” (Louise, 47, 9 y.o. daughter, Vic, Aus)
Comments such as these are suggestive of a mismatch between the perception of the parent and the teacher. What parents might see as involvement or advocacy, teachers may see as overbearing and overinvolved. This perception by teachers can be unhelpfully informed by stereotypes they may bring to their interactions with the parents of the gifted. For example, one textbook used by a University in Australia to prepare high school teachers states that while teachers generally hold expectations that help the development of the gifted child, families, specifically parents, can create problems. McInerney and McInerney (2006) believe that difficulties for the child can be the result of “overambitious parents determined to push their children to the limits.” (p. 332). As an important part of the system needed to support the child educationally, socially and emotionally, these types of messages from educators are likely to be yet another concern for the parents.

**Conclusion**

The above description of the educational environment of the children in the current study showed that most schools are attempting to provide some form of accommodation and usually not expecting that a single intervention will meet the child’s needs. However, despite this effort on the school’s part, the parents reported a level of satisfaction with the accommodations that could be described as unenthusiastic and indicated ambivalence towards the relationship with their child’s teachers. In some cases, parents were sufficiently motivated to change their child’s school and for a quarter of the US sample the parents assumed complete responsibility for meeting their child’s academic needs by turning to homeschooling as the best way to find an education fit.
CHAPTER 6

Parental Wellbeing

"Our fears are always more numerous than our dangers."

Seneca

The three key systems - family, child, and school - have now been described. Variables likely to be associated with the parents’ psychological wellbeing have been identified. Sociodemographic characteristics of the family, which are known to have an influence on coping and psychological wellbeing, were set out in Chapter 3. Characteristics of the children likely to cause the parents’ concerns such as the presence of a second source of exceptionality and/or behavioural problems were described in Chapter 4. Further causes for concern about their child’s current school environment were identified in Chapter 5. The aims of the current chapter are to describe the psychological wellbeing of the parents, in particular depression, anxiety, and stress, and then investigate the association between the child characteristics and educational areas of concern to determine what, if any, association there is between these systems and the wellbeing of the parent.

Chapter 3 highlighted the strong protective factors enjoyed by these families. However, children in the study were extremely gifted and are thereby exceptional by definition. Further Chapter 4 presented results suggesting that there are other areas of exceptionality in many of these children.

Research has shown that parenting a child who is exceptional, such as a child with Down syndrome (Sanders & Morgan, 1997), Autism Spectrum Disorder (Hayes & Watson, 2013; Huang et al., 2014), ADHD (Anastopoulos et al., 1992; Pimentel, Vieira-Santos, Santos, & Vale, 2011;), or a chronic health problem such as Type 1 Diabetes (Patton, Dolan, Smith, Thomas, & Powers, 2011; Whittemore et al., 2012), places extra
demands on the parents. Each diagnostic category may bring with it demands that are unique to that particular population, yet many seem to overlap and contribute to parental stress and threaten parental psychological wellbeing. Given this overlap, the findings of studies of these more seriously handicapped children can help identify characteristics of the gifted child that are associated with parental vulnerability and psychological wellbeing.

One area shared by all parents but exacerbated when children have problems is daily hassles. Every parent experiences daily hassles such as whining, disobedience, tantrums, sleep deprivation, or meeting the constant demands that children place on their caregivers especially in their earlier years (Crnic & Low, 2002). While normal levels of daily hassles are of little consequence to either the parent or child, prolonged, intense daily difficulties have been associated with negative outcomes for the parent, the child, and the relationship between the two (Belsky, Woodworth, & Crnic, 1996). It is not surprising therefore, that daily hassles and their relationship to parental stress has been widely researched in parents of exceptional children (Charron-Prochownik, 2002; Deater-Deckard, 2005; Green, 2007; Harper, Dyches, Harper, Roper, & South, 2013; Khamis, 2007; Larson, 1998; Padeliadu, 1998).

Research has shown that parenting a child who is outside of the norm, such as a child with Down syndrome (Sanders & Morgan, 1997), Autism spectrum disorder (Huang et al., 2014; Hayes & Watson, 2013), ADHD (Pimentel et al., 2011; Anastopoulos et al., 1992), or chronic health problems such as Type 1 Diabetes (Patton et al., 2011; Whittemore et al., 2012), places extra demands on the parents. Each diagnostic category may bring with it demands that are unique to that particular population, yet many demands seem to overlap and contribute to parental stress and threaten parental psychological wellbeing.
Parents of children with difficulties such as Autism or Down syndrome are likely to experience demands that are more severe and ongoing in nature than for parents of typically developing children. Sanders and Morgan (1997) compared the levels of family stress in families with either Autism or Down syndrome. Families were grouped by the disorder their child had – either Autism or Down syndrome – and were then compared with the families of typically developing children. All children were aged 7 – 11 years and each group had a relatively even gender split.

Across all measures, parents of the children with Autism or Down syndrome reported significantly higher levels of family stress. Further, the parents of children with Autism showed higher levels of family stress than the parents of children with Down syndrome. Parents of children with Autism were more critical of their child’s behavioural characteristics. These negative child characteristics were associated with higher levels of distress in parents.

Huang and colleagues (2014) investigated the relationship between problematic behaviour and parent stress in the mothers of 52 Chinese children aged between 3 and 12 years with an Autism spectrum disorder diagnosis. Both the Parenting Stress Index – short form and the SDQ – Chinese version were administered to parents and information relating to the child’s autistic behaviours was also collected. The children in the sample had higher mean scores for Hyperactivity/Inattention and Peer Problems than the children in the normative sample. In a regression model, Conduct Problems were shown to have the strongest connection with parenting stress as measured by the Parenting Stress Index – Short Form (Abidin, 1990) even when accounting for other variables.

Pimentel and colleagues (2011) investigated the relationship between problematic behaviour and parent stress in the mothers of 52 Portuguese children aged
between 6 and 12 years with a diagnosis of ADHD. Mothers of the ADHD children obtained higher mean scores on the Child Domain and Total Stress on the PSI than the normative sample. Mothers reported higher means on the Child Behavior Checklist. Again, child behaviours were found to contribute significantly to parental stress, with both internalising and externalising behaviours as important factors. Mothers described their children as more hyperactive/distractible, moody, and rigid, with other emotional and physical demands. These child behaviours were found to contribute significantly to the heightened levels of parental stress in the mothers.

Similar results were found in a review of studies of the relationship between having a child with Type 1 diabetes and parental psychological adjustment (Whittemore et al., 2012). The majority of the analysed studies showed that 20% to 30% of parents reported high levels of psychological distress with symptoms of anxiety and depression being the most common (Whittemore et al., 2012). In analysed papers where parents were compared to controls, the parents of the children with Type 1 diabetes consistently showed higher levels of parenting stress. As seen in the other populations discussed, higher levels of parenting stress was strongly associated with problematic child behaviour.

The previously mentioned studies show consistently that parents of exceptional children are at an increased risk of distress and this can be expressed as higher levels of parenting stress. A strong link is also evident between raising children who score highly on behavioural difficulties and higher levels of parental distress. While the demands of gifted children on their parents are nowhere near as high as the groups used as examples above, they are higher than in typically developing children and this may affect their parents’ psychological wellbeing.
This is in keeping with Morawska and Sanders (2008) who showed similar levels of problematic behaviours in a comparable sample of Australian children. Morawska and Sanders (2008) examined child behaviour variables through the SDQ and parental psychological wellbeing with the DASS. Children’s scores on the SDQ were similar to those reported in Chapter 4. Parents endorsed scores on the SDQ that placed 49.5% of children, described as a “significant minority” (p. 822), in the clinical range for Emotional and Peer Relationship Problems as has been found in the current sample. Their findings on the DASS showed that parent scores on depression, anxiety, and stress as well as the total distress score were within published norms.

Morawska and Sanders (2008) then used the DASS total difficulties score, along with relevant control variables, to predict child behaviour. They found the DASS total scores had no predictive capacity for the child’s behaviour. The current study has taken the opposite approach and asked what predictive capacity there is in the child’s behaviour for the parent’s scores on the DASS.

In this chapter, the following questions are investigated. What are the levels of parenting stress and psychological wellbeing in the parents of the gifted children? How are the characteristics of the family, child, and the level of parental trust in their child’s teacher associated with parental psychological wellbeing?

Methods

Participants.

One hundred and seventeen Australian and 265 US parents completed measures of psychological wellbeing.
Measures.

**Standardised measures.**

*Depression Anxiety and Stress Scales (DASS)*.

Developed in Australia, the Depression Anxiety and Stress Scales (DASS: Lovibond & Lovibond, 2004) was designed to measure the core symptoms of depression, anxiety, and stress. Each symptom is tapped by a subscale consisting of 14 items, with respondents being asked questions such as the following. For depression ‘I couldn’t seem to experience any positive feelings at all’, for anxiety “I was aware of dryness of my mouth” and stress, “I found it hard to wind down”.

Participants are asked to indicate how much each statement has applied to them over the past week using a 3-point Likert scale ranging from 0 = did not apply to me at all, to 2 = applied to me very much or most of the time. The DASS provides totals for each of the subscales and a Total Difficulties score.

Scores can be treated continuously however normative information is given to categorise scores by cut offs which results in five categories: Normal, Mild, Moderate, Severe, and Extremely Severe. Normative data for the USA were not available, therefore normative Australian data from the published manual (Lovibond & Lovibond, 2004) were used. In the current study, the internal consistency for the three subscales were acceptable (α range from .86 to .93) as was the Total Difficulties (α=.95). These were adequate for the purposes of this study and comparable to previous research (Lovibond & Lovibond, 2004; Musa et al., 2007).

*The Parental Stress Scale (PSS).*

The Parental Stress Scale (PSS: Berry & Jones, 1995) is a more narrowly focused measure of stress developed in the USA to measure potentially stressful facets of the parent-child relationship. It takes into account both positive and negative aspects
of parenting. Parents are presented with 18 statements that describe aspects of raising children. Samples of the statements include “caring for my child(ren) sometimes takes more time and energy than I have to give” and “I find my child(ren) enjoyable.” Respondents are asked to consider how well the statement fits their relationship with their child/ren using a 5-point Likert scale ranging from 1 = Strongly Disagree, to 5 = Strongly Agree. The total score is calculated by summing responses. Normative data given for this scale allow scores to be compared with scores of parents with typically developing children, children with a developmental disorder, and children who had been clinically referred due to behavioural difficulties. In the current study, the internal consistency for the scale was $\alpha = .63$.

As this is low, further investigations were conducted with the scale and no items were found that added to the consistency of the scale after being dropped. Examination of individual correlations between the items showed a number of them that are below the preferred cut off of 0.3 yet all are in the expected direction. Therefore, there does not seem to be a single explanation for the low internal consistency. The information does, however, add to the existing information on the struggles of parents of gifted children and, when couple with the narrative data obtained in this study, highlights differences in their parenting experience. Further investigation should be undertaken with a measure of parenting stress that may be more robust such as the Parenting Stress Index (Abidin, 1990). Given the exploratory nature of the study, it was decided to retain the scale and all items and to interpret results with caution.

**Procedure.**

As part of the online survey, parents completed the standardised measures as described in Chapter 2.
Analysis.

For the DASS, chi-square tests of independence were performed to determine whether there were significant differences in the distribution of the scores across levels of severity for each subscale. Where expected cell sizes were below five, Fishers’ exact test of probability was used.

For the PSS, a two-way t-test was carried out comparing scores on the PSS of the Australian parents to the US parents. One-way t-tests were carried out to compare each sample to available normative data.

Where results for the DASS and PSS showed significant differences between the current sample and normative data, hierarchical multiple regressions were undertaken to determine the contribution of the parents’ perception of their children’s behavioural problems to DASS and PSS scores. For both dependent variables (DASS Anxiety and PSS Total) covariates were entered at step 1. These were parent gender, country, age at birth of child, child age, child gender, and dual diagnosis. As there was no theoretical basis to guide the order of the independent variables, two separate models for each of the dependent variables were run. The first model entered SDQ Total at step 2 and Mean FSRS score at step 3. The same analyses were conducted with Means FSRS score entered at step 2 and SDQ Total entered at step 3. No significant difference was found between the two methods of entry of independent variables at step 2 and step 3.

Results: Parental Psychological Wellbeing

Depression Anxiety and Stress Scales.

Results for Australian parents are shown in Table 15 and for USA parents at Table 16.
Table 15

*DASS results for Australian parents - all children included*

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Category</th>
<th>Expected %</th>
<th>%</th>
<th>$\chi^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress</td>
<td>Normal</td>
<td>78</td>
<td>94.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mild</td>
<td>9</td>
<td>1.7</td>
<td>7.70**</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>8</td>
<td>1.7</td>
<td>5.55*</td>
</tr>
<tr>
<td></td>
<td>Severe</td>
<td>3</td>
<td>1.7</td>
<td>0.28NS</td>
</tr>
<tr>
<td></td>
<td>Extremely Severe</td>
<td>2</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>Normal</td>
<td>78</td>
<td>49.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mild</td>
<td>9</td>
<td>12.8</td>
<td>6.07**</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>8</td>
<td>18.0</td>
<td>17.37***</td>
</tr>
<tr>
<td></td>
<td>Severe</td>
<td>3</td>
<td>8.6</td>
<td>$p=0.005$</td>
</tr>
<tr>
<td></td>
<td>Extremely Severe</td>
<td>2</td>
<td>11.1</td>
<td>$p=&lt;0.001$</td>
</tr>
<tr>
<td>Depression</td>
<td>Normal</td>
<td>78</td>
<td>88.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mild</td>
<td>9</td>
<td>6.8</td>
<td>0.76NS</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>8</td>
<td>4.3</td>
<td>1.86NS</td>
</tr>
<tr>
<td></td>
<td>Severe</td>
<td>3</td>
<td>0.9</td>
<td>$p=0.23$NS</td>
</tr>
<tr>
<td></td>
<td>Extremely Severe</td>
<td>2</td>
<td>0.0</td>
<td>$p=0.23$NS</td>
</tr>
</tbody>
</table>

*Note: *$p<.05$  **$p<.01$  ***$p<.001$.  When expected cells size <five, Fishers Exact test conducted and reported.*
Table 16

*DASS results for USA parents - all children included*

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Category</th>
<th>Expected</th>
<th>%</th>
<th>%</th>
<th>(\chi^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress</td>
<td>Normal</td>
<td>78</td>
<td>78</td>
<td>95.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mild</td>
<td>9</td>
<td>9</td>
<td>2.6</td>
<td>13.91***</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>8</td>
<td>8</td>
<td>1.5</td>
<td>14.19***</td>
</tr>
<tr>
<td></td>
<td>Severe</td>
<td>3</td>
<td>3</td>
<td>0.8</td>
<td>3.57NS</td>
</tr>
<tr>
<td></td>
<td>Extremely Severe</td>
<td>2</td>
<td>2</td>
<td>0.0</td>
<td>(p=0.02)</td>
</tr>
<tr>
<td>Anxiety</td>
<td>Normal</td>
<td>78</td>
<td>78</td>
<td>58.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mild</td>
<td>9</td>
<td>9</td>
<td>10.2</td>
<td>2.61NS</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>8</td>
<td>8</td>
<td>16.6</td>
<td>22.41***</td>
</tr>
<tr>
<td></td>
<td>Severe</td>
<td>3</td>
<td>3</td>
<td>6.8</td>
<td>8.52**</td>
</tr>
<tr>
<td></td>
<td>Extremely Severe</td>
<td>2</td>
<td>2</td>
<td>7.9</td>
<td>21.56***</td>
</tr>
<tr>
<td>Depression</td>
<td>Normal</td>
<td>78</td>
<td>78</td>
<td>92.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mild</td>
<td>9</td>
<td>9</td>
<td>5.7</td>
<td>4.40*</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>8</td>
<td>8</td>
<td>1.1</td>
<td>15.95***</td>
</tr>
<tr>
<td></td>
<td>Severe</td>
<td>3</td>
<td>3</td>
<td>0.8</td>
<td>3.54NS</td>
</tr>
<tr>
<td></td>
<td>Extremely Severe</td>
<td>2</td>
<td>2</td>
<td>0.4</td>
<td>(p=0.57)</td>
</tr>
</tbody>
</table>

*Note:* *\(p<.05\)  **\(p < .01\)  ***\(p < .001\).* When expected cells size <five, Fishers Exact test conducted and reported.
The Australian parents were significantly over represented in the Normal category of Stress and underrepresented in the Mild and Moderate categories. There was no significant difference in the Severe and Extremely Severe categories. Significantly fewer Australian parents were in the Normal category of Anxiety and significantly more were in each of the severity ratings. For the Depression subscale there was no significant difference between the Australian parents and the normative sample in any of the categories.

For the US, sample parents were significantly over represented in the Normal category of Stress and significantly underrepresented in each of the categories of severity except for Severe where there was no significant difference. Significantly, fewer US parents were in the Normal category of Anxiety and significantly more were in each of the severity ratings except for Mild where there was no difference. For Depression, parents were significantly over represented in the Normal category and significantly underrepresented in Mild and Moderate categories. There was no significant difference between the parents and the normative sample in the Severe and Extremely Severe categories.

As a difference in SDQ results was found between the entire sample and those children with a twice exceptionality (see Chapter 4), parents of children with a reported diagnosis of ADHD, ASD, or Behavioural concern - Not Otherwise Specified were removed from the analysis. The analyses were carried out on the remaining 86 Australian and 218 USA parents. Chi-square tests were performed once more. Results for Australian parents are shown in Table 17 and USA parents at Table 18.
Table 17

*DASS results for Australian parents - twice exceptional children removed*

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Category</th>
<th>Expected %</th>
<th>%</th>
<th>$\chi^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress</td>
<td>Normal</td>
<td>78</td>
<td>96.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mild</td>
<td>9</td>
<td>2.3</td>
<td>5.01*</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>8</td>
<td>1.1</td>
<td>4.98*</td>
</tr>
<tr>
<td></td>
<td>Severe</td>
<td>3</td>
<td>0.0</td>
<td>$p=0.150^{NS}$</td>
</tr>
<tr>
<td></td>
<td>Extremely Severe</td>
<td>2</td>
<td>0.0</td>
<td>$p=0.246^{NS}$</td>
</tr>
<tr>
<td>Anxiety</td>
<td>Normal</td>
<td>78</td>
<td>50.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mild</td>
<td>9</td>
<td>14.8</td>
<td>7.18**</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>8</td>
<td>19.3</td>
<td>15.26***</td>
</tr>
<tr>
<td></td>
<td>Severe</td>
<td>3</td>
<td>8.0</td>
<td>$p=0.023$</td>
</tr>
<tr>
<td></td>
<td>Extremely Severe</td>
<td>2</td>
<td>8.0</td>
<td>$p=0.006$</td>
</tr>
<tr>
<td>Depression</td>
<td>Normal</td>
<td>78</td>
<td>88.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mild</td>
<td>9</td>
<td>8.0</td>
<td>$0.38^{NS}$</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>8</td>
<td>3.4</td>
<td>$2.76^{NS}$</td>
</tr>
<tr>
<td></td>
<td>Severe</td>
<td>3</td>
<td>0.0</td>
<td>$p=0.150^{NS}$</td>
</tr>
<tr>
<td></td>
<td>Extremely Severe</td>
<td>2</td>
<td>0.0</td>
<td>$p=0.246^{NS}$</td>
</tr>
</tbody>
</table>

*Note:* *$p<.05$  **$p <.01$  ***$p<.001$. When expected cells size <five, Fishers Exact test conducted and reported.*
Table 18

*DASS results for USA parents - twice exceptional children removed*

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Category</th>
<th>Expected %</th>
<th>%</th>
<th>$\chi^2$</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress</td>
<td>Normal</td>
<td>78</td>
<td>96.9</td>
<td></td>
<td>217</td>
</tr>
<tr>
<td></td>
<td>Mild</td>
<td>9</td>
<td>1.3</td>
<td>17.04***</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>8</td>
<td>1.3</td>
<td>12.72***</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Severe</td>
<td>3</td>
<td>0.5</td>
<td>3.99*</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Extremely Severe</td>
<td>2</td>
<td>0.0</td>
<td>$p = 0.043$</td>
<td>0</td>
</tr>
<tr>
<td>Anxiety</td>
<td>Normal</td>
<td>78</td>
<td>61.6</td>
<td></td>
<td>138</td>
</tr>
<tr>
<td></td>
<td>Mild</td>
<td>9</td>
<td>8.9</td>
<td>0.52NS</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>8</td>
<td>17.0</td>
<td>19.93***</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>Severe</td>
<td>3</td>
<td>5.4</td>
<td>2.93NS</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Extremely Severe</td>
<td>2</td>
<td>7.1</td>
<td>15.17***</td>
<td>16</td>
</tr>
<tr>
<td>Depression</td>
<td>Normal</td>
<td>78</td>
<td>92.9</td>
<td></td>
<td>208</td>
</tr>
<tr>
<td></td>
<td>Mild</td>
<td>9</td>
<td>4.9</td>
<td>5.29*</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>8</td>
<td>1.3</td>
<td>12.63***</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Severe</td>
<td>3</td>
<td>0.5</td>
<td>3.96*</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Extremely Severe</td>
<td>2</td>
<td>0.5</td>
<td>$p = 0.130^{NS}$</td>
<td>1</td>
</tr>
</tbody>
</table>

*Note: *p<.05   **p <.01   ***p <.001. When expected cells size <five, Fishers Exact test conducted and reported.*
The Australian parents were significantly over represented in the Normal category of Stress and underrepresented in the Mild and Moderate categories. There was no significant difference in the Severe and Extremely Severe categories. Significantly fewer Australian parents were in the Normal category of Anxiety and significantly more were in each of the severity ratings. For the Depression subscale there was no significant difference between the Australian parents and the normative sample in any of the categories.

For the US sample parents were significantly over represented in the Normal category of Stress and significantly underrepresented in the Mild and Moderate categories of severity. There was no significant difference between the USA parents and the normative sample in the Severe and Extremely Severe categories. Significantly, fewer US parents were in the Normal category of Anxiety and significantly more were in the Moderate and Extremely Severe categories. There was no significant difference in the Mild and Severe categories. For Depression, parents were significantly over represented in the Normal category and significantly underrepresented across all severity categories except for Extremely Severe where there was no difference.

**Parental Stress Scale.**

Results for the PSS scores for Australian and US parents are shown in Table 19. As mentioned above, normative data allows scores to be compared with typically developing children, children with a developmental disorder, and children who had been clinically referred due to behavioural difficulties.

Parenting Stress was significantly higher in the Australian sample than in the normative sample. Further, the Australian parents returned scores that were not significantly different to parents of clinically referred or developmentally delayed children. For the US parents, there were no differences between these parents and the
parents of children in the normative sample or those with a developmental delay. However, they were significantly lower than parents of children who were clinically referred.

Table 19

*Comparison of Australian and USA PSS averages to normative samples*

<table>
<thead>
<tr>
<th></th>
<th>Australia</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><em>M = 41.66; SD = 9.74</em></td>
<td><em>M = 38.29; SD = 9.44</em></td>
</tr>
<tr>
<td></td>
<td>95% CI [39.87, 43.44]</td>
<td>95% CI [37.15, 39.43]</td>
</tr>
<tr>
<td>Normative sample</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(N=233)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>M = 37.1; SD = 8.1</em></td>
<td>t (348) = 4.64, <em>p</em> &lt;.0001</td>
<td>t (496) = 1.50, <em>p</em> = 0.135</td>
</tr>
<tr>
<td>95% CI [36.06, 38.14]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Developmental delays</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(N=78)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>M = 40.1; SD = 9.3</em></td>
<td>t (193) = 1.12, <em>p</em> = 0.266</td>
<td>t (341) = 1.49, <em>p</em> = 0.136</td>
</tr>
<tr>
<td>95% CI [38.034, 42.16]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinically referred</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(N=51)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>M= 43.2; SD = 9.1</em></td>
<td>t (166) = 0.96, <em>p</em> = 0.338</td>
<td>t (314) = 3.42, <em>p</em> = 0.0007</td>
</tr>
<tr>
<td>95% CI [40.70, 45.70]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DASS and PSS Regressions.**

The results for the regression analyses for the contributors of Parenting Stress and Anxiety are shown at Table 20 and Table 21.
Table 20

*Summary of hierarchical regression analysis for variables predicting DASS Anxiety*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
<th></th>
<th>Model 3</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>B</td>
<td>SE B</td>
<td>β</td>
</tr>
<tr>
<td>Parent Gender</td>
<td>-1.129</td>
<td>1.366</td>
<td>-0.048</td>
<td>-1.325</td>
<td>1.325</td>
<td>-0.031</td>
<td>-0.731</td>
<td>1.323</td>
<td>-0.031</td>
</tr>
<tr>
<td>Country</td>
<td>1.141</td>
<td>.832</td>
<td>.078</td>
<td>.429</td>
<td>.820</td>
<td>.029</td>
<td>.463</td>
<td>.819</td>
<td>.032</td>
</tr>
<tr>
<td>Age at birth of child</td>
<td>-0.029</td>
<td>0.081</td>
<td>-0.021</td>
<td>0.016</td>
<td>0.079</td>
<td>0.012</td>
<td>0.008</td>
<td>0.079</td>
<td>0.006</td>
</tr>
<tr>
<td>Child age</td>
<td>-0.302</td>
<td>0.203</td>
<td>-0.085</td>
<td>-0.268</td>
<td>0.197</td>
<td>-0.076</td>
<td>-0.307</td>
<td>0.198</td>
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<tr>
<td>Child gender</td>
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<td>0.841</td>
<td>-0.078</td>
<td>-1.011</td>
<td>0.815</td>
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<tr>
<td>2E Diagnosis</td>
<td>2.723</td>
<td>1.101</td>
<td>.143*</td>
<td>1.041</td>
<td>1.127</td>
<td>.055</td>
<td>1.179</td>
<td>1.130</td>
<td>.062</td>
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<tr>
<td>SDQ Total</td>
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<td>.274***</td>
<td>.272</td>
<td>0.065</td>
<td>.256***</td>
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<tr>
<td>FSRS平均</td>
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<td></td>
</tr>
<tr>
<td>Note: *p&lt;.05   **p &lt;.01   **<em>p&lt;.001</em></td>
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</table>

Only SDQ Total (β = .256, P<.001) contributed significantly to Anxiety. The overall model fit was adjusted R^2 = 0.114.
Table 21

*Summary of Hierarchical Regression Analysis for Variables predicting PSS Total*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
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<td>$B$</td>
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</tr>
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<td>Country</td>
<td>3.691</td>
<td>1.122</td>
<td>.179**</td>
</tr>
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<td>-.001</td>
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<td>.274</td>
<td>-.066</td>
</tr>
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<td>.011</td>
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<td>SDQ Total</td>
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</tr>
<tr>
<td>FSRS Average</td>
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<td></td>
</tr>
</tbody>
</table>

*Note: *$p<.05$  **$p<.01$  ***$p<.001$*

A diagnosis of twice exceptionality, SDQ Total, and FSRS Average all contributed significantly to PSS Total. The model fit at step 3 was $R^2 = 0.276$. Country also contributed significantly however, it is possible that using the USA normative data for both countries failed to take into account cultural differences in parenting expectations.
As SDQ Total was found to be a significant predictor of Anxiety and PSS Total, further hierarchical multiple regressions were undertaken using the SDQ subscale scores to examine the contribution of each subscale. The results for the regression models for the contributors to Anxiety and Parenting Stress Scale score using the SDQ subscales as predictors are shown at Table 22 and Table 23.
Table 22

*Summary of hierarchical regression analysis for variables predicting DASS Anxiety*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
<th></th>
<th>Model 3</th>
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<td>SE B</td>
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<td>B</td>
<td>SE B</td>
<td>β</td>
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<td>.061</td>
<td>1.305</td>
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<td>SDQ</td>
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<td>Emotional</td>
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<td>.075</td>
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</table>

*Note: *p<.05   **p <.01   ***p<.001*
Table 23

Summary of hierarchical regression analysis for variables predicting PSS Total

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
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<tbody>
<tr>
<td></td>
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<td>SE B</td>
<td>β</td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>B</td>
<td>SE B</td>
<td>β</td>
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<tr>
<td>Parent Gender</td>
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<td>-0.028</td>
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<td>1.647</td>
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<td>1.122</td>
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<td>Age at birth of child</td>
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<td>-0.001</td>
<td>0.090</td>
<td>0.098</td>
<td>0.046</td>
<td>0.073</td>
<td>0.098</td>
<td>0.037</td>
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<tr>
<td>Child age</td>
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<td>-0.066</td>
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<td>0.254</td>
<td>-0.021</td>
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<td>Child gender</td>
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<td>0.054</td>
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<td>2E Diagnosis</td>
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<td>SDQ Conduct</td>
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<td>.226***</td>
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<tr>
<td>SDQ Hyper</td>
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<td>SDQ Peer</td>
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<td>.224</td>
<td>.109*</td>
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<td>-.856</td>
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<td>-.187**</td>
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<td>FSRS Average</td>
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<td></td>
<td></td>
<td></td>
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</table>

Note: *p < .05    **p < .01    ***p < .001
A diagnosis of twice exceptionality contributed significantly to parent Anxiety at step 1. However, when SDQ subscale scores were entered at step 2, twice exceptionality fell below significance and only SDQ Conduct contributed significantly. The overall model fit was adjusted $R^2 = 0.128$.

A diagnosis of twice exceptionality, SDQ Conduct, SDQ Peer Problems, SDQ Prosocial, and FSRS Average all contributed significantly to PSS Total. The model fit at step 3 was $R^2 = 0.276$. Country also contributed significantly however, it is possible that using the USA normative data for both countries failed to take into account cultural differences in parenting expectations.

**Discussion**

In both countries, parents reported levels of depression and stress comparable to the normative sample, however, they reported significantly higher levels of anxiety. Australian parents reported significantly higher levels of parenting stress than the normative sample. Levels in the US parents, although no different to the normative sample, were comparable to those of parents of children diagnosed with a developmental delay.

After controlling for the age and gender of both parents and child, behavioural problems in the child contributed significantly to the parent’s levels of anxiety and stress. Conduct Problems were the only SDQ subscale to contribute significantly to Anxiety scores. Child behaviour was again a significant predictor of elevated PSS scores, as were country, several subscales of the SDQ, and a diagnosis of twice exceptionality. Trust in the child’s teacher also contributed significantly to parenting stress.
Psychological Distress

The lower levels of depression and stress found in parents of both countries were not surprising given the ‘raft’ of protective factors as highlighted in Chapter 3. It appears that characteristics such as education, occupation, and income were behaving in an expected fashion and buffering the parents from depression and the physiological aspects of stress as assessed by the DASS. The protective factors seemed not to be as effective in mitigating anxiety, where between two and five times as many Australian parents were found at each level of severity. Disturbingly, the greatest over representation was observed in the most severe category. A similar picture was seen with the US parents, who were one and one half to three times more likely to show elevated levels of anxiety across all categories. Again, the greatest over representation was seen in the most severe category.

A significantly greater proportion of the parents indicated they were living with higher levels of anxiety than what was found in the general population. This result remains even when parents who have a child with a twice exceptionality are omitted from the analysis. Comparison of results from the current study to that of Morawska and Sanders (2008) shows general similarities in regards to the demographics for both children and parents. Results on the SDQ are also similar across both studies. However, focusing on the mean scores, Morawska and Sanders (2008) concluded that the parents of the gifted resemble a community sample across all three subscales of the DASS. This is at odds with the findings for the Anxiety subscale of the parents in the current study.

The differences between the results found in the current study and that of Morawska and Sanders (2008) reflect differences in the way the samples were compared to normative data. Morawska and Sanders compared means between
published norms and the parents in their sample. The current study, however, examined results through the categories of severity as clinically this seemed to be more informative than averages. Viewing the outcomes in this manner shows that parents in the current study were three to four times more likely to endorse answers that indicate severe or extremely severe levels of anxiety.

The child’s behaviour problems, in particular the group of behaviours tapped by the Conduct Problems subscale, contributed significantly to the parent’s level of anxiety. The behaviours measured by this subscale include losing their temper, disobedience, fighting, lying, and stealing. Importantly, the contribution of having a child with a twice exceptionality fell below significance when the child’s behavioural problems were entered into the analysis. These results suggest that children who display these types of behaviour, regardless of whether they have a twice exceptionality or not, are extremely difficult for parents to deal with.

The relationship between child conduct problems and parents’ anxiety is unexpected. One explanation could be that parents who have a child displaying these behaviours may fear that they are the early signs of delinquent behaviour. Further, the types of behaviours measured by this subscale are likely to make the parent worry about the child’s capacity to fit in with a school environment and society in general.

Surprisingly, most parents of twice exceptional children had scores that placed them in the normal category on depression and stress, where 80-90% of these parents reported scores within the normal range. However, levels of severity for anxiety were similarly higher with only 40 to 50% of these parents reporting scores in the Normal category and a similar over representation in the higher severity levels. This held for both countries. What these findings make clear is that the parents of the gifted children in this study, regardless of whether they were parenting a child with a twice
exceptionality, showed a different profile on a measure of the cognitive aspects of anxiety.

Another question that is of interest from a clinical perspective is whether these parents are experiencing a response to situational, time limited stressors or whether the tendency to be anxious is more of a trait like characteristic. While the DASS manual asserts it is a measure of ‘states’ (Lovibond & Lovibond, 2004, p. 1), an online FAQ (Lovibond & Lovibond, 2014) suggests that wording can be changed to investigate trait like aspects of psychopathology. While the FAQ suggests using published norms are no longer reliable once the wording has been changed, it does endorse the use of the DASS as a measure of traits. It is a possibility that the data could be highlighting relatively stable characteristics within these parents. This could be important when assessing areas for intervention should the parent need support.

**Parenting Stress.**

The Australian parents were experiencing a higher level of parenting stress than the parents of typically developing children and one that was comparable to parents of children with disabilities or clinically referred behavioural problems. This held true even when children with a twice exceptionality were removed from the analysis.

The US parents returned a mean score that was significantly lower than the Australian parents, however the difference was small. Their levels of parenting stress were not significantly higher than in the normative sample, however examination of confidence intervals showed that they sat at the higher end of the normal range of parenting stress for parents of typically developing children. Not surprisingly then, the US parents also did not differ significantly to the parents of children with developmental delays as reported by Berry and Jones (1995). The upper half of scores for the US parents fell within the lower half of the confidence interval around the mean.
of the Developmental Delays normative scores. Again this held true even when children with a twice exceptionality were removed from the sample.

Regression models identified interesting points regarding the variables that were associated with significantly higher levels of parenting stress. In the final model of predictors for PSS scores, country, higher scores on SDQ Conduct and Peer Relationship Problems along with lower scores on SDQ prosocial and FSRS Average were all significant.

A child displaying high scores on Conduct is an unsurprising predictor based on existing child behaviour literature. As described earlier in this chapter, Huang and colleagues (2014) found that the child’s score on Conduct Problems on the SDQ and the parents’ score on the Difficult Child subscale had the strongest connection with parenting stress Parenting Stress Index (Abidin, 1990). Having a child with defiant behaviours is likely to not only increase parent’s anxiety but also to increase daily hassles and create friction in the parent-child relationship. Peer Relationship problems also contributed significantly to parenting stress. These problems centre on difficulties with friendships and with bullying. A parent who has a child who struggles to develop and maintain friendships or is the victim of bullying is likely to experience higher levels of stress as a part of their parenting experience. Similarly, the association between lower scores on the SDQ Prosocial subscale and higher levels of parenting stress is understandable. The behaviours endorsed by parents include whether the child is kind to younger children and is the child helpful if someone is upset or hurt. Having a child who does not show signs of empathy such as this would be difficult, as is shown in the literature on children with ASD (Huang et al., 2014) where a lack of social skills is a key feature of the disorder.
Having a twice exceptional child was associated with higher levels of parenting stress but not with higher levels of generalised stress as measured by the DASS. It seems that a diagnosis of a twice exceptionality gives extra information on tension in the parent-child relationship. This tension in the relationship cannot be completely explained by scores on the SDQ.

A lower level of trust in the child’s teacher was also found to be predictive of higher levels of parenting stress. The FSRS tapped a range of areas including the teachers’ ability to meet the child’s educational, social, and emotional needs as well as communication with the parents. This suggests teachers’ ability to work constructively with the parents of the gifted is important not just for the benefit of the child but for the psychological wellbeing of the parent.

**Clinical Implications.**

The slightly higher levels of parenting stress and the far higher levels of anxiety reported by the parents in this study show that they are quantitatively different from parents of typically developing children. The associations between these aspects of psychological wellbeing and behavioural problems suggest that some of these parents are experiencing negative impacts from the difficulties that come with parenting children who are exceptional. Professionals in both psychology and education now have reason to accept that these parents are raising children that are exceptional and that this changes the parenting experience.

As this is an area previously unexplored, the data has raised more questions than the author feels have been answered. Yet they are important questions if we are to look beyond how the parent can best support their child, which has been the focus of previous investigations into parenting the gifted child. As described earlier, these parents felt a strong sense of responsibility for safeguarding their child’s development.
Still to be answered are questions such as what do the parents of the gifted need and want to feel they are living up to this responsibility, and how can the professionals working with the families support them in this pursuit.

The parent in the quote below highlights what these parents want – they want the best for their children, like all parents do – but many seem to feel that the pathway to what is ‘best for their kids’ is difficult to find and to follow:

“I find myself teary just relating the frustrations--I truly want the best for my kids, like we all do--but I don't know how to make that happen sometimes”. (Justina, 41, 9-y.o. son, CA, USA)

This quote from the mother below also highlights the commonly held belief that if a child is gifted it is unlikely the parent will have anything to worry about:

“People say 'What a shame' when someone’s child is diagnosed with Asperger’s, but when a child is found to be gifted, they say 'Oh well you don't have to worry about anything, your child is perfect’ But they don't realise there are some really difficult challenges with gifted kids, they are just different from those faced by the Asperger’s parents.” (Joan, 36, 6-y.o. son, SA, Aus)

The parents also have a complex range of worries centred on their children as shown here:

“I feel overwhelmed and also very responsible to help him find a way for school to be tolerable (and for him to learn). I worry that he will check out even more than he already has. I worry that his self-esteem is low, because he doesn't LIKE causing difficulties. I feel like I want to shake up the school system, but also, I don't want to be one of 'those' parents. I am conflicted. I also feel a bit guilty that I find him so overwhelming at times. I like going to work, because it is a break from the intensity.” (Rachel, 42, 7-y.o. son, VT, USA)
This parent displays a sense of being overwhelmed, of feeling guilt, and frustration in one brief paragraph. What is also interesting is that these emotions are aimed at herself, her child, and the educational environment. Above all else, this parent shares that she worries about her child’s academic, social, and emotional wellbeing.

The results here would suggest the parents of the gifted have more concerns than parents of a typically developing child would and while their concerns are not the same as a parent of a child with a more generally recognised exceptionality, they are nonetheless having an impact on their psychological wellbeing. The measures used in the current study were tools designed to screen for indications of psychological distress. These measures allowed us to take the first step towards understanding some of the experiences of the parents of gifted children. However, they did not capture the complexity of what some of the parents have written. What the measures provide is evidence that the experience of these parents of the gifted was different to that of a parent of a typically developing child and it did have an influence on their psychological wellbeing.
CHAPTER 7
Summary and Conclusions

*Research is to see what everybody else has seen, and to think what nobody else has thought.*

*Albert Szent-Gyorgyi*

Raising children is a demanding task for any parent. Raising children who are exceptional has been shown to be even more demanding. While the parents of children in a range of exceptionalities have been studied, little attention has been paid to the parents of gifted children. This study investigated the psychological wellbeing of the parents of intellectually gifted children in Australia and the USA who completed an online survey.

As discussed in Chapter 1, the areas of family and school are identified by Bronfenbrenner’s Bioecological theory as having the strongest impact on the developing child. Moreover, the theory states the developing child brings with it innate characteristics that will interact with the systems around it. Existing literature in the gifted field has focused on the child’s developmental needs, with special attention to their educational requirements, and the parents are considered a crucial support system. Consistent with this, the existing literature has identified characteristics of the gifted child and the educational environment as key areas of concern for the parents of gifted children. Since the focus of the existing literature has been on the child, it has not yet assessed whether the concerns reported by the parents of gifted children have an impact on their psychological wellbeing. There is, however, ample anecdotal evidence suggesting that some do have concerns and they find these concerns distressing.

To move the focus to the parents of the gifted child, parents were invited to complete an online survey. The survey gathered data on the families, the child, and the
educational environment, and analysis of results examined the impact these three areas have on the psychological wellbeing of the parents.

The Families

Chapter 3 described the families. Parents were highly educated with a high proportion of parents having a Bachelor’s degree. Many had professional jobs with a commensurately high income. The families had an average of 2.3 children. Mothers were older when they gave birth to their first child and were in a traditional two-parent household. A high proportion of mothers were homemakers or teachers. Fathers and mothers were predominantly Caucasian. There were no significant differences between the parents from Australia and the US on any of the measured characteristics and they were highly consistent with previous research (Alsop, 1994; Distin, 2006; Gross, 2004; Morawska & Sanders, 2008; Silverman, 2000).

For the most part, the children in this study have been born into households that were stable, valued education, and were financially secure. Factors such as education level, age, marital status, and family income are well-documented protective factors against poor mental health outcomes (Amato, 2005; Conger & Donnellan, 2007; Duncan & Magnuson, 2012; Santiago, Kaltman, & Miranda, 2013). This suggests that most of the parents in this study should be well protected from the stresses caused by the daily hassles of living and of raising children. However, there were a small number of parents in both countries who gave answers placing them at the opposite extreme. This is indicative that there might be degrees of vulnerability within the families. Importantly for the field, the similarity in sociodemographics between the two countries makes generalisation of results more reliable.
The Children

Chapter 4 described the children. There were more boys than girls in the sample across both countries and the girls were marginally older than the boys. Both boys and girls were likely to be the first-born. In half of cases, it was the parent who first noticed their child had advanced development, mentioning characteristics such as meeting developmental milestones earlier than expected as indicators of their child’s high intellect. Teachers were the first to identify a further one third in both samples.

The majority of the children had been formally tested with a standardised intelligence test. Strikingly, approximately 93% of Australian and 95% of US children were reported to have IQ’s that placed them at or above the 98th percentile, meaning the majority of the children were extremely gifted.

More than a third of the children in each country had a diagnosis of either a physical or mental health difficulty with Asperger’s syndrome, Attention Deficit Hyperactivity Disorder and sensory issues the most frequently cited. These findings are in keeping with literature on twice exceptionalities within the gifted population (Webb et al., 2005).

Significantly, more children in both countries than would be predicted by the published norms, obtained scores above the clinical cut-off on all subscales and Total Difficulties of the SDQ. For Emotional Symptoms and Peer Relationship Problems as well as Total Difficulties, the children in both countries were three to five times more likely to have a score that placed them in the clinical range than the normative sample predicts. Importantly, the distribution of scores was largely in keeping with data reported by Morawska and Sanders (2008) in a comparable sample of Australian children. These results held true even after omitting children with a diagnosed behavioural difficulty from the analyses. The literature had provided anecdotal
evidence for social and emotional difficulties with these children. Results from the SDQ, a widely used standardised test screening for childhood behaviour problems, provided the quantitative evidence for these difficulties, which allowed us to compare them with typically developing children. These results showed that parents were observing behaviours extreme enough to place a substantial percentage of the children in categories that might warrant further investigation by a professional such as a clinical psychologist.

However, these elevated SDQ scores could also be indicative of asynchronous development and/or perhaps Dabrowski’s overexcitabilities. That is, they are possibly intrinsic to giftedness. The majority of these children had IQ scores that placed them in the top 2% of their peers. They are likely to be thinking in ways that a much older child would. However, their socioemotional maturity may lag behind their intellectual maturity. This could lead to their behaviour being seen as more intense or inappropriate. It is also likely to lead to difficulties in interacting with age peers. In this case, the high levels of behaviour problems could indicate that popular psychological measures of behaviour are not appropriate for use with this population of exceptional children.

Regardless of the cause of the high scores, these parents are dealing with children whose behaviour is undeniably beyond what would be expected for a typically developing child of the same age. The children are different to what is expected for typically developing children as measured by standardised psychological tests as well as different to what might be expected for the children themselves given their advanced reasoning.

The Educational Environment

The majority of the children in both Australia and the US were attending state schools. The next most commonly chosen school type in Australia was Private
Religious. For the US however, the second most common form of schooling was homeschooling. The majority of parents in both countries who chose to homeschool gave a perceived inability of the traditional school system to deal with the individual needs of their child’s education as the reason for their choice.

The majority of children in both countries were receiving one or two educational accommodations, however, at least one child in each country was receiving each of the eight named interventions. Pull out groups and enrichment activities were the favoured formats. Just over half of the parents reported being satisfied or very satisfied with the accommodations their child’s school was providing.

Almost half of the children in both countries had changed schools at least once and the most common reason for this was a perceived poor academic fit for the child. This suggests that parents were actively seeking an adequate educational fit for their children. In both countries, parents reported only a moderate level of trust in their child’s teacher. They also reported a moderate degree of satisfaction with the frequency of contact and the nature of their relationship with their child’s teacher. Parents’ responses to questions on all aspects of school experience investigated in this study – school changes, satisfaction with accommodations, trust in teacher, satisfaction with teacher relationship, and frequency of teacher contact – suggest that the majority felt ambivalent about their child’s educational environment.

The dynamic process of parents actively seeking the best fit for their children and actively evaluating the quality of the relationship with the teachers indicates that this was a constant concern for these parents of the gifted children. This is consistent with the extensive body of literature, which identifies the school as a key area of concern for parents of gifted children (Alsop, 1994; Fisher et al., 2005; Gross, 2004;
Parental Psychological Wellbeing

Australian and US parents reported significantly lower Depression and Stress scores than the normative sample. However, scores on the Anxiety subscale were higher with significantly more parents in each of the severity categories beyond normal. The results held true even when parents of children with a diagnosed twice exceptionality were removed.

The Australian parents reported levels of parenting stress that were higher than the normative sample and comparable to parents of both children with a developmental delay and children who had been clinically referred for behavioural problems. However, while the US parents did not differ significantly from the normative sample, they also did not differ from the developmentally delayed sample. While the picture for the US parents may not be as clear as for the Australians, it would be clinically useful to consider that they had an increased level of parenting stress.

Parenting stress was significantly lower in the US than the Australian parents. This was the only measure on which parents from the two countries differed. This may be the result of differences in parental expectations based on the cultural variation between the two countries.

Only the SDQ Conduct subscale contributed significantly to parents’ Anxiety scores. A broader range of variables contributed significantly to Parenting Stress. These were country, twice exceptional diagnosis, higher SDQ Conduct Problems and Peer Relationship Problems, along with lower SDQ Prosocial Behaviour scores and lower FSRS average scores. Associations between these variables and parenting stress are consistent with the literature on parenting stress (Beck, Hastings, Daley, & Stevenson,
2004; Crnic & Low, 2002; Fathima & Jaya, 2015). Interestingly, despite so many of the children being scored in the clinical band on Emotional Difficulties and Hyperactivity, these subscales did not contribute significantly to either measure of parental psychological wellbeing.

Clinical and Theoretical Implications

The children.

The introduction outlined several popular definitions of gifted, many of which focus on intellectual potential and academic achievement. Where other characteristics are mentioned, it seems to be more to do with ways in which they may limit children’s ability to perform to their full potential. Perfectionism (Fletcher & Speirs Neumeister, 2012), rigidity (Shechtman & Silektor, 2012), and self-esteem (Vialle, Heaven, & Ciarrochi, 2015) have received considerable research attention. Behavioural characteristics such as defiance and disobedience have received far less attention.

The results from this study are consistent with the argument that to be gifted is more than possessing high intellect. The children studied here differed systematically on behavioural characteristics, which are likely to make it difficult for them to move smoothly through their daily lives. Broadening our understanding of what it is to be gifted would help us comprehend the extra demands that parents of many of these children are faced with and, as this study has shown, have a negative influence on parental psychological wellbeing.

A more holistic definition of gifted, such as the one proposed by the Columbus group (as cited in Tolan & Piechowski, 2012), which encompasses a full range of characteristics that make up the whole gifted person, may fit better with the behavioural characteristics of the gifted children identified in this study. The Columbus group’s definition focuses on the gifted person as a whole, both emotionally and cognitively,
and this allows these individuals to differ from the general population in aspects other than intellect.

**The parents.**

Until now, there has been a lack of research into the psychological wellbeing of the parents of gifted children and consequently there has been no theory regarding that experience. Therefore, the most important theoretical implication is the recognition that for many parents of a gifted child, their parenting experience will differ to that of a parent of a typically developing child. Given that this experience has now been shown to be negatively associated with the psychological wellbeing of the parents of the gifted, there is a real need for further investigation of this area.

The behavioural characteristics of many of the children studied were quantitatively different to the behavioural characteristics of typically developing children. They demonstrated unusually high levels of behaviours that were negatively associated with their parent’s psychological wellbeing. Results from psychometrically valid and reliable tests have given quantitative backing to what has been, until now, a largely qualitative conversation.

Parents in both countries reported levels of parenting stress similar to those in families of children who fall in the broad category of developmentally delayed. A developmentally delayed child would be considered an exceptional child. It is generally accepted that raising children with exceptionalities can be an arduous task and at the least, understanding for their parents is offered. In some cases, support is given. As highlighted by the parents’ free responses in this study, the understanding that their parenting task is especially demanding is an understanding not readily given to the parents of the gifted child. The question arises whether it would make the task of the parents of the gifted easier if they too were considered parents of exceptional children.
What might seem like an argument based on definitions is in fact an important step, which will assist the helping professionals to move to a position that enables them to be helpful to these families. Broadening their understanding of gifted to include the behavioural and emotional aspects that make the child more demanding, and accepting that the parents are parenting exceptional children, would help professionals working with these families. This would enable them to move beyond the widely held belief that raising a gifted child is predominantly a positive experience and to recognise that the parent who has presented to them in distress genuinely feels that distress and is likely to have a well-founded reason for this distress.

As shown in the free responses from some parents, they feel as if there is a widely held belief that they should have nothing to worry about and this may affect their help seeking behaviour. This study has shown parents of the gifted to have increased levels of parenting stress and anxiety and that these two measures of psychological wellbeing are associated with behavioural difficulties found in their children and difficulties in finding an educational fit for their child. Therefore, while many of the clinical implications may seem directed at the children, it is the parents who will ultimately benefit from a better understanding of the gifted child that is proposed herein. Even if the only benefit to the parent is a sense that they have a reason for asking for help, this could encourage help seeking which appears to be hindered in these parents at the moment.

Measures.

Beyond definitions, the findings of this study raise questions regarding the validity of the existing normative tables for the measures that were used. Commonly used tests such as the SDQ and the DASS are standardised on a normal population. By statistical definition alone, these children, and potentially their parents, are likely to be
outliers in a normal distribution. The implication of this is that results for gifted children on standard psychological tools need to be interpreted with caution and this is especially true when looking at child behaviour. It is highly possible that the elevated scores on the subscales of the SDQ are picking up on the intensity that is reported across the literature on gifted children (Daniels & Piechowski, 2009; Silverman, 2000; Webb et al., 2005;).

To the author’s knowledge, there is not a standardised measure that has been specifically targeted at the families of the gifted or their children. This is not the case with other exceptional children such as those with Autism where specialised behaviour check lists such as the Childhood Autism Rating Scale (Schopler, Reichler, & Renner, 2002) are available and have shown their usefulness in these populations. Additionally, commonly used behaviour checklists such as the CBCL have discriminatory validity when comparing children with ASD and the typically developing child (Pandolfi, Magyar, & Dill, 2012). This shows an awareness that a child with atypical behaviour will have scores that are different to those of a typically developing child, as they are meant to. In the case of the gifted child, being aware of how a ‘typical’ gifted child might score would seem to be a theoretically sound place to start. This study might be seen as starting that process, and clinicians and researchers should extend this work.

The fact that such a high number of gifted children appeared in the borderline and clinical cut off ranges on the SDQ highlights the need for psychologists to consider the child’s intellectual capacity when assessing their behaviour. While this is true for any child, the results show it may be as important for children on the far right side of the bell curve as it is to those on the far left.

An understanding that the gifted child’s behaviour may look like common disorders is vital especially given that Webb et al. (2005) suggest that ADHD and
Autism spectrum disorders are also the most commonly misdiagnosed difficulties in this population. Chapter 5 showed that these are certainly two of the most common twice exceptionalities that children in the current study have been diagnosed with. There are undoubtedly children who are gifted and have some form of behavioural or learning disorder. The data also suggest that some “behavioural disorders” could simply be a part of the gifted child. Not all children who are gifted have social and behavioural difficulties that warrant an official diagnosis. Nevertheless, some do. Clinicians should be aware of the differential diagnosis criteria when assessing childhood problems in this population.

**Limitations**

A number of limitations should be taken into account when generalising results found in this study. The sample described here and elsewhere in the literature, is predominantly white, middle to upper class, educated, and urban. A number of explanations for this narrow profile can be put forward.

As parents who have taken part in studies need to identify with their child being gifted, individual and cultural differences could account for some of the homogeneity across the samples. It is plausible to suggest that some parents do not value or identify with the idea of a child being ‘gifted’. These parents are unlikely to take part in studies that are focused on gifted children and their families. The term ‘gifted’ has been criticised in the literature and the general public leading to a number of parents choosing other euphemisms to describe their child’s high intellectual capacity. It is likely that parents such as these choose not to take part in studies that home in on the idea of giftedness.

Cultural differences in non-Caucasian families could also influence the low numbers of participants from minority races, especially families of Asian descent. A
number of studies have found that Asian families are less likely to share problems or use social support networks in times of stress or other difficulties (Chun, Moos, & Cronkite, 2006; Taylor et al., 2004). A belief that sharing family difficulties with people outside of the family is shameful could help to explain the small numbers of families from the collectivist cultures.

Parents who possess doubts about their own child’s giftedness may not feel they have a right to participate in studies such as these. While parents may suspect that their child is bright, they may feel that without formal identification of their child they do not qualify to participate. Evidence of this can be seen in communication to the author. Several parents contacted the author and asked whether they could take part in the study given that their child had not been formally identified as being gifted. This was despite clear indications that the study was designed to be as inclusive as possible and formal testing was not a pre-requisite for participation.

This raises a further limitation of the study. The parents were not asked to prove their child’s intellectual capacity. Despite many of the parents giving testing information and scores that showed their child’s potential, approximately 20% of both samples did not supply such information. It was felt that limiting the sample to those children who had been assessed would preclude certain families who may not have the disposable income to undertake the costly process of testing. Therefore, by trying to purify the sample in one way, it would also detract from the sample in another.

A further limitation is that the vast majority of the children in the study reportedly had IQ scores that placed them in the top 2%. This creates difficulties in generalising the findings to the wider gifted population, which is often operationalised in research as children who are enrolled in gifted programs in their schools. Placement in these programs is not necessarily based purely on results from standardised
intelligence tests. This makes it difficult to state how representative the children, and their parents, studied here are of the broader gifted population.

Part of the strength of this study is the size of the sample. The cost of the sample size however, was using the internet as the recruitment tool. While the internet based nature of this study allowed a substantial sample size in two distinct geographical locations, it does limit the study to those who had access to the internet. The internet was the only method used to recruit participants for the study and this would have precluded certain members of the community from taking part in the research.

Using the internet to administer questionnaires for psychological research is a relatively new area for the field. It has been shown to have benefits as outlined in Chapter 2 however, these benefits come with associated costs. There was no way of detecting whether the participants were who and what they said there were, as they are not monitored in any way. Further, as mentioned before, the sample was not randomly selected and populations responding to internet surveys tend to be skewed towards educated people in higher socioeconomic groups. There is also some question as to the validity of paper based measures being delivered in an online method and whether responses can be interpreted in the same way.

Riva and colleagues (2003) compared the responses of Italian undergraduates (Offline Condition: \( N=202 \); Online Condition: \( N=104 \)) who were given three measures including basic demographics, internet use attitude and computer use questionnaire. Results showed the online group used email and the web significantly more than the offline participants did. However, for the attitude and behaviours questionnaire they found no significant differences in the psychometric properties of the responses. The researchers concluded that delivering the questionnaires via the internet did not
significantly positively or negatively impact upon the responses given by participants. For the current study, evidence such as this suggests that the findings are robust.

While not conclusive confirmation, this viewpoint is further upheld when taking into consideration the results in comparison to the Morawska and Sanders paper (2008). Traditional paper and pencil questionnaires, which included the DASS and the SDQ, were sent to participants and their results on these two measures were similar to the current findings. When considering the similarities between participants’ demographics in Morawska and Sanders (2008) and the current study, it would seem the data reported in the current study is a valid and reliable indicator of the constructs measured.

A further limitation is the internal consistency of the Parenting Stress Scale. While the internal consistency came in on the low side of acceptable ($\alpha=.63$) statistical investigation as to the cause of this was unable to find a single contributor. Rather, low internal consistency along with an unusual pattern of cross-item correlation suggest that parenting stress, in this sample, is a multi-faceted and complex construct. Coupled with the narrative evidence obtained from the parents along with previous anecdotal data, there is ample evidence to suggest that the experience of raising a gifted child is different to that of the parents raising a more typically developing child. Further investigation of this should be undertaken by more psychometrically sound tests in the future.

**Future Directions**

As the psychological wellbeing of the parents of gifted children is a relatively un-researched area of enquiry, there are many directions for future research. Continuing to examine the psychological wellbeing of the parents through more targeted identification of gifted children would be a useful starting point. Intelligence tests are one of the few measures that are standardised for the full range of intellectual
ability. By operationalising ‘gifted’ using clear cut-offs based on tests that will give valid results for this population, future research could compare the parents of children of different degrees of giftedness. This would also allow testing of the suggestion that increased levels of asynchrony lead to increased levels of intensity as the Columbus Group posit (as cited in Tolan & Piechowski, 2012).

Of immediate need is for future investigations to examine whether measures of childhood behaviour that are commonly used need to be re-normed for use with gifted children or whether more targeted measures aimed specifically at these children should be formulated. From there, further examination of the children’s quantitative differences should be undertaken to help clinicians understand what part of behaviour is a core to being gifted, and what, if any, are part of more traditionally diagnosed disorders.

Finally, training for psychologists to recognise the social and emotional needs of the gifted children and their parents deserves consideration. This study showed that gifted children differ quantifiably in areas that may be considered to indicate the need for treatment. Given the frequency with which these differences occur, it is plausible that not all of the children actually need intervention. This distinction may not be immediately obvious to professionals who lack experience in working with this population. Equally importantly, these differences may have a negative impact on the psychological wellbeing of the parents of these children.

Arming psychology as a profession with the awareness that the gifted are a specialised population may help with proper support for the children and their parents should they have a need to seek the help of a psychologist. Future research is needed to confirm that this is the case.
Conclusion

Despite anecdotal evidence and pleas from experts in the field, there has been a lack of exploration of the actual experience of the parents of the gifted. Up until now, the field has either accepted there is nothing that needs investigation, or, conversely, accepted it as fact that the parents have worries. Regardless, neither standpoint has been rigorously tested. This thesis starts the process by providing sound quantitative measures.

Not all of the questions have been asked that will help professionals have a clear understanding of the impact that raising an intellectually gifted child has on a parent. However, the expressed purpose of this thesis was to start a conversation regarding the parents of the gifted, not to answer all the questions. The conversation now needs to move forward from a place of acceptance that the parents of gifted children are parents of exceptional children. These parents are as deserving of understanding and support as parents of other exceptional children. They need recognition of their unique experience of parenting these unquestionably unique children.
References


Green, S. E. (2007). "We’re tired, not sad": Benefits and burdens of mothering a child with a disability. *Social Science & Medicine, 64*(1), 150-163.


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National Centre for Health Statistics. (2011). In S. E. Kirmeyer & B. E. Hamilton (Eds.), *Transitions between childlessness and first birth: Three generations of U.S. women*
gifted children (pp. 205-212). Washington, DC, USA: The National Association for Gifted Children.


parental practices and child behaviour. *ADHD Attention Deficit & Hyperactivity Disorders*, 3(1), 61-68.


### Appendix A

Partial and Complete Respondents by Country

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Appendix B

Electronic Survey Contents

Welcome

About the study

This is an exploratory survey about the everyday experience of raising a gifted child.

It will be carried out by Natalie Rimlinger, a PhD (Clinical Psychology) student at the Australian National University, under the supervision of Dr. Phillipa Butcher at the ANU. Natalie is also the parent of two gifted daughters and has been an active member of the gifted families' community for the past 6 years. Her interest is therefore both professional and personal.

The overall study will consist of this survey content and optional interviews at a later stage. The purpose of the survey is to gain quantitative information regarding questions that haven't been asked of parents/caregivers of gifted children before. It aims to explore various aspects of raising your gifted child such as your experience of being a parent/caregiver, your interactions with your child's school, your worries or concerns, how raising your gifted child might have impacted on you, and your social support network. There is also the opportunity for you to share a small part of your story with me if you wish. The study also hopes to get a global sample by using the internet as its main form of data collection. Just because I'm in Australia doesn't mean you have to be!

Your decision to leave contact information and permission for me to contact you for later stages of the study is entirely optional. You do not need to agree to take part in later stages to take part in the survey stage of the study.

If you have any questions about the project or the way it has been conducted, please contact Natalie Rimlinger natalie.rimlinger@anu.edu.au or +61 2 6100 1305. Alternatively, you can contact Natalie's supervisor, Phillipa Butcher phillipa.butcher@anu.edu.au or +61 2 6125 5023.

Privacy and Ethics Approval

Approval

The research has been approved by the Human Research Ethics Committee of the Australian National University. If you have any concerns about the way the research was conducted, please contact the Secretary, Human Research Ethics Committee, Research Office, Chancellerly 10B, The Australian National University, ACT 6200 +61 2 6125 7945 or human.ethics.officer@anu.edu.au.

Purpose of data collection

This information is being sought for a research project entitled "An exploration of the everyday experience of raising a gifted child". The project aims to investigate the experience of raising cognitively gifted children who are undertaking a primary/elementary school curriculum. The information you provide will only be used
for the purpose for which you have provided it and it will not be disclosed without your consent.

Will you protect my privacy?

Yes. You do not have to give your full name, address, or any other personally identifying information. All identifying information that you provide as part of the contact process will be removed from the data set. All data will be maintained in password-protected files, with the computer under lock and key at all times. Any stories or quotes from the data used for illustrative purposes in research reports will be carefully anonymised to protect your privacy. Any contact information you provide will be kept in a separate password-protected file and will be used only for the purpose(s) you designate. It will not be considered part of the study data, and will not be disclosed to anyone else.

Information collected through Survey Gizmo is kept in a password protected account. You can view SurveyGizmo's privacy statement here.

Security of the website

Users should be aware that the World Wide Web is an insecure public network that gives rise to a potential risk that a user's transactions are being viewed, intercepted or modified by third parties or that data which the user downloads may contain computer viruses or other defects.

As the web can be an insecure medium you may choose to complete this survey by contacting the researcher. A paper based copy of the survey can be mailed or emailed to you or you can give your answers over the phone if you prefer. To do this, please contact natalie.rimlinger@anu.edu.au or +61 2 6100 1305.

Risks and Rewards

What are the risks?

The study involves no more than minimal risk to you (i.e., the level of risk encountered in everyday life). It is possible that thinking about issues with your child may bring up some intense or unpleasant memories. If this is the case, please contact a professional organisation such as Lifeline (www.lifeline.org.au) or a similar anonymous telephone counselling service in your country. Alternatively, you may contact me and I will attempt to help you to seek appropriate professional support in your local area.

What if I change my mind?

You are free to stop participating in this study at any time, or to withdraw part or all of the data you have already given. There will be no negative consequences for your choice to withdraw.

Do I do this with my partner or separately?

It would be VERY much appreciated if you and your partner could respond to this study separately. Both sets of responses would be completely anonymous and I therefore have no way of connecting the responses together. Researchers rarely get to hear from both
parents so it would be invaluable if you could suggest to them that it would be worthwhile taking part.

What are the rewards?

Your involvement will help to fill in a massive gap in the current research. We know so much about gifted children and their needs but we know very little about the parents/caregivers who are raising these children. This is your chance to help me fill in the blanks and raise awareness of the needs of parents/caregivers just like you.

How long will this take?

To answer the questions will typically take about 30 minutes but this will depend largely on how much information you share and your particular circumstances. **You are able to save your progress and come back to the survey at a more suitable time if you need to take a break.** If there is something else that you want to say in relation to your answers you can always email me at natalie.rimlinger@anu.edu.au or phone me on +61 2 6100 1305. If you give consent and provide contact information, I may contact you to help me understand your responses or for future stages of the project.

What sorts of questions will there be?

The first pages are simply gathering demographics about you and your children. While this may seem tedious, it is an opportunity for me to 'see' how the families are made up. You can give me as much or as little of the demographic information as you are comfortable with.

The next stage is the measures themselves. There are 5 or 6 of these depending on whether or not you home school. They are relatively brief and hopefully not too tedious and while they may not seem entirely relevant to the experience of raising a gifted child, they will provide me with much needed and highly valuable information. When you have finished the measures you will be given the opportunity to share with me what your experience has been like. I'm really interested in how raising this child has made you feel. What have the high points been? What about the lows? Where do you get your support from?

While 30 minutes seems to be the typical amount of time that a 2 child family takes to complete the survey, it has taken some participants with more children and more complex stories quite a bit longer. As I stated above, **you are able to save your progress and return to the survey.** Surveygizmo should send you an email to the address that you provide. Thank you for any information that you are willing to share.

Consent

Beginning this survey is taken as your informed consent.
Participation

Can I participate?

In order to take part in this study, at least one of your children must meet the following criteria:

- be currently undertaking primary/elementary school level curriculum. In some states/countries this may include children enrolled up to Year 7. The key element is that they mostly deal with the one classroom teacher;
- and must also be considered to be cognitively gifted.

There are many different ways that a child can be identified as being gifted. Perhaps they’ve been formally identified by taking an IQ test or they are enrolled in a gifted program at their school. However, there are some children who are never formally identified due to their backgrounds or the areas that they live in. As I hope to be as inclusive as possible, your child does not have to be formally identified to be considered as 'gifted'. If you or your family believe that your child is gifted or if the child's teacher thinks your child is gifted, then you are able to participate.

Do you have a child currently undertaking a primary/elementary school level curriculum and who is also cognitively gifted? *

- Yes
- No

About you

Your gender:

- Male
- Female

Your age:


Marital Status:

- Single
- Never married
- Married/de facto
- Divorced
Separated
Widowed
Other: Please specify:

What is the highest level of education that you have completed?

Did not go to school
Year 8 or below
Year 9 or equivalent
Year 10 or equivalent
Year 11 or equivalent
Year 12 or equivalent
TAFE certificate/Trade qualification
Diploma or Advanced diploma from a college or university
Degree from a college or university
Postgraduate degree from a college or university
Don't know
Other: Please specify:

What is the highest level of education that your spouse or partner has completed?

Did not go to school
Year 8 or below
Year 9 or equivalent
Year 10 or equivalent
Year 11 or equivalent
Year 12 or equivalent
TAFE certificate/Trade qualification
Diploma or Advanced diploma from a college or university
Degree from a college or university
Postgraduate degree from a college or university
Don't know
Other: Please specify:

What is your occupation/job role?

- Academic/Researcher
- Accounting / Finance / Banking
- Administration / Clerical / Reception
- Advertisement / PR
- Architecture / Design
- Arts/Leisure / Entertainment
- Beauty / Fashion
- Buying / Purchasing
- Construction
- Consulting
- Customer Service
- Distribution
- Education
- Health Care (Physical & Mental)
- Human resources management
- Management (Senior / Corporate)
- News / Information
- Operations / Logistics
- Planning (Meeting, Events, etc.)
- Production
- Real Estate
- Research
- Restaurant / Food service
- Sales / Marketing
<table>
<thead>
<tr>
<th>Occupation/Job Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science / Technology / Programming</td>
</tr>
<tr>
<td>Social service</td>
</tr>
<tr>
<td>Student</td>
</tr>
<tr>
<td>N/A - Unemployed / Retired / Homemaker</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

**What is your spouse or partner's occupation/job role?**

- Academic/Researcher
- Accounting / Finance / Banking
- Administration / Clerical / Reception
- Advertisement / PR
- Architecture / Design
- Arts/Leisure / Entertainment
- Beauty / Fashion
- Buying / Purchasing
- Construction
- Consulting
- Customer Service
- Distribution
- Education
- Health Care (Physical & Mental)
- Human resources management
- Management (Senior / Corporate)
- News / Information
- Operations / Logistics
- Planning (Meeting, Events, etc.)
- Production
- Real Estate
Research
Restaurant / Food service
Sales / Marketing
Science / Technology / Programming
Social service
Student
N/A - Unemployed / Retired / Homemaker
Other

How many children are in your family in total?

What ethnic group do you identify with?

Caucasian
Aboriginal/Torres Strait Islander
Asian
Middle Eastern
Pacific Islander
African-American
African
Multi racial
Decline to respond
Other: Please specify:

What is your annual household income before tax in your local currency?

Less than 25,000
25,000 to 34,999
35,000 to 49,999
50,000 to 74,999
75,000 to 99,999
100,000 to 124,999
125,000 to 149,999
150,000 or more
Unsure or would rather not say

Which country do you live in? *

- Afghanistan
- Albania
- Algeria
- Andorra
- Angola
- Antigua
- Argentina
- Armenia
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh
- Barbados
- Barbuda
- Belarus
- Belgium
- Belize
- Benin
- Benin
- Bolivia
Bosnia
Botswana
Brazil
Brunei Darussalam
Bulgaria
Burkina Faso
Burundi
Cambodia
Cameroon
Canada
Cape Verde
Central African Republic
Chad
Chile
China
Colombia
Comoros
Congo (Brazzaville)
Congo (Kinshasa)
Costa Rica
Cote d'Ivoire
Croatia
Cuba
Cyprus
Czech Republic
Denmark
Djibouti
Dominica
Indonesia  
Iran  
Iraq  
Ireland  
Israel  
Italy  
Jamaica  
Japan  
Jordan  
Kazakhstan  
Kenya  
Kiribati  
North Korea  
South Korea  
Kosovo  
Kuwait  
Kyrgyzstan  
Lao  
Latvia  
Lebanon  
Lesotho  
Liberia  
Libyan Arab Jamahiriya  
Liechtenstein  
Lithuania  
Luxembourg  
Macedonia  
Madagascar
Malawi
Malaysia
Maldives
Mali
Malta
Marshall Islands
Mauritania
Mauritius
Mexico
Micronesia
Moldova
Monaco
Mongolia
Montenegro
Morocco
Mozambique
Myanmar
Namibia
Nauru
Nepal
Netherlands
New Zealand
Nicaragua
Niger
Nigeria
Northern Ireland
Norway
Oman
What is the postcode of your family home?
About the target child

First of all, however, I want you to give me information on the child that will be the target child. This is your gifted child who is undertaking a primary/elementary school curriculum. In some states/countries this may include children enrolled up to Year 7. The key element is that they mostly deal with the one classroom teacher.

If you have more than one gifted child that is undertaking a primary/elementary school curriculum, please choose the child that you have the most worries or concerns about.

The target child is the child that I'll ask you to think about when you answer questions later in the survey.

Do you have more than one gifted child that is undertaking a primary/elementary school curriculum? *

☐ Yes
☐ No

Can you please tell me why you chose this child as your target child?

How old is your child - in years?

Your child's gender?

☐ Male
☐ Female

What is your relationship to the target child?

☐ Mother
☐ Step-mother
☐ Father
☐ Step-father
☐ Grandmother
Does your child have any health or physical issues?

- Yes
- No

What health or physical issues does your child have?


Upon what basis do you identify this child as being gifted? Check all that apply.

- Cognitive (IQ) test results
- Identified for any form of gifted programming such as subject acceleration, cluster grouping, or other gifted services
- Reached many developmental milestones early
- Is a member of a high-IQ society (e.g. Mensa)
- Achievement test results
- Skipped one or more grades in school
- Other talent search results
- Have been frequently spoken of as gifted by others such as teachers
- Biological relatives are gifted
- Identified as twice-exceptional/dual diagnosis
- Early entry in to formal schooling
- Other: Please specify:
Who initiated the identification of your child as being gifted? Examples might be the class teacher, yourself, your spouse or a childcare worker or other.

[Blank]

Please tell me more about the IQ test that your child was tested with. Please include which version of the test if applicable. Examples are SBV, WISC-IV etc. If you know your child's full scale IQ (FSIQ), General Ability Index (GAI), or percentile rank please enter that as well.

<table>
<thead>
<tr>
<th>IQ Test administered</th>
<th>FSIQ/GAI</th>
<th>Year test was given</th>
<th>Percentile rank</th>
</tr>
</thead>
</table>

Which test was administered? [___] [___] [___] [___]

Does your child have a "dual diagnosis" (2E)? Examples might be a learning disability (e.g. dyslexia, sensory issues etc.), behavioural difficulty (ADHD, ADD etc.), or developmental issue (ASD, Asperger's etc.)?

☐ Yes
☐ No

What dual diagnosis/2E does your child have?

[Blank]

Who suggested this to you?

☐ Teacher
☐ Paediatrician
☐ Spouse/Partner
☐ Other relative
☐ Occupational therapist
☐ Psychologist/Psychiatrist
☐ Friend
☐ Family Doctor/GP
☐ Speech therapist
☐ Self
☐ Other health care professional
☐ Other - please specify: [ ]

Has it been professionally diagnosed?
☐ Yes
☐ No

Who conducted the diagnosis?
☐ Teacher
☐ Paediatrician
☐ Spouse/Partner
☐ Other relative
☐ Occupational therapist
☐ Psychologist/Psychiatrist
☐ Friend
☐ Family Doctor/GP
☐ Self
☐ Speech therapist
☐ Other health care professional
☐ Other: [ ]
What year is your child currently enrolled in?

- Kindergarten / Preparatory / Pre-Primary / Reception / Transition
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- Other

What type of school does your child attend?

- Government/public
- Private - religious
- Private - non religious
- Homeschooled
- Alternative
- Co-schooled
- Other: Please specify:

Please briefly state why the target child is being homeschooled.
Is your child's school providing any form of educational accommodation for your child?

☐ Yes
☐ No

What form of accommodation is being offered to your child? Please choose all that apply.

☐ Ability or achievement grouping
☐ Grade skipping
☐ Compacted curriculum
☐ Telescoping
☐ Subject acceleration
☐ Pull out groups with other gifted children
☐ Individualised differentiation of classwork in regular classroom
☐ Enrichment activities
☐ Enrolled in specific gifted program
☐ Other: Please specify: _______________________________

How satisfied are you with the educational accommodation that has been offered to your child by their current school?

☐ Very dissatisfied
☐ Dissatisfied
☐ Unsure
☐ Satisfied
☐ Very satisfied

Has your child changed schools at any time?

☐ Yes
☐ No

How many times has your child changed schools?
What was the main reason for your child changing schools? Please give brief details for each change.
The following statements describe feelings and perceptions about the experience of being a parent. Think of each of the items in terms of how your relationship with the target child typically is. Please indicate the degree to which you agree or disagree with the following items. *

<table>
<thead>
<tr>
<th></th>
<th>1 = Strongly disagree</th>
<th>2 = Disagree</th>
<th>3 = Undecided</th>
<th>4 = Agree</th>
<th>5 = Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am happy in my role as a parent.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>There is little or nothing I wouldn't do for my child if it was necessary.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Caring for my child sometimes takes more time and energy than I have to give.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I sometimes worry whether I am doing enough for my child.</td>
<td>○</td>
<td>○</td>
<td>○</td>
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</tr>
<tr>
<td>I feel close to my child.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
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</tr>
<tr>
<td>I enjoy spending time with my child.</td>
<td>○</td>
<td>○</td>
<td>○</td>
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</tr>
<tr>
<td>My child is an important source of affection for me.</td>
<td>○</td>
<td>○</td>
<td>○</td>
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</tr>
<tr>
<td>Having my child gives me a more certain and optimistic view for</td>
<td>○</td>
<td>○</td>
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<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
The major source of stress in my life is my child.

Having my child leaves little time and flexibility in my life.

Having my child has been a financial burden.

It is difficult to balance different responsibilities because of my child.

The behaviour of my child is often embarrassing or stressful to me.

If I had it to do over again, I might decide not to have a child.

I feel overwhelmed by the responsibility of being a parent.

Having my child has meant having too few choices and too little control over my life.

I am satisfied as a parent.

I find my child enjoyable.
FSRS

The following statements describe feelings and thoughts you might have regarding your child's teacher. In relation to your target child, please indicate how much you agree with each statement while thinking about your child's main classroom teacher.

*I am confident that my child's teachers:*

<table>
<thead>
<tr>
<th>Statement</th>
<th>1 = strongly disagree</th>
<th>2 = disagree</th>
<th>3 = unsure</th>
<th>4 = agree</th>
<th>5 = strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>...are doing a good job teaching my child academic subjects.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>...are doing a good job teaching my child to follow rules and directions.</td>
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<tr>
<td>...are doing a good job helping my child resolve conflicts with peers.</td>
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<tr>
<td>...are doing a good job keeping me well-informed of my child's progress.</td>
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<tr>
<td>...are doing a good job encouraging my participation in my child's education.</td>
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<tr>
<td>...are doing a good job disciplining my child.</td>
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<tr>
<td>...are easy to reach when I have a problem or question.</td>
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<tr>
<td>...keep me aware of all the information I need related to school.</td>
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<tr>
<td>Statement</td>
<td>☐</td>
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<tr>
<td>--------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>...are doing a good job encouraging my child's sense of self-esteem.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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</tr>
<tr>
<td>...are doing a good job encouraging my child to have a positive attitude toward learning.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>...are doing a good job helping my child understand his/her moral and ethical responsibilities.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>...are friendly and approachable.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>...are receptive to my input and suggestions.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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</tr>
<tr>
<td>...are sensitive to cultural differences.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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</tr>
<tr>
<td>...respect me as a competent parent.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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</tr>
<tr>
<td>...care about my child.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>...have my child's best interests at heart.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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</tr>
<tr>
<td>...are worthy of my respect.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>...will do what is best for my child in the classroom.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
I have contact with my child’s teacher:

- Very infrequently
- Somewhat frequently, the bare minimum
- Somewhat frequently, but less than I'd like
- Very frequently
- Other: Please specify: 

I find the relationship with my child's teachers:

- Very unsatisfying, it is difficult for me to work with my child's teachers
- Somewhat unsatisfying, could definitely be improved
- Somewhat satisfying, it's OK
- Very satisfying, it is easy for me to work with my child's teachers
- Other: Please specify: 

DASS

*Please read each statement and choose a number 0, 1, 2 or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.*

<table>
<thead>
<tr>
<th>Statement</th>
<th>0 = Did not apply to me at all</th>
<th>1 = Applied to me to some degree, or some of the time</th>
<th>2 = Applied to me to a considerable degree, or a good part of time</th>
<th>3 = Applied to me very much, or most of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>I found myself getting upset by quite trivial things</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>I was aware of dryness of my mouth</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>I couldn't seem to experience any positive feeling at all</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>I just couldn't seem to get going</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>I tended to over-react to situations</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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</tr>
<tr>
<td>I had a feeling of shakiness (e.g., legs going to give way)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>I found it difficult to relax</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>I found myself in situations that made me so anxious I was</td>
<td>☐</td>
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<tr>
<td>most relieved when they ended</td>
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<td>--------------------------------</td>
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<tr>
<td>I felt that I had nothing to look forward to</td>
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<tr>
<td>I found myself getting upset rather easily</td>
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<tr>
<td>I felt that I was using a lot of nervous energy</td>
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<tr>
<td>I felt sad and depressed</td>
<td></td>
<td></td>
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<tr>
<td>I found myself getting impatient when I was delayed in any way (e.g., lifts, traffic lights, being kept waiting)</td>
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<tr>
<td>I had a feeling of faintness</td>
<td></td>
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<tr>
<td>I felt that I had lost interest in just about everything</td>
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<tr>
<td>I felt I wasn't worth much as a person</td>
<td></td>
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<tr>
<td>I felt that I was rather touchy</td>
<td></td>
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<tr>
<td>I perspired noticeably (e.g., hands sweaty) in the absence of high temperatures or physical exertion</td>
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<tr>
<td>I felt scared without any good reason</td>
<td></td>
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<td></td>
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<tr>
<td>I felt that life wasn't worthwhile</td>
<td></td>
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<tr>
<td>Statements</td>
<td></td>
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<tr>
<td>---------------------------------------------------------------------------</td>
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<td>--</td>
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</tr>
<tr>
<td>I found it hard to wind down</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I had difficulty in swallowing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I couldn't seem to get any enjoyment out of the things I did</td>
<td></td>
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</tr>
<tr>
<td>I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt down-hearted and blue</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I found that I was very irritable</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt I was close to panic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I found it hard to calm down after something upset me</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feared that I would be &quot;thrown&quot; by some trivial but unfamiliar task</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I was unable to become enthusiastic about anything</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I found it difficult to tolerate interruptions to what I was doing</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>I was in a state of nervous tension</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt I was pretty worthless</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>I was intolerant of anything that kept me from getting on with what I was doing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt terrified</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I could see nothing in the future to be hopeful about</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I felt that life was meaningless</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I found myself getting agitated</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I was worried about situations in which I might panic and make a fool of myself</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I experienced trembling (e.g., in the hands)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I found it difficult to work up the initiative to do things</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**SDQ**

The following statements describe aspects of your child’s behaviour. For each item, please select an answer on the basis of the target child’s behaviour over the last six months.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Not True</th>
<th>Somewhat True</th>
<th>Certainly True</th>
</tr>
</thead>
<tbody>
<tr>
<td>Considerate of other people's feelings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restless, overactive, cannot stay still for long</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Often complains of headaches, stomach-aches or sickness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shares readily with other children, for example toys, treats, pencils</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Often loses temper</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rather solitary, prefers to play alone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Generally well behaved, usually does what adults request</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Many worries or often seems worried</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helpful if someone is hurt, upset or feeling ill</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constantly fidgeting or squirming</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has at least one good friend</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Often fights with other children or bullies them</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Often unhappy, depressed or tearful</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Generally liked by other children</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Easily distracted, concentration wanders</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nervous or clingy in new situations, easily loses confidence</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>Kind to younger children</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>Often lies or cheats</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>Picked on or bullied by other children</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>Often volunteers to help others (parents, teachers, other children)</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>Thinks things out before acting</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>Steals from home, school or elsewhere</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>Gets along better with adults than with other children</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>Many fears, easily scared</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>Good attention span, sees work through to the end</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
</tbody>
</table>

---

**You're almost done!**

I'm really interested in hearing what you've got to say about what it's like to raise this child of yours especially how it makes you feel. If you don't wish to share anything, please select no and then click on the next button.

**Is there anything else about the experience of raising your gifted child that you'd like to tell me?**

〇 Yes
〇 No

**What would you like to share with me? (Text box approximately 2500 characters)**
Optional contact information

Leaving contact details is entirely optional.

If you do not wish to leave contact information, please select NO and then click the submit button to complete the survey.

If you are interested in receiving a copy of the results of this study or finding out if the study is published I will need you to leave me with contact details.

There is also a second stage to this study planned for 2012. It will be a series of interviews with parents/caregivers who indicate that they are willing to be contacted. The interviews are designed to capture more detail on the day to day experience of raising a gifted child and will cover topics such as home life with the gifted child, navigating the education system, your expectations and realities of raising a gifted child, and the impact that having a gifted child (or children!) has had on your life. To take part in this stage of the project, you will need to give me optional contact information as I have no other way of contacting you.

Do you wish to provide me with optional contact information?

☐ Yes

☐ No

Optional contact information

If you are willing to provide me with contact information, you must enter it here, and you must indicate what purposes I can use it for. It is completely up to you how much, or how little contact information you choose to provide to me. None of it is compulsory. You can be assured that your information will be handled in the strictest of confidence. Your identifying information will be removed from the other answers that you have submitted and kept in such a way that the two cannot be matched.

Please remember to click on the submit button at the bottom of the page when you have finished.

First Name

______________________________

Last Name

______________________________

Street Address

______________________________

City

______________________________

State

______________________________

Post Code/Zip

______________________________
Country

Email Address

Skype ID

Phone Number

By checking these boxes, you are giving me consent to use the above contact information only for the following purposes (choose as many as apply):

- contact you if I have follow up questions.
- contact you to take part in the interview stage of the project.
- contact you with a summary of the findings of this research.
- inform you if this research is published.

Thank you very much for taking part in our research. Your input is really important and I appreciate the time and effort that you've put in to your responses.

If you have any questions, please contact Natalie at natalie.rimlinger@anu.edu.au or +61 2 6100 1305

I'd really appreciate it if you could ask your partner to also complete the survey. Their responses will of course be completely anonymous and cannot be matched to your information in any way. It would also be great if you could help spread the word about our survey to people that you know who you think might qualify to take part. The survey can be found by going to www.parentsofgiftedchildren.com.

Natalie
## Appendix C

### Strengths and Difficulties Questionnaire (SDQ; Goodman, 2001)

For each item, please circle a number indicating Not True, Somewhat True, or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain. Please give your answers on the basis of your child’s behaviour over the last six months.

<table>
<thead>
<tr>
<th>Item</th>
<th>Not True</th>
<th>Somewhat True</th>
<th>Certainly True</th>
</tr>
</thead>
<tbody>
<tr>
<td>Considerate of other people’s feelings.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Restless, overactive, cannot stay still for long.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Often complains of headaches, stomach-aches, or sickness.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Shares readily with other children, for example toys, treats, pencils</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Often loses temper.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Rather solitary, prefers to play alone.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Generally well behaved, usually does what adults request.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Many worries or often seems worried.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Helpful if someone is hurt, upset, or feeling ill.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Constantly fidgeting or squirming.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Has at least one good friend.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Often fights with other children or bullies them.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Often unhappy, depressed, or tearful.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Generally liked by other children.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Easily distracted, concentration wanders.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Nervous or clingy in new situations, easily loses confidence.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Kind to younger children.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Often lies or cheats.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Picked on or bullied by other children.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Often volunteers to help others (parents, teachers, other children).</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Thinks things out before acting.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Steals from home, school, or elsewhere.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Gets along better with adults than with other children.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Many fears, easily scared.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Good attention span, see chores or homework through to the end.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
Appendix D

Family-School Relationship Survey (FSRS; Adams & Christenson, 2000)

Please indicate how much you agree with each statement while thinking about the target child’s main classroom teacher.

<table>
<thead>
<tr>
<th>I am confident that my child’s teachers:</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Unsure</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>are doing a good job teaching my child academic subjects.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>are doing a good job teaching my child to follow rules and directions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>are doing a good job helping my child resolve conflicts with peers.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>are doing a good job keeping me well-informed of my child’s progress.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>are doing a good job encouraging my participation in my child’s education.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>are doing a good job disciplining my child.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>are easy to reach when I have a problem or question.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>keep me aware of all the information I need related to school.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>are doing a good job encouraging my child’s sense of self-esteem.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>are doing a good job encouraging my child to have a positive attitude toward learning.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>are doing a good job helping my child understand his/her moral and ethical responsibilities.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>are friendly and approachable.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>are receptive to my input and suggestions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>are sensitive to cultural differences.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>respect me as a competent parent.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>care about my child.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>have my child’s best interests at heart.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>are worthy of my respect.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>will do what is best for my child in the classroom.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Now think about the relationship that you have with your child’s teacher and answer the following questions and choose a number to indicate your response:

“I have contact with teachers of my child,”
0   (Very infrequently).
1   (Somewhat frequently, the bare minimum),
2   (Somewhat frequently, but less than I’d like),
3   (Very frequently),

“I find the relationship with my child’s teacher,”
0   (Very unsatisfying, it is difficult for me to work with my child’s teachers).
1   (Somewhat unsatisfying, could definitely be improved),
2   (Somewhat satisfying, it’s OK),
3   (Very satisfying, it is easy for me to work with my child’s teacher),
Appendix E

Depression Anxiety Stress Scale (DASS: Lovibond & Lovibond, 2004)

<table>
<thead>
<tr>
<th>DASS</th>
<th>Name:</th>
<th>Date:</th>
</tr>
</thead>
</table>

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.

*The rating scale is as follows:*

0  Did not apply to me at all
1  Applied to me to some degree, or some of the time
2  Applied to me to a considerable degree, or a good part of time
3  Applied to me very much, or most of the time

<table>
<thead>
<tr>
<th></th>
<th>Statement</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I found myself getting upset by quite trivial things</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>2</td>
<td>I was aware of dryness of my mouth</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>3</td>
<td>I couldn't seem to experience any positive feeling at all</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td></td>
<td>I experienced breathing difficulty (e.g., excessively rapid breathing,</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td></td>
<td>breathlessness in the absence of physical exertion)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>I just couldn't seem to get going</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>6</td>
<td>I tended to over-react to situations</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>7</td>
<td>I had a feeling of shakiness (e.g., legs going to give way)</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>8</td>
<td>I found it difficult to relax</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>9</td>
<td>I found myself in situations that made me so anxious I was most</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td></td>
<td>relieved when they ended</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>I felt that I had nothing to look forward to</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>11</td>
<td>I found myself getting upset rather easily</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>12</td>
<td>I felt that I was using a lot of nervous energy</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>13</td>
<td>I felt sad and depressed</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td></td>
<td>I found myself getting impatient when I was delayed in any way</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td></td>
<td>(e.g., lifts, traffic lights, being kept waiting)</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>I had a feeling of faintness</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>16</td>
<td>I felt that I had lost interest in just about everything</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>17</td>
<td>I felt I wasn't worth much as a person</td>
<td>0 1 2 3</td>
</tr>
</tbody>
</table>

227
<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>I felt that I was rather touchy</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>19</td>
<td>I perspired noticeably (e.g., hands sweaty) in the absence of high temperatures or physical exertion</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>20</td>
<td>I felt scared without any good reason</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>21</td>
<td>I felt that life wasn't worthwhile</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>22</td>
<td>I found it hard to wind down</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>23</td>
<td>I had difficulty in swallowing</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>24</td>
<td>I couldn't seem to get any enjoyment out of the things I did</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>25</td>
<td>I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>26</td>
<td>I felt down-hearted and blue</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>27</td>
<td>I found that I was very irritable</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>28</td>
<td>I felt I was close to panic</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>29</td>
<td>I found it hard to calm down after something upset me</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>30</td>
<td>I feared that I would be &quot;thrown&quot; by some trivial but unfamiliar task</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>31</td>
<td>I was unable to become enthusiastic about anything</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>32</td>
<td>I found it difficult to tolerate interruptions to what I was doing</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>33</td>
<td>I was in a state of nervous tension</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>34</td>
<td>I felt I was pretty worthless</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>35</td>
<td>I was intolerant of anything that kept me from getting on with what I was doing</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>36</td>
<td>I felt terrified</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>37</td>
<td>I could see nothing in the future to be hopeful about</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>38</td>
<td>I felt that life was meaningless</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>39</td>
<td>I found myself getting agitated</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>40</td>
<td>I was worried about situations in which I might panic and make a fool of myself</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>41</td>
<td>I experienced trembling (e.g., in the hands)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>42</td>
<td>I found it difficult to work up the initiative to do things</td>
<td>0</td>
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<td>2</td>
<td>3</td>
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</tbody>
</table>
Appendix F

Parental Stress Scale (Berry & Jones, 1995)

PSS

The following statements describe feelings and perceptions about the experience of being a parent. Think of each of the items in terms of how your relationship with the target child typically is. Please indicate the degree to which you agree or disagree with the following items.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Not Sure</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am happy in my role as a parent.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>There is little or nothing I wouldn't do for my child if it was necessary.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Caring for my child sometimes takes more time and energy than I have to give.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I sometimes worry whether I am doing enough for my child.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>I feel close to my child.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I enjoy spending time with my child.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>My child is an important source of affection for me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Having child gives me a more certain and optimistic view for the future.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>The major source of stress in my life is my child.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Having a child leaves little time and flexibility in my life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Having my child has been a financial burden.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>It is difficult to balance different responsibilities because of my child.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>The behaviour of my child is often embarrassing or stressful to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Statement</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>If I had it to do over again, I might decide not to have a child.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel overwhelmed by the responsibility of being a parent.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having child has meant having too few choices and too little control over my life.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am satisfied as a parent.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I find my child enjoyable.</td>
<td></td>
<td></td>
<td></td>
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Appendix G

Geographic location of Australian Participants by State

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<th>State</th>
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<tr>
<td>NSW</td>
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<td>31.2</td>
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<td>VIC</td>
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<td>8.3</td>
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<td>18.3</td>
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<tr>
<td>WA</td>
<td>3</td>
<td>2.8</td>
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<tr>
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<td>8</td>
<td>7.3</td>
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## Appendix H

Geographic Location of USA Participants by State

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<td>CT</td>
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<td>4.2</td>
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<td>2.7</td>
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<td>%</td>
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<tr>
<td>-------</td>
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<tr>
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<tr>
<td>VT</td>
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<td>0.4</td>
</tr>
<tr>
<td>WA</td>
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<td>2.3</td>
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<td>WI</td>
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<td>1.1</td>
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<tr>
<td>WY</td>
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<tr>
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## Appendix I

### Maternal Occupations for Australian Participants

<table>
<thead>
<tr>
<th>Occupation</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A - Unemployed / Retired / Homemaker</td>
<td>24</td>
<td>21.82%</td>
</tr>
<tr>
<td>Education</td>
<td>14</td>
<td>12.73%</td>
</tr>
<tr>
<td>Other</td>
<td>14</td>
<td>12.73%</td>
</tr>
<tr>
<td>Health Care (Physical &amp; Mental)</td>
<td>12</td>
<td>10.91%</td>
</tr>
<tr>
<td>Management (Senior / Corporate)</td>
<td>7</td>
<td>6.36%</td>
</tr>
<tr>
<td>Science / Technology / Programming</td>
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</tr>
<tr>
<td>Consulting</td>
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</tr>
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<tr>
<td>Student</td>
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</tr>
<tr>
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<td>3</td>
<td>2.73%</td>
</tr>
<tr>
<td>Academic/Researcher</td>
<td>3</td>
<td>2.73%</td>
</tr>
<tr>
<td>News / Information</td>
<td>2</td>
<td>1.82%</td>
</tr>
<tr>
<td>Sales / Marketing</td>
<td>2</td>
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</tr>
<tr>
<td>Advertisement / PR</td>
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</tr>
<tr>
<td>Arts/Leisure / Entertainment</td>
<td>1</td>
<td>0.91%</td>
</tr>
<tr>
<td>Buying / Purchasing</td>
<td>1</td>
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</tr>
<tr>
<td>Human resources management</td>
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</tr>
<tr>
<td>Planning (Meeting, Events, etc.)</td>
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</tr>
<tr>
<td>Real Estate</td>
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<tr>
<td>Social service</td>
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</tr>
<tr>
<td>Architecture / Design</td>
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<td>0.00%</td>
</tr>
<tr>
<td>Occupation</td>
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<td>%</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Beauty / Fashion</td>
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<tr>
<td>Construction</td>
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N= 109
### Appendix J

**Maternal Occupations Australian Participants**

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<th>%</th>
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</thead>
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<tr>
<td>Arts/Leisure / Entertainment</td>
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</tr>
<tr>
<td>Beauty / Fashion</td>
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<td>0.00%</td>
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<tr>
<td>Customer Service</td>
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<tr>
<td>Distribution</td>
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<td>%</td>
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<tr>
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<td>0.00%</td>
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<tr>
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<td>Production</td>
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N= 93
# Appendix K

## Maternal Occupations for USA Participants

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<tr>
<td>Sales / Marketing</td>
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<tr>
<td>Advertisement / PR</td>
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<tr>
<td>Distribution</td>
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<tr>
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<tr>
<td>Planning (Meeting, Events, etc.)</td>
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<tr>
<td>Production</td>
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<tr>
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$N = 256$
Appendix L

Paternal Occupations for USA Participants

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<td>Science / Technology / Programming</td>
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<tr>
<td>Other</td>
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<tr>
<td>Health Care (Physical &amp; Mental)</td>
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<td>Education</td>
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<td>Management (Senior / Corporate)</td>
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<tr>
<td>Consulting</td>
<td>13</td>
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<tr>
<td>N/A - Unemployed / Retired / Homemaker</td>
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<td>Arts/Leisure / Entertainment</td>
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<tr>
<td>Operations / Logistics</td>
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<td>2.15%</td>
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<tr>
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<tr>
<td>Occupation</td>
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<td>%</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>----</td>
<td>-----</td>
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<td>Production</td>
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<td>Real Estate</td>
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<td>Social service</td>
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<tr>
<td>Beauty / Fashion</td>
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</tr>
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N = 233
## Appendix M

**ICD Diagnosis by condition for Australian children**

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<td>F90</td>
<td>ADHD</td>
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<td></td>
<td>Sensory issues</td>
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<td>14.08</td>
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<tr>
<td>F84.5</td>
<td>Asperger's</td>
<td>9</td>
<td>12.68</td>
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<tr>
<td>J45</td>
<td>Asthma</td>
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<td>9.86</td>
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<tr>
<td>F82</td>
<td>Dyspraxia</td>
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<td>7.04</td>
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<td>F81.0</td>
<td>Dyslexia</td>
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<td>5.63</td>
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<tr>
<td>F41</td>
<td>Anxiety</td>
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<td>4.23</td>
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<td>F98.9</td>
<td>Behavioural Issues NOS</td>
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<td>2.82</td>
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<tr>
<td>K90</td>
<td>Coeliac disease</td>
<td>2</td>
<td>2.82</td>
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<td>L20</td>
<td>Eczema</td>
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<td>2.82</td>
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<td>R27</td>
<td>Other lack of co-ordination</td>
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<tr>
<td>T78.1</td>
<td>Non-life-threatening food allergy</td>
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<tr>
<td>T78.4</td>
<td>Allergies (NOS)</td>
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<tr>
<td>F32</td>
<td>Depression</td>
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<td>Unspecified behavioral syndromes associated with physiological disturbances and physical factors</td>
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<tr>
<td>G29.9</td>
<td>Neuropathy (NOS)</td>
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<td>1.41</td>
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<td>G43</td>
<td>Migraine</td>
<td>1</td>
<td>1.41</td>
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<td>H53.9</td>
<td>Visual disturbance (NOS)</td>
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<td>Gastroesophageal Reflux Disease (GERD)</td>
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<tr>
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<td>Cardiac Murmur</td>
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<td>1.41</td>
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<td>Code</td>
<td>Disorder</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>------</td>
<td>--------------------------------------------------------------</td>
<td>----</td>
<td>----</td>
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<tr>
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N=71
## Appendix N

**ICD Diagnosis by condition for USA children**

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<th>% of Cases</th>
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<td>Asthma</td>
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<td>Other anxiety disorders</td>
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<td>Asperger's syndrome</td>
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<td>F82</td>
<td>Specific developmental disorder of motor function</td>
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<td>2.53</td>
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<tr>
<td>R27</td>
<td>Other lack of coordination</td>
<td>4</td>
<td>2.53</td>
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<td>F84.9</td>
<td>Pervasive developmental disorder, unspecified</td>
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<td>Unspecific mood (affective) disorder</td>
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<td>Obsessive-compulsive disorder</td>
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<td>Autistic disorder</td>
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<td>Tic disorder</td>
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<td>Tourette's disorder</td>
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<td>Gastro-esophageal reflux disease</td>
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<td>1.27</td>
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<tr>
<td>K31.9</td>
<td>Disease of stomach and duodenum, unspecified</td>
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<td>1.27</td>
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<tr>
<td>R27.8</td>
<td>Other &amp; unspecified lack of co-ordination including dysgraphia</td>
<td>2</td>
<td>1.27</td>
</tr>
<tr>
<td>Code</td>
<td>Disorder</td>
<td># Cases</td>
<td>% of Cases</td>
</tr>
<tr>
<td>-------</td>
<td>-----------------------------------------------------------------</td>
<td>---------</td>
<td>------------</td>
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<td>Type 1 diabetes mellitus</td>
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<td>Expressive language disorder</td>
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<td>Mixed receptive-expressive language disorder</td>
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<td>Developmental disorder of scholastic skills, unspecified</td>
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<td>Sleep Disorders</td>
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<td>Convergence insufficiency and excess</td>
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<td>Astigmatism</td>
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<td>0.63</td>
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<tr>
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<td>0.63</td>
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<td>K58</td>
<td>Irritable bowel syndrome</td>
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<td>Celiac disease</td>
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<td>0.63</td>
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<td>M41</td>
<td>Scoliosis</td>
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<td>0.63</td>
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<td>Disorder of bone, unspecified</td>
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<td>Q65</td>
<td>Congenital deformities of hip</td>
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<td>Q71</td>
<td>Reduction defects of upper limb</td>
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<td>0.63</td>
</tr>
<tr>
<td>Q72</td>
<td>Reduction defects of lower limb</td>
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<td>0.63</td>
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<tr>
<td>R62</td>
<td>Lack of expected normal physiological development in childhood and adults</td>
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<td>0.63</td>
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</table>

\[N = 158\]
Appendix O

Missing Data Analysis of SDQ Responses – Australia and USA Participants

Missing data was found in both Australian and US samples. SPSS 23 Missing Data Analysis was conducted and missing data for both countries was deemed to be random. Mean substitution was conducted based upon the child’s scores on the subscale. Recoding is described in detail below.

Australia

Case #600

No answer for Question 24 Many fears, easily scared

Scores for other questions in the emotional scale:

\[
\begin{align*}
Q3 & \quad 0 \\
Q8 & \quad 0 \\
Q13 & \quad 0 \\
Q16 & \quad 0
\end{align*}
\]

Sample mean for Emotional Difficulties = 4.09

Other scores on emotional questions suggest that a score of 0 would be a better fit for this child.

Case #1418

No answer for Question 6 Rather solitary, prefers to play alone

Scores for other questions in the peer scale:

\[
\begin{align*}
Q11 & \quad 0 \\
Q14 & \quad 0 \\
Q19 & \quad 0 \\
Q23 & \quad 0
\end{align*}
\]

Sample mean for Peer Difficulties = 3.93

Other scores on Peer questions suggest that a score of 0 would be a better fit for this child.
Case #558

No answer for Question 15 *Easily distracted, concentration wanders*

Scores for other questions in the Hyper scale:

Q2 2  Q10 2  Q21 1  Q25 1

Sample mean for Hyper Difficulties = 5.63

Average across other full scales for this participant = 5.5

Average of other questions on this scale: 1.5

Other scores on hyperactive questions suggest that a score of 2 would be a good fit for this child.

Case #667

No answer for Question 8 *Many worries or often seems worried*

Scores for other questions in the emotional scale:

Q3 2  Q13 1  Q16 0  Q24 2

Sample mean for Emotional Difficulties = 4.09

Average across other full scales for this participant = 6.5

Average of other questions on this scale: 1.25

Other scores on emotional questions suggest that a score of 1 would be a better fit for this child.

Case 632 Did not complete the SDQ

Case 599 Did not complete the SDQ
USA

Case #1242

No answer for Question 23 Gets along better with adults than with other children.

Scores for other questions in the emotional scale:

Q6 1  Q11 3 (RS)  Q14 3 (RS)  Q19 1

No other qualitative information. Recoded as 1.

Case #571

No answer for Question 11 Has at least one good friend

Scores for other questions in the peer scale:

Q6 1  Q14 0  Q19 0  Q23 1

Child appears to have few Peer problems. Other scores on Peer questions and qualitative information suggest that a score of 1 would be a better fit for this child.

Question 13 Often unhappy, depressed, or tearful

Q3 0  Q8 0  Q16 0  Q24 0

Child appears to have few emotional problems. Recoded as 0.

Case #650

Measure not answered.

Case #6930

No answer for Question 22 Steals from home, school or elsewhere

Scores for other questions in the emotional scale:

Q5 0  Q7 0  Q12 0  Q18 0

Child appears to have few conduct problems. Recoded as 0.
Case #738

Question 3 Often complains of headaches, stomach-aches etc.

Q8 0  Q13 0  Q16 2  Q24 1

Child appears to have some emotional problems. Recoded as 1.

Case #1015

No answer for Question 11 Has at least one good friend

Scores for other questions in the peer scale:

Q6 0  Q14 0  Q19 0  Q23 1

Child appears to have few Peer problems. Other scores on Peer questions and qualitative information suggest that a score of 1 would be a better fit for this child.

Case #1391

No answer for Question 7 Generally obedient, usually does what....

Scores for other questions in the emotional scale:

Q5 1  Q12 0  Q18 0  Q22 0

Child appears to have few conduct problems. Recoded as 0.

Case #589

Measure not answered.

Case #615

No answer for Question 7 Generally obedient, usually does what....

Scores for other questions in the emotional scale:

Q5 0  Q12 0  Q18 0  Q22 0
Child appears to have no conduct problems. Recoded as 0. Case #619
Measure not answered.

Case #656
Measure not answered.

Case #711
Measure not answered.

Case #714
Measure not answered.

Case #920
Measure not answered.

Case #629
No answer for Question 2 Restless, overactive, cannot stay still for long
Scores for other questions in the emotional scale:

Q10  1  Q15  2  Q21  1  Q25  1

Child appears to have few hyperactivity problems. Recoded as 1.

Case #724
No answer for Question 2 Restless, overactive, cannot stay still for long
Scores for other questions in the emotional scale:

Q10  2  Q15  2  Q21  1  Q25  0

Child appears to have quite a number of hyperactivity problems. Recoded as 2.
Appendix P

List of IQ Tests Used to Identify USA Children

Comprehensive Test of Nonverbal Intelligence (CTNI)
Differential Ability Scales (DAS)
Kaufman Assessment Battery for Children (KABC)
Kaufman Brief Intelligence Test (KBIT)
Kaufman Test of Educational Achievement (KTEA)
Raven's Progressive Matrices (Ravens)
Reynolds Intellectual Assessment Scales (RIAS)
Stanford-Binet Intelligence Scale: Form L-M (SB LM)
Stanford-Binet Intelligence Scales (SB5)
TerraNova InView
Test of Nonverbal Intelligence (TONI)
The Woodcock-Johnson III and the Cognitive Abilities Test (WJ COGAT)
Wechsler Intelligence Scale for Children (WISC)
Wechsler Preschool and Primary Scale of Intelligence (WPPSI)
Appendix Q

Parent Free Responses to School Type – Australia and USA Parents

Australian parents free responses to “other” type of school:

1) Homeschooled
2) Montessori Cycle 1
3) Progressive Preshil
4) She was at a private Anglican school until the end of last term but we've withdrawn her this term and we're now homeschooling.

USA parents free responses to “other” type of school:

1) Charter school
2) Charter School
3) Charter school for gifted students
4) Charter school for homeschooling families
5) E-school
6) Gifted center public school
7) Homeschooled, with a couple of classes at the public middle school
8) Hybrid charter - 2 days @ school, 3 @ home
9) Independent study program of a public charter school
10) K12 Online
11) Montessori
12) non formal homeschool
13) Part-time public and partial homeschooling
14) Private school for Gifted Children
15) private-non religious, gifted
16) Public charter homeschool
17) Public gifted
18) She is switching from a public school she attended last year for 1st grade to a private school she will start this fall for 2nd grade.

19) STEM Magnet

20) University Affiliated School
Appendix R

Parent Free Responses to Reason for Homeschooling – Australia and USA Parents

Australian parents free responses to “Please briefly state why the target child is being homeschooled”

1) Decision made before he was born due to beliefs about the poor education system. However we now see that no school can cater to a grade 1 student capable of grade 6+ work, combined with his social and sensory difficulties. We believe a safe, supportive, loving environment is where he will thrive, and he has made magnificent progress. Gifted ed psychologists and teachers have also told us there's no way he should be in school as the system is not equipped for students like my son (who would be at great risk of depression, bullying, etc.).

2) Did early entry to school at 4y2m, and after 18months she obviously needed further acceleration. The school was unwilling/unable to provide this so through the Ed Dept we were allowed to access Distance Education where they immediately did a full year acceleration (skipping year 2), she did year 3 and were planning to do another skip into year 5 but we decided to homeschool independently as she needed more depth than the NSW curriculum was able to supply (foreign language, ancient history, indepth science etc.).

3) He needs intense 1/1 learning sessions.

4) I was already homeschooling my older two children when this child reached preschool age. At that time, he was not diagnosed with CAPD, and we knew that there was an issue with communication and speech. We decided not to send him to preschool for those reasons. After he was diagnosed with CAPD, we felt that it
would not benefit him to attend school for both educational and social reasons. He was the first child that I homeschooled right from the beginning. We monitored his progress academically, as well as his communication skills, and found that he was exceeding our expectations. In the early years, we spent a lot of time adapting his environment to cater for his needs, such as using a lot of computer and video instruction using headphones with the right ear louder to teach him to listen on one side to attempt to filter other noises. He no longer needs this type of assistance, and it is not noticeable to others that he has this problem. He is academically ahead of his age cohort and I can target his curriculum accordingly. Homeschooling also allows him to follow his interests at more depth.

5) Child was increasingly anxious to the point of being physically ill when going to school. She was rapidly losing self-confidence and regularly stated that she was 'stupid'. She was too tired to play after school and presented with signs of depression.

6) My child is being homeschooled because he did not enjoy regular school. His lack of enjoyment eventually led to high levels of stress and anxiety. The reasons for the anxiety included emotional ones (my child did not like being separated from his parents) and practical ones (my son was bored). My son also found it difficult to make like-minded friends.

7) Though not registered for homeschool yet (due to his age), he is currently completing a grade 2 maths curriculum and reading and writing fluently. We have been unable to find a school capable of catering to his educational and emotional needs. Technically he is 4 year kinder / Prep level.

8) We felt that given this area's high level of socio-economic difficulties, it would be unlikely that the school would be able to meet his needs. We were unable to find a
school we were happy with within a reasonable driving distance. We felt that his asynchonicities would be better met with homeschooling. Also in SA, he would be in reception for 6 terms, and this would be unlikely to work for him.

USA parents free responses to “Please briefly state why the target child is being homeschooled”

1) (1) Always knew we would homeschool, even before knowledge of giftedness. (2) Suggested by psychologist that we homeschool, though we already were doing so (3) Live in a rural area and local public school gifted program is one day per week, for a few hours

2) This is the US, and we have the freedom to homeschool. In our state, Illinois, we don't have to ask anybody's permission to do so, and are considered private schools by law. 2.) Public schools do NOT meet the needs of G&T students in Illinois, even in school districts where there is the money to do so. The best that can be offered is a pull-out program and enrichment. There are NO public school classrooms for these children where they can reach their potential. 3.) The target child attended Catholic school from age 3 through 8. She wanted to attend earlier, and had the ability, even asked the principal of one school on her own. The excuses were many, but most had to do with chronological age, no real reason. When in these schools, the target child was bored to the point where she took 'bathroom sabbaticals' where she would ask permission to use the restroom, then wander the school in search of something to learn. 4.) Schools for the gifted have extremely high tuition rates. In the US, the money to educate the child doesn't travel with the child, but stays in the public school district. If the child doesn't attend that school and that school only, the school doesn't receive funding for that child, but the funding stays with the government agency. As these are tax dollars, it seems pretty wasteful. 5.) Formal
schools have a lot of rules necessary to the average student, but completely unnecessary to G&T students.

3) After Kinder in a private school (early entered), the teacher stated that she didn't think that they could place my daughter at a grade level that would challenge her and still be a good fit socially and emotionally, and suggested homeschooling.

4) Although he was skipped ahead a year, it was still not challenging enough. Teacher's were more focused on making a 5 year old be more organized than helping him continue to learn in the classroom. He was starting to get into trouble at school for not paying attention, and was starting to do poor work. We looked into private schools, but they were too expensive and still did not guarantee he would be challenged in the classroom.

5) Can’t find a school equipped to deal successfully with all of his issues.

6) Classroom, group learning is just not a fit for many reasons. She is too far from the norm for teachers to work with her in a classroom setting. She is too creative and independent for a classroom to be comfortable for her and so the combination of ability, personality and youth made elementary education too confining. She is a global thinker and learner and understandings in great gulps. She learns best by following her interests and occasionally asking clarifying questions. A natural autodidact, she doesn't accept information passively -- everything starts to change and be organized and played with the instant it enters her wonderful brain.

7) Concern that the private school she had attended for the past two years was not sufficiently focused on her creativity and desire for intense intellectual stimulus, rather than rote learning or curriculum constraints. We feel she should be given the broadest possible exposure to ideas and concepts, which we can influence directly at this age, more so than in a structured environment.
8) Doing pre-algebra, middle school science, and reading at middle school level while having delays in motor skills doesn't work in a traditional school setting.

9) Due to giftedness she is 'beyond her level' and the local schools will not place her accordingly...and I wouldn't want her surrounded by those several grades above at this age anyway...those kids can be mean to others who don't 'fit in'

10) Gabe began reading well when he was about 2.5 years old and progressed rapidly.

By the time he was old enough to begin kindergarten, he was reading books like The Hobbit and others on his own. In a classroom situation, he would have had to sit through other children who were just learning to read. His father and I were both homeschooled as children, and we had been homeschooling our oldest child as well who is also academically gifted, though in other areas. We knew that a homeschool environment could provide the flexibility that Gabe needed to thrive.

11) He attended public school until third grade. He had been accelerated midway through Kindergarten to first grade, attended second grade the following year, then most of third grade. He was quite young since he has a late November birthday, so he was still six years old when he began third grade. Academically, he did very well and qualified for the gifted program on the school's screener (CogAT). However, he began to have anxiety about 'not being good at writing' because his handwriting looked like a six-year old's and 'not being good at sports' since he was two years younger than the other boys in his class. Also, two years after the initial skip he was already needing more advanced work in math, reading, science and spelling.

Another grade skip did not seem like a good idea. The school refused to provide subject acceleration, and the teachers did not provide meaningful differentiated instruction. When his wonderful teacher changed jobs midyear, and an elderly long-
term substitute who didn't understand my son at all was hired, that was the last straw.

12) He is too academically advanced for traditional schools to manage, as he's doing high school- and college-level work in some areas. Additionally, his overexcitabilities would make participating in a classroom situation difficult on both him and the teacher.

13) he is working at different grade levels in different subjects, academically he is much further ahead than he is socially/emotionally, he gets very frustrated with the workings of traditional school

14) He was denied gifted services and was bored to the point the school insisted he had ADHD.

15) He was enrolled in school for PreK and Kindergarten. In Kindergarten he became very sad because he was not 'believed' when he read and was frustrated with the level of math (low) he had to complete. He had many friends but 'felt stupid' because they said they were gifted and although he was actually ahead of them in all subjects he felt different. His stress level was so high and he asked early on if he could homeschool because his elder profoundly gifted brother had done so on and off in the past. We homeschooled him for 1st and 2nd and he thrived academically and emotionally. The plan was to homeschool for 1 and 2 and put him back in a new school in 3rd and he was very excited. But he did not have a great 3rd grade year. He again was not allowed to proceed from the level of studies he had completed. He also has a vivid imagination and big sentences and some kids did not understand him...so again he felt 'stupid'. He asked to homeschool from early on in the year but we elected for him to finish the 3rd grade year because we liked the teacher. We felt that he was making some friends whose relationships needed cementing before
leaving the school, and that he needed a sense of completion (since he is such a competence fan and perfectionist). He is excited to begin homeschooling later this month because he knows he can get academics at his own level. I would overall say that the emotional issue is the main reason with the secondary BUT root cause being academics.

16) He was missing large chunks of info and was having behavior outbursts out of frustration. He also had difficulty with the repetition (when reviewing for the yearly testing) and standing in line and being picked on before school.

17) He was originally enrolled in a private laboratory school affiliated with a local college. We hoped that they would be able to differentiate the curriculum enough for him, and asked about that before we enrolled. However, after about 6 months of negotiating with the teacher and then the administration, we were told that he could not be accelerated in math because of the math curriculum (Everyday Math) that the school uses (though we know that students have been allowed to do this in the past). They also were not willing to allow us to have him tutored using the Orton-Gillingham method during school hours. The teacher was picking on him, and he was miserable. We withdrew him from the school in March 2011 and opted to homeschool at that time. He is much happier now, and we are moving at his own pace. Public schools here do not work with students with dyslexia and do not have an adequate gifted program.

18) Her academic needs were not being met even with the addition of a once a week pull out program. She also had difficulty with a teacher who tried to pull her down to level rather than meet her where she was.

19) Her advanced academic needs cannot be met in a school setting.
20) Her needs were not being met in public schools even though she was in a gifted magnet program. The teachers and administration at the school stated numerous times that they could not and would not make the accommodations necessary to allow her to work at her level. So we decided to start homeschooling this year with a radical acceleration to 6th grade (she should be entering 4th).

21) His academic level is more in line with a 2nd grader but our state does not allow grade skips before the age of 7. We were worried about behavior issues as a result of a lack of challenge to the curriculum.

22) His older siblings were being home-schooled, and he naturally followed. When he wanted to try school, we enrolled him in a very nice school. While the atmosphere was fine, and he liked the teachers and classmates -- and loved recess -- he was bored by the academics and activities and games. He thought the other kids (ages 6&7) might be less bored (they weren't, he was) if they could watch NOVA and study physics at school. He finally sadly declared, 'Mom, I just don't have time to learn any more, because I'm in school all day.' He really wanted school to work out, but decided he would rather homeschool.

23) I tried a private school and a public school program for students who scored in the 99% on academic achievement and neither school could accommodate my son's needs.

24) If this child were put in school, she would do fine, but would be bored and not reach her full potential. Also, we believe that we can do a better job of teaching the children ethics, manners, western civilization, art, religion, and culture than the schools can. We also wish to supervise the social interactions of our children, to ensure proper development of personality and relationships.
25) Initially due to parents’ work schedule. But as her giftedness appeared we realized homeschooling would be the best option for her. We cannot afford a private school, and the gifted programming at our local public school is mediocre. She is young for her grade, an only child, and socially immature. We figured grade acceleration in public school would not be a good solution for her. With homeschooling, I am able to teach her at a variety of levels -- both challenging her intellect and helping her with areas in which she struggles.

26) Initially it was because I was homeschooling his 2E older brother, but now it's because he is so far ahead of agemates academically that school would not be a good fit. There is no gifted program in the local schools and no private gifted schools in the area.

27) It is the best fit for the child. She finds the traditional school setting extremely boring.

28) It's currently the best fit for his accelerated academic needs.

29) Learns out of order. Sensory issues would have made earlier schooling not work.

30) Local school not appropriate for needs

31) Low quality schools in our area. Opportunity to have an individualized education, accelerate or decelerate as needed in various subjects. Freedom of scheduling. Better relationship with children.

32) Meets her needs in a way traditional school does not seem to be able to.

33) My daughter asked to be homeschooled after spending a year in public school. Although she was in a gifted program, she found school to be boring and soul-destroying. Although popular with the other kids, she finds she does better with adults than same-age peers. My daughter is very justice-oriented and was often upset by the 'unfair' and bullying behavior of some of her peers. She also felt a bit
lonely as she didn't have classmates who could discuss her political interests or the kind of books she was reading. My daughter has a very high energy level and likes to keep busy and engaged, so it was very difficult for her to have to keep still in her desk while the teacher explained and re-explained the lesson. My daughter sometimes got in trouble for correcting the teacher and calling out answers. She reads and learns quickly and loves to learn at her own pace. Her physical energy level is also unusually high. She loves to swim and play tennis and she takes Taekwondo. She is physically very active for several hours a day, so sitting still in a classroom for six hours a day was very hard for her. She does not have ADHD -- this is focused energy. I gave my daughter a choice to homeschool, and she jumped at it.

34) My husband and I both grew up happy socially, but unchallenged intellectually in school and we didn't want our kids to have the same experience. Homeschooling has allowed us to accelerate our children's studies when necessary. The flexibility of our schedule has allowed them to pursue their artistic and academic interests and yet still have free time every day to enjoy childhood.

35) My son became suicidal at age 4 after only 6 months in kindergarten. He was convinced that he was a moron because he lacked the fine motor skills to be able to fasten the button on his pants and zip up his zipper. He was bullied by his peers and older children, and the school administration refused to protect him. Moreover, his teacher claimed that she saw no evidence that my son, who had been able to read since he was around 3, knew his alphabet. I also witnessed a conversation between him and his teacher where he tried to explain the difference between a deciduous tree and a flower to her (his class was identifying plants in the room), and she treated him like an idiot and then ignored him because she couldn't comprehend
what he was saying. Once he was out of the school system, it became readily apparent that his highly asynchronous development would be very problematic for any rigidly defined educational system.

36) My son could not be accommodated in a school specifically for highly gifted children and needed many years more acceleration than was offered.

37) No available services in our area, no gifted programming, limited differentiation.

We live in a very rural area.

38) Originally for religious reasons, after we got going we found that academically our children are a poor fit for the local public schools due to giftedness.

39) Originally, she was homeschooled because her brother and sister were already being homeschooled and it was just easier. Now, she is so far ahead of her peers, that I would have concerns about the school's ability to meet her needs.

40) Originally because he was too asynchronous to reasonably fit into any public or private school. At this point we have determined that homeschooling is a really good fit for our family.

41) Our child has a severe food allergy, which is the primary reason for homeschooling. However, he also reads at an advanced level (3rd grade) and was a spontaneous reader who began to read at 3. His math skills are at a 1st grade level. We believe that the local public school is ill-equipped to deal with the food allergy AND his accelerated learning.

42) Our son is currently being home-schooled for lack of a curriculum that fits his individual needs. His development is asynchronous and that is hard to accommodate in a traditional classroom. Although he has the ability to process information on a very high level (high school science for example), he struggles with his physical ability to write in a manner that represents this knowledge. His
writing abilities are that of a 6-7 year old. He despises repetition of any sort. He feels that if he already knows how to do something, he shouldn't be asked to continue doing the same thing over again. He feels he should be able to move on to a new subject. This has proven difficult for most teachers to facilitate. Educating the gifted child is the most difficult part of being a parent of a gifted child. There are very few educational settings for young gifted children.

43) School couldn't accommodate intellectual needs especially when combined with physical deficiencies.

44) School was so focused on behavior issues that he was not even on grade level for academics (constantly in office or unavailable for learning due to sensory issues).

45) School would kill her natural curiosity and be more of a burden on our family than homeschooling. We had children to raise them ourselves.

46) She has always been homeschooled. I did a lot of informal research on this while I was in college (psych major), and it seemed to me that what I was seeing was that it's the most effective form of education, especially for gifted children. I believe that a lot of the creativity she displays would be squelched in a mass education format. And I've rubbed shoulders with enough gifted education school workers to know that while they may work in that area, they are all too often not as gifted as the children they work with, and really have no clue. Being given more of the same boring work that's boring in regular class isn't real gifted education; nor is being required to complete it in have the time; nor is having a pull-out class once a week where something completely unrelated to anything else one is studying. My experience is that the more gifted a child is, the more they not only deviate from the norm, but also from each other.
47) She is profoundly gifted, and we learned from multiple assessments of our son (also PG) that school will not work for her, given her similarities to her brother. She is too far ahead, too asynchronous, learns too rapidly (leaps and bounds), and does not do well in indoor group settings because of her SPD.

48) She was two grades ahead of her first grade classmate. Teacher refused to give her learning material that suited her and school refused to let her skip a grade. She was being punished at school for wanting to help other students or finishing works ahead of schedule (she turned in her weekly homework package the day it was given, and refused to take it home, because she finished it). She was frustrated and begun to cry in the morning and refused to go to school. She is currently in 7th grade. But she is enrolled in Public Charter school, but it is a homeschool charter school.

49) SPD would make it difficult for my son to attend a regular school. His focus is much better at home and he is doing 1st grade level math, 2nd grade level language arts and writing, and advanced science and history. The school systems here would not be able to serve his asynchronous needs or properly challenge him.

50) The grade skip wasn't enough

51) The public school system does not adequately meet her needs, and the private school for the gifted has staffing problems.

52) This child was in public school through 3rd grade. It turns out neither of his needs: gifted nor the mood disorder could be properly addressed in the school setting. 3rd grade was very difficult and exacerbated the mood symptoms. He was making himself throw up to get out of school, and running away from the school campus. He was engaging in bullying behavior, and being targeted as a trouble maker. He was losing interest in learning, and in activities he had enjoyed before.
53) This is the second year being homeschooled. Previously child attended public school. The gifted program at the school was not meeting his needs. Teachers need only one week of 'gifted training' in my state. The classroom teacher thought that gifted students should be 'serious'. She did not understand the humor, need for intellectual stimulation, etc. of a highly gifted child. His vocabulary exceeded that of the teacher and she would say that he was being a class clown when he used words that she did not know. He was extremely frustrated with having to do group work with students reading way below his reading level.

54) To accommodate dual exceptionalities - public school could not provide an environment that was appropriately accelerated in areas of strength while still accommodating areas in need of extra support and rehabilitation. Homeschooling gave flexibility to radically accelerate content while still getting daily therapies in an atmosphere with appropriate social demands and accommodations for motor disabilities.

55) To provide a more challenging curriculum.

56) We chose to homeschool before he was born, but after seeing how advanced he was mathematically and verbally, we knew homeschooling was the best choice for him to accelerate at his own pace and follow his own interests instead of doing busywork in a classroom.

57) We couldn't get the public system to even TEST him. Every time I said he was gifted, they said, 'We work with a lot of gifted kids and they need to go through the whole curriculum anyway to prevent gaps. Just let him do it faster.' That wasn't satisfactory to me, but they didn't believe me when I tried to clarify, 'No, my child is gifted even compared to other gifted children!' (I could see they thought, 'Yeah, right. ALL parents think their child is gifted.') They told me he couldn't read and
was autistic because they refused to test him on his level and he was bored and spaced out during the one test they gave. They refused to look at the portfolio I'd collected of work he'd done at home. So I gave up. I knew I could do better than that by myself, since I taught junior high for 6 years and college for 1, so I pulled him out and we've never looked back. There are other reasons, too. My husband is a musician and we like to tour with him when he goes. We have a circadian rhythm sleep disorder that leaves many of us awake all night and asleep all morning--and I just couldn't sacrifice my child's education and childhood with sleep deprivation so he could be 'normal,' especially since that would condemn him to being not normal. He has a tic disorder and would be teased mercilessly (he talks like a dictionary, is really smart, runs when he thinks, wears glasses, is chubby, has asthma, and tics--it's a recipe for social disaster in the public schools!), and I couldn't condemn his future and sense of self that way. I highly disapprove of the supposed 'socialization' that goes on in public schools--public schools create automatons and bullies. They squash creativity, hamper personal growth, and fail at educating children. Why would I want to invest my children in that?! Plus, I was very unhappy with the haphazard, poorly prepared and poorly taught curriculum the public schools used. I knew I could do better. And I have.

58) We feel the local schools are very poor, and would do little to encourage our bright and very active child. She would be bored and start acting out or being destructive if she had to be in the school environment.

59) We homeschool for a wide variety of reasons -- religion, family culture, the poor experiences my husband and I both had being gifted in a normal public school growing up, wanting to support our children's growth as whole people and not artificially tying their socialization to academics, wanting to individualize their
education and keep them challenged. There are more, but those are the easy ones to enumerate. :)

60) We homeschooled our 13yo and he just joined in when he was interested. One on one instruction, ability to make accommodations without any official IEP, ability to follow his interests, can pick and choose social situations as we teach him how to participate more effectively, ability to work at his level instead of being locked into a grade, able to do math at a higher level but writing at a younger level with no negative implications.

61) We identified our son as academically gifted between the ages of 2 and 3. He was reading at 3 and doing map puzzles and geography during that year. At the same time (end of 2nd year, almost 3yrs old), relatives and family and a friend familiar with autism 'saw' autism in our son. Concerned, we began a quest to understand our son and the various concerns mentioned. We soon put to rest the idea of autism after several screenings for speech and motor development and embraced the developmental path of our gifted child, which is asynchronous. We began to consider homeschooling at that time. Our son was in a pre-school who also raised concerns about social and motor skills, which we again followed up with screenings and assessments. Our frustration continued as he had 2 different preschool teachers with concerns that we had already well researched and addressed. Our feeling was that every year we would have to explain the issues related to a gifted child to a new teacher if we went through the school system. Also, we did not feel confident that our complex child working at many different grade levels would be given the education we wanted him to have.
62) We live in a small town and our school can not provide adequate resources for profoundly gifted children. We tried school, but it seemed to inhibit rather than enhance her learning.

63) We recently decided to home school her, it will begin with this new school year. Fiona's academic needs were not being met in her school and we felt the type of curriculum typical in public school was not suitable for her. She requires more in depth and focused material, particularly in mathematics and that does not seem to be the current trend in American education. She is hungry to learn and her last year in school, she started expressing boredom. We were tired of feeling she wasted 7 hours per day in school, to come home where she can really learn. The possibilities are endless at home and she can practice her violin more, as she wants to be (currently) a professional violinist.

64) We started experiencing difficulties with public school when my son was in 3rd grade. At the time we didn't know what was going on but he was falling into a depression with increasing anxiety about school. Challenges of Asperger's (sensory, peer and social/communication issues) were not recognized or acknowledged by school staff or administration because he continued to be successful academically. We were unable to obtain adequate support for him in the public school environment. Things continued to worsen at school. After more than a year of testing, evaluations, counseling, two hospitalizations, symptoms of physical illness (stomach aches and headaches) and numerous meetings at school we decided to try homeschooling in an attempt to alleviate his anxiety.

65) We tried school for kindergarten; it was a total disaster. They were teaching phonics; she wanted to read William Blake and Shakespeare. She became emotionally distraught and physically very ill. We had to take her out.
66) We were already homeschooling his older brother (10yo) because public school wasn't a good fit for him: he's profoundly gifted, but is a 'deep thinker,' rather than being quick. He needs significant acceleration, but he would struggle to keep up with older kids, so homeschooling seemed the better fit. Once we realized that the younger son was also profoundly gifted, but with the added challenge of an LD, too, keeping him home for school was an obvious choice. He's been home for a year now, and he's progressing extremely well, plus he's a lot happier than he was.

67) We were unable to find a school situation that was appropriate for her when it was time to consider starting school. She was doing everything at such an advanced level that the idea of putting her in 'regular school' was disheartening. So we decided to homeschool instead.

68) Where we live, you have to be 5 by September first to enter kindergarten. This means my daughter would enter kindergarten this fall, but she is already reading chapter books, writing stories, and doing complex math (multiplication, tells time, is currently learning multiple digit addition). Homeschooling is the only way my daughter is going to get the education she needs at this point in time.
Appendix S

Parent Free Responses to “Other” Type of Accommodation– Australia and USA Parents

Australian parents free responses for “other” type of school accommodation:

1) In Opportunity Class
2) Limited differentiation within the classroom only.
3) Our daughter is at a Montessori school, in which children are supposed to be able to learn at their own pace. Classes are in 3-year aged groups. Cycle 2 is for year levels 1-3 for example, and cycle 3 is for year levels 4-6. Last year our daughter was
4) Teachers Aid
5) Very minor acceleration at this point. Probably not much scope for acceleration in later grades.

USA parents free responses for “other” type of school accommodation:

1) 'Cluster grouping' which means that a few students have slightly different, same-grade level, within the same classroom. No material is taught beyond the current grade curriculum. In other words, she isn't being taught anything new, just has more and ha
2) Breaks for OT
3) early enrolment in kindergarten
4) he's in a dedicated classroom with other highly gifted children from the entire school district
5) HG program works 2+ years advanced while exploring subjects at age-appropriate level
6) hiring a tutor to teach him math during his regular math period
7) IEP, including speech and occupational therapy
8) In first grade he and 2 other children were pulled out of class for a special guided reading group; he was in a special extra math group with 8 other children that met once a week. So far, in 2nd grade, nothing.
9) Not sure yet
10) pull-out in the past, discontinued for the coming year
11) pulled for reading (not group)
12) triple acceleration in math in addition to accelerated gifted program (1 yr across curriculum)
13) very elite school with small class size. All children are sufficiently accommodated.
14) Waiting the approval of subject acceleration
15) we are allowed to use the public schools part-time, so he can choose classes in whatever grade and interest he likes
16) Will begin full-time gifted magnet this year--previously attended a school that did not provide GT programming
Appendix T

Parent Free Responses to Reason for School Change – Australia and USA Parents

Australian parents free responses to reason for school change:

1) BORED, DISENGAGED, WITHDRAWN  2. BULLYING BY OTHER
CHILDREN AND RESENTMENT FROM TEACHERS.  INSUFFICIENT
STIMULATION, JEALOUSY / DISCRIMINATION FROM GOSSIPING
COMPETITIVE PARENTS (sic)

2) Lack of fit leading to severe school avoidance. After a successful early entry, the
second year of school saw increased disenchantment and disengagement as the pace
of learning moved too slowly while the focus was on tasks such as neat writing.
After struggling with school avoidance and the development of separation anxiety,
we decided to homeschool.  2. Desire for increased social interaction.
Homeschooling was wonderful academically, but my child yearned for the social
interaction only school can provide.

3) Other parents turning against my child. Parents screaming at him in the corridor and
reporting him to the police (for trivial matters). School staff lacking the energy and
motivation to tackle the problem.  2. Lack of resources to provide a differentiated
curriculum.  3. Lack of supervision in the playground.

4) An unwillingness to even enter a discussion about ability and differentiation.

5) Bought a house so moved him to the local school. Would have left him at the first
school until the end of the year but the teacher wasn't coping with him.

6) Changed school to enter an 'opportunity class' for gifted kids at a nearby school.

7) Changed school to join a school that had specific gifted programme.

8) Failure to make accommodation for his schooling needs.
9) First change - bullying, second change - to homeschool with older siblings, third change - return to second school with friends, fourth change - interstate move, fifth change - moving house to new region.

10) First time - financial (went from private to government) Second time - because of issues highly gifted older brother was having. Went to a school with a high number of gifted children and a good reputation for handling them.

11) First time was due to immigration from the UK to Australia. Second time was due to a local house move which was precipitated by his deep unhappiness at the first Australian school.

12) First was a move interstate - great school in the ACT but wanted to return to Sydney. Second, to huge relief, gained entry into OC. Former school had little concept of education for the g&t

13) frustration at school grades going backwards Parent stress at interaction with school developing negative self-image

14) He was in a catholic school and I was told that they didn’t care how bored he was with what work they gave him, unless his behaviour was perfect they weren’t going to give him anything to extend him.

15) He was bored and subject to some bullying. This combination made him very unhappy. The school was not really 'on his side' and was not prepared to accommodate his fast pace of learning and need to be accelerated.

16) He was grade skipped at his old school, and another skip was being considered. I wasn’t happy with this arrangement from a social point of view, or the fact that my kid was the school freak. In his new school he is in a class of other kids the same age who are equally capable.
17) His school which was a great school for him that had an individual program who really fit him unfortunately closed its doors.

18) Kate moved from public primary school to a small private school when we thought that she was not participating due to shyness in K. Kate moved from private school to homeschooling when the school would not acknowledge her dual diagnosis or assist us in helping the child access interesting information at her cognitive level and provide adequate intervention for her literacy disability.

19) Move from an international school to a local school to integrate into the local community in preparation for high school attendance.

20) Moved countries Moved suburb (and dissatisfied with school)

21) Moved interstate. Were also dissatisfied with accommodations in Queensland schools for both academic ability and physical disability.

22) moved to a different area

23) Moving to another location. Also dissatisfied with what her previous school was able to offer her.

24) Moving to Ohio in the USA for 1 year. Changed to the school in the US and then back to his first school.

25) Moving too far away to stay at the same school. I would consider moving again to a school that could help us more, my child doesn't react well to change and so I am trying to help him within this school first.

26) My son didn't enjoy school, and so we began to homeschool.

27) Needs weren't met. Total refusal to acknowledge intellectual & physical needs. My son was bored stupid, Refusal to accommodate my input, or that of treating professionals, or to acknowledge activities outside of school
28) Not being challenged despite specific request. Teachers & headmaster seemed uneducated in gifted needs. My son started to 'dumb' himself down to fit in & was losing his spark/interest for learning. Also there was physical bullying.

29) Not happy with the school environment and doubts about their ability to accommodate his academic/social needs.

30) Principal and teachers who had no real understanding of giftedness; and who penalised my daughter for not being 'right' or the 'best' all the time.

31) relocation of home

32) She was initially commenced in a Montessori school but by the end of the first 3-year program she had stopped participating and was refusing to complete work. she was bored but the staff just thought she was naughty. We then had her tested and spoke to counsellors and enrolled her in a private selective school that tends to accelerate all or most of their students.

33) Skipped prep in to a grade 1/2 composite. By the time dd started school they had changed their teaching format to a team teaching arrangement which resulted in her being in a class of 45 kids. She was completely overwhelmed. Despite allowing the skip they refused to allow her to read at her level and gave her little support to adjust to starting school. She had was having melt downs every afternoon for an hour of more. As a result, we looked for and found a school that was experienced with gifted kids.

34) State school enrolled in previously failed to provide for child's needs - gifted and special accommodations for disabilities.

35) Supportive principal went on extended sick leave. Replacement school's principal was better at sales than delivery, and original principal was expected to return from sick leave.
36) The school approached us and advised that they were unable to cater for the level of acceleration that our daughter required. We were referred to her current school as the 'school of choice' by Education Qld.

37) The schools were unable or unwilling to recognise the ability of my daughter and to provide programming that was suitable for her level of ability. What they said they would do and what they were actually prepared to do were unrelated. Able to comprehend and provide some level of programming for the mild to moderately gifted end of the scale but no idea of how to provide an education for my daughter and not really able to understand that they weren't meeting my daughter's needs. Even when came across a Principal who did finally seemed to get it at our last school, what was promised and what happened were unrelated. The classroom teacher 'knew' how to teacher as had been doing it for 32 years and was not open. Wanted all students to be working at the same level. Only one boy was allowed to work ahead on Maths everyone else was being brought into line. My daughter's Maths was actively kept at a lower level than she could do as all eyes were on this boy, whose maths ability was less than my daughter's. I was/am not the only parent to comment on this. All students in the class were compared to this child who was advanced in maths. My daughter's assessments could not compete with this present situation. This was the same story across all her subjects. She was bored witless again with associated behavioural problems with the added issue this time in that she was now showing very obvious psychological changes over an above contrary, resistance and school avoidance behaviours. Her basic personality was beginning to change to become introverted and non social and no demonstration on happy and creative behaviour. All this was further compounded by continual bullying by class mates and in the end one particular child who assailed my daughter daily over any
little thing e.g. colour she liked, what food she like, whether she still had a bath etc.  
This was starting to undermine my daughter's confidence which has always been very high, and a saving grace! Sorry as brief as possible!

38) This was our intended high school and it begins at Year 5.

39) to enter the opportunity class

40) Traumatised by teacher bullying at previous public school. I homeschooled and then he was offered a place in the Opportunity Class, which he chose to accept.

41) We changed schools as we believed that a private school would be more able and prepared to assist and guide a gifted child who also has other 'issues'.

42) We had to move house as we were renting and the owners sold. We managed to buy our first home but in a decidedly less well-off area, reflected, we now know, in the schools.

43) we moved from one end of the state to the other

44) We moved house - 70km distance from the old school. Finished off the term (commuted) then moved schools this term. Old school was private, current school public. Our children are on waiting lists for local private schools.

45) Would not allocate any resources to providing differentiation or extension

46) Years of promises being made to accommodate her academically coming to nothing.

She became extremely unhappy and asked to be changed.

USA parents free responses to reason for school change:

1) 1. We moved from CO to TX in Kindergarten. (work related)  2. We moved to a different neighborhood boundary between 1st and 2nd. (bought a house)  3. We moved from TX to CA in the middle of 2nd (work related)  4. We pulled him from
public school and enrolled in a school at home charter. (behavior) 5. We pulled him from the charter to enroll in a charter with a more flexible model.

2) 1. homeschool, then looked for more help to keep up with him 2. private school was not challenging enough 3. online school was too rigid moved to a different city. 2) was in private school which did not recognize gifted education, and thus considered him a problem.

3) 1st change was because the public school was unable to meet his needs. We had 3 frustrating years after he was tested, during which the school did not follow through on what they said they would do, and lied to us about options available. He moved to a private school for gifted children which was a significant improvement. 2nd change was due to aging out of the school.

4) 1st change was in order to skip 1st grade, after the school filled out the Iowa Acceleration Scale and he was found to be an excellent candidate for a full grade skip. 2nd change was because pace of the class in our local district was still too slow, and he didn't have any intellectual peers, so he transferred to a school for highly gifted kids mid-year.

5) 1st time, from neighborhood school public to a Core Knowledge charter, for a more structured, intense academic environment 2nd time, from the Core Knowledge school to a public charter for gifted, hoped there would be more differentiation and individualization of his education 3rd time, from public charter for gifted to STEM magnet, so he could focus on his specific interests and talents more intensely

6) Advancement in grade level the first time and due to our relocation the second move.

7) Anxiety and depression.

8) Bad teachers, inflexible administration
9) Because we had to move to a different state.

10) Boredom. My daughter was exceptionally bored in a regular classroom. Her teacher was admirable and worked very hard to keep her engaged--but the spread of ability in the classroom was just too great for one teacher with 25 1st grade students. School administrators were awful.

11) Change due to a job change/move: We homeschooled for part of that year and then transferred to a public school. This year, my son will advance from the elementary school to the intermediate school.

12) Child's self esteem and love of learning was going down the drain due to lack of appropriate accommodation and teacher not equipped to handle the unique personality of this (or any!) gifted child...

13) Daughter witnessed teacher physically attack a student, unwarranted. Student left the school. Teacher initially admitted to us as parents what she had done, later tried to intimidate our daughter into denying anything had occurred.

14) Dissatisfaction with supervision and lack of coherent philosophy.

15) Extended day K program not available at our home school. Only some schools in the district had 'extended day' kindergarten, so for 1st grade she went to

16) First -- moved to a different state. Second -- left school to homeschool due to poor school fit

17) First and second time were moves out of state - the third is when he was removed from the school he attended most of last year (3rd grade) because of a teacher who actually became verbally abusive.

18) First Public school was not able to raise the curriculum to his level. Second school, a Charter was good for two years but had administration and teacher changes. Third
school - Charter only went to year 5. Current school is University affiliated for
Highly Gifted year 6-university.

19) First school: They couldn't handle my son. Said he needed to be medicated. Also,
they didn't make accommodations for his 2e and he was starting to hate school.
Second school: for kids with disabilities--fun and easy for him, but no challenge.

20) First to attend a 'gifted' program, then to attend a 'highly gifted' program.

21) First, he was enrolled in a school for children with autism. The director determined
he was ready to be mainstreamed. He then attended a regular public school for K
and grade 1. He started Grade 2 in the public school for the gifted which goes
from Grades 2 to 12.

22) From elementary school, he went to homeschooling. Now he participates part-time
in the middle school.

23) From neighborhood school to gifted magnet school.

24) Grades K - 5 are housed seperately from grades 6 - 8

25) He changed from day-care right before turning 3 to a Montessori school. We felt he
needed to be challenged and be under a different environment that attended to his
curiosity, etc...

26) He chose to attend public school, where he had been homeschooling.

27) He moved from a private school to the public school gifted program. The reason for
the change was because he needed more challenging curriculum.

28) He outgrows programs (intellectually quickly). We had to leave preschool early
when they 'ran out of curriculum for him.' We left the public school gifted program
when it became clear he was not receiving any challenge.
29) He started at a small charter school. Moved to our neighborhood school in 2nd grade, which happened to be a GT focus school. He just began 5th grade at a new school following a move.

30) He started in a deaf/hard of hearing program, but after trying to get his needs met, we found it impossible, and moved to a district that was willing to work with us.

31) He was in a Montessori preschool, which didn't work out for him. We then committed to homeschooling.

32) He went to a special ed preschool for a year but we realized that we understood our child better than the school system did. They didn't know how to have a child prove his knowledge without speaking or writing. Teachers need to be trained to think outside the box because they assume a child is stupid if they can't perform like average students in the public school system.

33) He went to public school until this year. The public school did not offer a gifted program or any other form of acceleration, and he was not being challenged at public school.

34) Her first preschool was a poor fit (we thought) so, we enrolled her in one with a different philosophy. She was miserable as she was unable to find common ground with her classmates and the environment was not intellectually stimulating for her. This is when she changed to homeschool where she is very satisfied.

35) Her previous school was unable to meet her needs. They 'ran out of books' for my 6 year old because the reading curriculum only went to 4th grade, but said that she was not eligible for gifted services. Ridiculous.

36) His father is in the military, and we were moved to another location.

37) Homeschooled in the past and found new school to try after that because first school was very small and inflexible.
38) Homeschooled until mom burned out; public elementary (part time 3rd-4th gr, then full time 5-6th gr.), then this year changed to a small parochial school when public school would not work with us to prepare her for the transition to a big regional Middle School

39) Hoped that larger school with more services would help. It didn't.

40) hopefully new school will allow him to find and work at level he needs to be.

41) I have a twice exceptional son (8th grade) that was at a private school and we sent our daughter there as well. We just moved our son to a public middle school, and Megan moved to the public system as well.

42) I work in special education, and I got a job at a different school. He changed schools then

43) In pre-K, the issue was that he was not learning anything and the teacher and administrator were openly hostile to him. We withdrew him in 1st grade because the school was unwilling to provide him with the education he needed.

44) In the U. S. educational system there is generally elementary, middle or junior high and high school. She changed schools when she had completed elementary school. She will not need to change schools again because of the type of school we selected.

45) Inadequate differentiation for ability. Though she was given some advanced work in reading, she did not get any in any other subject. She frequently complained of not learning anything at school. Also, the principal of her small school did not like her and perceived her as a problem child.

46) It seemed unlikely that public school would be able both to challenge him sufficiently and to help with his LD. It's hard for *me* to do this, and he is my primary responsibility. Asking a teacher with 30 kids in the class to handle this seemed patently unfair.
47) Job transfer.

48) K would only grade skip, not subject accelerate. Homeschooled 1st half 1st grade, public school 2nd half 1st grade, public HG program 2nd grade to present

49) location—we moved

50) Montessori school only goes through kindergarten, had to switch when started 1st grade.

51) Move to a different state

52) Moved from private Kindergarten to homeschooling to provide a better academic fit.

53) Moved homes

54) moved to public charter school because of local reviews

55) Movement within Texas Foster Care System

56) My child went to our neighborhood public school for kindergarten, which was not challenging enough for her. Since I had an older child at that school and knew that the curriculum was designed for average and struggling students rather than gifted students, I had my child tested for the gifted program and she changed schools at 1st grade.

57) My child will be changing schools this school year to attend program for highly gifted students. My comments are related to the former school as that is the experience we have had so far.

58) My daughter moved from a small private to public school because we thought the public school offered more -- better educational opportunities (GT program, school transport, etc.) She became disappointed with the public school after a year, so we moved to homeschooling.

59) Needed more from the curriculum: more options, more extra curriculars.

60) Not accommodated for his abilities.
61) once a preschool closed, once I pulled him out because I did not agree with their religious ideals, and the last was to start public kindergarten

62) Other factors are involved, but the brief answer is: Discontinued Montessori because he needed more structure. Discontinued public school because of lack of flexibility/understanding/meeting his needs. Discontinued homeschooling because too challenging at this point. Back to giving it a go with the public school.

63) Our daughter was bored and unchallenged. We enrolled in a newly offered online homestudy program so that our daughter could accelerate at her own pace.

64) Paid for private Montessori K, as public schools would not allow him to start K - he missed the cutoff by 2 days. Couldn't afford another year of tuition. So he attended a charter montessori school for 1st grade. It was not a good fit. The teacher thought he was academically challenged. Suggested that he had a learning disability. Didn't take the time to challenge him to find out that he was years beyond grade level. Found another charter school for 2nd grade. A hybrid school with 2 days @ school and 3 days of homeschooling using a shared curriculum. He completed 2nd grade first semester and 3rd grade second semester. This year he is enrolled as a 4th grader.

65) poor educational fit. unwillingness to differentiate. lack of understanding of gifted children. same problems at each school.

66) Preschool>Young 5s>Magnet gifted program

67) Previous school thought he had a cognitive deficiency and refused to move him out of the lowest reading and math groups.

68) Private gifted school was not meeting her gifted needs (I know weird) and was just getting too expensive.
69) private kindergarten to public elementary school because private school only went to six years old; public school to homeschool to better meet educational needs

70) public school class was overcrowded and teacher could not accommodate his advanced reading skills (although teacher referred him for gifted testing, we changed schools before testing) public school teachers also continued to describe his behavior as problematic, though he was merely acting out due to lack of stimulation

71) Public school kindergarten focused entirely on the reading and math skills that he had already mastered. State mandates didn't allow time for science, social studies, art, music, or p.e.

72) Public school unable and unwilling to meet his academic needs. He was grade skipped in kindergarten using the Iowa Acceleration Scale.

73) Relocation

74) Relocation due to domestic violence / birth father. Relocation due to parent work/education opportunity and safety. Relocation due to bullying at doctor's demand / respite. Relocation due to domestic violence, birth father (after divorce) safety.

75) school could not offer appropriate level learning

76) School did not seem to be providing any sort of education.

77) see above, for why he homeschools

78) separate campuses for K-2 and 3-5

79) She asked to go to the school that her older brother attended. She wants smaller classes and to meet new people. She also thinks the curriculum will be more challenging.

80) She changed from kindergarten to first grade due to the quality of the school going down and programs being cut.
81) She changed schools so she be in a full-time gifted classroom instead of just a pull-out one day a week program. She needed to be with a teacher full-time that understands gifted students.

82) She has just transferred to a public school for highly gifted students. Classes begin in September.

83) She is enrolled in Public Charter School, but it is a homeschool system, although they have to meet the Public School requirements, we can go at our own speed. the school documents what we do.

84) She was being bullied in her public middle school. She was the smallest and youngest child there in grades 5 through 8. We pulled her to put her in an e-school at home with a much better curriculum and to get her away from the bullying.

85) She will attend a new school for the upcoming 4th grade in order to attend a full-time 'Advanced Academic Program'. Her previous school only offered pull-outs and some differentiation and it was not enough. She attended a different school for KG because we lived somewhere else.

86) Social problems.

87) Son was miserable at public school due to lack of challenge, asynchronous development and social issues.

88) Students move to a new school in sixth grade.

89) The district is structured that way. K-2 at one building 3-5 at another.

90) The first 3 didn't address his needs. He wants to spend most of his time creating and playing with his friends. The last school gave him that.

91) The first change was a transition from a private Kindergarten to public school (he aged out of the private school) The second change was from public school to homeschool.
92) The first change was from a Mother's Day Out program to a formal, private elementary school. The second change was from the elementary school to a Montessori school.

93) The first school was changed because the principal was elderly, and didn't want to achieve anything. The second school was changed because the target child was diagnosed as G&T, and we moved to another area of the state. If we'd stayed in that area, the second school would have worked with us to get the target child what she needed.

94) The Montessori school could not accommodate his learning style and made him very anxious and pushed for an ADHD diagnosis. We feel he was bored out of his mind.

95) The public school was terrible.

96) The school my son attended for preschool provided schooling up to grade 8. The school refused to allow grade skipping, subject matter acceleration or achievement grouping. We changed schools shortly after they told us that our son was no brighter than anyone else in their school.

97) The schools could not challenge him.

98) The special services he requires are available on only one campus in the school district.

99) They did not understand her needs, not intellectually, not emotionally (worse practices by the school here), and were completely unwilling to have conversations with we, the parents, about our daughter. It was beyond description, with a mindset of 'we know best.'

100) To better meet her academic needs.

101) To have the support of a behavior-focused special education classroom
102) We changed schools (from private Montessori to public school) when we moved into a new town which was 45 minutes from where we previously lived.

103) we decided to homeschool to meet his needs, my health issues were an issue so we tried Montessori--big mistake so back to homeschool

104) We had jobs changes which required moving to different areas of the country and therefore new schools.

105) We had to take him out of a private preschool because they were unable to accommodate his needs and he wasn't mentally ready for the environment. After he finished second grade, we used school of choice to put him an IB school instead of our neighborhood school.

106) We homeschooled under the private school exemption in Kindergarten & 1st grade, then because of the poor economy we decided to enroll her in a charter to receive a curriculum stipend. When we moved to a different area, we had to switch charters.

107) We moved after Kindergarten b/c her older sister, who is also highly gifted per IQ scores and performance, was not getting her needs well met in our neighborhood schools. The GT coordinator for the district advised me to homeschool her and told me that 'highly gifted students don't last long in the public school system.' We tried a new charter school for the next year (1st and 3rd) for my girls. It was kind of a mess and they fired half of the teachers by the end of the year. The school went through three or four principals that year as well. We couldn't deal with the level of chaos so we went back to a more traditional public school where my daughter, who is the subject of this survey, has attended school since 2nd grade.

108) we moved out of state for a better school. child was not challenged at private gifted school.
109) We moved to a different city.

110) We moved. He was previously in a British curriculum school (he entered 1 year early) while we lived in the Czech Republic.

111) We were asked to leave b/c our son no longer napped at pre-school. Also were told that he outsmarted all of the workers.

112) Went from a bad private school to a great charter school
Appendix U

Parent Free Responses to “Other” Frequency of Contact with Child’s Teacher
– Australia and USA Parents

Australian parent free responses to “Other” frequency of contact with child’s teacher:

1) as frequently as I want
2) as I work at my child's school we see each other daily
3) As often as I initiate it
4) as often as necessary
5) Formal meetings twice a term with all teaching staff. Informally as required by any either party
6) Frequently but not quality
7) Frequently enough, when they or I need.
8) I have frequent contact, in the sense of saying hello to the teacher most days, but I am not discussing Alexandra's progress or schooling with her more than once a term.
9) Initially as required, however I have pulled away and it is now infrequently
10) Term meetings
11) Two days a week I get to talk to my son's teachers.
12) Very Frequently - more than I want to
USA parent free responses to “Other” frequency of contact with child’s teacher:

1) An adequate amount

2) frequently yet primarily only when necessary

3) I am my child's teacher

4) I have somewhat frequency because afraid of being considered to hovering

5) school hasn't started yet, but I have been in contact with the school quite a bit

6) School just started with a new teacher.

7) School year has just begun, haven't met her yet.

8) School year just began; we've had little contact so far.

9) Somewhat frequently, as often as I need

10) somewhat frequently, which is what I prefer

11) The teachers are easily contacted by email & meetings can be had easily. I can have as much or little contact as I desire

12) This is a new school year and a new school - back to school night is next week. I will know more then.

13) We meet every 4 weeks to discuss progress and goals, and present the work we have done at home.

14) We spoke when it was necessary. Her teacher went above and beyond to challenge my daughter.

15) When I initiate contact