CHANGING PLACES –

RESILIENCE IN CHILDREN WHO MOVE

Christine McLeod

University of Sydney

SID: 0213911

CONTENTS

INDEX OF TABLES AND FIGURES

TABLES

FIGURES

ACKNOWLEDGEMENTS

To all of you I give my heartfelt thanks and appreciation for 4 years of support, help and encouragement.

To Sandra whose tremendous patience, unfailing good humour and generosity in the sharing of your time and expertise made this thesis possible.

To Caroline for giving me the opportunity to do this course and calmly managing all the issues that arose along the way.

To Stephen whose kindness, wisdom and encouragement kept me going.

To Alex who did not bite, but taught me to listen and ask.

To Lyn and Pauline who often carried the load and yet still encouraged me.

To Sharryn, Silvia, Mary and Joanna who helped with many of the details of layouts and taking the all-important messages from potential participants.

To Helen and staff at PCHC/CCHC for their continued interest and support.

To Sheila and Karen who freely shared their time and clinical experience and offered the bonus of friendship as well.

To Ravi who revealed the mysteries of SPSS.

To VAN services for the opportunity to work and learn with a wonderful team.

To the NSW Department of Education and Training, my thanks for allowing me access to schools.

To principals, parents and teachers whose participation was vital and greatly appreciated.

To my daughters Tamara and Monique with whom I was, for a brief time, fellow students. It was fun.

To my parents who have encouraged me in all my pursuits my whole life and brought me up to believe I could do anything that I set my mind to.

Last, and most important, to my husband Ken. You inspired me and believed I could do it. Without you, it simply would not have been possible. Thank you for the tea.

CONTRIBUTIONS OF THE AUTHOR

The named author was primarily responsible for the research contained in this thesis. As such, the author:

- Reviewed the literature and, with the help of supervisors, developed the research questions.

- Developed and chose questionnaires.

- Liaised with the NSW Department of Education and Training and school principals for recruitment purposes. This included some visits.

- Contacted radio, newspapers, magazines and organizations such as the Air Force for coverage and recruitment purposes.

- Collated and sent packages.

- Marked the questionnaires and entered the data.

- Analyzed the data with the assistance of supervisors.

- Wrote the dissertation.

DECLARATION

I hereby certify that the work embodied in this thesis is the result of original research and has not been submitted for a higher degree to another university or institution.

_____

Christine McLeod

DATE

ABSTRACT

Figures from the Australian Bureau of Statistics show that over 40% of all Australian children moved at least one time in the census period from 1996 to 2001 (ABS, 2001). The literature varies in the impact that this has on children. The purpose of this study was to examine the associations between residential relocation, resilience and the emotional, behavioural and academic adjustment of children 8-12 years of age who had moved. Risk factors as identified in the literature as well as the relative impact of resilience were examined. By studying how adjustment occurs in the context of resilience, possible areas for prevention and intervention may be developed for the large numbers of children who move.

Results showed that the sample population was in the normal range in academic and behavioural terms. The sample was found to have repeated more grades than average; however the children did not exhibit significant behavioural or emotional consequences. A number of demographic factors have been indicated in the literature as affecting adjustment after residential relocations, yet these were generally not found to be significantly associated with adjustment for this study population. Socioeconomic status was the only factor other than resilience to have been significantly associated with adjustment. Possibly due to the developmental stage of the participants, only the resilience subscales of interpersonal strength and school functioning were found to be significant in their positive association with adjustment, leading to fewer behavioural and academic problems. While the children in this study have all had the potential stress of moving house, the demographic characteristics of this sample would suggest that they might not have had to encounter multiple life challenges or adversities. This conclusion may help explain the lack of significant effects of

demographic factors on the adjustment of the children in this sample. Results highlight the importance of good schooling and that the core business of schools in building and enhancing the intellectual functioning of children, is a vital component in the development of resilience. These findings suggest that different aspects of resilience may be important for different developmental stages and different life stressors. The distinction between cause and effect when examining resilience factors is discussed and it is suggested that outcomes in one context may be treated as influences upon outcomes in another context.

CHAPTER 1
RESIDENTIAL RELOCATION

1.1   Introduction to the Issue of Residential Relocation

Moving house has become an increasingly frequent part of most people's lives over the last 50 years. As a consequence the interest in the impact that moving has had on children has similarly increased. Studies have identified numerous factors that contribute to the adjustment children make to this change in their lives with the aim of informing interventions that may alleviate potential negative outcomes. Residential mobility can be studied both as an outcome or result of social factors and as a possible cause of a variety of consequences.

Results from the studies in this field have been equivocal. The reasons for such diverse results are primarily due to methodological differences. For example, different factors have been used to measure adjustment, such as school results, repeating school grades, general well-being, attitude to the move, peer relationships, extra curricula activities and behaviour. Each of these factors, in turn, has been measured in different ways. Moving also has been defined as a change of residence, a change of school or a combination of both, all within a variety of time scales. Different age ranges and therefore different developmental stages have also been studied.

Results of previous research have also been difficult to compare because they have focused on different variables that might impact upon children's adjustment to a move. These variables include number of moves, distance of move, parental, especially

maternal, attitude towards the move, socio-economic status (SES), reason for the move, choice, race, child's age and school grade at the time of the move and family composition. In a variety of combinations, these variables have been studied longitudinally and cross-sectionally, quantitatively and qualitatively, in large numbers and individually. Many studies have focused on only one or two factors making it difficult to draw broad conclusions and only a few have focused on intrapersonal factors such as resilience.

The present study aims to look broadly at the most common factors as identified in the literature, as well as more narrowly at the relative impact that resilience may play in a child's adjustment to their residential relocation. The first chapter will present an overview of the factors highlighted in the literature as impacting on this transition and the second chapter will focus on the concept of resilience, with particular reference to moving. Data will be presented that assess the effect of the variables most often found to impact upon moving on a sample of children aged 8-12 years. The thesis will conclude with a discussion on the inter-relation of all factors and the implications for children, their families, schools, businesses and communities.

1.1.1 Epidemiology

Australia's population has been reported to be one of the most mobile in the world (Long, 1992). Figures from the Australian Bureau of Statistics show that over 40% of all Australian children moved at least one time in the census period from 1996 to 2001 (ABS, 2001). Of these children, 14% were aged from 0 to 4 years, 57.59% were from 5

to7 years of age, 49% were 8 to 12 years and 44.41% were from 13 to 18 years of age. In terms of total numbers, 1,810,578 children moved once during this time period and an additional 595,442 children moved two or more times.

1.1.2   Military Studies

Many of the early studies on the impact of moving on children came out of the military originally in the USA and later in Australia, with anecdotal concerns reaching government level and resulting in various enquiries in an attempt to ameliorate the negative impacts of compulsory military moves (Hamilton, 1986; Kelly, 1988). While these early Australian Government reports highlighted social, emotional and academic problems with a number of specific case studies, national and international research has not consistently found negative effects due to geographic mobility. Marchant and Medway (1987) "failed to find any negative relationships associated with frequent relocation of military families" (p.292) and, in fact, there was some evidence of a positive correlation between frequent moves and increased participation in activities and organizations which, in turn was seen as positively related to school achievement. A more recent study on adolescents in military families has similarly found improvements in behaviour with frequency of moves (Weber & Weber, 2005).

These results need to be understood in the context of the American military which is a vast organization with a strong culture and often with its own infrastructure of schools, shops, entertainment and services which may inherently provide mediating factors for the impact of moving. Although Marchant and Medway's (1987) use of a small sample size limits the ability to generalize from the results, their findings support those in an even

earlier study which compared 'emotionally disturbed' and 'normal' children of military families and found no effect due to mobility but rather due to parental attitudes (Pedersen & Sullivan, 1963).

The size and infrastructure of the Australian military is different to that of the United States in that it does not have its own schools, shops or high status, however Australian military studies on family mobility have also found mixed results. Bourke and Naylor (1971) were unable to conclude that school mobility had any detrimental effect to either a child's education or attitude towards school, while Rahmani (1982) and Craig (1989) found that the number of changes of school and length of father's absence were related to academic achievement; more school changes and longer paternal absences resulted in lower academic attainment. Rahmani (1982) concluded that the exact relationship varied with each of the services (i.e., Air Force, Army, Navy) and was also impacted upon by characteristics of the child's personality with children who were introverted being less affected academically than those who were extroverted.

It is likely that Rahmani's study, while looking at specific military aspects such as fathers' absences, more closely resembles the experiences and consequences of non-military children who also move. Duffy's (1987) review of Australian literature on mobile children, both military and civilian, questioned the cause-effect relationships by finding that the worst affected children are those whose "parents feel socially rootless and economically enslaved or deprived" (p.548). While Rahmani (1982) gave little explanation for his findings on the differences between introverted and extroverted children, later studies on social capital, a phrase not yet coined in 1982, would suggest

that the more introverted child suffered fewer losses than the extroverted child who might have to leave behind many more friends and associations. This suggestion partially fits with Bailer's (1996) study on adolescents in military families in which she concluded that perceived social support from friends and family significantly contributed to social adjustment. Although no distinction was made between the relative merits of friends and family support, the developmental literature suggests that this would probably have shown a change with age, moving from family to friends as children grew into adolescence.

Shaw (1987) highlighted five factors that he considered influenced a child's adaptation to frequent moves in the military. He included the child's coping repertoire, personality and level of psychosocial development along with the adaptive capacities of the family and the parental attitudes and identification with the military. Perhaps one of the more significant associations to arise from military studies has been the link between this parental identification with the military and, specifically, positive maternal attitude towards the move (Marchant & Medway, 1987; Pedersen & Sullivan, 1963; Shaw, 1987). When these attitudes are present, children have been found to adapt more readily to the transition. This association is discussed in more depth in 1.1.7.

1.1.3 No Adverse Effect

The conclusion that there are little, if any, adverse effects for children who relocate has also been drawn by numerous non-military researchers (Barrett & Noble, 2002; Brown & Orthner, 1991; Cornille, 1993; Deady 1998; Heinlein & Shinn 2000; Scott 1996; Smith, 1986; Stroh & Brett, 1990). These researchers have studied different impacts that moving

may have on children and, although generally finding that moving was not associated with negative outcomes, have reported some effects on children. Heinlein and Shinn (2000) found "no relationship between mobility and subsequent [school] achievement when prior achievement is controlled" (p.349). However, as Heinlein and Shinn's (2000) study was only carried out with school-age children, results may not be definitive as they do not account for earlier moves.

Deady (1998) found that school transfers had no immediate deleterious effects on academic results or self esteem although some negative impact on school results were noticed in the second year after transfer and the effects may be compounded by other factors such as family crises or being in higher grades. L'Esperance (1998) also found no correlation between academic performance and mobility, however the mobility was defined as adjustment to the normal transfer from elementary to middle school, a move that is expected, does not include a change of home and usually includes being accompanied by current friends. Barrett and Noble (1973) and Cornille (1993) concluded that moving, while stressful, has only a transitory impact that is quickly overcome by most children. They also found that the children's level of disturbance was below that found in the general population.

In contrast, positive outcomes from moving were found by Stroh and Brett (1990) in their study of 56 children aged from 6 to 18 years whose fathers worked for US corporations. The study found that the more frequently a child had moved in the past, the more enthusiastic they were about the upcoming move. There were some limitations in this study relating to sample size and SES such as the participants were from college

educated, intact families. Enthusiasm also does not necessarily preclude other adjustment difficulties such as negative academic effects. Cornille (1993) however also found moving to be a positive experience in a child's life suggesting that relocating "offers opportunities for success….and a chance to learn new skills for coping with change"(p.296).

1.1.4 Negative Effects

While the above studies found no adverse effects of moving, a number of other studies have highlighted the negative impact of moving. In their review on the effects of residential mobility on children and youth, Scanlon and Devine (2001) concluded that, on balance, residential mobility negatively affects academic performance, increases the likelihood of repeating grades and reduces high school completion rates with these being exacerbated by 'hypermobility'. While Scanlon and Devine considered the social and psychological effects to be less clear, Fields (1995) argued that both academic attainment and social skills were adversely affected for highly mobile students even when controlling for factors such as single parent families, divorce, economic disadvantage and abuse.

Although studies of the impact that moving has on children's behaviour are mixed, one study that was not within the context of the impact on children of residential mobility found that social fragmentation was most consistently associated with suicide risk for ages as young as 15 years (Middleton et al., 2004). Social isolation was defined by the proportion of people living alone and by population mobility to which was attributed the lack of social integration and bonds which were seen as moderators of suicide risk. This

finding corresponds with that of Malmgren and Gagnon (2005) who noted the high rate of school mobility in adolescents who suffered from emotional disturbances; they suggested minimizing school changes where possible. Equally, in her study on how Australians choose where to live and how this links to their quality of life, Mathews (2005, p.25) noted that "length of residence was the best predictor of attachment to the local community".

Similar social capital factors were cited by Pribesh and Downey (1999) whose longitudinal study found that even children with both biological parents in high income families experienced a reduction in academic results when they moved. However, some of this reduction was considered to be as a result of a decline in social relationships. Social isolation was also proposed as being a secondary effect when children who had been maltreated moved, along with changes in the affective states of the child, their siblings and parents. Eckenrode, Rowe, Laird and Braithwaite (1995) found that children who were maltreated were more mobile than those who were non-maltreated and that this mobility compounded the effects of the maltreatment on academic outcomes.

In summary, findings on the effects of geographic mobility have been mixed with positive, negative and neutral outcomes being found in both military and civilian populations. The following sections will now review the literature on specific factors that have been found to contribute to these positive or negative outcomes.

1.1.5   Effects of Age and Gender

The ability to cope with the changes brought about by a move has been found to differ with age and gender, with younger children generally being found to establish new friends and therefore settle more quickly than adolescents (Barrett & Noble, 1973; Brett, 1982; South & Haynie, 2004). However, this is not a uniform finding. Edwards and Steinglass (2001) concluded that younger children had more difficulty adjusting to relocations than their older siblings. One possible explanation for this difference is that the population Edwards and Steinglass studied was not indicative of the general population as families were cohesive, well educated and employed. While not directly targeting age, Heinlein and Shinn (2000) found that children who had moved prior to third grade were more likely to encounter academic difficulties by sixth grade than those who had moved after third grade. They suggest that moving within these formative years at school may result in missing out on learning some basic skills.

Brown and Orthner (1991) found that gender made a difference to adjustment after a move, with 12 -14 year old girls reporting a modest, but significantly lower score on the life satisfaction factor of well-being (defined as self-esteem, alienation, depression and life satisfaction). Boys of the same age displayed no negative association on any of the well-being measures. Girls in this study also showed increased depression with a history of frequent moves. However, the validity of the measurement of depression in this study is questionable as it was solely based on one retrospective Likert scale question about how these 12-14 year olds thought they felt over the previous year. Furthermore, the scale did not indicate which factors contributed towards their feelings of depression.

Shaw's (1987) study, based on self-description questionnaires of adolescents, indicated that girls found moving more difficult than boys, while Goebel (1978) found adolescent boys encountered greater negative academic impact than did girls. Of note here is the difference in the measurement of adjustment in these two studies, that is, self-description of feelings, attitudes and behaviours as opposed to results of state wide academic tests. These may not be mutually exclusive findings as they are measuring different factors and may suggest that girls do worse on measures of emotion and boys on academic performance. Friendship networks in mobile adolescents were the focus of South and Haynie's (2004) study and they found that older adolescents and particularly females, had fewer friends, were less popular and more likely to be isolated. However, when Mann (1972) considered the long term effects of moving, he found that college students with a relocation history displayed less anxiety and a greater tolerance for new and uncertain situations and that this effect was greater for males than for females.

While it is reasonable to postulate that developmental stages and the growing sense of identity and awareness of the larger world could account for the changes with age, there are few explanations as to the gender differences and why they occur. One possibility is the difference in the types of friendships that male and females have. Friendships between male adolescents have been described as being less important and more 'fluid' than those amongst females who attach more importance to these relationships and who turn to their friends for emotional support (South & Haynie, 2004). This difference would make it more difficult for an adolescent girl to break into strong, established groups. In general, results focusing on age and gender seem to indicate that early moves and

frequent moves have a negative impact on academic outcomes but moves during older adolescent years, especially for girls, adversely affects well-being.

1.1.6 Family Composition

Other studies have shifted focus from the gender of the children in families who move to the composition of the family itself, with intact families faring better than single parent families. It has been suggested that a major impact on children's adjustment after a move is their family structure, with single parent families being identified as a risk factor for poor adjustment (Nelson, Simoni & Adelman, 1996; Scanlon & Devine, 2001).

Scanlon and Devine (2001) also include low SES and number of moves as two additional contributing variables to poor adjustment. Nelson et al. (1996), in their longitudinal study of 2,524 kindergarten children from low income backgrounds, found that the most mobile children also rated lowest initially in behaviour and school adjustment, suggesting that these problems were in place prior to changing schools. They noted that the most mobile students tended to come from single parent families with unstable housing, employment and finances. Tucker, Marx and Long (1998) go so far as to assert that moving, even an "above average" number of times (but excluding the "hyper-mobile" who have moved eight or more times), will not be significantly harmful for children who are with both biological parents, but for children in other family structures any move will have negative impacts upon schooling. They found that the most mobile children were those in step-families and postulated that for children in other than biological families, transitions such as death, divorce or remarriage would have presented additional adjustments for children to make.

Crowder and Teachman (2004) however, suggest that rather than family composition affecting the risk of dropping out of school and of experiencing a pre-marital teen pregnancy, these outcomes are largely attenuated when differences in the level of neighbourhood disadvantage and the number of residential moves experienced by the adolescent are taken into account. They concluded that there was very little evidence that family structure had an effect that persisted - "above and beyond"- that of neighbourhood disadvantage and residential mobility.

1.1.7   Attitude Toward the Move

Another aspect of families that has been found to impact upon children who move is that of attitude. Fields (1995, 1997) examined social, emotional and educational impacts of moving and, along with other factors, found that unwelcome and undesirable changes are associated with adjustment problems. Other research also indicates the importance of attitude towards moving (Linke, 2000; Marchant & Medway, 1987; Pedersen & Sullivan, 1964; Sinetar, 1986; Stroh & Brett, 1990). In discussing the emotional impact of moving, Sinetar (1986) concluded that while a degree of grief is natural in moving, people who are ambivalent about the move will be more distressed than those who are optimistic, secure and positive about the novel experience. Other researchers have been able to be more specific about the impact of parental, especially maternal, attitude towards the move and children's adjustment (Linke, 2000; Marchant & Medway, 1987, Stroh & Brett, 1990). As with other factors, there are numerous variations in definition and measurement of maternal attitude which has been measured by: 1) identification with the military; 2) well-being; and, 3) their general attitude towards the move. In both the

corporate and military world, most studies have found that children adjusted better to a move if the mother was feeling positive about the move. This positive adjustment was observed regardless of how well-being was defined or measured.

Pedersen and Sullivan (1964) also suggested that maternal attitudes tended to mediate the possible negative impact of change on the children. They suggested that "women generally have fewer opportunities for expression other than the home, whereas men have jobs that absorb their energy" (p. 579). While this reason would no longer hold true due to the changed numbers of women in the workplace, the importance of positive maternal attitude has continued to be salient. Stroh and Brett (1990) found that not only did maternal well-being, which they related to adjustment, predict the child's attitude towards the move but that it was also predictive of the children's attitude towards their new neighbourhood. While the sample size in their study was not large, the participants were solely middle class and the direction of the effect was not clear, one of the strengths of this study was that information about the mothers' well-being came directly from the mothers, and the information about the children's attitude towards the move came directly from the children, rather than a parent or teacher rating. One study found that parents who had had a 'bad attitude' towards the move rated their children as having been negatively effected, however, these ratings were not supported by a formal measure completed by the mothers (Barrett & Noble, 1973).

1.1.8   Number of Moves

"Hyper-mobility" is a factor that has been emphasized over the last 20 years as being important in how children adjust after a move. There has been a reasonably consistent finding in the literature across both military and civilian populations that high mobility results in poorer outcome, especially academically (Felner, Primavera & Cauce, 1981; Rahmani, 1982; Scanlon & Devine, 2001; Scott, 1996; Simpson & Fowler, 1993; Tucker et al., 1998; Wood, Halfon, Scarlata, Newacheck & Nessim, 1993). While results have been consistent, the exact meaning of high mobility has varied greatly. Some studies suggest that more than three moves results in adverse effects (Craig, 1989; Rahmani, 1982; Simpson & Fowler, 1993), but others double this number to more than six (Heinlein & Shinn, 2000) or eight moves (Tucker et al., 1998). What is not always clear is the time frame in which these moves take place. While it is generally accepted that a high rate of mobility has adverse effects emotionally, socially and academically, Tucker et al. (1998) observe that in their large sample only five percent of children under 12 years of age had moved more than eight times so hyper-mobility is not representative of the larger population.

In their Australian study on adolescent adjustment following family transitions such as separation, divorce and death, Ruschena, Prior, Sanson and Smart (2005) similarly found a weak, but significant link between increasing numbers of transitions and behaviour problems. Weber and Weber (2005) proposed that frequency of relocation rather than actual number of moves was more predictive of improved behaviour in adolescents in military families. While challenging some of the above findings, Weber and Weber's

(2005) findings are in keeping with a number of the military studies which found that children developed improved coping skills the more they moved.

1.1.9   Reason for the Move

Yet another factor in the mobility-adjustment equation is the reason for the move. Reasons for moving have been classified as forced, imposed or preference dominated (Glick, 1993). Field (1997) hypothesized that "forced moves are associated with more trauma and resettlement difficulties" (p.4). This hypothesis was supported by Warren-Sohlberg and Jason (1992) who found that families who moved due to "household considerations" such as death, divorce or financial difficulties experienced more undesirable life events and poorer academic results. While these studies went on to report unclear results for those moving to seek a fresh start or a better place to live, Field (1997) differentiated this further, suggesting that school transfers due to issues such as bullying or behavioural problems were less successful. Problems were avoided rather than tackled and therefore tended to reappear.

Edwards and Steinglass' (2001) analysis of mediating factors for mobile children used a very limited sample of families who all worked in a State Department where moving was an integral part of their lives and for whom there were no forced moves due to death, divorce or remarriage. These factors were suggested as acting as moderators for the negative effects which can accompany relocations as the children involved evidenced fewer negative effects.

1.1.10   Timing and Distance Moved

While Fields (1997) suggested that moving during the school year is more problematic than moving at the beginning of the year, this has not been found in other empirical studies (Barrett & Noble, 1973; Stroh & Brett, 1990; Wright, 1999). Wright's (1999) longitudinal study found that while time of year of moving had no significant effect on academic performance, distance moved was a significant factor, with those moving locally within the school district encountering greater difficulties than those moving greater distances to or from other districts. While limiting their study to those who had moved from more than 50 miles away to one specific city, Barrett and Noble (1973) similarly concluded that these 'long distance moves' were not problematic for children, with 81% displaying either 'no effect' or a 'good effect'.

These results closely matched Johnson and Lindblad's (1991) observations that intracity movers evidenced greater adverse academic results than did either non-movers or those who had moved from outside the city. However, these results may be more indicative of SES issues rather than actual distance. Johnson and Lindblad (1991) noted that short distance moves were often forced in some way and more often undertaken by those less well off. Most of these studies do not include effects of moves over very large distances, even within the same country.

1.1.11   Relative Impact of Socio-Economic Status

Wright (1999) found that the distance moved had less impact on adjustment than did ethnic minority status or family income. The relative importance of SES lends support to Johnson and Lindblad's (1991) earlier findings that demographic features such as family income might influence whether or not students' mobility was harmful. Of note in these studies is that no social or personal impacts of moving were taken into consideration and only the effect on school achievement was assessed which cannot be generalized to suggest overall adjustment.

Family income however, forms part of the pre-existing conditions which Pribesh and Downey (1999) considered accounts for the greater part of the negative effects of moving. Similar links were suggested by Petit and McLanahan (1993) who suggested that poverty levels in the destination community are an important factor in a child's well-being and that moving to a more affluent area may actually attenuate the negative effects of moving. This concept may also explain Marchant and Medway's (1987) suggestion that when moving their personnel, organizations should try to ensure that living conditions in the new location are not too different from their current community.

Most studies which have either included a cross-section of SES or have focused on low income families have concluded that the impact of low SES and its concomitant problems outweighs the negative impact that moving may have but that moving is likely to exacerbate these pre-existing conditions.

1.1.12   Cumulative Effect of Factors Affecting Outcome after Moving

The most common reason suggested for negative outcomes is that there is a cumulative effect of multiple losses, transitions and changes over time that cannot be overcome, with academic results being particularly affected (Edwards & Steinglass, 2001; Fields, 1997). These losses may include social capital factors such as friends and extended family, teachers and community groups, clubs, activities and churches. Moving might also be accompanied by the loss of a parent (death or divorce) or even pets. For children who move a number of times before third grade, it may mean missing out on consistent schooling in the early years thus disrupting the developing foundation of early academic skills (Heinlein & Shinn, 2000). For those already experiencing academic difficulties, relocations will tend to exacerbate the problem.

Speare and Goldscheider (1987) established that children who moved frequently were less likely to live with both biological parents and more likely to be less well off, thus contributing to an adverse outcome. Similarly, Pribesh and Downey (1999) suggested that, while moving certainly accounted for some of the effect in the different academic results between movers and non-movers, most of the negative effect was due to pre-existing differences such as lower incomes, not living with both biological parents and fewer social ties and therefore more frequent moves. Wood et al. (1993, p.1339) sum this up in their observation that "as the number of family risk factors increases, the likelihood of child dysfunction increases dramatically". Heller et al. (1996) also suggested that no single factor predicts outcome as well as the total number of risk factors.

1.2 Summary of Main Factors Identified in the Literature on Residential Relocation

Following is a table of published studies located by a PsycINFO search covering the years 1960 to 2005. While there are also some excellent literature reviews available, the table only includes studies that provided empirical data on research on children and adolescents who have moved. Key words were residential relocation, geographic relocation, geographic mobility, family transfers, moving house, changing school, adolescents and children.

TABLE 1
Summary of Literature Review on Residential Relocation

Authors and dates	Age range and population	Definition of mobility and predictor variables and their measures	Measures of adjustment	Findings
Pedersen & Sullivan. (1963)	27 disturbed males 11-15 yrs compared with 30 normal males.	Life time residential mobility - father in military. Parental attitude Likert scale, attitude towards military & relocation. Matched for parental age, rank, education & SES.	Disturbance in children – child psych. referrals	No diff. in disturbance due to mobility but 'normals' had greater parental identification with military and more positive maternal attitude to moving.
Barrett & Noble. (1973)	315 children 3-18 yrs	Non-military, long distance residential move>50 miles. Reason for move, family attitudes, current satisfaction.	Louisville Behaviour Check List – aggression, inhibition, learning difficulties. Ease of making friends & parents' judgment of effects on children.	81% no effect or good effect on behaviour, 75% no difficulty with school change. Parental negative attitude thought by parents to have negative effect but not supported by Louisiana Behaviour Check List (LBCL).
Felner, Primavera & Cauce. (1981)	250 high school students	Number of school transfers. Generally low SES and non-white.	9th grade academic performance & attendance record	High rates of school mobility correlated with poor academic performance, particularly for black & Hispanic.
Marchant & Medway. (1987)	40 US Army families	History of geographic mobility – number, frequency & recency. Identification with Army life, parental well-being.	Children's school achievement – standardized tests & social competence-CBCL.	Spousal/maternal identification with military most strongly related to children's results. No negative relationships to frequent relocation

Authors and dates	Age range and population	Definition of mobility and predictor variables and their measures	Measures of adjustment	Findings
Shaw. (1987)	56 adolescents	30 adolescents with average 2.1 moves compared with 26 adolescents average 9.5 moves. Gender & parental identification with military.	Self description questionnaire. Self esteem, alienation, depression & life satisfaction -Rosenberg Adolescent Self -Esteem Scale.	More moves = more insecure. Females had greater difficulty. Parental identification with military mitigates impact.
Brown & Orthner. (1990)	720 adolescents - 12-14 yrs	Recency of move and no. of moves. Gender.	Standardized achievement test results from school records. Self –esteem, alienation, depression & life satisfaction.	No negative well-being for males but life satisfaction for females affected both by recency of move and number of moves. Frequent moves also increased depression in females.
Stroh & Brett. (1990)	56 children 6-18 yrs	Corporate mobility resulting in residential relocation. Mother's well-being –QOL measure. All families middle SES.	Pre & post move questions to children re activities and attitude re moving.	Positive post-move attitudes positively related to pre-move attitude & maternal well-being. Number of prior moves positively related to positive attitude. Post-move activities predicted by pre-move activities. Age & time of year not predictive.
Johnson & Lindblad. (1991)	1686 6th graders. Information from SRA Assessment Survey	Non-mobile, intracity moves & extracity moves. Divided into disadvantaged (free lunch), and advantaged. Gender, ethnicity and social class included.	Academic performance as assessed by SRA Survey – weighted average.	No difference between extracity and non-mobile. Intracity had lower scores. May be due to ethnicity and SES.

Authors and dates	Age range and population	Definition of mobility and predictor variables and their measures	Measures of adjustment	Findings
Warren-Sohlberg & Jason. (1992)	451 3rd, 4th & 5th grade school children	Reasons for school transfer. Family demographics & SES, family stressors (Life Events Scale), child achievement.	(WRAT-R), school results and self-esteem (Piers-Harris).	Change of school due to change in household e.g., death, divorce or finances = poorer school grades & more life stress. Effects different for each race.
Pettit & McLanahan. (1993)	331 children 6-17 yrs in disadvantaged families in the Moving To Opportunity program in LA.	Move to area with <10% poverty or >10% poverty rate.	Social capital: parents talk to parents of children's friends; after school activities & number of after school activities.	Moving reduces some aspects of social capital but moving to an affluent area may attenuate the negative effects.
Wood, Halfon et al. (1993)	9915 children, 6-18 yrs from 1988 NHIS national survey.	Frequent family moves, family poverty status, structure, employment, parental education, urban or rural residence.	Child's health status - delay in growth & development, learning disorders, school failure & behaviour problems.	Frequent moves increase both the risk of failing a grade and of behaviour probs. Greater no. of risk factors = greater academic and behaviour problems.
Fields. (1995)	40 Queensland 10-15 year old students.	Changed schools 3 or more times in last 2 years	Standardized math & reading test scores & educational expectations	Mobility has adverse effects on social and academic achievement.
Nelson, Simoni & Adelman. (1996)	Longitudinal study of 2524 kindergarten & 1st grade children from low income families.	Comparison of mobile and non-mobile over 3 years i.e., change of school. Demographic information.	Reading, math & behaviour from report cards; absenteeism, tardiness & teacher report on 3 students with most difficulties.	Most mobile students had poorer initial behaviour, absenteeism and adjustment. Also often from single parent families. No academic differences found.

Authors and dates	Age range and population	Definition of mobility and predictor variables and their measures	Measures of adjustment	Findings
Tucker, Marx & Long. (1998)	4,178 children 7-12 yrs. Info. from National Health Interview Survey, 1988.	Residential mobility. Number of moves, SES, family structure	Repeat grade, school disobedience.	Children with both biological parents adjust better than any other family structure, even with multiple moves (<8).
Pribesh & Downey. (1999)	24000 8th graders. Information from National Educational Longitudinal Study (1988 & 1992).	Longitudinal design. Number of residential moves &/or number of school moves. Social capital: students connections with their parents, peers school & community.	Kansas reading & math assessment	Moving has a negative impact on test scores but greatest effect due to pre-existing conditions.
Wright. (1999)	1,580 3rd & 4th graders.	School & family mobility within district; into or out of district; both or non-mobile. Also pre & post test mobility. Ethnicity, gender & SES (free lunch eligibility).	Standardized academic tests.	Within district = lower scores. Mobility is a sig. predictor but subordinate to ethnicity, income and, at times, gender. Deficits often pre-existing.
Heinlein & Shinn. (2000)	764 school records of 6th graders.	Total school moves since Kindergarten. SES (eligibility for free lunch) controlled	Percentile rank on standardized reading & math tests in 3rd & 6th grades. Repeat grade.	No link between mobility and school achievement when prior achievement is controlled. Early mobility greater predictor of 6th grade achievement than later mobility.

Authors and dates	Age range and population	Definition of mobility and predictor variables and their measures	Measures of adjustment	Findings
Edwards & Steinglass. (2001)	73 children, 6 + yrs from State Dept. families returning from abroad	Multiple (2-11) relocations. Parent - child checklist; family interview; family cohesion test (Kvebaek); Family Assessment Measure of family life; Dyadic Adjustment Scale for parents relationship; observed family task; Social Network Inventory; Shannan Sentence Completion test for psych. coping styles & Early Memories Inventory for self-concept.	Children's psychological adjustment =Piers-Harris; Social adjustment=CBCL.	Increased risk for negative outcomes with younger age, non-Caucasian race & a tendency to see social interactions as negative. High functioning mother and positive emotional family climate acts as buffer.
Kelley, Finkel & Ashby. (2003)	86 mother – child dyads. Children 9-13 years.	Residential mobility, length of time in current residence & rate of mobility in military families. Maternal & family factors eg. adaptability cohesiveness, marital satisfaction, maternal depression & stress. Demographic data.	CBCL, Loneliness Scale, self perception-SPPC; child's attitude towards mother-CAM; Social anxiety – SASC; peer relations-IPR.	Maternal depressive symptoms & children's perception of relationship with mother = aggression & non-compliance. Rate of mobility not significant but time in current house = positive effect.
Crowder & Teachman. (2004)	1,643 males & females 13-19 years from Panel Study of Income Dynamics.	Childhood living arrangements / family composition & family change compared with neighbourhood context and residential mobility.	Dropping out of school and premarital teen pregnancy.	Effects of living arrangements eg single mother and family change attenuated by neighbourhood context and residential mobility.

Authors and dates	Age range and population	Definition of mobility and predictor variables and their measures	Measures of adjustment	Findings
South & Haynie. (2004)	13,000 adolescents from a US national multi survey.	Residential change within 2 yrs &/or school change within 1 yr. Race, age, gender, SES by parental education and family composition.	Friendship network size, structure and popularity.	Highly mobile adolescents have fewer friends, are less popular & more isolated. These are reduced in schools with a highly mobile pop.
Malmgren & Gagnon. (2005)	70 adolescents with emotional disturbances. Info. from school records	School mobility.	Emotional disturbance.	High rates of school mobility found in this emotionally disturbed group.
Weber & Weber. (2005)	179 adolescents with parents in the military	Residential relocation – military posting.	Parent perception of adolescent's conduct and adolescent behaviour.	Frequent moves = improved perception and decreased negative behaviour. Frequency rather than number of moves is important.

In summary, research on the impact that moving has on children is equivocal, however there is an overall tendency towards a sliding scale of negative effects. Some of the significant findings for good adjustment have been the importance of a positive parental, particularly maternal, attitude towards the move. In addition, the most highly mobile children are often those from the lowest SES backgrounds and are also often from single parent families with both of these factors having more adverse impact on children's adjustment than number of moves. Although these children were found to be adversely affected by moves both academically and behaviourally, controlled studies indicated that these problems pre-dated their moves. However, as studies have only been carried out on school age children, results may not be definitive, as they cannot account for moves pre-

dating school attendance. Similarly, the finding that other variables have greater impact does not mean that moving had no adverse effects. Pribesh and Downey (1999, p531) were emphatic that, taking all else into consideration, "moving itself matters" and they were unable to "identify any group that consistently *benefitted* from moving."

Resilience factors such as personal strengths are variables that have been missing from most of the relocation literature. By studying resilience and the process of adjustment in the context of risk situations such as moving, possible areas for prevention and intervention may be developed or better determined. They may be in the form of eliminating or reducing the level of risk, strengthening the assets in children's lives or mobilizing or improving external and internal adaptational systems (Masten & Powell, 2003). While relocating is not a uniformly negative experience, with such a high proportion of Australian children moving each year, there is still a significant cost emotionally, socially and academically to individuals, families, schools and communities that could potentially be alleviated through either universal or less expensive targeted approaches. These factors will be studied in conjunction with the part played by resilience and results will be outlined in chapter four, with discussion of the results, conclusions and implications discussed further in chapter five.

CHAPTER 2

RESILIENCE

2.1   Introduction to the Issue of Resilience

In many studies on mobility, personal factors such as personality, individual strengths or resilience have been alluded to but not directly addressed. Sinetar (1986) hints at this element when she states that "different things are necessary for each person to make that readjustment. Each must satisfy his or her own individual needs before feeling 'at home' again" (p.46). Carlisle-Frank (1992) refers to the importance of personal factors such as exploratory behaviours, self-concept, personal control beliefs and hardiness and their interaction with the family and community as playing a critical role in the adaptation process. Similarly, Shaw (1987) considered that the personality structure of the child was an influencing factor on children's adaptation to frequent moves. Cornille (1993) commented on individual coping skills in addition to the importance of families, schools, social and youth organizations, employers, churches, and health and welfare organisations all contributing to reduce the stress after children move. Although her dissertation was on adults, Kling (1999) also found that personality influenced adjustment to a community relocation, with neuroticism being associated with increases in depressive symptoms and decreases in positive affect about the move.

Parker, Cowen, Work and Wyman (1990) found many of these personal factors such as self-esteem, empathy and an internal and realistic locus of control differentiated between stress-affected and stress-resilient children. This differentiation was expanded upon by Slee (1995) in his study of 647 Australian families with kindergarten children who had experienced stressful events such as moving home. He suggested that although the

presence of adverse social or economic situations may increase a child's vulnerability, "from an early age stress resilient children possess attributes, skills and competencies that may help buffer them against the effect of significant life stress" (p.16). Slee (1995) concluded that a cluster of protective factors deriving from both nature and nurture contribute to a child's resilience. He identified some of these as having a flexible and adaptable temperament as well as strong self-esteem, a sense of identity, and available network of family, relatives and friends with, in particular, a warm, trusting and unconditional relationship with at least one adult. These factors are now some of those commonly associated with the concept of resilience.

2.1.1   Definitions of Resilience

Tarter and Vanyukof (1999) question the label of 'resilience'. They maintain that, as an attribute, the label of resilience is usually applied post hoc and therefore cannot guide strategies for prevention. However this is just one opinion in the widely ranging discussions in the literature surrounding the definition and understanding of resilience. Kaplan (1999) provides a comprehensive discussion of the definition of resilience as he presents a variety of differing viewpoints. He starts by questioning whether the concept of resilience is an outcome in itself in response to stress, or is it the cause of an outcome - a moderating effect. In the latter construct Kaplan (1999) explores hardiness as a fundamental equivalent of resilience and he highlights three adaptive characteristics (commitment, control and challenge), which moderate adverse effects of stressful situations. He describes the mechanism as being a more helpful interpretation of events that then allows the use of adaptive coping skills. This understanding is similar to the

---

concept of competence, first described by Garmezy (1973) and which Luther and Cushing (1999) still consider as being one of the critical components of resilience, along with risk.

Both Kaplan (1999) and Luther (1993) discuss the variability in defining outcomes of resilience. Earlier studies focused on social competence as one construct of resilience as reflected behaviourally such as by school grades or parent rating of behaviour (Luther, 1993). While considered to be a helpful outcome variable in the study of resilience, Luther (1993) questioned the usefulness of the concept of overall resilience and suggested instead that adjustment of at-risk children can vary markedly across different domains and that discussions should be more specific about both the strengths and vulnerabilities in academic, emotional and/or social resilience. Masten (1994) adds to this argument in her caution about the need to also take developmental stages and culture into account.

While Gilgun (1999) suggests viewing resilience in terms of both behaviours and internalized capacities, resilience has also been seen as a process as opposed to state-trait characteristics. Kaplan (1999) presents this process definition as another option and describes resilience as allowing a stage of development to be reached which would not have been reached without the experience of an adverse event. The adverse event or life stress then fosters the development of protective factors or resilience. Kaplan (1999) draws parallels between this construct at the level of the individual with that of successful organizations and communities which similarly build trust, support and openness.

Finally, there is the issue of the variability in risk factors. As to be resilient automatically assumes that there has been exposure to risk, then the variability in these risks, in turn, impacts upon the definition of resilience. The greater the number of risk factors in a child's life then the greater the number of protective factors are required to counter-balance them, although this is not a clear-cut relationship. Similarly, it may be viewed that those children who adapt best may be those with fewest risk factors.

Kaplan (1999) concludes his review by recommending the inclusion of individual, environmental and situational factors and their inter-relationships as well as developmental stage when looking at resilience. In line with Kaplan's argument, Masten and Powell (2003) suggest that the combination of individual differences, relationships, and community resources and opportunities are those often associated with resilience, which they define as "patterns of positive adaptation in the context of significant risk or adversity "(p.3). They identify three factors: 1) *individual difference* factors such as cognitive abilities, self-perceptions of self-efficacy and self-esteem, temperament, personality, self-regulation and positive outlook; 2) *relationship* factors such as parenting quality, close relationships with caring adults and connections to pro-social and rule abiding peers; and, 3) *community* factors such as good schools, connections to pro-social organisations such as clubs or religious groups, neighbourhood quality in terms of safety and resources, and quality of health and social services.

While these different definitions of resilience are important in so far as they expand and challenge the whole concept, they are not seen as mutually exclusive. This thesis will employ an operationalized approach based on Masten and Powell's (2003) understanding

of resilience that includes individual, relationship and community factors functioning interactionally.

2.1.2 Background to the Study of Resilience

The study of resilience had its genesis in research in the nature and origins of schizophrenia. This later transformed into the study of children at risk of psychopathology who went on to develop and function normally despite their risk factors or exposure to adversity. These observations eventually led to the inception of 'Project Competence' (Gamerzy, 1973) which, in turn, not only identified potential strengths and risk factors, but also had the insight to foresee how this concept could be utilized in a preventative manner.

Public institutions such as health, housing and, at times, education departments have long taken a risk- or problem-focused approach in dealing with their respective issues. When used to the exclusion of other approaches, this may have the potential to be not only negative and limiting but also expensive. A more optimistic, proactive and preventative approach that has developed in recent decades has been the identification and building of protective factors at the individual, family and community levels. While it would be naïve to allow the pendulum of care to swing too far in this direction to the exclusion of a problem- based approach, there is much benefit to both givers and receivers of a more strength-based approach to be included in the spectrum of care.

One way of including a more strength-based approach has been to consciously attempt to build resilience. This method has seen the growth of such programmes as Health Promoting

Schools and capacity building approaches to community development projects as well as in the inclusion in individual therapies with both adults and children.

2.1.3.   Resilience in the Individual Child

Howard and Johnson (2000, p.322) note that the literature on resilience in children tends to suggest that "just as risks have been identified as cumulative, protective factors seem to have the same cumulative effect in individual's lives" and that therefore the more protective factors in a child's life the more resilience they would be likely to muster. However, they also note that this approach does not take account of the mechanisms by which this cumulative effect occurs. In their study of what makes a difference for at-risk children, Howard and Johnson (2000) highlight three well recognized domains which contribute to the development of resilience in the child as being the family, school and community and, in particular, the interactions that occurs between these. In the family domain they emphasized aspects such as unconditional love, stability, predictability and supportive relationships, particularly with parents, a point duplicated in the research on residential relocation. These findings are compatible with those of other researchers who emphasize the importance of a caring adult in the lives of children (e.g., Ayers-Lopez & McCrory, 2004; Ferguson & Horwood, 2003; Slee, 1995; Werner, 1990).

While children themselves clearly articulated the importance of gaining good academic grounding at school, teachers in Howard and Johnson's (2000) study suggested that the contributions from schools in making a difference in the lives of children were in the development of social and coping skills. Involvement in activities such as church, sport and other clubs was generally seen as the contribution made by the community in supporting

children who have 'tough lives'. Although there would be little dispute about these outcomes, a gap in Howard and Johnson's (2000) study is the lack of comment on intrapersonal factors such as self-esteem, internal locus of control, problem solving skills, self-regulation and temperament (Masten & Powell, 2003; Slee, 1995; Walsh, 1995).

Many of the characteristics identified by Howard and Johnson (2000) are not stand alone factors but are inter-related. The high-warmth, cohesion and involvement in families would be largely dependent on the attachment bonds that develop between parents and children. Cairns (2002, p.144) considered resilience to be "closely linked to the internal working model of the world generated through attachment experiences." These attachments, in turn, would impact on parenting qualities that have also been recognized as contributing towards the development of resilience in children. Masten and Powell (2003) describe the importance of authoritative parenting as a predictor of many valued conduct and achievement standards.

2.1.4   Resilience in Families

Quality parenting has been identified as an important protective factor in resilient families as it involves setting healthy boundaries while also promoting appropriate autonomy (Ayers-Lopez & McCrory, 2003). Resilient families have many characteristics in common with resilient individuals and the broad definition of being able to rebound from adversity still pertains. By building protective family factors, children are aided in the development of strengths and competencies required to deal with life challenges. A variety of similar qualities that have contributed to the satisfaction and self worth of family members have also been observed across families from different cultural heritage both within America and around the world (Defrain, 1999). Silberberg (2001) outlines the

qualities found in the Australian Family Strengths Template as being communication, togetherness, sharing activities, affection, support, acceptance, commitment and resilience with this last factor being described as encompassing all the other attributes.

While these are similar in concept to other models of family strengths, it must be cautioned that a resilient family is more than just a list of desirable qualities. Just as an understanding of resilience in individuals needs to include the processes by which it develops, so too does an understanding of family resilience need to incorporate the processes required to achieve it. These processes may also be different for different families, as each one will have different strengths to enhance in order to adapt to their varying challenges. Underlying these strengths however, is the sharing of common values and beliefs.

The many characteristics that produce resilience in the individual combine in a synergistic fashion and so too are family and individual resiliencies interwoven. In developing their programme designed to build resilience in the children of women with co-existing substance abuse, violence and mental health disorders, Finkelstein et al. (2005, p.142) recommended that family approaches be emphasized by the inclusion of the mothers as they can "potentially increase protective factors" for these children.

Reminiscent of Tarter and Vanyukof's (1999) comment on the attribute of resilience only being identified in a post hoc fashion, Silberberg (2001) notes that families sometimes only observe in hindsight how a particular event strengthened the family. While families identified strengths such as communication, support and togetherness in overcoming

these adversities, it was also noted that having a positive, constructive attitude was an important trait that facilitated problem solving. As well as also being an individual strength, this last characteristic is one identified as being significant in the literature on residential relocation.

2.1.5   Resilience and Residential Relocation

There is a broad crossover between studies of resilience and those of children adjusting to moving home. Relocation studies, despite their widely different methodologies, have consistently, although not exclusively, concluded that, as risk factors accumulate, the ability to adjust to the move diminishes. Resilience studies have also observed the importance of this cumulative risk (Heller et al, 1996; Kumpfer, 1999; Masten & Powell, 2003; McCubbin et al., 1999; Rutter, 2000; Smith & Prior, 1995; Wood et al, 1993). While such aggregation provides a good prediction of outcome, it can obscure the more specific processes of stress or adaptation. To clarify these processes, Masten and Powell (2003) studied both additive, or compensatory, models and moderating models and their role in competence and resilience. In both models parenting quality, intellectual functioning and family socio-economic resources were consistently identified as key resources. Thus resilience factors may account for some of the findings in the literature on the impact of geographic mobility on children. Conclusions that SES, positive parental attitude and intact families are significant variables that impact on children's adjustment after moving closely echo the resilience literature. Similarly, the three external domains of family, school and community have been identified as significant for both moving and resilience in individuals (Howard & Johnson, 2000) and families (Walsh, 1996).

2.2   Aims and Hypotheses of Study

The purpose of this study was to examine the association between residential relocation, resilience and the emotional, behavioural and academic functioning of children 8-12 years of age who had moved. The study is divided into two parts. First, the characteristics of the sample were examined and outcomes on risk factors as identified in the literature were studied. The second part of the study included the concept of resilience and investigated the relative impact of this factor when compared to those risk factors already identified. Hypotheses and expected findings are detailed below:

Hypothesis 1: Due to the diversity of findings (in the literature), it was expected that children who had moved would exhibit a range of outcomes. These would include:

a)   No difference in academic progress or behavioural outcomes when compared to the normal population.

b)   Children living in more disadvantaged areas (low SES) or children from single parent families will display greater adjustment difficulties after relocation than those from more advantaged areas (high SES) and from two-parent families.

c)   Maternal attitudes and the time since relocation will independently predict adjustment following relocation. It is predicted that positive maternal attitudes and greater time since relocation will be associated with better outcome.

Hypothesis 2: The individual factor of resilience (operationalized by the BERS-2 total Strength Index) will have an additional impact on adjustment following relocation, over and above that of the risk factors as identified in the literature.

CHAPTER 3

METHOD

3.1　Participants

Seventy seven children, their parents and teachers participated in the study which included 40 boys and 37 girls (see Table 2). All children were aged between 8 and 12 years (*M*= 9.29, *SD*=1.19) and were attending primary school. Schools participating in the study included public, private, and Catholic schools. Nearly all children (*n*=74) were from NSW and were from geographically widespread locations including city, suburban and country areas. The three children who were not from NSW had parents who were with the Defence Force.

Table 2
Distribution of Participants by Age and Gender

	Age in Years					
Gender	8 years	9 years	10 years	11 years	12 years	Totals
Male	3	12	14	6	5	40
Female	8	7	9	10	3	37
Total	11	19	23	16	8	77

3.1.2　Inclusion Criteria

Children aged between 8 and 12 years were chosen for this study as they did not yet have to deal with the social, physical and emotional adjustments that often come with adolescence. Similarly, they had not yet made the transition to high school, which could confound the effects of relocation as that change is a significant transition in itself. It was also considered easier to be able to obtain an indication of academic performance in

relation to peers when the child usually has only one teacher in primary school as opposed to the many teachers in high school.

The time frame for the relocation was initially set at having occurred within the previous 12 months. However 12 participants had moved outside this time frame. In order to maintain an adequate level of power in the study, it was decided that the data from these respondents would be included so long as they matched all other criteria. Data from three respondents were excluded due to the young age of the children.

3.2   Measures

3.2.1   Moving

There are three different definitions of relocation used in the literature on children who relocate: 1) residential relocation; 2) change of school; and, 3) both 1 & 2. In the present study, moving has been defined as a 'residential relocation' because comparative data were able to be commissioned from the ABS. Information obtained from the ABS gave the number of children in each Sydney suburb, each capital city, each state and total numbers for Australia who had moved once and also who had moved two or more times between 1996 and 2001 (Table 3). Similar information on changes of school is not information collected by the Australian Bureau of Statistics (ABS) and therefore no clear understanding of the breadth of the issue could be determined.

Table 3

Number of Australian Children who Moved between ABS Census Period 1996-2001

Total Australia	0-4 years	5-7years	8-12 years	13-18 years	Total
1 move	214,793	417,268	595,318	583,199	1,810,578
2 or more		134,057	196,395	264,990	595,442
% moved	14.23%	57.59%	49.00%	44.41%	40.15%

3.2.2   Adjustment

Adjustment is a protective process that allows people to adapt to changing environments and/or circumstances. In the literature on residential relocation, adjustment has been measured in a variety of ways, some of which include assessing academic results, levels of disturbance, friendships, self-esteem, depression, activities and general behaviour. As behaviour, affect and academic results have appeared most frequently, these have been included in this study. The measures used are: 1) Achenbach Child Behavior Checklist (CBCL) for behaviour and affect; and, 2) comparative academic progress and grade retention for academic achievement.

3.2.2.1 Child Behavior Checklist (CBCL) (Achenbach, 1991)

In the literature on residential relocation, the CBCL has been used to provide a measure of behaviour, feelings or social adjustment after children have moved (Edwards & Steinglass, 2001; Kelly et al., 2003; Marchant & Medway, 1987).

The CBCL is a behaviour rating scale that provides an assessment of social competency, as well as emotional and behavioural adjustment in children aged between 6 and 18 years of age. The competence scale is comprised of 13 questions and the problem scale has 113 questions. The problem scale includes behavioural descriptors that are scored on a three-point scale – not true, somewhat true or very true - and are grouped together to broadly define internalizing and externalizing syndromes. The competence scale includes questions about a child's participation in extra-curricula activities, school performance and friendship.

The CBCL, parent version, is one of the most commonly used and best validated rating scales of child behaviour (Spreen & Strauss, 1998). It has excellent psychometric properties with good test-retest reliability (.56 to .93) and internal consistency for the separate scales (.57 to .96). Good validity has also been demonstrated and the test correlates highly with other measures of child behaviour (Achenbach, 1991). In this study, the total T-score, Internalizing T-score and Externalizing T-score from the problem scales were used as behavioural and emotional measures of adjustment.

3.2.2.2 Academic Outcomes

In the literature on residential relocation, academic outcomes have been the most common way of measuring adjustment (Brown, & Orthner, 1990; Crowder, & Teachman, 2004; Felner et al.1981; Fields, 1995; Halfon et al., 1993; Heinlein & Shinn, 2000; Johnson & Lindblad, 1991; Kelley et al., 2003; Marchant & Medway, 1987; Pettit & McLanahan, 1993; Pribesh, & Downey, 1999; Tucker, et al.1998; Warren-Sohlberg, & Jason, 1992; Wood et

al.,1996, 1998; Wright, 1999). In the present study, teachers were asked to rate the academic performance of their participating student in relation to their peers on a 5-point Likert scale: 1=well below average, 2=below average, 3=average, 4=above average, 5=well above average (see Appendix A). They were also asked if the child had ever repeated a grade. This question also appears in the CBCL parent version.

3.2.3.   Resilience

As discussed above, resilience is a complex set of inter-related attributes and processes usually measured by a battery of tests, each dealing with one or two main resilience factors. In the present study a single questionnaire, Behavioural and Emotional Rating Scale-2 (BERS-2), has been used. Although the questionnaire may not be a comprehensive measure of resilience, it encompasses the main attributes consistently described in the resilience literature.

Examination of the questions in the BERS-2 indicates that there is a strong crossover between Masten and Powell's (2003) factors and the BERS-2. Individual factors are included in the sub-scales of Interpersonal Strength, Intrapersonal Strength, School Functioning and Affective Strength. Relationship factors are covered in Interpersonal, Intrapersonal and Affective Strength and Community factors are incorporated into the Family Involvement and School Functioning subscales. Quality in parenting, schools, neighbourhood, health care or social services is not covered by the questionnaire.

In addition to being closely aligned to Masten and Powell's (2003) resilience factors, it was also noted that that the BERS-2 elicits temperament features indicative of easiness and

likeability along with low emotionality. These temperament factors were identified by Smith and Prior (1995) as being "easily the most discriminating variable in the analysis of overall resilience" (p.177). One difference however, is that Smith and Prior (1995) consider a teacher rating to be more valid than a parent rating. Along with temperament, they concluded that another important variable was mother-child warmth and that this factor was predictive of adjustment at school as well as at home.

3.2.3.1   Behavioural and Emotional Rating Scale-2 (BERS-2; Epstein, 2004)

The BERS-2 is a strength-based assessment of children's behaviours and emotions that was developed to aid in the planning and monitoring of individual mental health or educational services for children aged 5 to 18 year. Initially the BERS was developed in 1998 by Epstein and Sharma and was intended as a formal measure of strengths in children with emotional or behavioural difficulties rather than a measure of pathologies and deficits, where only informal strength measures existed at that time. The BERS was revised by Epstein in 2004 resulting in BERS-2.

The BERS-2 is a standardized, norm-referenced questionnaire comprised of 52 items. The questionnaire uses a 4-point Likert scale in which respondents are asked to rate each question from 0-3 with 0 = "not at all like the child" to 3 = "very much like the child". An overall Strength Index is obtained as well as individual indexes for the subscales. Each sub-scale has an index out of 20 and the scores for the Strength Index fit a normal distribution with an average score falling between 90 and 110. The BERS-2 is a psychometrically sound test with good inter-rater reliability (.80 to .94) and test-retest reliability coefficients at .80 and above. Convergent, content and discriminant validity have been found to be adequate

(Mooney et al., 2004). Of note in this analysis of the BERS-2 parent rating scale was the use of the CBCL as a measure of convergent validity with correlations ranging from -.09 to -.91. Although some of the correlations were high, it is considered that the two tests measure different constructs with the CBCL being largely a symptom-based measurement and the BERS-2 being strength based.

The BERS-2 is divided into five factor-analytically derived sub-scales that have been found to be both stable and reliable (.79 to .99) (Epstein et al., 2002). The 5 sub-scales are: 1). Interpersonal Strength which determines a child's ability to manage their emotions and behaviours in social situations; 2) Family Involvement which focuses on family relationships and participation; 3) Intrapersonal Strength measures the child's perception of competence and accomplishment; 4) School Functioning assesses academic attainment and general school behaviour; and, 5) Affective Strength which measures the ability to empathize and express feelings as well as to give and receive affection. There are parent, teacher and youth versions available. The parent version was used in this study in order to limit the demands on teachers.

3.2.4   Family Questionnaire

In order to capture information on the other predictor variables of gender, distance moved, number of moves, reasons for the moves, age at moves, socioeconomic status (SES), family composition and maternal attitude towards the move, a family questionnaire was constructed in a format allowing it to be coded on SPSS (Appendix B). Subcategories of these variables are:

Distance moved: (1) less than 10 km, (2) 10-100km, (3) 100-1000km, (4) greater than 1000km. *Reasons for the moves*: (1) requested by company, (2) forced to move, (3) change in family composition, (4) change to a better school, (5) upgrade, (6) job change. *Socioeconomic status*: (1) most disadvantaged 10% of NSW, (2) 25% of population is as disadvantaged or worse, (3) 50% is as disadvantaged or worse, (4) 75% is as disadvantaged or worse, (5) 90% is as disadvantaged or worse, (6) least disadvantaged 10% of NSW population. *Family composition*: (1) both biological parents; (2) single parent; (3) parent and step-parent. *Maternal attitude towards the move*: (1) happy to move, (2) sad to move, (3) looked forward to the move, (4) angry about the move, (5) felt the move was a positive one; spoke positively to the children about the move. The six parts of maternal attitude were appropriately reverse scored and added together in order to obtain a total attitude score where 6 was the lowest score and 24 the highest obtainable results.

Socio-economic status (SES) was determined by the ABS Index of Relative Socio-Economic Disadvantage for NSW post codes (ABS, 2001). This socio-economic index of disadvantage has been based on factors such as low educational attainment, high unemployment and unskilled occupations as derived from the 2001 census.

3.3   Procedure

3.3.1   Recruitment

Recruitment took place in a number of stages and in a number of forms. With the ABS statistics indicating a high rate of residential mobility, the initial plan was to contact and visit a cross-section of 10 schools, public and private, in the Penrith and Blue Mountains Local

Government Areas. After obtaining permission from the Department of Education and Training (DET), letters were sent out to school principals (Appendix C). These letters were followed up by a visit to the school and the provision of the correct number of request forms (Appendix D) to be given to all primary school children. The majority of principals were supportive of the research.

When it became clear that the response rate was minimal, an application to approach all schools in the relevant Local Government Areas (LGAs) was sought and obtained. At the same time newspaper articles were printed in both the Penrith Press and Blue Mountains Gazette. Unfortunately, the articles referred to children aged 3 to 6 years rather than those in classes 3 to 6 so once again the response was limited.

A request was made to the Sydney University Ethics Committee to advertise for volunteers. The issue of residential relocation was accepted as topic on ABC Radio 702's morning show with Angela Catterns, where the researcher discussed the main points relating to residential relocation, people phoned in and volunteers were requested. While this resulted in much interest, the majority of respondents were adults who had moved frequently as children and who still felt strongly about how difficult this had been for them. All e-mails were replied to, although only a few produced appropriate study participants.

Banks and the Defence Force were then approached with the request to advertise within their organizations for volunteers. While all the banks declined, the Defence Force agreed and an article was written and printed in the Defence Force magazine (June, 2005) accompanied by a request for interested volunteers. An advertisement was also placed in Sydney's Child, a

high-profile magazine that focuses on child-related issues. In an attempt to attract participants from the more disadvantaged SES areas, a housing officer from a Department of Housing estate was visited and notices put up. There were no responses.

With the response rate remaining small, it was decided that a larger potential population needed to be reached. This recruitment was done through a blanket e-mail to all primary schools, (public, private, Catholic and alternative schools) with the advertisement requesting volunteers to contact a specific e-mail address or phone number. One hundred and seventy five packages were sent out to 125 volunteer families. Of these, 70 families had only one child in the target group, 24 families had two children and three families requested three sets of questionnaires. While this produced good results, the final numbers of returned packages for the correct age group was still only 80, with three packages excluded because of the child's young age. When taken in the context of the numbers that are known to move each year, this level of response is of interest in itself and will be addressed further in the discussion section.

Packages were mailed to volunteers with reply paid envelopes. Included in the package were general instructions, information statements for the child and information for the parent as well as consent forms for participation and consent forms to contact teachers. Formal measures of behaviour and affect (CBCL) and resilience factors (BERS-2) were sent along with the family questionnaire requesting information on family demographics and history of mobility. Once a package was returned, teachers were faxed an information form, consent to participate and questionnaire on their student (Appendix A).

3.4.   Analyses

Masten and Powell (2003) described two main approaches in the attempt to identify factors associated with better adaptation among children at risk. These approaches were the variable-focused approach and the person-focused approach, both of which were used in Project Competence. In this study, the variable focused approach has been used with the aim of examining the links between adjustment after a relocation and resilience. A series of regression analyses were conducted to examine the relationship between the variables of interest. The dependent variable was adjustment to a residential relocation which had occurred in the past year (although volunteers who had moved up to 21 months ago were included). Adjustment was measured by behaviour, academic progress and whether or not a child had repeated a grade. The independent or predictor variables as identified in the literature were gender, distance moved, number of moves, reasons for the moves, age at moves, socioeconomic status, family composition and maternal attitude towards the move. In addition to these, this study also includes resilience factors as a predictor variable. This has not previously been directly addressed in the literature in relation to residential relocation.

A power calculation (Table 4) was conducted for regression analyses. Allowing for 8

independent variables, a sample size of 53 would provide sufficient power to detect large

effects (i.e., $r=.5$).

Table 4
Power Calculation

		Increment to R-Squared			Cumulative R-Squared		
		Number Variables in set	Increment to R-Squared	Power for Increment	Cumulative Number Variables	Cumulative R-Squared	Power for Cumulative R-Squared
1	Main set	8	0.25	0.80	8	0.25	0.80
	Alpha=0.05	Designated sets (1 to 1), Number variables = 8, Increment = 0.25 N cases = 53, Power = 0.80					
		Power computations: Non-central F, Model 2 error.					

CHAPTER 4

RESULTS

All statistical analyses appear in Appendix E.

4.1   Preliminary Analysis

From the total sample of 77 respondents, 2 did not include results for maternal attitude, 14 did not include results for academic progress and there was no SES rating available for 5 of the listed postcodes. These missing data were statistically managed through the use of the pairwise exclusion of missing data option in SPSS as suggested in Pallant (2002, p119). As part of the multiple regression procedures, multicollinearity was assessed and no variable was found to have a tolerance of $<.1$ or a variance inflation factor (VIF) of > 10 showing that none of the predictor variables were too highly correlated with each other. There were no violations of the assumptions of normality, linearity and homoscedasticity. In the logistic regression some outliers were identified and removed from the analysis.

4.2 Demographic Characteristics of the Sample

Although there was a wide geographic distribution of participants in the study, this did not equate to an even spread of socio-economic status which, as shown in the graph in Figure 1, included a greater number of participants from the least disadvantaged areas of NSW and none from the most disadvantaged.
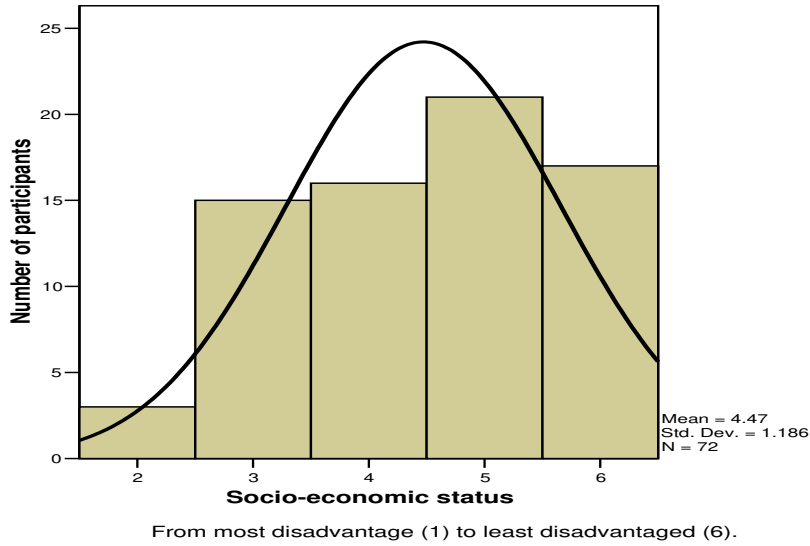
Figure 1. Distribution of participants by SES.

Distances moved were relatively evenly distributed as shown in Table 5. These data included 13 children who had changed state and 16 who had changed country. The number of moves experienced ranged from 1 to 6 (M=2.92, SD= 1.67).

Table 5
Distance Moved

Distance	Number of participants (n)	Percent (%)
< 10 km	23	29.9
10 - 100 km	12	15.6
100 - 1000 km	20	26.0
> 1000 km	22	28.6
Total	77	100.0

Despite the fact that the majority of respondents had relocated quite recently, the time since the last move ranged from 1 to 21 months (*M*=7.49, *SD*=5.16)with a number of participants (N= 12) having moved outside the requested time frame (Figure 2).
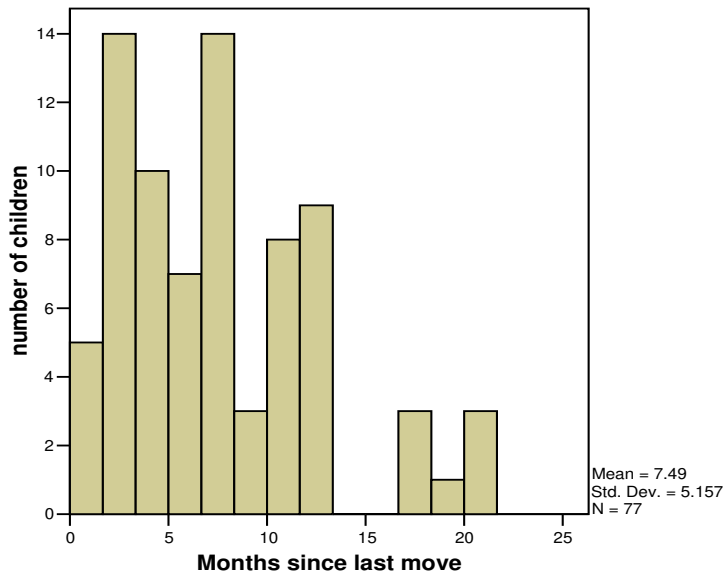
Figure 2. Distribution of length of time since last move.

Family composition (Table 6) was primarily comprised of children living with both biological parents, with only six living in single parent households and six with a step parent and biological parent.

Table 6
People Living at Home in Recent Move

Family Composition	Frequency	Percent
both biological parents	65	84.4
single parent	6	7.8
father and stepmother	2	2.6
mother and stepfather	4	5.2
Total	77	100.0

4.3   Hypothesis 1a

Frequencies of the occurrence of repeat grades, behaviour problems and academic

progress relative to the general population of similarly aged children were examined in

order to detect any difference in academic progress or behavioural outcomes after a

residential relocation when compared to the normal population.

Mean = 3.43
Std. Dev. = 0.962
N = 63
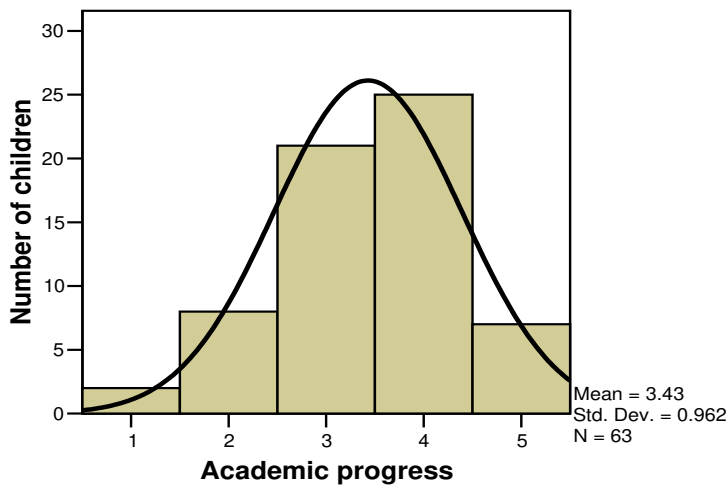
Figure 3. Distribution of results of academic progress**.**
Note: 1- well below average, 2- below average, 3-average, 4-above average, 5-well above average

The graph in Figure 3 indicates that the majority of children fall in the average to above average categories. Out of the 77 cases, 14 teachers did not respond leaving 63 results of academic progress. Of this 63, 10 children were rated as well below or below average with the remaining 53 children rated as average or above. In this sample, 11 children (14.3%) had repeated a class. This figure is higher than Stone's (1997) reported rate of 5.5% of NSW children repeating year 1, 3% for year 2, and 1.5% who repeat year 3.

Statistically this sample of children who have moved falls within the normal population both behaviourally and emotionally as measured on the CBCL total scale (*M*=50.65, *SD*=10.98) as shown in Tables 7 and Figure 4 and on the internalizing and externalizing scores (Tables 7 and 8).

Table 7

Distribution of Internalizing, Externalizing and Total Problem Scores in CBCL

Scores	Total T (n)	Tot-T %	Internalizing (n)	Internalizing %	Externalizing (n)	Externalizing %
Normal range	69	89.6	63	81.8	72	93.5
Total Borderline	4	5.2	8	10.4	4	5.2
Total Clinical range	4	5.2	6	7.8	1	1.3

Note: Normal T-score < 65; borderline = T-score 65-69; Clinical T-score >69

See Appendix E for more detail.

Mean = 50.65
Std. Dev. = 10.975
N = 77
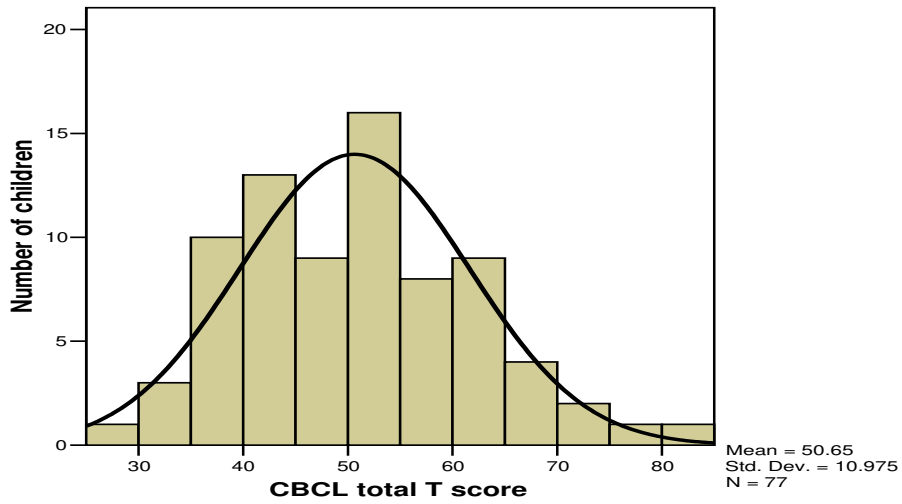
Figure 4. Distribution of CBCL total-T scores with normal curve displayed.

Table 8

One-Sample T-test Results Comparing CBCL with Normal Population

	N	Mean	SD	Test value = 50		
				t	df	Sig. (2-tailed)
CBCL total T score	77	50.65	10.98	.52	76	.61
CBCL internalizing T score	77	51.69	11.24	1.32	76	.19
CBCL externalizing T score	77	50.29	9.99	.25	76	.80

4.4   Hypothesis 1b

Multiple regression analyses with each dependent variable were conducted to investigate whether children living in more disadvantaged areas (low SES) displayed greater adjustment difficulties after relocation than those from more advantaged areas (high SES). With only six participants coming from single parent families (see Table 6, p.64) meaningful analyses regarding the relative impact of single parent families could not be carried out. Reason for the move (i.e., forced, non-forced) was also not included as a predictor variable due to the small number (5) who had listed 'forced' as their reason to move.

Separate multiple regression analyses were conducted with the CBCL Total T-score and with academic progress along with the 7 independent variables (gender, age, number of moves, distance moved, SES, total maternal attitude, months since the last move). Neither model was found to significantly account for the variance in behaviour or academic progress after having moved (CBCL total-T: $F(7,69) = .71$, *ns*; academic progress: $F(7,60) = .75$, *ns*). Subsequent analyses with CBCL internalizing ($F(7,69) = .46$, *ns*) and externalizing T-scores ($F(7,69) = 1.07$, *ns*) were also not significant.

Logistic regression was used to analyze the effect that moving had on the categorical variable, 'repeating a grade'. The model was also not found to be significant, ($\chi2\,(7,70) = 5.59$, *ns*) indicating that the variance was due to chance or factors other than those proposed.

4.5   Hypothesis 1c

To test the hypothesis that maternal attitude (*M*=20.31, *SD*=3.52) and the time since

relocation (*M*=7.49, *SD*=5.16) would independently predict adjustment following

relocation, the impact of these predictor variables on the dependent variables was studied.

Results were small and not significant.

4.6   Hypothesis 2

BERS-2 strength indexes in this sample population were within the normal range

(*M*=104.12, *SD*=15.36). Additional multiple regression analyses with the 2 dependent

variables (i.e., behaviour and academic progress) and a logistic regression analysis with

the dependent variable (i.e., repeat grade) were re-run with the 7 previous independent

variables and with the addition of the BERS-2 total strength index. The BERS-2 was

added to the analyses in order to study whether the individual factor of resilience would

add anything over and above the other variables in the association between the risk

factors as identified in the literature and children's adjustment to relocation. With the

addition of resilience, the regression model was found to be significant (*F(8,69)*=4.05,

p=.001) and accounted for 34.7% of the total variance in behaviour (Table 9).

Table 9
Model Summary of CBCL Total Scale and Predictor Variables Including Resilience

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.59(a)	.35	.26	9.43

The total-T for the CBCL was significantly negatively correlated with the BERS-2 strength index ($r = -.54$) as shown in Table 10 indicating that resilience accounts for 27.4% of the variance in the behaviour of children who have moved and that behaviour improves as resilience increases. (See Appendix E for statistical analyses).

Table 10.
Coefficients of CBCL Total Scale and Predictor Variables Including Resilience

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	87.12	13.16		6.62	.00
	Gender	2.36	2.47	.11	.96	.34
	Age in years	.62	.99	.07	.63	.53
	Socio-economic status	-1.53	1.01	-.17	-1.52	.13
	Months since last move	.01	.24	.01	.01	.99
	Distance moved	1.56	1.03	.17	1.52	.14
	total attitude	.10	.35	.03	.26	.79
	Number of moves	-.39	.71	-.06	-.55	.59
	BERS-2 scaled score strength index	-.40	.08	-.56	-5.05	.00

When resilience was added to the analysis of academic progress, the model still did not reach statistical significance ($F(8,60)=1.20$, $p=.32$). Similarly, the inclusion of resilience to the 'repeat grade' equation made little difference ($\chi^2(8, 70) = .58$, *ns*).

When taken together, the results for the impact of resilience on all the dependent variables provides partial support for the hypothesis that greater resilience will help children adjust after a residential relocation in terms of emotional and behavioural outcomes but not on either academic results or repeating a grade. Given this pattern of results, post hoc analyses

were conducted with the BERS-2 subscales and CBCL internalizing and externalizing scales and these are detailed in the next section.

4.7　　　Further Analyses

Analyses (Appendix E) of the CBCL internalizing and externalizing scales with the BERS-2 strength index produced different results with no significant outcomes for the internalizing scale ($F(8,69)$ =1.78, p=.099) but significant negative associations between resilience, SES and externalizing behaviours ($F(8,69)$ = 4.50, p=.001) so that as the SES and resilience indices increased, the externalizing scale reduced, moving away from the clinical range (Note: Normal T-score < 65; borderline = T-score 65-69; Clinical T-score >69). This suggests that stronger resilience and less socioeconomic disadvantage may result in less rule breaking and aggressive behaviour (Table 11).

Table 11
Regression Analysis with SES and Resilience Predictors of Adjustment as Measured by CBCL Externalizing Score (N=77)

	Beta	t-value	Sig.
SES	-.25	-2.70	.02
BERS-2 Strength Index	-.55	-5.06	.01

Further analyses (Appendix E) were then carried out with the BERS-2 subscales of interpersonal strength, family involvement, intrapersonal strength, school functioning and affective strength. Correlations between BERS-2 subscales and CBCL scales ranged from r =-.07 to r =-.64 (Appendix E). The regression models with the dependent variables, CBCL scales and academic progress, were found to be significant (Total CBCL:

F(5,76)=9.51, p<.01; Internalizing: *F (5,76)*=3.44, *p*=.008; Externalizing: *F* (5,76)

=13.53, p<.01; Academic Progress: *F(5,62)*=2.76, *p*=.03). The separate analyses are

presented in Tables 13-20. The BERS-2 subscale of 'school functioning' was

significantly positively associated with academic progress (Tables 12 & 13) indicating

that as this aspect of resilience becomes greater then academic progress will improve. No

other independent variables were significantly associated for this model.

Table 12
Model Summary for Academic Progress and BERS-2 Subscales

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.44(a)	.19	.12	.90

Table 13
Regression Analysis with Academic Progress and BERS-2 Subscales

	Beta	t-value	Significance
Interpersonal Strength	-.13	-.60	.55
Family Involvement	-.14	-.76	.45
Intrapersonal Strength	.12	.71	.48
School Functioning	.46	3.01	.01
Affective Strength	.04	.26	.79

Factors from the BERS-2 subscales which were significantly negatively associated with

the CBCL total scale were interpersonal strength and school functioning. This suggests

that as a child's resilience in the areas of being able to get on with others and function

well at school became greater, then their overall behavioural and emotional adjustment

after a residential relocation would be better (Tables 14 & 15).

Table 14

Model Summary for CBCL Total Scale and BERS-2 Subscales

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.63(a)	.40	.36	8.79

Table 15

Regression Analysis with CBCL Total Scale and BERS-2 Subscales

	Beta	t-value	Significance
Interpersonal Strength	-.53	-3.26	.01
Family Involvement	.12	.82	.42
Intrapersonal Strength	.05	.35	.73
School Functioning	-.34	-2.89	.01
Affective Strength	.05	.41	.69

Interpersonal strength was significantly negatively associated with the externalizing scale (Tables 16 & 17) although intrapersonal strength was nearing significance ($p=.06$) closely followed by school functioning ($p= .08$). Interpersonal strength shows the ability of a child to get on with others and control emotions and behaviours in social situations. This result indicates that as this aspect of resilience increases then there will be fewer behavioural problems as a child adjusts to the move. The confidence and self-esteem indicated in intrapersonal strengths may also have some association with behavioural adjustment, although this is not significant.

Table 16

Model Summary for CBCL Externalizing Subscale and BERS-2 Subscales

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.699(a)	.488	.452	7.397

Table 17

Regression Analysis with CBCL Externalizing Subscale and BERS-2 Subscales

	Beta	t-value	Significance
Interpersonal Strength	-.65	-4.37	.00
Family Involvement	-.14	-1.09	.28
Intrapersonal Strength	.23	1.92	.06
School Functioning	-.20	-1.81	.07
Affective Strength	.12	.95	.34

The only significant BERS-2 subscale showing an association with the CBCL internalizing scale was school functioning (Tables 18 & 19) suggesting that resilience in the area of school functioning may reduce anxious or depressed feelings in these children. School functioning and interpersonal strength were the factors that were associated most consistently with the CBCL scales and academic progress although no factor reached significance for repeating a grade.

Table 18

Model Summary for CBCL Internalizing Subscale and BERS-2 Subscales

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.44(a)	.19	.14	10.43

Table 19

Regression Analysis with CBCL Internalizing Subscale and BERS-2 Subscales

	Beta	t-value	Significance
Interpersonal Strength	-.18	-.99	.33
Family Involvement	.08	.50	.62
Intrapersonal Strength	-.07	-.50	.62
School Functioning	-.30	-2.18	.03
Affective Strength	-.02	-.13	.90

CHAPTER 5

DISCUSSION

5.2   Discussion of Key Findings
5.1.1.   Summary

The purpose of this study was to examine the associations between residential relocation, resilience and the emotional, behavioural and academic functioning of children 8-12 years of age who had moved. While children in the sample population showed, as predicted, no difference in academic progress or behavioural outcomes when compared to the normal population, they did report a higher rate of having repeated a class. Children living in more disadvantaged areas did not display greater adjustment difficulties after relocation than those from more advantaged areas, although there were no participants from the most disadvantaged, lowest SES, areas. Unfortunately, the small number of children in the sample from single parent families did not allow for meaningful analyses regarding the relative impact of single parent families. The effect of maternal attitudes and time since the move was not found to be statistically significant on any of the adjustment variables in the context of non-significant regression models.

When taken together, the results of the impact of resilience on all the dependent variables provided partial support for the hypothesis that greater resilience will help children adjust after a residential relocation, with a significant result being found for the positive association of resilience on the children's behaviour but no significant associations with their academic progress or likelihood of repeating a grade.

Additional analyses of the CBCL internalizing and externalizing subscales and the BERS-2 subscales elicited further results. Resilience and SES factors were significantly positively associated with externalizing behaviour but no factors were significantly linked with internalizing behaviours.

When resilience, as measured by the BERS-2, was broken down into its separate factors (BERS-2 subscales) and included in the analyses replacing the total strength index, all regression models with the three CBCL measures were found to be significant. Both interpersonal factors and school functioning were found to be significantly negatively associated with the CBCL total scale. Interpersonal functioning was also found to be highly significant in its negative association with externalizing behaviours. Only school functioning was found to significantly affect internalizing behaviours and academic progress. However, the model looking at resilience subscales and their impact on repeating a grade was not found to be significant.

5.1.2 Review of Aims and Hypotheses in Relation to Hypothesis 1a

An examination of the results showed that most children in the sample are making good academic progress and, when studied in conjunction with the internalizing and externalizing scores, these outcomes indicate that most children in this sample are performing behaviourally and academically within average levels or above. While children in the sample population showed, as predicted, no difference in academic progress or behavioural outcomes when compared to the normal population, without knowledge of pre-move academic results it is difficult to ascertain the cause of this outcome. There are several possibilities such as moving may have enhanced their abilities as suggested by Heinlein and Shinn (2000), or the

participants represent a biased, skewed sample. Certainly there was not a normal distribution of SES with an under-representation of participants in the index of relative socio-economic disadvantage. Another possible interpretation is that the study sample disproportionally represented resilient children who had not been adversely affected by their moves.

Although there were no norms available for repeating a grade, Stone's (1997) results supported Kenny's (1991) findings that in New South Wales primary schools 5.5% of children repeated year 1, 3% repeated year 2, and 1.5% repeated year 3. In the present study, 14.3 % had repeated a class. This percentage is well in excess of Stone's figures, suggesting that this sample of geographically mobile children may be different to the general population in its likelihood of repeating a class. This finding would suggest that in addition to the usual reasons for repeating a class which are a child's abilities or social development (Stone, 1997), children who have moved may experience further difficulties such as a change in education system and the need to adjust to different standards, culture and possibly, curricula. Repeating a grade was used in the American literature as a marker of adjustment as it had been found to be an indicator of not completing high school. Although repeating a class does seem to be linked with moving, it is not clear if the same assumptions hold in relation to long term negative effects such as not completing high school. While this sample has been found to repeat more grades than average, there do not seem to be obvious adverse effects in their academic or behavioural outcomes.

5.1.3   Review of Aims and Hypotheses in Relation to Hypotheses 1b and 1c

Insufficient numbers of volunteers from single parent families and families listing 'forced' as their reason to move, precluded meaningful analyses regarding the relative impact of these factors on adjustment. The impact of maternal attitudes and the time since relocation were not significantly predictive of adjustment.

5.1.4   Review of Aims and Hypotheses in Relation to Hypothesis 2

The second main hypothesis investigated in this study was whether the individual factor of resilience, operationalized by the BERS-2 Strength Index, would have an additional impact on adjustment following relocation, over and above that of the risk factors as identified in the literature. In this study, resilience was found to exert a direct additional effect on behaviour as seen by the significant negative association with the CBCL total scale, suggesting that children who are more resilient display fewer behaviour and emotional problems than less resilient children. Results suggest that increased resilience had a greater effect on improved behavioural adjustment than on emotional adjustment (i.e., internalizing behaviour), which produced no significant result. As well as noting the improvement in behaviour as resilience increased, behaviour also improved as SES disadvantage lessened. The externalizing factor is more indicative of behaviour than emotional states and so highlights the potential difference in behaviour between children from differing SES backgrounds in this sample, with those from more disadvantaged homes tending to exhibit more rule breaking and aggressive behaviours. In addition, the young ages of the participants would also suggest that, developmentally, they are more likely to exhibit externalizing behaviours than internalizing problems.

In post-hoc analyses, SES was the only factor other than resilience to have been significantly associated with adjustment, although this was only in conjunction with the addition of resilience to the analyses. In Masten and Powell's (2003) variable-focused analysis both in their cross-sectional and longitudinal designs, three key resources have consistently been associated with competence or resilience, regardless of the extent of experienced adversity. These variables are parenting quality, intellectual functioning and family socioeconomic resources. While parenting quality was not directly measured in this study, the results highlighting the significance of interpersonal strength, school functioning and SES in their impact on adjustment clearly reflect some of the findings of Masten and Powell (2003).

Interpersonal strength and school functioning were found to be significant in their positive association with adjustment and predictive of fewer behaviour and academic problems. For children who have moved to a new school, these interpersonal strengths would be of benefit in quickly making new friends and developing relationships with other children, teachers and neighbours. This notion fits with Howard and Johnson's (2000) study that suggested that the contributions from schools in making a difference in the lives of children were in the development of social and coping skills. Similarly, these interpersonal skills would enhance involvement in pro-social organisations such as church, sport and other clubs that have been seen as the contribution made by the community in supporting children (Masten & Powell, 2003). Parker et al. (1990, p.21) noted the importance of "effective coping strategies and interpersonal problem-solving skills, including empathy" in their potential to favour resilient outcomes.

While intrapersonal factors such as self-esteem, internal locus of control, self-regulation and temperament (Masten & Powell, 2003; Slee, 1995; Walsh, 1995) are also acknowledged as important in the development of resilience, in the context of this study, these intrapersonal strengths have been shown to play a less important role in the adjustment of children who have moved to a new location. One of the possible reasons for this finding may be the developmental stage of the children in the sample population. Masten and Coatsworth (1998) list the developmental tasks of middle childhood as: social adjustment, academic achievement, getting along with peers and rule-governed behaviour. These directly correspond to the interpersonal strengths and school functioning found to be important for these sample children.

One of the individual differences noted by Masten and Powell (2003) as contributing to the development of resilience is cognitive abilities. Similarly, the children who participated in Howard and Johnson's (2000) study also identified the importance of gaining good academic grounding at school in contributing to "kids with tough lives doing OK". The finding in this study that school functioning makes a significant contribution to helping children adjust after moving house is consistent with these earlier studies with the factor of school functioning being shown to result in fewer behavioural and emotional adjustment problems and improved academic progress. School functioning encompasses both school achievement and desirable school behaviours such as paying attention and completing homework, all of which are valued outcomes which would result in positive responses which in turn would ease some of the stresses of moving.

While the children in this study have all had the stress of having to move house, the demographics of this sample would suggest that they may not have had to encounter multiple life challenges or adversities which may help explain the lack of significant effects of demographic factors on the adjustment of the children in this sample. This reasoning also corresponds with Kaplan's (1999) concept of the variability in risk factors. As to be resilient automatically assumes that there has been exposure to risk, then the variability in these risks, in turn, impacts upon the definition of resilience. Kaplan (1999) suggested that the greater the number of risk factors in a child's life then the greater the number of protective factors are required to counter-balance them, although this is not a clear-cut relationship. Similarly, it may be viewed that those children who adapt best may be those with fewest risk factors. Relocation studies, despite their widely different methodologies, have consistently, although not exclusively, concluded that as risk factors accumulate, the ability to adjust to the move diminishes. Resilience studies have also observed the importance of this cumulative risk (Heller et al, 1996; Kumpfer, 1999; Masten & Powell, 2003; McCubbin et al., 1999; Rutter, 2000; Smith & Prior, 1995; Wood et al., 1993). In relocation and resilience studies, parenting quality, intellectual functioning and family socio-economic resources are consistently identified as key resources. These factors describe characteristics of this study's sample. Thus resilience factors may account for some of the findings in the literature on the impact of geographic mobility on children. Conclusions that SES, positive parental attitude and intact families are significant variables that impact on children's adjustment after moving closely resemble the resilience literature.

5.2   Discussion of the Study

5.2.1   The Relationship between Resilience and Adjustment

Masten and Coatsworth (1998) noted the importance of being able to distinguish between cause and effect when examining resilience factors. They suggested that it was unclear about the direction of the effect between individual, family and extrafamilial factors and resilience, and that these attributes could be consequences of success rather than causes of it. This distinction arose as an issue in this research as the literature on relocation and resilience seemed to indicate that the same factors which contribute to a child's adjustment to moving were similar to those identified as aiding in the development of resilience. Kaplan (1999) also grappled with the concept of resilience as an outcome as opposed to resilience as an influential quality and concluded that "outcomes in one context may be treated plausibly as influences upon outcomes in another context" (p.22). The relationship between cause and effect was further clarified by Masten and Powell (2003, p14) who described resilience as arising from "ordinary magic" by which they meant that resilience arises from the "operation of common human adaptational systems, rather than rare or extraordinary processes" and that these adaptational systems have evolved from a long history of biological and cultural evolution and that they develop over time in individuals and, as such, sustain or restore conditions essential to cognitive and social development. This concept may be one explanation why, in this study's sample, there was no significant impact of family demographic factors on adjustment, but a strong impact of resilience factors as, unintentionally, many of the harmful family factors identified in the relocation literature were controlled for and had resulted in a population of children who were resilient in the context of moving with their families. Of

note is that their strengths were within the average range and did not have to be extraordinary to cope with the stress of relocation. It is possible that their family environments were such that they sustained the conditions required for cognitive and social development, therefore promoting resilience. Masten and Powell (2003, p.14) would suggest that "adversity may wreak its greatest damage through harm to the development of key adaptive systems" which does not seem to have been the case for this population. This link between cause and effect also accords with Kaplan's (1999) suggestion that the greater the number of risk factors in a child's life then the greater the number of protective factors are required to counter-balance them or that those children who adapt best may be those with fewest risk factors. As far as can be measured in this study, children in the current study did not seem to have many risk factors other than the move itself.

5.2.2   Limitations

The results of this study are directly linked to the process and some of the issues that arose in conducting the study. One of the more salient observations was the paucity of volunteers especially when taken in the context of the numbers known to move. Few participants volunteered for the study, potentially compromising the adequacy and robustness of analyses and findings. While there was no direct gain for parents or children, the act of moving is still something that the majority of people can relate to and, anecdotally, are very interested in. One of the possible reasons for the lack of participation may be the busyness of people's lives. This was highlighted by one very interested school principal who brought the study to the attention of the relevant parents in his school, but none of them volunteered. This lack of response may also indirectly support the conclusions of Barrett and Noble (1973) and

Cornille (1993) who suggested that moving, while stressful, has only a transitory impact that is quickly overcome by most children. Adults too, may quickly move on and therefore soon lose interest in a stressful event that has now been overcome. This response would be supported by the observation that the average time since the participants in this sample moved was only 7.5 months. This would suggest that the interest in the event of moving, and therefore the motivation to participate in a study of no direct benefit, might not be high.

In examining the populations of the various studies in the literature on this topic it was noted that the great majority of those with large sample populations had either gathered information from large national surveys (Crowder & Teachman, 2004; Johnson & Lindblad, 1991; Petit & McLanahan, 1991; Pribesh & Downey, 1999; South & Haynie, 2004; Tucker, Marx & Long, 1998; Wood & Halfon, 1993) or had accessed school records for mobility histories and academic results as opposed to direct contact with the people involved (Felner, Primavera & Cauce, 1981; Heinlein & Shinn, 2000; Nelson, Simoni & Adelman, 1996; Wright, 1999). While this in no way diminishes their findings, it does provide a context in which to interpret the difficulty in accessing sufficient numbers in this area of research. Parker et al. (1990) also expressed concern about low participation rate (29%) and possible bias due to the likelihood of not being able to access the most highly stressed families.

Other notable features of this study were the distribution of SES, family composition types and number of moves experienced. There were no respondents from the most disadvantaged areas in NSW but 21 were in the category indicating '90% of the NSW population was more disadvantaged than they were' and 17 were from areas listed as the 'least disadvantaged'. While these ABS (2001) listings only report on postcodes rather than individuals, they still

present a reliable indication of SES. Similarly, family composition was predominantly

(84.4%) comprised of both biological parents, the family type least likely to encounter

difficulty in adjustment after a move (Tucker et al., 1998).

There were only a few children who could be considered to be 'hypermobile', with the

average number of moves in the sample population being 2.92. While this is still sizeable,

especially considering the young ages of the children, it does not reach the number of moves

generally considered to lead to problems. Speare and Goldscheider (1987) showed that

children who moved frequently were less likely to live with both biological parents and more

likely to be less well off, thus contributing to an adverse outcome. Similarly, Pribesh and

Downey (1999) suggested that, while moving certainly accounted for some of the effect in

the different academic results between movers and non-movers, most of the negative effect

was due to pre-existing differences such as lower incomes, not living with both biological

parents and fewer social ties and therefore more frequent moves; these demographics mostly

do not apply to this study's sample.

The fact that the majority of the sample moved through choice and that maternal attitude was

overall very positive raises the question of whether these factors may be positively linked

with high SES. It is considered that this combination of comfortable SES level, relatively few

moves and living with an intact family largely accounts for the lack of predicted effects in

this study.

Another limitation of the study was the use of one questionnaire to measure resilience. As

discussed in chapter 2, resilience is a complex set of inter-related attributes and processes

usually measured by a battery of tests, each dealing with one or two main resilience factors.

In the present study a single questionnaire, the BERS-2 has been used and, although the questionnaire may not be a comprehensive measure of resilience, it encompasses the main attributes consistently described in the resilience literature. It was also quick and easy for respondents to complete.

5.2.3   Improvements

Without redesigning the whole study, there were still a number of ways in which this research project could have been improved, generally through changes in the family questionnaire. A potentially important question on whether or not the residential relocation had included a change of schools was not asked. While it was clear by the distances moved that this would have been the case for the majority of the participants, there is some face validity to the idea that a change of residence without a change of school may not require the same adjustment. If sufficient numbers of participants had not changed schools, results could potentially have been different than if most participants had in fact changed schools.

Both in this project and in research in the literature, moves that occurred before starting school were not controlled for so there is no indication of the relative impact of moves prior to commencement of school. Similarly, there are findings in the literature that moves in early school years may have a larger negative effect on academic progress than later moves Heinlein and Shinn (2000). These issues could have been investigated by dividing the question on number of moves into three sections: (a) before school, (b) kindergarten to second class and (c) third to sixth class. A more balanced question on the issue of reasons to move could also have been developed so that a clearer distinction could be made between

forced and non-forced moves. Consistent research has found this to be an important

consideration in how children respond to their move (Field, 1997; Glick, 1993; Warren-

Sohlberg & Jason 1992).

Due to the difficulty in recruiting participants and the fact that there was no direct benefit for

participants, an incentive such as including a tip sheet with ideas on how to help children

when they move might have been of help. However, this idea arose only in hindsight, as with

the large numbers known to move and, late in the study, access to the e-mail addresses of all

NSW primary schools, recruitment had not been foreseen as being problematic.

Obtaining pre-existing information before the move such as academic results would have

been helpful and children's self reports would have added an extra dimension to the

information gathered. These suggestions are discussed further in future directions.

5.2.4   Implications and Future Directions

With over 40% of Australian school children moving at least once in any census period, the

effects of residential mobility can be costly financially, academically, socially and

emotionally for the individuals, their families, schools and the community. The current study

is significant because it provides an enhanced understanding of the factors that would assist

children when they move and reduce potential negative impacts. It may also provide

guidelines for organizations that regularly transfer their staff on how to ease these transitions.

Similarly, these results may help inform public housing policy, as it is often in these areas

that the effects are most strong with the greatest number of risk factors often occurring

simultaneously. Mathews (2005) noted that length of residence was the most important factor

to predict people's attachment to their local community and that this was linked to their well-being. The findings that for children who move, interpersonal skills may make a difference in being able to adjust is a positive one as many of these abilities such as coping skills, social problem solving and empathy can be taught (Parker et al., 1990). Perhaps one of the more important implications of this study is that, while it is unquestionably of great benefit that schools provide a venue and opportunity for children to learn intrapersonal and, in particular interpersonal skills, their core business of building and enhancing the intellectual functioning of children has been shown to be a vital component in the development of resilience.

While this study has been different in so far as it has included a focus on resilience in the individual and how it may moderate the negative effects of a residential relocation, the research in this field would benefit by future studies focusing further on the individual in such areas as temperament. Such an individual characteristic is generally seen as being inherent and therefore less open to external impact. However, it is gradually being recognized that there is little, if any, understanding of the part played in resilience by genetics and a study of temperament could well suit this gap. Ruschena et al. (2005, p.355) describe temperament as being part biologically based but 'socially conditioned". Similarly, while there has been a proliferation of research on resilience as an outcome, a protective factor or a process, Bifulco (2004) also notes that one area missing from the equation is that of the biological and genetic aspects.

Other gaps in the literature are the perspectives of the children themselves who have recently moved. Both Stroh and Brett (1990) and Howard & Johnson's (2000) studies worked directly with the children themselves, not just parents and teachers. Howard and Johnson's (2000)

study on resilient outcomes for children at risk could be used as a basis for a similar study whereby, rather than relying solely on parent or teacher assessments, focus groups with children themselves could be carried out to find out what they found helpful or unhelpful during the relocation process.

Finally, during the recruitment process, many adults who had experienced frequent moves as children phoned or e-mailed their stories, eager to talk about an issue that they felt had affected their lives so much. While a longitudinal study would be most interesting, it would not be particularly feasible unless part of a larger study. However, a retrospective study examining residential relocation histories along with family of origin demographics and current life status along with resilience factors could be carried out and would add a new dimension to the study of the impacts of residential relocation.

5.3   Conclusions

This study has been as notable for what was not found significant as what was found to be associated with children's adjustment after moving. While not finding significant links with family demographic characteristics and adjustment, the importance of resilience, over and above family factors, was clear. Following on from this, the presence of resilience made a difference but specific components of the resilience equation, in this case interpersonal strengths and school functioning, were also important for this sample of children, to make this transition. These findings suggest that different aspects of resilience may be important for different developmental stages and different life stressors.

One must be careful in drawing conclusions about how to describe the children who adjusted well after their residential relocation. It would too sweeping a statement to say that these children had a blanket quality of resilience. Rather, as suggested in the literature (Glantz & Sloboda, 1999; Luther, 1993; Masten & Powell, 2003) comments on resilience should be specific both to the stressor and the outcomes and that in order to adapt to a residential relocation, interpersonal skills may be more important than intrapersonal strengths for this age group. Also keeping in mind applicability to specific developmental stages (Masten, 1994), a clearer conclusion of this study would be that these 8 to 12 year old children displayed academic, emotional and behavioural resilience in the face of a residential relocation. This cannot necessarily be generalized to all aspects of these children's lives either now or in the future although resilience can breed more resilience and there is the opportunity for these children to use their experiences to their future benefit. While this study was not able to incorporate information from those with the highest risk factors, it was representative of middle Australia and, with such large numbers moving, outcomes would be relevant for a large number of people. This does not remove the need to access those most at need, as it is these children who may grow to make the largest demands on society in health and welfare needs. However, the development of resilience is clearly not a 'one size fits all' and for programs to be effective and economic then they need to be directed accordingly.

REFERENCES

Achenbach, T.M. (1991). Manual for the Child Behavior Checklist / 4-18 and 1991 profile. Burlington: University of Vermont, Department of Psychiatry.

Australian Bureau of Statistics. (2001). Population census customised table. Client request number CR-20020905-171459-pm.

Australian Bureau of Statistics. (2001). Socio-Economic Indexes for Areas. Australia. *Information Paper 2039.0 – Census of Population and Housing.*

Ayers-Lopez, S., & McCrory, J. (2004). Fostering personal, client and family resilience. Part One: Resilience, the resilient child, and the resilient professional. *Protection Connection, 11,* 1-27.

Bailer, D. (1996). The relationship between psychological type preferences in geographically mobile adolescents to social and academic adjustment and perceived social support. *Dissertation Abstracts international, A (Humanities and Sciences), 57.*

Barrett, C., & Noble, H. (1973). Mothers' anxieties versus the effects of long distance move on children. *Journal of Marriage and the Family, 35,* 181-188.

Benard, B. (1999). Applications of resilience. In M.D. Glantz and J.L. Johnson, (Eds.), *Resilience and Development: Positive Life Adaptations.* New York: Kluwer Academic/Plenum Publishers.

Boisjoly, J., Duncan, G., & Hofferth, S. (1995). Access to social capital. *Journal of Family Issues, 16,*609-631.

Bourke, S., & Naylor, D.R. (1971). The effect of school changes and Army dependent children. *Australian Army School of Education Cell - Project 4-70.*

Brett, J. (1982). Job transfer and well-being. *Journal of Applied psychology, 67,* 450-463.

Brown, A.C., & Orthner, D.K. (1990). Relocation and personal well-being among early adolescents. *Journal of Early Adolescence, 10,* 3, 366-381

Cairns, K. (2002). *Attachment, Trauma and Resilience. Therapeutic Caring for Children.* London, BAAF.

Coleman, J. (1988). Social capital in the creation of human capital. *American Journal of Sociology, 94 (Suppl.95) s94-120.*

Cornille, T. A. (1993). Support systems and the relocation process for children. *Marriage and Family Review, 19*, 281-298.

Craig, D. (1989). The social problems of imposed residential relocation. *Defence Force Journal, 78,* 31-38.

Crowder, K., & Teachman, J. (2004). Do residential conditions explain the relationship between living arrangements and adolescent behaviour? *Journal of Marriage and Family, 66, 721-738.*

Deady, F.X. (1998). The effect of school transfers due to mobility on students' self-concepts and academic performance. *Dissertation Abstracts International, A (Humanities and Social Sciences) 58* (10-A).

Defrain, J. (1999). Strong families around the world. *Family Matters, 53*, pp. 6-13.

Duffy, E.P. (1987). Itinerant children in the schools: A neglected social issue. *Australian Journal of Social Issues, 22*, 542-552.

Edwards, M., & Steinglass, P. (2001). Relocation as potential stressor or stimulating challenge. *Journal of Feminist Family Therapy, 13,* 121-152.

Eckenrode, J., Rowe, E., Laird, M., & Braithwaite, J. (1995). Mobility as a mediator of the effects of child maltreatment on academic performance. *Child Development, 66,* 1130-1142.

Elkind, D. (1981). *The hurried child. Growing up too fast too soon.* Reading; MA: Addison-Wesley.

Epstein, M. H., & Sharma, H.M. (1998). *Behavioural and Emotional Rating Scale: A Strength Based Approach to Assessment.* Austin, TX: Pro-Ed.

Epstein, M.H., Ryser, G., & Pearson, N. (2002). Standardization of the Behavioural and Emotional Rating Scale: Factor structure, reliability and criterion validity. *The Journal of Behavioral Health Services and Research, 29,* (2), 208-215.

Felner, R.D., Primavera, J., & Cauce, A.M. (1981). The impact of school transitions: A focus for preventive efforts. *American Journal of Community Psychology. 9,* 4, 449-459.

Fergusson, D., & Horwood, L. (2003). Resilience to childhood adversity. Results of a 21-year study. In S. Luthar (Ed.), *Resilience and Vulnerability. Adaptation in the Context of Childhood Adversities.* Cambridge: Cambridge University Press.

Fields, B. (1995). Family mobility. Social and academic effects on young adolescents. *Youth Studies Australia.* Winter, 27-31.

Fields, B. (1997). Children on the move. The social and educational effects of family mobility. *Children Australia, 22(*3), 4-8.

Finkel, L., Kelley, M., & Ashby, J. (2003). Geographic mobility, family and maternal variables as related to the psychosocial adjustment of military children. *Military Medicine, 168,* 1019-1024.

Finkelstein, N., Rechberger, E., Russell, L., et al. (2005). Building resilience in children of mothers who have co-occurring disorders and histories of violence: Intervention model and implementation issues. *Journal of Behavioural Health Services and Research. 32,* 141-154.

Garmezy, N. (1973). Competence and adaptation in adult schizophrenic patients and children at risk. In: S.R. Dean (Ed.) *Schizophrenia: The First Ten Dean Award Lectures.* (pp.163-204). New York, NY:MSS Information.

Garmezy, N. (1985). Stress-resistant children: The search for protective factors. In J.E. Stevenson (Ed.), *Recent Research in Developmental Psychopathology: Journal of Child Psychology and Psychiatry Book Supplement (4)*, (pp2132-233). Oxford: Pergamon Press.

Gilgun, J.F. (1999). Mapping resilience as process among adults with childhood adversities. In H.I. McCubbin, E.A. Thompson, A.I. Thompson & J.O. Futrell (Eds.), *The Dynamics of Resilient Families.* USA: Sage Publications.

Glantz, M.D., & Sloboda, Z. (1999). Analysis and reconceptualization of resilience. In

    M.D. Glantz & J.L. Johnson (Eds.), *Resilience and Development: Positive Life*

    Adaptations. (pp. 109- 125). New York: Kluwer Academic/Plenum Publishers.

Glick, P.C. (1993). The impact of geographic mobility on individuals and families.

    Marriage and Family Review, 19, 31-54.

Goebel, B. (1978). Mobility and education. *American Secondary Education, 8*(4),

11-15.

Hamilton, S. (1986). Supporting service families. A report on the main problems facing

    spouses of Australian Defence Force personnel and some recommended solutions.

    Office of the Status of Women.

Heinlein, L.M., & Shinn, M. (2000). School mobility and student achievement in an

    urban setting. *Psychology in the Schools, 37*(4), 349-357.

Heller, S.S., Larrieu, J.A., D'Imperio, R.D., & Boris, N.W. (1996). Resilience to

    Maltreatment. *Family Process, 35*(3), 325-338.

Howard, S., & Johnson, B. (2000). What makes the difference? Children and teachers

    talk about resilient outcomes for children at risk. *Educational Studies*. *26*(3), 321-

    337.

Humpke, C., & Schaefer, C. (1995). Relocation: A review of the effects of residential mobility on children and adolescents. *Psychology,* 32(1), 16-24.

Johnson, R.A., & Lindblad, A.H. (1991). Effect of mobility on academic performance of sixth grade students. *Perceptual and Motor Skills, 72*(2), 547-552.

Kaplan, H. (1999). Toward and understanding of resilience. A critical review of definitions and models. In M.D. Glantz & J.L. Johnson (Eds.), *Resilience and Development: Positive Life Adaptations.* (pp.17-79). New York: Kluwer Academic/Plenum Publishers.

Kelly, R. (1988). Some examples of educational disadvantage experienced by children of service families. *Submission to the Australian Education Council.*

Kling, K (1999). The influence of personality on adjustment to community relocation. *Dissertation Abstract International: B: The Sciences and Engineering, 60,* (1-B).

Kumpfer, K.L. (1999). Factors and processes contributing to resilience. In M.D. Glantz & J.L. Johnson (Eds.), *Resilience and Development: Positive Life Adaptations.* (pp. 179-216). New York: Kluwer Academic/Plenum Publishers.

L'Esperance, R. (1998). The revolving door: Highly mobile students in urban middle schools. *Dissertation Abstracts International, A (Humanity and Social Sciences), 58* (12-A).

Linke, P. (2000*). Home is where the family is: Moving house with children.* Watson, ACT: AECA.

Long, L.H. (1992). International perspectives on the residential mobility of America's children. *Journal of Marriage and the Family, 54,* 861-869.

Luthar, S. (1993). Annotation: Methodological and conceptual issues in research on childhood resilience. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 34,* 441-453.

Luther, S., & Cushing, G. (1999). Measurement issues in the empirical study of resilience. In M.D. Glantz & J.L. Johnson (Eds.), *Resilience and Development: Positive Life Adaptations* (pp.129- 154). New York: Kluwer Academic/Plenum Publishers.

Malmgren, K.W., & Gagnon, J.C. (2005). School mobility and students with emotional disturbance. *Journal of Child and Family Studies, 14,* 299-312.

Mann, P. (1972). Residential mobility as an adaptive experience. *Journal of Consulting and Clinical Psychology, 39,* 37-42.

Marchant, K., & Medway, F. (1987). Adjustment and achievement associated with mobility in military families. *Psychology in the Schools, 24,* 289-294.

Masten, A.S. (1994) Resilience in individual development: Successful adaptation despite

 risk and adversity. In M.C. Wang & E.W. Gordon (Eds.), *Educational Resilience in*

 Inner-City America: Challenges and Prospects (pp.3-23). Hillsdale, NJ: Lawrence

 Erlbaum.

Masten, A. (1999). Commentary. The promise and perils of resilience research as a guide

 to preventive interventions. In M.D. Glantz & J.L. Johnson (Eds.), *Resilience and*

 Development: Positive Life Adaptations (pp. 251-256). New York: Kluwer

 Academic/Plenum Publishers.

Masten, A.S., & Coatsworth, J.D. (1998). The development of competence in favorable

 and unfavorable environments: Lessons from research on successful children.

 American Psychologist, 53, 205-220.

Masten, A.S., & Powell. J.L. (2003). A resilience framework for research, policy and

 practice. In S.S. Luthar (Ed.), *Resilience and Vulnerability: Adaptation in the*

 Context of Childhood Adversity. (pp.1-25). New York: Cambridge University Press.

Mathews, R. (2005). Of people and places: Deciding where to live. *InPsych.* (Dec.), 24-

 29.

Middleton, N., Whitley, E. Frankel, S. et al. (2004). Suicide risk in small areas in

 England and Wales. *Social Psychiatry and Psychiatric Epidemiology, 39*(1), 45-52.

Mooney, P., Epstein, M.H., Ryser, G., & Pierce, C.D. (2005). Reliability and validity of the Behavioral and Emotional Rating Scale-2: Parent Rating Scale. *Children and Schools*, 27, 147-155.

Nelson, P.S., Simoni, J.M. & Adelman, H.S. (1996). Mobility and school functioning in the early grades. *Journal of Educational Research, 39,* 6, 365-369.

Pallant, J. (2005). *SPSS Survival Manual. A step by step guide to data analysis using SPSS for Windows (Version 12)* (2nd ed.). Allen & Unwin, Australia.

Parker, G.R., Cowen, E.L., Work, W.C., & Wyman, P.A. (1990). Test correlates of stress resilience among urban school children. *Journal of Primary Prevention,* 11(1), 19-35.

Pedersen, F.A., & Sullivan, E.J. (1964). Relationships among geographical mobility, parental attitudes and emotional disturbances in children. *American Journal of Orthopsychiatry*, *34*, 575-580.

Pettit, B., & McLanahan, S. (2003). Residential mobility and children's social capital: Evidence from an experiment. *Social Science Quarterly, 84,* 632-649.

Pribesh, S., & Downey, D. (1999). Why are residential and school moves associated with poor school performance. *Demography, 36,* 521-534.

Rahmani, Z. (1982). Educational turbulence among young children in service families. In

    H. Smith, (Ed.), *The service family: Problems and prospects.* Department of

    Government, Faculty of Military Studies, UNSW at The Royal Military College.

Rolf, J.E. & Johnson, J.L. (1999) Opening doors to resilience intervention for prevention

    research. In M.D. Glantz & J.L. Johnson, (Eds.) *Resilience and Development:*

    Positive Life Adaptations (pp. 229-247). New York: Kluwer Academic/Plenum

    Publishers.

Ruschena, E., Prior, M., Sanson, A., & Smart, D. (2005). A longitudinal study of

    adolescent adjustment following family transitions. *Journal of Child Psychology*

    and Psychiatry, 46, 353-363.

Rutter, M. (2000). Resilience reconsidered: Conceptual considerations, empirical findings

    and policy implications. In J.P. Shonkoff & S.R. Meisels (Eds.), *Handbook of Early*

    Intervention. (2nd ed.) (pp.651-681). New York: Cambridge University Press.

Sameroff, A.J. & Fiese, B. H. (1990). Transactional regulation and early intervention. In:

    S.J. Meisels & J.P. Shonkoff (Eds.) *Handbook of Early Childhood Intervention.*

    Cambridge, Cambridge University Press.

Sandler, I.N., & Ramsey, T.B. (1980). Dimensional analysis of children's stressful life

    events. *American Journal of Community Psychology, 8,* (3), 285-302.

Scanlon, E., & Devine, K. (2001). Residential mobility and youth well-being: Research, policy and practice issues. *Journal of Sociology and Social Welfare, 28*, (1), 119-138.

Scot, W.B. (1996). Academic achievement, self-esteem and mobility: A study of tenth graders in Flour Bluff. *Dissertation Abstracts International, A (Humanities and Social Sciences, 56* (8-A), Feb. 3074, US.

Shaw, J.A. (1987). Children in the military. *Psychiatric Annals 17*:8 August. 539-544.

Simpson, G.A., & Fowler, M.G. (1994). Geographic mobility and children's emotional/behavioural adjustment and school functioning. *American Academy of Pediatrics, 93* (2), February, 303-309.

Sinetar,M. (1986). Relo shock. *Personnel Journal, 65* (5), 44-49.

Slee, P. (1995). Sources of stress in Australian families and characteristics of stress resilient children. *Children Australia, 20* (2), 14-17.

Smith, J., & Prior, M. (1995). Temperament and stress resilience in school-age children: A within-families study. *American Academy of Child and Adolescent Psychiatry, 34*(2), 168-179.

South, S., & Haynie, D. (2004). Friendship networks of mobile adolescents. *Social Forces, 83,* 315-350.

Speare, A., Jnr. & Goldscheider, F. (1987). Effects of marital status change on residential mobility. *Journal of Marriage and the Family, 49,* 455-464.

Spreen, O. and Strauss, E. (1998). *A Compendium of Neuropsychological Tests: Administration, Norms and Commentary (2nd ed.).* New York: Oxford University Press.

Stone, W. (1997). Exploring links between schools and families. *Family Matters, 46,* 32-33.

Stroh, L. K. & Brett, J.M. (1990). Corporate mobility: After the move what do the children think? *Children's Environments Quarterly. 7* (3), 7-14.

Tarter, R., & Vanyukov, M. (1999). Re-visiting the validity of the construct of resilience. . In M.D. Glantz & J.L. Johnson (Eds.), *Resilience and Development: Positive Life Adaptations.* (pp.97-100). New York: Kluwer Academic/Plenum Publishers.

Tucker, C.J., Marx, J., & Long, L. (1998). "Moving on": Residential mobility and children's school lives. *Sociology of Education, 71*(1), 111-129.

Walsh, F. (1996). The concept of family resilience: Crisis and change. *Family Process, 35*(3) 261-280.

Warren-Sohlberg, L., & Jason, L. (1992). How the reason for a school move relates to

 school adjustment. *Psychology in the Schools*, *29,* 78-84.

Weber, E.G., & Weber, D. K. (2005). Geographic relocation frequency, resilience and

 military adolescent behaviour. *Military Medicine, 170*, 638-642.

Werner, E. (1990). Protective factors and individual resilience. In S.J. Meisels & J.P.

 Shonkoff (Eds.), *Handbook of Early Childhood Intervention.* Cambridge,

 Cambridge University Press.

Werner, E.E., & Johnson, J.L (1999). Can we apply resilience? In M.D. Glantz & J.L.

 Johnson, (Eds.), *Resilience and Development: Positive Life Adaptations.* New York:

 Kluwer Academic/Plenum Publishers.

Whalen, T., & Fried, M. (1973). Geographic mobility and its effect on student

 achievement. *Journal of Educational Research, 67,* 163-166.

Windle, M. (1999). Critical conceptual and measurement issues in the study of resilience.

 In M.D. Glantz & J.L. Johnson, (Eds.), *Resilience and Development: Positive Life*

 Adaptations. New York: Kluwer Academic/Plenum Publishers.

Wood, D., Halfon, N., Scarlata, D., Newacheck, P., & Nessim, S. (1993). Impact of

    family relocation on children's growth, development, school function and

    behaviour. *JAMA, 270* (11), 1334-1338.

Wright, D. (1999). Student mobility: A negligible and confounded influence on student

    achievement. *The Journal of Educational Research, 92*(6) 347-353.

<u>APPENDIX A:</u> Teacher Questionnaire

Psychology Clinic
School of Psychology
University of Sydney

Title of Project: Changing places – A Study on the impact of resilience on children's adjustment to residential relocation.

Investigators: Mrs Christine McLeod, Doctor of Clinical Psychology Student, Sydney University

                    Dr Sandra Heriot, Clinical Psychology Unit, Sydney University

                    Dr Caroline Hunt, Clinical Psychology Unit, Sydney University

---

Name of Child:……………………………………………………………………………

Current school grade:………………………………………………………………………

Has this child ever repeated a grade? …………………………………………………..

    If so what year?
    ………………………………………………………………………………………

    What grade?…………………………………………………………………………..

    Why?………………………………………………………………………………

Please rate this child's academic progress in relation to his or her peers?

1	2	3	4	5
Well Below	Below	Average	Above	Well Above
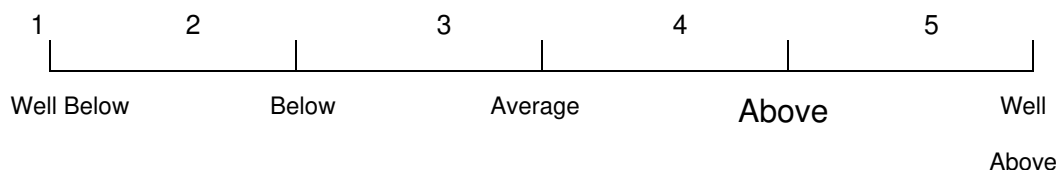
Thank you for taking the time to fill in this form. Your input is appreciated.

APPENDIX B: Family Questionnaire

Psychology Clinic
School of Psychology
University of Sydney

Title of Project: Changing places – A Study on the impact of resilience on children's adjustment to residential relocation.

Investigators: Mrs Christine McLeod, Doctor of Clinical Psychology Student, Sydney University

Dr Sandra Heriot, Clinical Psychology Unit, Sydney University

Dr Caroline Hunt, Clinical Psychology Unit, Sydney University

Changing Places – Resilience in Children Who Move

Name of Child: _____

Date of Birth: _____

Address: _____

Date of most recent move: Month / Year _____

Age of Child at move: _____

Distance moved: less than 10 km   ❒

                        10 – 100 km   ❒

                        100 – 1000 km   ❒

                        greater than 1000 km   ❒

Did this include a change of state?   yes   ❒   no   ❒

                            or country?   yes   ❒   no   ❒

What was the main reason for the move?:

      Requested by company /job   ❐

      Forced to move (eg rental property sold/ reduced income) ❐

      Change in family composition (eg Divorce/marriage)   ❐

      Change to better school   ❐

      Upgrade to larger house or 'better' area   ❐

      Job change   ❐

Other (Please Specify)_____

Previous moves:

	Date./ Month / Year	Age of Child	School Grade
1			
2			
3			
4			
5			

Mother / Stepmother please circle the appropriate number regarding your attitude towards the most recent move.

	Not at all	A little	Some	A lot
I was happy to move	1	2	3	4
I was sad to move	1	2	3	4
I looked forward to the move	1	2	3	4
I was angry about the move	1	2	3	4
I felt the move was a positive one	1	2	3	4
Before the move, I spoke positively to the children about it	1	2	3	4

– Who was living at home during the most recent move? Please specify the exact relationships to the child ie; brother, sister, mother, father

_____

_____

Family's cultural background e.g., Aboriginal, Australian, Philipino, etc,

_____

_____

Do you:

Own your own house	❏
Pay a mortgage on your house	❏
Rent privately	❏
Rent from Department of Housing	❏
Other	❏

Is the main income earner;

Employed	❏
Self-employed	❏
Pension/benefits	❏
Retired	❏

Thankyou for filling out this questionnaire.

<u>APPENDIX C</u>: Letter to Principals

Psychology Clinic
School of Psychology
University of Sydney

Principal, XXXXX School

Dear

My name is Christine McLeod and I am currently enrolled in the Doctor of Clinical Psychology (DCP) degree at Sydney University. I am writing to request your support in a study I am conducting on children between the ages of 8 to 12 years of age).

Information from the last census indicates that over 40% of Australian children move at least once in any inter-census period suggesting great impacts on individuals, families, schools and the community. For the research component of my course I am studying the factors, such as resilience, which impact upon a child's adjustment after a residential relocation.

In order to do this I have some questionnaires for parents who volunteer, to complete about their children. There is also a teacher component which, knowing the enormous demands upon teachers' time, I have kept very brief (five minutes).

My research has received approval from the Ethics Committee from Sydney University and the NSW Department of Education. For more information I have enclosed the Teacher Information sheet that would accompany the study.

My request of your school is that you allow a form giving information about the study and requesting volunteers to be sent home with your primary age students and then to collect the names of those who have agreed to volunteer. I will supply the school with a reply paid envelope to send me the returned forms. I will then send and collect packages by mail to those who replied. If agreed, I will attend a staff meeting to discuss this research further and to answer any questions.

I hope you will be able to help me in this research.
Yours Sincerely
Christine McLeod

<u>APPENDIX D:</u> School Handout

_____

Have You Moved in the Last Year?

I am a psychologist and a doctoral student of clinical psychology at Sydney University and am doing my thesis on children who move. Census information tells us that over 50% of Australian children move house at least once during a census period and that for some, but not for all of these children, there will be significant negative effects for them socially, academically and behaviourally.

My study aims to find out what factors, such as resilience, affect children's ability to adjust to moving. In order to do this the Education Department has given me permission to approach your school to ask for volunteers form grades 3, 4, 5 and 6 who have moved house for any reason within the last year. Volunteers will be rated academically by their teachers and parents will be asked to fill out some questionnaires. Names and individual results will remain confidential although overall results will be available to the school on conclusion of the study. It is hoped that factors may be identified that will help children cope with moving.

In order for this to be a useful study as many volunteers as possible are needed. If you are willing to volunteer, please sign the bottom of this form and return it to your child/children's teacher and I will send out the various questionnaires. They will have reply paid envelopes. Your participation will be appreciated.

Christine McLeod

<u>Changing Places – Resilience in Children Who Move.</u>

I am interested in volunteering for this study. Please forward further information and the forms and questionnaires to me by mail.

My name is--

Address---

I am in ---------------class and my teacher's name is---

Parent's signature--

APPENDIX E: Statistical Analyses

List of analyses:

1. Distribution of CBCL Internalizing, Externalizing and Total Problem Scores.

2. Distribution of Syndrome Scale Scores in CBCL.

3. Multiple Regression Analyses for Dependent Variable CBCL Total-T without BERS-2.

4. Multiple Regression Analyses for Dependent Variable Academic Progress without BERS-2.

5. Logistic Regression Analysis for Dependent Variable Repeat Grade without BERS-2.

6. Multiple Regression Analysis for CBCL Total-T Including BERS-2 Strength Index.

7. Multiple Regression Analysis for Academic Progress Including BERS-2 Strength Index.

8. Logistic Regression for Dependent Variable Repeat Grade Including BERS-2 Strength Index.

9. Multiple Regression Analysis with CBCL Internalizing Including BERS-2 Strength Index.

10. Multiple Regression Analysis with CBCL Externalizing Including BERS-2 Strength Index.

11. Multiple Regression Analysis with CBCL Total-T and BERS-2 Subscales.

12. Correlations of BERS and CBCL Subscales.

13. Multiple Regression Analysis with Academic Progress and BERS-2 Subscales.

14. Logistic Regression for Dependent Variable Repeat Grade Including BERS-2 Subscales.

1. Distribution of CBCL Internalizing, Externalizing and Total Problem Scores

Scores	Total T	% Tot-T	Internalizing	% Internalizing	Externalizing	% Externalizing
65	3	3.9	2	2.6		
66			3	3.9		
67			1	1.3	1	1.3
68	1	1.3	1	1.3	3	3.9
69			1	1.3		
Total Border Line range	4	5.2	8	10.4	4	5.2
70			1	1.3		
71	2	2.6	1	1.3		
72			1	1.3		
73			0			
74			1	1.3	1	1.3
75			2	2.6		
77	1	1.3				
81	1	1.3				
Total Clinical range	4	5.2	6	7.8	1	1.3

Note: Borderline range <70; clinical range ≥ 70

2. Distribution of Syndrome Scale Scores in CBCL.

Syndromes	Anx/ Dep	Withdrawn /Dep	Somatic	Social	Thought	Attention	Rule- Breaking	Aggressive
65								
66	2	3	1			2	1	
67			2	2		1	1	
68	1		1					2
69				1		1		1
Total Border-line	3	3	4	3	0	4	2	3
70	1		2	1	1			
71	2			1	1	1	1	
72			2				1	
73	3				1			
74								
75				1	2			
76	1							
77								
78								1
79								
80		1						
81								
82			1					
83						1		
84					1			
87						1		
Total Clinical	7	1	5	3	6	3	2	1

3. Multiple Regression Analyses for Dependent Variable CBCL Total-T without BERS-2

Descriptive Statistics

	Mean	Std. Deviation	N
CBCL total T score	50.65	10.98	77
Gender	0.52	.50	77
Age in years	9.88	1.20	77
Socio-economic status	4.47	1.19	72
Months since last move	7.49	5.16	77
Distance moved	2.53	1.20	77
total attitude	20.31	3.52	75
Number of moves	2.92	1.67	77

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.27(a)	.07	-.03	11.14

a Predictors: (Constant), Number of moves, Age in years, Distance moved, total attitude, Months since last move, Socio-economic status, Gender
b Dependent Variable: CBCL total T score

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	612.94	7	87.56	.71	.67(a)
	Residual	7697.51	62	124.15		
	Total	8310.44	69			

a Predictors: (Constant), Number of moves, Age in years, Distance moved, total attitude, Months since last move, Socio-economic status, Gender
b Dependent Variable: CBCL total T score

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	55.44	13.66		4.06	.00
	Gender	1.20	2.91	.06	.41	.68
	Age in years	.81	1.17	.09	.69	.49
	Socio-economic status	-1.94	1.19	-.21	-1.63	.19
	Months since last move	.161	.28	.08	.58	.56
	Distance moved	1.04	1.21	.11	.87	.39
	total attitude	-.43	.39	-.14	-1.10	.28
	Number of moves	.02	.83	.004	.03	.98

Dependent Variable: CBCL total T score

Correlations. CBCL total T score

		CBCL total T score
Pearson Correlation	CBCL total T score	1.00
	Gender	.02
	Age in years	.05
	Socio-economic status	-.18
	Months since last move	.09
	Distance moved	.06
	total attitude	-.12
	Number of moves	-.04
Sig. (1-tailed)	CBCL total T score	.
	Gender	.43
	Age in years	.32
	Socio-economic status	.07
	Months since last move	.21
	Distance moved	.29
	total attitude	.15
	Number of moves	.37

4. Multiple Regression Analyses for Dependent Variable Academic Progress without BERS-2

Descriptive Statistics

	Mean	Std. Deviation	N
Academic progress	3.43	.96	63
Gender	.52	.50	77
Age in years	9.88	1.20	77
Socio-economic status	4.47	1.19	72
Months since last move	7.49	5.16	77
Distance moved	2.53	1.19	77
total attitude	20.31	3.52	75
Number of moves	2.92	1.67	77

Correlations

		Academic progress
Pearson Correlation	Academic progress	1.00
	Gender	.06
	Age in years	-.17
	Socio-economic status	-.06
	Months since last move	-.1
	Distance moved	-.03
	total attitude	.10
	Number of moves	.16
Sig. (1-tailed)	Academic progress	.
	Gender	.32
	Age in years	.09
	Socio-economic status	.31
	Months since last move	.12
	Distance moved	.39
	total attitude	.22
	Number of moves	.11

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.29(a)	.09	-.03	.98

a Predictors: (Constant), Number of moves, Age in years, Distance moved, total attitude, Months since last move, Socio-economic status, Gender
b Dependent Variable: Academic progress

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	4.98	7	.71	.75	.64(a)
1	Residual	50.6	53	.96		
	Total	55.58	60			

a Predictors: (Constant), Number of moves, Age in years, Distance moved, total attitude, Months since last move, Socio-economic status, Gender
b Dependent Variable: Academic progress

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.06	1.29		3.16	.003
	Gender	.09	.27	.05	.36	.72
	Age in years	-.14	.11	-.17	-1.26	.21
	Socio-economic status	-.06	.11	-.07	-.51	.61
	Months since last move	-.02	.03	-.08	-.59	.55
	Distance moved	.01	.11	.01	.05	.96
	total attitude	.04	.04	.14	1.05	.29
	Number of moves	.09	.08	.16	1.18	.24

a Dependent Variable: Academic progress

5. Logistic Regression Analysis for Dependent Variable Repeat Grade without BERS-2

Model Summary of dependent variable 'repeat grade' without resilience factor.

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	55.29(a)	.08	.13

a Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Omnibus Tests of Model Coefficients for dependent variable 'repeat grade'

		Chi-square	df	Sig.
Step 1	Step	5.59	7	.59
	Block	5.59	7	.59
	Model	5.59	7	.59

Case Processing Summary

Unweighted Cases(a)		N	Percent
Selected Cases	Included in Analysis	70	90.9
	Missing Cases	7	9.1
	Total	77	100.0
Unselected Cases		0	.0
Total		77	100.0

a If weight is in effect, see classification table for the total number of cases.

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1(a)	gender(1)	1.06	.85	1.55	1	.21	2.89
	agey	.56	.32	3.10	1	.08	1.75
	SES	-.03	.33	.01	1	.93	.97
	recntmv	-.02	.07	.06	1	.80	.98
	distance	.33	.34	.97	1	.33	1.39
	Tattitude	.01	.09	.01	1	.92	1.01
	numbermoves	-.21	.23	.84	1	.36	.81
	Constant	-8.16	3.86	4.47	1	.04	.00

a Variable(s) entered on step 1: gender, age in years, SES, months since last move, distance, total attitude, number of moves.

Variables in the Equation (cont'd)

		95.0% C.I.for EXP(B)	
		Lower	Upper
Step 1(a)	gender(1)	.55	15.29
	agey	.94	3.27
	SES	.51	1.84
	recntmv	.86	1.12
	distance	.72	2.72
	Tattitude	.84	1.22
	numbermoves	.51	1.27
	Constant		

a Variable(s) entered on step 1: gender, age in years, SES, months since last move, distance, total attitude, number of moves.

6. Multiple Regression Analysis for CBCL Total-T Including BERS-2 Strength Index

Descriptive Statistics

	Mean	Std. Deviation	N
CBCL total T score	50.65	10.98	77
Gender	.52	.50	77
Age in years	9.88	1.20	77
Socio-economic status	4.47	1.19	72
Months since last move	7.49	5.16	77
Distance moved	2.53	1.19	77
total attitude	20.31	3.52	75
Number of moves	2.92	1.67	77
BERS-2 scaled score strength index	104.12	15.36	77

Correlations

		CBCL total T score	BERS-2 scaled score strength index
Pearson Correlation	CBCL total T score	1.00	-.54
	Gender	.02	.04
	Age in years	.05	.00
	Socio-economic status	-.18	.07
	Months since last move	.09	-.13
	Distance moved	.06	.09
	total attitude	-.12	.29
	Number of moves	-.04	-.09
	BERS-2 scaled score strength index	-.54	1.00
Sig. (1-tailed)	CBCL total T score	.	.00
	Gender	.43	.36
	Age in years	.32	.50
	Socio-economic status	.07	.28
	Months since last move	.21	.14
	Distance moved	.29	.23
	total attitude	.15	.01
	Number of moves	.37	.23
	BERS-2 scaled score strength index	.00	.
			77

Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.59(a)	.35	.26	9.43

a Predictors: (Constant), BERS-2 scaled score strength index, Age in years, Gender, Number of moves, Socio-economic status, Months since last move, total attitude, Distance moved
b Dependent Variable: CBCL total T score

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2883.73	8	360.47	4.05	.001(a)
	Residual	5426.71	61	88.96		
	Total	8310.44	69			

a Predictors: (Constant), BERS-2 scaled score strength index, Age in years, Gender, Number of moves, Socio-economic status, Months since last move, total attitude, Distance moved
b Dependent Variable: CBCL total T score

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	87.12	13.16		6.62	.00
	Gender	2.36	2.47	.11	.96	.34
	Age in years	.62	.99	.07	.63	.53
	Socio-economic status	-1.53	1.01	-.17	-1.52	.13
	Months since last move	.002	.24	.001	.01	.99
	Distance moved	1.56	1.03	.17	1.52	.14
	total attitude	.09	.35	.03	.28	.78
	Number of moves	-.39	.71	-.06	-.55	.58
	BERS-2 scaled score strength index	-.40	.08	-.56	-5.05	.00

a Dependent Variable: CBCL total T score

7. Multiple Regression Analysis for Academic Progress Including BERS-2 Strength Index

Descriptive Statistics

	Mean	Std. Deviation	N
Academic progress	3.43	.96	63
Gender	.52	.50	77
Age in years	9.88	1.20	77
Socio-economic status	4.47	1.19	72
Months since last move	7.49	5.16	77
Distance moved	2.53	1.19	77
total attitude	20.31	3.52	75
Number of moves	2.92	1.67	77
BERS-2 scaled score strength index	104.12	15.36	77

Correlations

		Academic progress	BERS-2 scaled score strength index
Pearson Correlation	Academic progress	1.00	.28
	Gender	.06	.04
	Age in years	-.17	.00
	Socio-economic status	-.06	.07
	Months since last move	-.15	-.13
	Distance moved	-.03	.09
	total attitude	.10	.29
	Number of moves	.16	-.09
	BERS-2 scaled score strength index	.28	1.00
Sig. (1-tailed)	Academic progress	.	.01
	Gender	.32	.36
	Age in years	.09	.50
	Socio-economic status	.31	.28
	Months since last move	.12	.14
	Distance moved	.39	.23
	total attitude	.22	.01
	Number of moves	.11	.23
	BERS-2 scaled score strength index	.01	.
			77

Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.39(a)	.16	.03	.95

a Predictors: (Constant), BERS-2 scaled score strength index, Age in years, Gender, Number of moves, Socio-economic status, Months since last move, total attitude, Distance moved
b Dependent Variable: Academic progress

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.65	8	1.08	1.19	.32(a)
	Residual	46.93	52	.90		
	Total	55.58	60			

a Predictors: (Constant), BERS-2 scaled score strength index, Age in years, Gender, Number of moves, Socio-economic status, Months since last move, total attitude, Distance moved
b Dependent Variable: Academic progress

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.69	1.42		1.89	.06
	Gender	.05	.27	.03	.19	.85
	Age in years	-.13	.11	-.16	-1.22	.23
	Socio-economic status	-.07	.11	-.09	-.68	.49
	Months since last move	-.01	.03	-.05	-.34	.74
	Distance moved	-.02	.11	-.02	-.15	.88
	total attitude	.02	.04	.6	.42	.67
	Number of moves	.11	.08	.19	1.44	.16
	BERS-2 scaled score strength index	.02	.01	.28	2.02	.05

a Dependent Variable: Academic progress

8. Logistic Regression for Dependent Variable Repeat Grade Including BERS-2 Strength Index

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	6.61	8	.58
	Block	6.61	8	.58
	Model	6.61	8	.58

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	54.28(a)	.09	.16

a Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Variables in the Equation

		B	S.E.	Wald	df	Sig.
Step 1(a)	Gender(1)	1.24	.89	1.94	1	.16
	age	.55	.32	2.97	1	.09
	SES	-.004	.33	.00	1	.99
	BERS	-.03	.03	.98	1	.32
	Recent move	-.02	.07	.08	1	.78
	Distance	.41	.36	1.25	1	.26
	Total attitude	.04	.10	.19	1	.66
	Number moves	-.25	.24	1.07	1	.30
	Constant	-6.30	4.23	2.23	1	.14

a Variable(s) entered on step 1: gender, age, SES, BERS-2, months since recent move, distance, total attitude, number of moves.

Variables in the Equation (cont'd)

		Exp(B)	95.0% C.I.for EXP(B)	
			Lower	Upper
Step 1(a)	gender(1)	3.46	.60	19.89
	age	1.73	.93	3.23
	SES	.99	.52	1.91
	BERS	.97	.92	1.03
	Recent move	.98	.86	1.12
	distance	1.50	.74	3.06
	Total attitude	1.05	.86	1.27
	Number moves	.78	.49	1.25
	Constant	.002		

a Variable(s) entered on step 1: gender, age, SES, BERS, months since recent move, distance, total attitude, number of moves.

9. Multiple Regression Analysis with CBCL Internalizing Including BERS-2 Strength Index

Descriptive Statistics

	Mean	Std. Deviation	N
CBCL internalizing T score	51.69	11.24	77
Gender	.52	.50	77
Age in years	9.88	1.20	77
Socio-economic status	4.47	1.9	72
Months since last move	7.49	5.16	77
Distance moved	2.53	1.19	77
total attitude	20.301	3.52	75
Number of moves	2.92	1.67	77
BERS-2 scaled score strength index	104.12	15.36	77

Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.435(a)	.19	.08	10.76

a Predictors: (Constant), BERS-2 scaled score strength index, Age in years, Gender, Number of moves, Socio-economic status, Months since last move, total attitude, Distance moved
b Dependent Variable: CBCL internalizing T score

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1648.07	8	206.01	1.78	.1(a)
	Residual	7060.93	61	115.75		
	Total	8708.99	69			

a Predictors: (Constant), BERS-2 scaled score strength index, Age in years, Gender, Number of moves, Socio-economic status, Months since last move, total attitude, Distance moved
b Dependent Variable: CBCL internalizing T score

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	81.07	15.01		5.40	.00
	Gender	2.85	2.82	.13	1.01	.32
	Age in years	.06	1.13	.01	.05	.96
	Socio-economic status	-.48	1.15	-.05	-.42	.68
	Months since last move	.13	.27	.06	.47	.64
	Distance moved	1.07	1.17	.11	.92	.36
	total attitude	.01	.39	.002	.02	.99
	Number of moves	-.84	.81	-.12	-1.03	.31
	BERS-2 scaled score strength index	-.29	.09	-.40	-3.25	.002

a Dependent Variable: CBCL internalizing T score

10. Multiple Regression Analysis with CBCL Externalizing Including BERS-2 Strength Index

Descriptive Statistics

	Mean	Std. Deviation	N
CBCL externalizing T score	50.29	9.99	77
Gender	.52	.50	77
Age in years	9.88	1.20	77
Socio-economic status	4.47	1.19	72
Months since last move	7.49	5.16	77
Distance moved	2.53	1.19	77
total attitude	20.31	3.52	75
Number of moves	2.92	1.67	77
BERS-2 scaled score strength index	104.12	15.36	77

Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.61(a)	.37	.29	8.43

a Predictors: (Constant), BERS-2 scaled score strength index, Age in years, Gender, Number of moves, Socio-economic status, Months since last move, total attitude, Distance moved
b Dependent Variable: CBCL externalizing T score

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2556.40	8	319.55	4.50	.00(a)
	Residual	4330.63	61	70.99		
	Total	6887.03	69			

a Predictors: (Constant), BERS-2 scaled score strength index, Age in years, Gender, Number of moves, Socio-economic status, Months since last move, total attitude, Distance moved
b Dependent Variable: CBCL externalizing T score

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	90.88	11.75		7.73	.00
	Gender	2.73	2.21	.14	1.24	.22
	Age in years	-.04	.89	-.004	-.04	.97
	Socio-economic status	-2.13	.89	-.25	-2.37	.02
	Months since last move	.02	.21	.01	.08	.93
	Distance moved	.59	.92	.07	.65	.52
	Total attitude	.15	.31	.05	.49	.62
	Number of moves	.15	.64	.03	.24	.81
	BERS-2 scaled score strength index	-.36	.07	-.55	-5.06	.00

a Dependent Variable: CBCL externalizing T score

11. Multiple Regression Analysis with CBCL Total-T and BERS-2 Subscales

Descriptive Statistics

	Mean	Std. Deviation	N
CBCL total T score	50.65	10.975	77
Interpersonal strength	10.49	2.718	77
Family involvement	10.86	2.732	77
Intrapersonal strength	10.79	2.711	77
School functioning	9.86	2.941	77
Affective strength	10.97	2.476	77

Correlations

		CBCL total T score
Pearson Correlation	CBCL total T score	1.00
	Interpersonal strength	-.57
	Family involvement	-.39
	Intrapersonal strength	-.36
	School functioning	-.53
	Affective strength	-.35
Sig. (1-tailed)	CBCL total T score	.
	Interpersonal strength	.00
	Family involvement	.00
	Intrapersonal strength	.001
	School functioning	.00
	Affective strength	.001

Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.63(a)	.40	.36	8.79

a Predictors: (Constant), Affective strength, School functioning, Family involvement, Intrapersonal strength, Interpersonal strength
b Dependent Variable: CBCL total T score

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3671.72	5	734.34	9.51	.00(a)
	Residual	5481.82	71	77.21		
	Total	9153.53	76			

a Predictors: (Constant), Affective strength, School functioning, Family involvement, Intrapersonal strength, Interpersonal strength
b Dependent Variable: CBCL total T score

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	75.99	5.15		14.77	.00
	Interpersonal strength	-2.12	.65	-.53	-3.26	.002
	Family involvement	.46	.57	.12	.82	.42
	Intrapersonal strength	.18	.52	.05	.35	.73
	School functioning	-1.28	.44	-.34	-2.89	.01
	Affective strength	.24	.58	.05	.42	.69

a Dependent Variable: CBCL total T score

12. Correlations of BERS-2 and CBCL Subscales

		Interpersonal strength	Family involvement	Intrapersonal strength	School functioning	Affective strength
CBCL internalizing T score	Pearson Correlation	-.35**	-.26*	-.32**	-.41**	-.26*
	Sig. (2-tailed)	.01	.02	.01	.00	.02
CBCL externalizing T score	Pearson Correlation	-.66**	-.53**	-.28*	-.46**	-.36**
	Sig. (2-tailed)	.00	.00	.01	.00	.00
CBCL - anxious/depressed	Pearson Correlation	-.29*	-.24*	-.28*	-.29**	-.19
	Sig. (2-tailed)	.01	.04	.01	.01	.10
CBCL- withdrawn/depressed	Pearson Correlation	-.29**	-.31**	-.47**	-.40**	-.44**
	Sig. (2-tailed)	.01	.01	.00	.00	.00
CBCL - somatic complaints	Pearson Correlation	-.23*	-.11	-.23*	-.34**	-.07
	Sig. (2-tailed)	.05	.34	.05	.00	.57
CBCL - social problems	Pearson Correlation	-.43**	-.29*	-.38**	-.43**	-.26*
	Sig. (2-tailed)	.00	.01	.00	.00	.03
CBCL - thought problems	Pearson Correlation	-.38**	-.14	-.28*	-.20	-.24*
	Sig. (2-tailed)	.00	.24	.02	.08	.04
CBCL - attention problems	Pearson Correlation	-.36**	-.32**	-.37**	-.52**	-.26*
	Sig. (2-tailed)	.00	.01	.00	.00	.03
CBCL - rule-breaking behaviour	Pearson Correlation	-.58**	-.42**	-.23*	-.372**	-.38**
	Sig. (2-tailed)	.00	.000	.04	.001	.00
CBCL - aggressive behaviour	Pearson Correlation	-.64**	-.55**	-.36**	-.453**	-.34**
	Sig. (2-tailed)	.00	.00	.00	.00	.00

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed).
Note: N=77

13. Multiple Regression Analysis with Academic Progress and BERS-2 Subscales.

Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.44(a)	.19	.12	.90

a Predictors: (Constant), Affective strength, School functioning, Family involvement, Intrapersonal strength, Interpersonal strength
b Dependent Variable: Academic progress

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.18	5	2.24	2.76	.03(a)
	Residual	46.25	57	.81		
	Total	57.43	62			

a Predictors: (Constant), Affective strength, School functioning, Family involvement, Intrapersonal strength, Interpersonal strength
b Dependent Variable: Academic progress

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.29	.58		3.93	.00
	Interpersonal strength	-.04	.07	-.13	-.59	.55
	Family involvement	-.05	.06	-.14	-.76	.45
	Intrapersonal strength	.04	.06	.12	.71	.48
	School functioning	.15	.05	.46	3.00	.01
	Affective strength	.02	.07	.04	.26	.79

a Dependent Variable: Academic progress

14. Logistic Regression for Dependent Variable Repeat Grade Including BERS-2 Subscales

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	10.37	12	.58
	Block	10.37	12	.58
	Model	10.37	12	.58

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	50.52(a)	.14	.24

a Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

Variables in the Equation

							95.0% C.I.for EXP(B)	
	B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
gender(1)	1.44	1.01	2.03	1	.15	4.23	.58	30.83
age	.54	.37	2.13	1	.15	1.71	.832	3.51
SES	.06	.37	.03	1	.87	1.06	.51	2.18
Recent move	.01	.08	.03	1	.87	1.01	.87	1.18
distance	.37	.39	.88	1	.35	1.44	.67	3.10
Total attitude	.05	.11	.17	1	.68	1.05	.84	1.29
Number moves	-.31	.26	1.44	1	.23	.74	.45	1.22
BERSa	.17	.25	.45	1	.50	1.19	.72	1.95
BERSb	-.12	.19	.44	1	.51	.88	.61	1.28
BERSc	.29	.21	1.89	1	.17	1.33	.88	2.01
BERSd	-.22	.19	1.38	1	.24	.80	.55	1.16
BERSe	-.33	.25	1.78	1	.18	.72	.44	1.17
Constant	-7.25	4.57	2.52	1	.11	.001		

a Variable(s) entered on step 1: gender, age, SES, months since recent move, distance, Total attitude, number of moves, BERSa, BERSb, BERSc, BERSd, BERSe.