Risk factors affecting psychological adjustment following transition to secondary school

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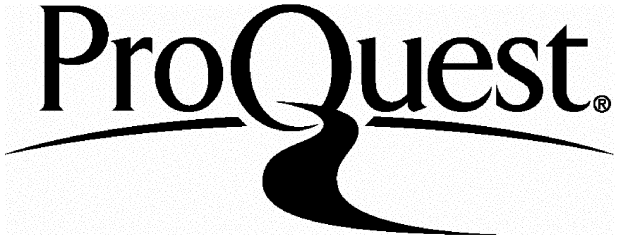

ABSTRACT

This study examined the impact of secondary school transition on children's psychological functioning. Research has shown that the transition from primary to secondary school is likely to be a stressful and demanding time for children, but little yet is known about the psychological characteristics that affect this adjustment process. Researchers have attempted to identify risk factors that may predict which children are more vulnerable to problems during transition and which make the transition successfully. This study added to the research literature by looking at multiple risk factors affecting adjustment to secondary school, in order to begin to build up a profile of the children for whom transition may be difficult.

175 children were assessed in their first term of secondary school as part of a longitudinal follow up of a large cohort of children that were first assessed in year 6 of primary school. Contrary to hypotheses, the findings showed no evidence of an overall increase in psychological problems as a result of the transition. However, a subgroup of children showed negative changes in some aspects of their functioning post-transition, suggesting a greater vulnerability to stressors. Several risk factors were found to predict psychological distress post-transition after controlling for pre-transition levels of symptomatology. The results are discussed in relation to the transition literature.

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DEDICATION

I dedicate my thesis to the memory of my brother, James

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CHAPTER 1

INTRODUCTION

1.1 Background

The transition to secondary school is a major event for a child, involving the move from a small school, which is often more personalised and task focused, to a larger, more achievement orientated environment. The child has to adapt to new teachers and integrate with new peer groups. Furthermore, this transition occurs during early adolescence, which in itself entails rapid biological and interpersonal changes. The transition from primary to secondary school is therefore likely to be a stressful and demanding time for the child (Chung, Elias & Schneider, 1998; Seidman, Allen, Aber, Mitchell & Feinman, 1994).

Researchers have attempted to examine the impact of secondary school transition on children's psychological adjustment and to identify factors that may predict which children are more vulnerable to problems during transition and which make the transition successfully. Empirical data has demonstrated that while some children experience no or mild adjustment difficulties following the transition (Hirsch & Rapkin, 1987; Nottelman, 1987; Roeser, Eccles & Freedman-Doan, 1999; Taylor, 2000) others undergo severe difficulties (Chung et al., 1998; Seidman et al., 1994; Simmons & Blyth, 1987; Wigfield, Eccles, MacIver, Reuman, & Midgley, 1991).

According to Ingraham (1985) children who do not make effective transitions may be less successful in school and may be vulnerable to mental health and adjustment problems. This would support the need for greater emphasis on transition research to further our understanding of the different developmental patterns of adaptations

associated with transitions and help to identify children at risk, in order to provide appropriate intervention and prevention strategies to ease children's transition from primary to secondary school.

This chapter begins with a brief introduction to the transitional life events literature, and an exploration of what the secondary school transition entails for children. Since the transition to secondary school occurs during early adolescence, this critical period of development is then briefly explored. The literature examining both the positive and negative impact of school transitions is reviewed before looking at research aiming to identify specific predictors. The focus then moves on to childhood anxiety, which has largely been neglected in the transition literature. The chapter ends with the current study's rationale and research hypotheses.

1.2 Transitional life events

Transitional life events such as starting a new job or entering a new school are unique in their nature and processes. Such events involve substantial changes in the new environment or circumstances in which individuals find themselves. According to Bloom (1978), changes associated with a transition can often be stressful and may ultimately lead to negative outcomes. Such stress is produced by the changes that an individual is required to make in their roles and behaviour in order to adapt to the new environment.

An important factor in this adjustment, according to Bloom (1978), is the characteristics of the setting and the extent to which they differ from that of the pre-transition. From this perspective, Blyth, Simmons & Carlton-Ford (1983) suggest

that the more discontinuous or different two school environments, the greater the psychological, academic, and social disruption there will be.

During the transition from primary to secondary school (or from elementary to middle or junior high school as it is referred to in America, where the majority of transition research has been conducted), children have to face and adjust to various marked and discontinuous changes. For example, children often lose contact with peers who had previously been their closest friends. The new setting challenges them to establish a supportive peer group among a larger and more diverse group of children than at primary school (Reyes & Hedeker, 1993). In addition, the structure of the school day changes from having most lessons in one classroom with one teacher to different classes and teachers for each subject (Eccles, Midgley, Wigfield et al., 1993; Roderick, 1995).

In this new context, children must gain the acceptance of new teachers, and learn to adapt to their various instructional styles. They must also conform to a different set of rules and expectations in each of their classes. Furthermore, the increased number of children at secondary school may inhibit the development of close relationships with teachers (Eccles et al., 1993).

School procedures and policy changes also take place during this transition. Among the changes faced by children are the use of higher marking standards, which may create a competitive atmosphere and can exert undue pressure on children (Eccles et al., 1993; Wigfield, Eccles & Pintrich, 1994). There is also a tendency for secondary schools to have stricter policies in terms of discipline and control, which may clash

with adolescents' need for autonomy and independence (Eccles et al., 1993; Eccles & Midgley 1990).

Finally children making the transition from primary to secondary school experience a change in status, moving from the top status position in one school to the bottom or lowest position in the second school. This shift in status may, according to Blyth et al. (1983), cause a variety of disruptions or difficulties for children. Other documented demands associated with this transition include an increase in daily hassles, a decline in social support and increases in victimisation compared to primary school (Blyth, Simmons & Bush, 1978; Seidman et al., 1994).

Another factor influencing how an individual adapts to these changes is the interaction between the nature of the new environment and the characteristics that individuals bring to the transition, including personality, resources, skills and perception of changes (Kelly, Ryan, Altman & Stelzner, 1993; Levine & Perkins, 1987). From this perspective, any change can be considered a stressful event in that it taps the individual's resources for adaptation. Differences in how individuals respond to stressful life events, such as school transitions, are assumed to result from the balance of protective and risk factors. Protective factors are thought to buffer against adverse effects, whereas risk factors work to exacerbate such effects (Kelly et al., 1993).

Based on the transitional life events literature reviewed above, one would expect the transition into a secondary school to be at least a short-term disruption, either

because of the amount of discontinuity in the two school environments or because the transition taps into a child's resources for adaptation.

1.3 Early adolescence

Early adolescence is a time of key changes in physiology, physical appearance, cognitive, emotional and personality function. It is also a period of social and environmental change and as such is clearly a critical period of development. As Hamburg (1974) argued "early adolescence is intrinsically a period of great stress, impoverished coping skills, and consequent high vulnerability" (Hamburg, 1974, p. 101).

There have been many studies investigating the course of emotional and behavioural problems in childhood and early adolescence that have highlighted the chronic nature of both internalising and externalising problems (Farington, 1995; Ferdinand & Verhulst, 1995; Zocolillo, Pickles, Quinton & Rutter, 1992). Lewinsohn, Hops, Roberts, Seeley and Andrews (1993) for example, noted that the presence of depressive symptoms in adolescence is often the precursor of clinical depression in later adolescence and/or adulthood. According to a number of researchers and clinicians (Keller, Lavori, Wunder, Beardslee, Schwartz & Roth, 1992; Winnet, Riley, King & Altham, 1989), part of the reason for the chronic prognosis is that a large percentage of individuals suffering from problems never access mental health services and therefore never receive treatment.

The transition into secondary school may well mark the social beginning of adolescence (Elder, 1968). Blyth et al. (1978) maintain that it is more appropriate to

use a social rather than physiological criterion for initially defining when adolescence begins, because of the huge variation in rates of physical maturation. However, they stress that the use of a social criterion, such as the transition into secondary school, should not minimise the importance of physiological development and the ways in which it may interact with the social and psychological changes.

There is increasing evidence for the clinical significance of these co-occurring personal and environmental factors. Secondary school age has been documented as a period during which rates for juvenile crime, drug abuse, pregnancy and suicide increase (Lipsitz, 1980). The US seventh grade (which is equivalent to year 6 in the UK) has also been found to be a pivotal time for referrals to community mental health facilities (Lipsitz, 1980; Rutter, 1980). In a survey of school administrators, Elias, Gara and Ubriaco (1985) found an estimated 8.4% of referrals to social services were attributed to secondary school transition and 14.7% of informal contacts with special services were also transition related.

Early adolescence is a transitional developmental period in which children tend to be in conflict with adult figures over issues of dependency, conformity and independence and so distance themselves from their parents while simultaneously increasing their time with peers (Fuligni & Eccles, 1993). The 'developmental mismatch hypothesis' posed by Eccles and Midgley (1989) proposes that developmentally, early adolescence is an inopportune time to leave the familiarity of primary school friends for a new group of peers, and to change from being taught by one supportive teacher who knows the child's academic and social strengths, to brief contact with numerous teachers. They argue that transitions into large, anonymous

settings make the establishment of supportive relationships increasingly unlikely, which makes it difficult for them to experience being valued at a time when they are trying to develop an identity beyond their family.

Despite the belief in great psychological turmoil during early adolescence, there is, however, evidence in large-scale longitudinal research of a general rise in self-esteem and self-image after early adolescence, even across the transition to junior high school (McCarthy & Hoge, 1982; O'Malley & Bachman, 1983; Simmons, Carlton-Ford & Blyth, 1987). As Nottelmann (1987) notes, there seems to be an emerging consensus that adolescent turmoil may be the exception rather than the rule.

1.4 The impact of secondary school transition on children's psychological adjustment

The next section reviews the literature examining first the negative impact and then the positive impact of secondary school transition.

1.4.1 Studies reporting negative impact of transition

There have been numerous studies that have reported on the stressful nature of the transition to secondary school and its negative impact on adjustment, including self-esteem, scholastic achievement and psychosocial symptoms.

Blyth et al. (1978), Seidman et al. (1994) and Wigfield et al. (1991) all carried out studies which involved the assessment of children before and after their move from

primary to secondary school. They found an initial decrease in children's self-esteem following the transition, which was maintained at a one-year follow-up.

Simmons, Rosenberg and Rosenberg (1973) provided early evidence for difficulties in terms of self-esteem at the time of junior high transition. Their first study, conducted in Baltimore in 1968, involved a cross-sectional sample of 1,918 children from grades 3 through to 12. They found that grade 7-9 students (i.e. students making the junior high school transition) scored lower on a number of self-image variables compared with children in other grades.

Blyth et al. (1978) found the transition from primary to secondary school at age eleven, hinders the normal growth in self-esteem which is otherwise seen at this age. Similarly, Eccles and her colleagues (1993) found that some children experience steep declines in their self-esteem after the junior high transition, declines that appear to mark long-term trajectories of academic and emotional functioning through high school. Blyth et al. (1983) examined the effect of transition on self-esteem and found that over the transition period girls displayed a greater decline than boys in self-esteem. They concluded that the transition places girls at relative risk in terms of their self-esteem. It is debatable however, whether the conclusions drawn from the above studies are justified without having a comparison group of same aged children who did not experience the transition. The differences may well just be a result of age effects and so limited conclusions can be drawn.

Transition researchers have documented the advantage of fewer transitions and have noted the superior outcomes of students who make a single transition. In a

longitudinal study which did use a comparison group, Simmons, Blyth, Van Cleave and Bush (1979) compared two groups of children, children who moved out of kindergarten schools into junior high school in grade 7 and children who remained in kindergarten until grade 8. The former showed losses in self-esteem and were participating in less extracurricular activities than they had previously, compared to the cohort who remained in the smaller, more intimate grade eight schools, thus illustrating the importance of the school environment in children's psychological functioning. Furthermore, these children did not recover from this loss by grade 10, despite the fact that both groups had made the transition into senior high school by then (Blyth et al., 1983). Whilst it appears that transition may therefore hinder a normal growth in self-esteem, these results may be due to initial differences between the two samples in school environment and pupil catchments. Nonetheless, whether one or multiple transitions are made, all groups experiencing a transition have been found to suffer declines in terms of their previous levels of self-esteem (Blyth et al., 1983; Seidman, Aber, Allen & French, 1996).

Researchers have also investigated academic performance during school transitions (Lord, Eccles & McCarthy 1994; Simmons & Blyth, 1987; Wigfield & Eccles, 1994). For example, Roderick (1995) found marked declines in some children's academic grades during the junior high school transition. Other researchers agree that academic performance tends to decrease after the transition to middle school (Eccles et al., 1993; Wigfield et al., 1991). Blyth et al. (1983) also examined the effect of transition on academic ability (grade point average) and found that over the transition period children displayed a decline in academic achievement. They concluded that the transition places both boys and girls at risk in terms of their

academic ability. However, in response to studies showing a decrease in academic ability post-transition, Nottelman (1987) suggests that the drop in grade point average in early adolescence following transitions to junior high school, reflects in part the more severe grading practices of secondary school teachers.

Following a school transfer, some children show a loss of interest and motivation in school, as well as a decrease in academic self-confidence and performance (Alvidrez & Weinstein, 1993; Reyes & Hedeker, 1993). Eccles, Midgley and Adler (1984) reviewed evidence showing that many early adolescents become more negative about school and themselves following the transition to junior high school.

In terms of psychosocial symptoms, Hirsch and Rapkin (1987) found increased depressive symptomatology in girls making the transition as compared to boys. Chung et al. (1998) also revealed significant changes in adolescents' adjustment following middle school transition. Both boys and girls showed significant increases in psychological distress across the transition and one year after. They also found that children showing high levels of psychological distress prior to the transition were at a greater risk than their peers for a continued stressful school transition.

In summary, the studies reviewed above have provided convincing evidence for the potential stressfulness of the middle school transition. Studies have suggested that, following middle or junior high transitions, some adolescents develop significant adjustment problems including lowered self-esteem, declined academic achievement and motivation and increased psychological distress (Blyth et al., 1983; Chung et al., 1998; Hirsch & Rapkin, 1987; Seidman et al., 1994; Simmons & Blyth, 1987; Wigfield et al., 1991).

Based on the above literature, a number of factors have been identified as potential risk factors for poor adjustment to the transition, including: being female, having high levels of psychological distress prior to the transition and the age at which the transition takes place, with older children fairing better.

According to Brown, Harris, and Bifulco (1986) and Maughan and Rutter (1986), school transitions appear to be an important risk factor that may determine the direction of a child's future academic success. Furthermore, according to Elias et al. (1985) the negative impact of the middle school transition is often sufficient to elicit referrals to specialist services for some adolescents. This suggests that educational and psychological interventions designed to ease these early transitions could make an enormous difference in children's future development.

1.4.2 Studies reporting stability in difficulties or positive outcomes of transition

In contrast to the studies reported above, others have found no change in children's self-esteem and psychological functioning following secondary school transition.

Roeser et al. (1999) reported stability in self-esteem from elementary to high school, a period incorporating the transition to secondary school. They concluded that there was long-term continuity in both poor and good adjustment in grades, self-esteem and school motivation. However, this study only took assessments in elementary and high schools and therefore does not provide a direct test of the impact of secondary school transition. In a study that did specifically look at the impact of secondary school transition, Hirsch and Rapkin (1987) found that children's self-esteem remained stable post-transition, then increased during the first year of secondary

school. Another longitudinal study conducted by Fenzel & Blyth (1986) also failed to replicate the decrement in self-esteem reported by many researchers. In a small study of 14 pupils, half of which had specific learning disabilities, Forgan and Vaughn (2000) also found stability in self-esteem during the transition period.

Proctor and Choi (1994) found that self-esteem actually increased across the transition to junior high school. They suggested that the impact of transition may be moderated by a number of factors within the educational and family environments. For example, factors thought to assist children in making the transition include whether they have a supportive family environment, whether peers make the transition to the same school and whether the secondary school provides orientation and support for new children.

Nottelman (1987) compared transition and non-transition groups and found no negative impact of moving schools, in fact she also found positive changes in children's self-esteem and social and cognitive competence. Post-study interview data from a random sample of 20 boys and 20 girls also suggested that school transition was a good experience for many children.

In terms of psychosocial symptoms, in a study examining the impact of schemas on reactions to secondary school transition, Taylor (2000) found no evidence of children's emotional and behavioural difficulties increasing after transition to secondary school. Wallis & Barrett (1998) examined the impact of transition from elementary to high school on the psychological adjustment of 110 children in Brisbane, Australia. They screened for emotional and behavioural problems in grade

7 and again in grade 8 and found that, in general, the transition to high school did not coincide with a marked decrease in psychological adjustment for the majority of children. Despite this, they did find that a substantial number of children (11% of boys and 10 % of girls) were found to be suffering from psychological disorders and emotional and behavioural problems, which under normal circumstances may not have been identified. Due to limitations in the design of the study, they were not able to identify factors, which differentiated between individuals who experienced a decrease in adjustment and those who did not.

In summary, there is evidence in some large-scale longitudinal research of stability in difficulties or a general rise in psychological functioning during the transition to junior high (Hirsch & Rapkin 1987; Nottelmann, 1987; Roeser et al., 1999; Taylor, 2000; Wallis & Barrett, 1998).

Whilst Wallis and Barrett's study (1998) did not reveal the transition to be a major stressor associated with decreased psychological adjustment for the population as a whole, the data did highlight that a substantial number of young adolescents may be experiencing psychological disorders which under normal circumstances may not be identified. The authors stressed the importance of continued development of assessment and intervention programmes for adolescents and that the transition to high school may represent an appropriate access point to target this population.

1.4.3 Overall summary of the impact of secondary school transition research

Studies have shown that secondary school transition is a significant, sometimes stressful, life event for early adolescents, often associated with adjustment problems

including declined self-esteem, academic ability and increased psychological distress (Blyth et al., 1983; Simmons & Blyth, 1987; Wigfield et al., 1991). Yet difficulties with this transition are by no means universal, as other studies have found that in general, the transition to secondary school did not coincide with a marked decrease in psychological adjustment (Hirsch & Rapkin 1987; Nottelmann, 1987; Taylor, 2000; Wallis & Barrett, 1998)

Such contradictory findings have been explained in part by the different measures used in the studies. According to Nottelman (1987) some scales are more sensitive to change than others. The inconsistencies among studies have also been explained by the different populations studied. For example, there have been less transition effects reported in studies assessing children from suburban schools who are predominantly white and middle class, than studies of children from different ethnic backgrounds, who attend inner city schools (Chung et al., 1998; Nottelman, 1987; Seidman et al., 1994).

Studies of the transition period also vary in methodology, most are cross-sectional rather than longitudinal, with only a few using random sampling. Many studies are based on small samples and so caution must be exercised when interpreting the results as findings often can not be generalised to wider populations. The year of change into secondary school is not always made clear, which makes comparisons across studies difficult. Finally the community context of the school varies considerably between schools. The transition into a large, impersonal schools may be more difficult in a large urban setting than in a suburban or smaller community, which again makes comparisons difficult across studies.

Despite the sometimes contradictory findings regarding the outcome of secondary school transition, there is general agreement that the transition is a demanding life event, that some children will find difficult. Although some of these differences in findings undoubtedly reflect variations across studies in populations, school environments and varying methodologies, it is likely that individual differences in responses also play a role. There appears to be large individual differences among young adolescents in their response to the transition, some showing significant negative changes, while others manifest no negative and sometimes even positive changes following the transition. These mixed findings suggest the need to identify and evaluate the factors influencing the direction of these individual differences. What follows is a review of some of these predicting factors.

1.5 Factors which may predict adjustment to secondary school transition

Studies have tended to concentrate largely on documenting the outcome of transitions, rather than identifying what psychological variables predict adjustment, other than previous symptom levels. Some researchers have attempted to identify variables that may predict which children are more vulnerable to negative transition outcomes, and also the protective factors which assist the child in adjusting to secondary school. In reviewing past studies investigating the transition to secondary school, a number of factors appear to influence how children adjust and adapt to the changes inherent in moving school. The literature documenting these variables will now be reviewed. Whether or not studies replicate the general negative change, it is important to investigate factors that explain and predict negative impact where it does occur.

1.5.1 Academic achievement

Some studies have focussed on the protective role that actual abilities may play during the secondary school transition. A general theme within the transition literature is that children need to have the academic abilities to deal successfully with school transitions (Jason, Weine, Johnson et al., 1992). Studies have demonstrated that success in academic and social domains in primary school is positively related to increases in self-esteem following secondary school transition (e.g. Hirsch & Rapkin, 1987; Simmons & Blyth 1987; Simmons et al., 1987). These studies suggest that actual achievement levels are related to children's overall self-esteem and adjustment to the transition.

Similarly, Chung et al. (1998) and Lord et al. (1994) both found high academic achievement to protect against experiencing a negative transition. Despite reporting overall declines in grades following the transition to secondary school, Reyes, Gillock, Kobus and Sanchez's study (2000) found that children who began secondary school with better grades fared best. They concluded that having strong academic skills might have made adjustment to higher grading standards easier than for children with poor academic ability.

A minimal body of research exists regarding the effects of making the secondary school transition on the development of adolescents in special education. In one of the few such studies, Forgan & Vaughn (2000) compared adolescents with and without learning disabilities making the transition from primary to secondary school. They found no obvious differences regarding how children with and without learning

difficulties make the transition to middle school, rather they found that both groups reacted similarly to the transition.

1.5.2 Previous self-esteem and levels of psychological distress

Self-esteem has been the central focus of research on school transitions because, according to Harter (1990), it is key to understanding the emotional life of the self. Many researchers have found that children with low levels of self-esteem and high levels of psychological distress prior to the secondary school transition are likely to experience stressful transitions and have therefore been identified as significant predictors of a negative transition outcome (Chung et al., 1998; Lord et al., 1994; Robinson, Garber & Hilsman, 1995; Simmons et al., 1987).

Chung et al. (1998) revealed significant changes in adolescents' adjustment following secondary school transition. Both boys and girls who had high levels of psychological distress prior to the transition, showed significant increases in their distress both during the transition and one year later. In addition, boys showed decreased academic achievement. They concluded that children showing high levels of psychological distress prior to the transition are at a greater risk than their peers for a stressful school transition. However, as with many of the school transition studies, it is debatable whether these conclusions are justified without having a comparison group of same aged children who did not experience the transition. The findings may be a result of age effects, or due to other potential mediating factors such as family characteristics or academic ability for example and so limited conclusions can be drawn from this study.

1.5.3 Demographic variables

Most school transition studies have limited their examination to white, middle-class and often suburban children and adolescents (Seidman et al., 1994). However, it is also important to understand the effects of a normative school transition on poor urban adolescents from diverse racial and ethnic backgrounds.

In some of the few studies to have used more diverse racial and ethnic samples, non-white students from lower-performing backgrounds have been found to adjust poorly to the changes they encounter following their transition to high school (Eccles, Lord & Midgley, 1991; Roderick, 1995; Seidman et al., 1996; Simmons, Black & Zhou, 1991). In the urban, low-income, and racially and ethnically diverse sample studied by Seidman et al. (1994), a drop in academic performance was found following the transition to junior high school, which continued to deteriorate through the transition to senior high school. More recently, Reyes et al. (2000) conducted a 6 year study investigating the impact of the elementary to high school transition on adolescents from urban, minority, low-income backgrounds. They also found that children's academic ability declined following the transition and showed that they failed to recover sustained losses. However, since no high income or non-minority comparison groups were used in all these studies, the conclusions that can be drawn are limited. Roderick (1995) overcame this problem by looking at serial transitions. In her study of urban, predominantly ethnic minority students, using archival data, she found that high school dropouts and graduates showed declines in grades and attendance following all school transitions.

In a longitudinal study that did use a comparison group, Simmons et al. (1991) did not find that ethnicity affected transition. In their comparative analysis of African-American and white children as they made the transition to secondary school, they found that both groups adjusted similarly to the transition. On most variables there were no significant racial differences, with both ethnic groups demonstrating a decline in self-esteem. The differences that did exist between the two groups were explained by the more frequent lower class status of the African American children.

According to Jason et al. (1992) children from lower socio-economic status families may be most at risk for developing or continuing academic, social, health and emotional problems. Blai (1985) proposed that children from economically poor homes may be at a disadvantage at school by not having the same exposure to books and other learning materials

1.5.4. Family variables

Research and clinical evidence suggest that the family's ability to adapt to the changing needs of adolescents has implications for the process of identity formation (Grotevant, 1983), and the likelihood of the development of psychopathology (Minuchin, Rosman & Baker, 1978). Family related variables also appear to be influential in determining whether children are able to adapt to the changes associated with the transition to high school (Lord et al., 1994).

A central task for early adolescents is to develop a sense of autonomy (Eccles et al., 1993; Erickson, 1963). Lord et al. (1994) suggest that parents who are able to adjust to their child's need for autonomy are more facilitative of positive adjustment across

the transition than family environments in which the adolescents' autonomy is suppressed. Family environments that provide opportunities for personal autonomy are associated with such positive outcomes as high self-esteem, greater self-reliance, greater satisfaction with school and student/teacher relations and more positive school adjustment.

Other characteristics of the family environment which have also been shown to facilitate positive adjustment to the transition, is an affective relationship between parent and child (Baumrind, 1989; Maccoby & Martin, 1983), and parental involvement such as providing opportunities for their children outside of the home (Grolnick & Ryan, 1989; Maccoby & Martin, 1983). Studies have also investigated the negative impact of parental conflict on children's psychological adjustment and development (Dadds & Powell, 1991; Kempton, Thomas & Forehand, 1989; Ohannessian, Lerner, Lerner & Von Eye, 1994).

Based on the literature, it is reasonable to hypothesise that family environments that are responsive and developmentally sensitive to the early adolescent may help the adolescent develop certain competencies such as self-esteem, autonomy and maturity that may serve as protective factors for the transition to junior high school. Such an environment may provide sufficient support and scaffolding so that the transition to secondary school is less stressful and disruptive.

1.5.5 Individual traits

Causey & Dubow (1993) suggest that individual characteristics such as personal coping resources and personality, attitudinal and cognitive dispositions can

ultimately benefit or hinder children and contribute respectively to positive or negative adjustment.

Robinson et al. (1995) investigated the role of children's cognitive appraisals and coping strategies on adjustment to stressful events such as school transition, and reported that attributional style and perceived self-worth predicted depressive symptoms, but not externalising symptoms after transition. They stressed that such variables are considered vital to the outcome of stressful events.

Other personal coping resources that buffer against the detrimental effects of stress include a sense of autonomy, a sense of personal efficacy and confidence in one's competence (Bandura, 1986; Compas, 1987; Garmezy, 1983; Harter, 1990).

1.5.6 School environment

Evidence has shown that children's self-perceptions become more negative in early adolescence, they also become more negative about school and many studies have shown that they have lower ability self-concepts than do younger peers (Blyth et al., 1983; Eccles, Adler & Meece, 1984; Eccles & Midgley, 1989; Eccles et al., 1993; Marsh, 1989; Simmons et al., 1973; 1979). Simmons & Blyth (1987) have postulated that these changes in children's attitudes and beliefs are due in part to differences in the school environments of primary and secondary school. These differences include more emphasis on evaluation and social comparison among children (Feldlaufer, Midgley, & Eccles 1988; Harter, Whitesell & Kowalski, 1992), stricter grading standards (Blyth et al., 1978; Kavrell & Petersen, 1984) and a disruption of children's social networks (Berndt & Keefe, 1995).

Simmons et al. (1987) speculate that children will find it more difficult to adjust to secondary school transition if the school is very heterogeneous in terms of social class and ethnicity as they are likely to feel less comfortable and more alienated, whereas homogeneity among classmates might be protective. They suggest that such heterogeneity results in lower self-esteem especially among children who find themselves victimised or have few peers.

It has been hypothesised that the sudden increase in classroom and school size in secondary school has negative effects for children's adjustment, as being confronted with large numbers of people may foster alienation, isolation and difficulties with communication and intimacy (Brookover, Beady, Flood, Schweitzer & Wisenbaker, 1979; Morgan & Alwin, 1980; Simmons et al., 1987). In a study of 17 secondary schools, Simmons et al. (1987) found that the larger and more ethically diverse the school, the lower the self-esteem of students. This was partially explained by the higher levels of victimisation in this environment.

A number of studies however, show no significant effects of school size on a variety of dependent variables including academic achievement and aspirations (Berkovitz, 1979; McDill & Rigsby, 1973). Berkovitz (1979) posits contradictory effects of size on children's adjustment and suggests that larger numbers create more opportunities to meet a variety of peers from different backgrounds. Such discrepant findings may in part be explained by the sample and measurement differences between the studies, which will undoubtedly affect the findings.

1.5.7 Stressors/life events

The adverse impact of traumatic life events such as the death of a parent or sibling, parental divorce, or hospital admission on children has been well documented (Garmezy & Rutter, 1983). Whilst it is clear from research and clinical work that there are children who possess sufficient personal and social support resources to avoid serious permanent harm from such events (Garmezy, Masten & Tellegen, 1984), it is also evident that an accumulation of negative life events increases vulnerability to psychological disorders (Garmezy & Rutter, 1983; Murrel & Norris, 1983).

In a study examining direct and stress-moderating effects on depressive and externalising symptoms during the junior high school transition, Robinson et al. (1995) showed that an accumulation of life events and daily school hassles at the time of transition, were predictors of depression and behavioural problems following secondary school transition.

Stress in the form of negative life events is often associated with depression (Lloyd, 1980). Cross-sectional studies with children and adolescents have found that depressive symptoms are significantly correlated with cumulative life events, hassles, and chronic stress (Compas, Grant & Ey, 1994; Garber & Hilsman, 1992).

Children who are experiencing a difficult family environment, for example increased parental conflict, also appear particularly at risk for school transition problems, according to Lord et al. (1994). Children who have experienced more than one parental divorce are less well adjusted than those who have never experienced a parenting transition (Capaldi & Patterson, 1991; Kurdek, Fine & Sinclair, 1994).

Kurdek, Fine and Sinclair's study (1994) found that relative to children who experienced no parenting transitions, those who experienced multiple parenting transitions had lower grades, lower achievement scores and more disruptive behaviour.

From the perspective of cumulative stress effects (Petersen & Spiga's work as cited in Simmons et al., 1987), non-normative life-events have particular effects on young adolescents because of the many normative changes they experience as well, such as school transitions, birth of a sibling and developmental changes. For example, it is hypothesised that experiencing pubertal changes at the same time that a child's parents are undergoing a divorce would be extremely stressful, as the child would be experiencing two significant changes at once. Related to this, some events may be more powerful at some ages than others. For example, although divorce and parental death are difficult for children at any age, they are likely to have particular effects at early adolescence because of the changes in parent-child relationships at this time.

According to Jason et al. (1992) children who are negotiating transition in several areas of their lives may be most at risk from developing or continuing academic, social, health and emotional problems. Furthermore, Simmons & Blyth (1987) report that children who experience a build-up of simultaneous life changes around the transition to secondary school, show diminished performance in these years that can mark a long-term trajectory of difficulties through the later years of adolescence.

1.5.8 Friendship quality

During early adolescence, peer relations take on increasing prominence and importance, as children are increasing their independence from family influences (La Greca, 2001). Although few normative data are available, existing findings suggest that most children and adolescents do have close friendships. For example, Parker and Asher (1993) found that amongst a sample of 881 9 to 12 years olds, 78% reported having at least one best friend in the classroom and 55% reported having a very best friend.

Peer acceptance and friendships are thought to be critical for children's and adolescent's emotional health and psychological well-being. For example, a longitudinal study of young adolescents revealed that those who reported positive friendships had a positive perception of their self-worth, whereas those reporting negative interactions, perceived their self-worth negatively (Berndt & Keefe, 1995). Behaviour and adjustment has also been shown to improve when children have friendships that are trusted and supportive (Berndt & Keefe, 1995). Stocker (1994) found that warmth in friendships was associated with less loneliness and behaviour conduct problems, higher self-worth and lower levels of depressive mood. Strong associations between peer support and psychological well-being have been found in many other studies (Compas, 1987; Elias et al., 1985; Hirsch & Rapkin, 1987; Jason et al., 1992).

Problematic peer relations, on the other hand, are predictive of negative adjustment outcomes (Parker & Asher, 1993). Children who are disliked or excluded by their peers display high rates of internalising difficulties such as anxiety, depression and

loneliness (Asher, Parkhurst, Hymel & Williams, 1990; La Greca & Stone, 1993). Furthermore, overtime, problematic peer relations may contribute to serious mental health and academic adjustment problems (La Greca, 2001).

Supportive interpersonal relationships are known to be related to children's success in coping with stressful life events such as children's adjustment to school transitions. Forgan and Vaughn (2000) postulated that making the secondary school transition is less stressful for adolescents with supportive friendships than it is for those who lack such friendships. Chung et al. (1998) found significant correlations in girls between peer-related problems in primary school and post-transition measures looking at academic achievement, self-concept and school behaviour, thus concluding that stressful school transitions can be moderated by supportive social relationships with peers.

In a study exploring friends' influence on adolescents' adjustment to school, Berndt and Keefe (1995) found that adolescents who described their friendships as having more positive features were more involved in school, whereas adolescents who described their friendships as having more negative features were less involved and more disruptive. They concluded that friendship quality affects school adjustment.

Ladd and Kochenderfer (1996) contend that friendships in the classroom supply a number of provisions, for example, emotional support, interpersonal skills and validation that may facilitate children's ability to cope with and adjust to the challenging demands of school.

1.5.9 Gender

Several investigators have suggested that various protective and risk factors may be related differentially to females' and males' adjustment to life transitions. For example many researchers have shown that girls were more likely to show decreases in their self-esteem or psychological well-being post-transition (Blyth et al., 1978; Blyth et al., 1983; Hirsch & Rapkin, 1987; Rosenberg & Simmons, 1972; Simmons et al., 1979). Hirsch and Rapkin (1987) reported an increase in depressive symptomatology in girls making the transition as compared to boys. Simmons and Blyth (1987) found the greatest disruptive effects of junior high school transition on girls' rather than boys' self-esteem. More recently Chung et al. (1998) found that girls showed more psychological distress (as assessed by physical symptoms) than did boys post transition.

Blyth et al. (1983) found that whilst the transition places girls at greater risk in terms of their self-esteem, boys were more likely to show decreases in academic achievement and increased behavioural problems post-transition. This is contradictory to other findings, which have suggested a greater negative effect of school transition on academic achievement for girls (Simmons & Blyth 1987). Therefore it remains unclear which gender is at greater risk in terms of a decline in academic achievement during the transition.

According to Simmons et al. (1979) developmental differences between gender groups may contribute to their adjustment during school transitions and deserve attention. The transition is more likely to coincide with significant pubertal change for girls than for boys (Hamburg, 1974). This means that many girls, but few boys,

would have to adapt to salient external changes in their bodies and the responses of others to these changes as well as to the new academic and social challenges of a new school. As Nottelmann (1987) notes, girls making the transition into junior high school are likely to face imposed multiple changes.

In a longitudinal study in Milwaukee public schools, Simmons et al. (1979) found that girls who made the transition to junior high school suffered a decline in self-esteem, especially if they had early onset of puberty and had begun dating. Rosenberg (1986) suggested that girls are more affected by the physical changes occurring at puberty and predicted that their self-concepts would therefore be more unstable than those of boys during the transition period. Similarly, Simmons et al. (1987) maintained that the coincidence of the school transition with the entry into adolescence may be difficult for the self-image, especially for girls.

Previous work by Simmons et al. (1973) and Douvan and Adelson (1966) suggest that girls will be more vulnerable to, and be more affected by, the school transition, due to the major change in social relationships the transition entails. They believed this is because of the greater perceived importance of social relations for females in our society.

Some researchers have found no significant gender effects (Nottelman, 1987; Seidman et al., 1996). Wigfield et al. (1991) reported longitudinal findings regarding gender differences in self-esteem but did not replicate the pattern of gender differences reported by Simmons and Blyth (1987). Rather than finding the junior

high school transition had a negative effect only on girls' self-esteem, they instead found that changes in self-esteem were similar for boys and girls.

On the whole, findings seem to suggest greater vulnerability among girls during the transition. However, it is difficult to be sure whether such findings reflect true gender differences, sample or measurement differences or response bias i.e. the possibility that girls may have been more honest in reporting their psychological distress than boys. According to Maehr & Nicholls (1980) boys tend to be more self-congratulatory than girls in their responses to self-report measures, whereas girls may be more modest in their self-reports. The effects may also depend on the symptoms being measured, with Chung et al. (1998) reporting that boys were at risk of more differentiated adjustment problems including low academic achievement and poor school behaviour, whereas girls had more generalised difficulties.

In summary, although there are some mixed findings, in general children of low academic achievement, low social class, with a history of low self-esteem and/or psychological problems, possess minimal personal coping resources, lack supportive friendships and who have difficult family relationships, appear particularly at risk for transition problems. In addition, life stressors and schools with a large diverse population have a negative impact on adaptation. Overall, studies seem to suggest greater vulnerability amongst girls during the transition. To date, however, these factors have not been investigated within a single study and so it is not known whether these factors have independent or shared effects.

As discussed in the following section, some of these protective and risk factors that have been identified have also been associated with, or affected by, anxiety, however the role of anxiety in the transition literature has largely been ignored.

1.6 Childhood anxiety

1.6.1 Background information

The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV: American Psychiatric Association, 1994) recognises the following anxiety disorders: separation anxiety disorder; generalised anxiety disorder; panic disorder; social phobia; obsessive-compulsive disorder and post-traumatic or acute stress disorder. According to Bell-Dolan, Last and Strauss (1990) there is evidence to suggest that symptoms of these disorders also occur in children.

Anxiety disorders and symptoms of anxiety are quite common among children and adolescents according to Muris & Steerneman (2001). Recent epidemiological studies have indicated that between 8 and 12% of children and adolescents suffer from some type of anxiety disorder that is severe enough to interfere with daily functioning (Bernstein, Borchardt & Perwien, 1996).

Anxiety and fears have been noted as tending to change in type and decrease in number as individuals progress through childhood and adolescent years (Ronan & Deane, 1998). Ronan & Deane (1998) document that the early fears of young children tend to be related to specific danger cues, for example; animals, strangers and nightmares. With age, fears and anxieties become more anticipatory, internalised and become more focused on social, school, physical and health

concerns. Social and school concerns become most prominent around the late childhood, early adolescence time (especially for girls). This is also the time that secondary school transfer happens.

Although anxiety in children is a normal part of growing up, persistent and/or excessive anxiety can be maladaptive when it results in distress or interferes with a child's developmental challenges, such as socialisation and academic studies (Gaskell, Wells & Calam, 2001). There is an increasingly large body of research suggesting that childhood anxiety disorders represent a serious mental health problem (Barrett & Turner, 2001). Kashani and Orvaschel (1990) show evidence for the long-term effects of child anxiety disorders on general development. They studied a community sample of 210 children and adolescents aged between 8 and 17 years and found that children with anxiety disorders in each age group had higher rates of all other disorders compared with non-anxious children.

Cole, Lachlan, Peeke, Martin, Truglio and Serocynski (1998) and Orvaschel, Lewinsohn and Seeley (1995) have also noted that anxiety symptoms and disorders in childhood, signal significant risk for other disorders, particularly other anxiety disorders and depression. Last, Hanson and Franco (1997) and McGee and Stanton (1990) both demonstrated how anxiety symptoms and disorders could significantly interfere with children's interpersonal and academic functioning. Roth and Fonagy (1996) report that childhood anxiety can be pervasive and can become increasingly so as children become older. According to Keller et al. (1992), without treatment, childhood anxiety can have a chronic and unremitting course. Given the potentially

serious consequences associated with childhood anxiety disorders, it is important that these problems are identified and addressed effectively.

Questionnaires for measuring childhood anxiety are frequently employed in both research settings and clinical practice. While many of the measures are considered to be reliable and valid, many have the limitation that they do not tap into the separate anxiety disorders as described in classification systems such as the DSM-IV (Stallings & March, 1995). Several attempts have been made to develop questionnaires for measuring childhood anxiety in terms of the DSM, including the Screen for Child Anxiety Related Emotional Disorders (SCARED: Birmaher, Khetarpal, Brent et al., 1997). Another questionnaire that closely follows the DSM taxonomy of childhood disorders is The Spence Children's Anxiety Scale (Spence, 1997), which measures symptoms of separation anxiety disorder, generalised anxiety disorder, panic disorder, social phobias, obsessive-compulsive disorder, and specific phobias.

1.6.2 School anxiety

Whilst the literature on childhood anxiety acknowledges that anxiety symptoms and disorders can significantly interfere with children's interpersonal and academic functioning (Last et al., 1997; McGee & Stanton, 1990) and without treatment, can have a chronic and unremitting course (Keller et al., 1992), such research has not specifically addressed the impact of secondary school transition on children's anxiety, nor the impact of pre-existing anxiety on this transition. In the school transition research, there has been an overarching focus on self-esteem to the neglect

of other aspects of well being, such as psychological symptomatology, including anxiety.

According to Ronan and Deane (1998) social and school anxieties become most prominent around late childhood and early adolescence. Since this is the time that secondary school transfer happens, one may assume that social and school concerns, will be particularly relevant to secondary transfer, whereas there might not be any reason to think that physical and health concerns or simple phobias would be as relevant to the transfer. In line with this, Hirsch & Rapkin (1987) found phobic symptoms to decrease in early adolescence. They did not view this finding to be surprising, given the apprehension in primary school over the forthcoming transition to secondary school. In one of the few studies to mention the role that anxiety plays during the secondary school transition period, Harter et al. (1992) found that children tend to become more anxious about school matters after the transfer.

Several studies have indicated that anxiety about one's performance in academic and social domains is negatively related to children's school performance (e.g. Payne, Smith & Payne, 1983; Willing, Harnisch, Hill & Maehr, 1983). Eccles and her colleagues have suggested that both anxiety and self-consciousness may be particularly detrimental to early adolescents as they are forced to adjust to a new school environment characterised by a stricter marking system and an increase in social comparison among students (Eccles & Midgley, 1989; Feldlaufer et al., 1988). These detrimental effects are likely to be especially salient during early adolescence, because this developmental period is characterised by increased self-focus and self-consciousness (Eccles & Midgley, 1989; Eccles et al., 1984).

According to Douglas and Rice (1979) girls are affected more by anxiety than are boys with regard to school. Similarly a study by Meece, Parsons, Kaczala, Goff and Futterman (1982) showed that in general boys report less anxiety than do girls. However, no gender differences in the mean levels of anxiety were reported in Lord et al's study (1994), although it is possible that the boys were underreporting their anxiety.

In summary, although anxiety in children is considered to be a normal part of growing up, for a significant number of individuals, anxiety remains intense and pervasive, leading to psychological distress and maladjustment. Anxiety to this extent becomes a concern as it negatively impacts on the children's self-esteem and ability to perform age appropriate tasks including academic performance and peer relationships.

Longitudinal studies of anxious children have revealed that anxiety becomes more severe during early adolescence, with increasing negative impact on school performance (Savoy, 1997). Furthermore, it would seem likely that there would be an increase in social and performance anxiety following the transition to secondary school, consistent with findings that social and school anxiety increase in early adolescence, whereas phobias decrease. There is however, a lack of research pertaining to the impact of secondary transfer on anxiety symptoms.

1.7 General Summary of the literature

The transition from primary to secondary school is an important developmental event that may have significant long-term effects on adjustment among adolescents. Since

all children in our society will eventually have to make this transition, it is important to examine the immediate and longer-term psychological, academic and social adjustments as they make these transitions and to identify any subgroups of individuals who are particularly vulnerable to such changes. This information would be vital in developing preventative interventions that reduce the effects of 'risk' indicators.

There has been mixed support in relation to the impact of secondary school transition with some studies reporting a negative impact of transition, while others report stability in difficulties or positive outcomes of transition. Researchers have also attempted to identify variables that may predict which children are more vulnerable to negative transition outcomes, and also the protective factors which assist the child in adjusting to secondary school. Although there have been mixed findings reported, a pattern is beginning to emerge of the psychological processes that put some children at risk for later emotional and behavioural problems and possible school failure, specifically: being female; having poor academic achievement and special education needs; low socio-economic status; reporting a greater impact of negative life events; having poor quality friendships and having a history of psychological problems prior to the transition. Children who posses minimal personal coping strategies and who have difficult family relationships also seem particularly at risk from transition problems. The mixed findings reported may in part indicate the complex nature of adjustment during early adolescence. However, some of these differences in findings undoubtedly reflect variations across studies in populations, school environments and varying methodologies.

Although the findings from existing transition research is beginning to exert an influence on school policies, there are many limitations and omissions in the existing research which makes it difficult to make clear recommendations. The present study attempted to address some of these issues.

1.8 The current study's rationale and research hypotheses

The present study was designed to extend the empirical literature on school transitions in several ways:

- There is already substantial research that has been carried out in the area of secondary school transfer, however much of the transition research has been conducted in the USA. Further research within the British educational system is needed before one can confidently generalise the findings, since the educational systems and the general culture in the USA and the UK differ from one another.

- Much of the existing research has used small sample sizes. The current study had a large sample size, which enabled more accurate identification of different risk factors that might interact and contribute to the transition. Another virtue of having a large sample size is that it increases the likelihood of identifying the small number of children for whom transition is particularly difficult.

- Only a few studies have utilised multiple indices of personal and environmental factors related to school transition. Most studies have primarily concentrated on using the independent contributions of variables, or including only a small number of constructs when considering the interrelationships between the

variables, and thus fail to provide a comprehensive account of the secondary school transition process. This study builds on the literature on secondary school transfer by providing a more thorough assessment of adolescents' psychological adjustment by looking at multiple factors affecting adjustment, using norm-based measures.

- The role of children's anxiety in the transition literature has not been investigated. Therefore this study examined the impact of pre-existing anxiety, on secondary school transfer.

- Previous studies have tended to assess children during the transition period using general measures of psychological distress. For example, Taylor (2000) used the Strengths and Difficulties Questionnaire (SDQ: Goodman, 1997) to assess for distress, and found no transition difficulties. However, this may have been more to do with the 'general' nature of this measure, rather than the extent of emotionally related problems such as depression and anxiety in this group. The current study, in addition to the SDQ, used the Children's Depression Inventory (Kovacs, 1981) which is a specific measure of depressive symptoms and the Spence Children's Anxiety Scale (Spence, 1997), which is a more specific measure of anxiety, tapping into the separate anxiety disorders described in DSM-IV (American Psychiatric Association, 1994): separation anxiety disorder; generalised anxiety disorder; panic disorder; social phobias, obsessive compulsive disorder and specific phobias.

The principal aim of the current study was to explore how children's emotional and behavioural functioning changed across the secondary school transition. The study also explored the association of several protective and risk factors (some assessed in primary school while others contemporaneous with the transition) with indicators of children's transition adjustment. The specific risk factors explored were: being female; having poor academic ability and special education needs; having low socio-economic status; impact of negative life events; having poor quality friendships and having a prior history of psychological distress prior to the transition.

School adjustment is a broad construct with multiple facets. The current study focussed on three facets to represent this dimension, each assumed to be an important precursor of children's subsequent school functioning, namely, levels of anxiety, depression and general emotional and behavioural symptoms. The presence of these factors have been hypothesised to explain variation in the amount of psychological distress and problem behaviours displayed by young adolescents post-transition. Through developing a more comprehensive picture of the factors associated with adjustment to the transition, we can begin to understand and help children undergoing stressful transitions.

The current study followed up a cohort of children who had made the transition into secondary school. Children were given various questionnaires assessing their psychological status in year 6 of primary school and again in year 7 of secondary school when they had made the transition. The analyses addressed two basic research questions:

1. What was the impact of secondary school transition on children's psychological functioning?

2. Which risk factors influenced adjustment to secondary school?

Based on these research questions, the following specific hypotheses were made:

1. In line with the literature highlighting the potential stressfulness of secondary school transition, it was predicted that the transition would have a negative impact on children's psychological functioning. In other words, there would be an increase in children's self-reported general emotional and behavioural difficulties, anxiety and depression during the first term of secondary school following the transition.

2. In line with much of the transition literature suggesting greater vulnerability amongst girls than boys during the secondary school transition, it was predicted that girls would be at a greater risk of experiencing psychological distress post-transition.

3. It was also predicted that children who had some or all of the following risk factors would report greater levels of psychological distress post-transition;
   a) poor academic ability and/or SEN
   b) low socio-economic status
   c) significant impact of negative life events
   d) poor quality friendships
   e) high levels of psychological distress prior to the transition

CHAPTER 2:

METHOD

2.1 Overview

This study was a follow up of a cohort of children who had made the transition into secondary school. In the previous study (described in Creswell, Holmes & O'Connor, Unpublished manuscript), children were given various questionnaires assessing their anxiety levels and psychological status in year 6 of primary school. In the current study, the questionnaires were re-administered along with two other measures, when the children were in the first term of secondary school.

2.2 Setting

The previous study took place in 15 primary schools in an inner London borough. The current study took place in nine secondary schools in the same inner London borough.

2.3 School Characteristics

The nine secondary schools participating in the current study were chosen because they were identified by the Local Education Authority (LEA) as being the main schools that the 15 primary schools, which participated in the earlier study, fed into and because they were within the same LEA. Secondary schools outside the LEA were not approached to take part in the study. All nine schools approached agreed to participate in the research.

The 15 mixed sex, state primary schools which participated in the previous study were representative of the 47 primary schools in the borough on several key demographic indicators. For example, the 15 participating schools were similar to the non-participating schools on the proportion of children eligible for free school meals (41.7% vs. 41.2% respectively), proportion of children with special educational needs (2.2% vs. 1.6% respectively), and proportion from an ethnic minority background (55.2% vs. 57.1% respectively).

There were wide variations across the nine schools participating in the current study in terms of gender, number of children (total roll), eligibility for free school meals (SES), percentage of children with special educational needs and levels of attainments in national tests and exams (as reported by the schools' Ofsted inspection) and the preparations in place for secondary transfer (Table 2.1).

Table 2.1: Characteristics of the participating schools in terms of contextual and performance data

				SEN %		SATs Key stage 3			GCSE/GNVQ 2002 %		
School	**Gender**	**Total roll**	**SES %**	**Without statement**	**With statement**	**% achieving Level 5 or above**			**5 A*-C**	**5 A*-G**	**No passes**
						English	**Maths**	**Science**			
1	Boys	743	35.9	21.0	4.7	78	70	73	37	90	5
2	Girls	1183	51.4	22.5	1.4	63	49	46	40	87	6
3	Girls	787	39.3	38.0	2.8	62	67	71	45	93	4
4	Mixed	1152	43.8	24.0	2.0	32	33	26	25	74	7
5	Mixed	611	51.4	25.7	3.9	29	47	29	20	62	19
6	Mixed	778	46.5	22.2	3.7	34	47	41	23	64	26
7	Mixed	985	48.6	10.3	5.8	35	42	34	27	81	13
8	Girls	661	39.8	21.9	2.0	74	56	64	58	93	2
9	Boys	894	26.5	16.8	4.5	60	62	54	30	76	14
LEA totals/average		**7794**	**42.9**	**22.1**	**3.3**	**51**	**50**	**46**	**32.9**	**78.7**	**11.6**
National average 2002			**14.9**	**15.9**	**2.4**	**67**	**67**	**67**	**51.5**	**88.9**	**5.4**

2.4 Sample

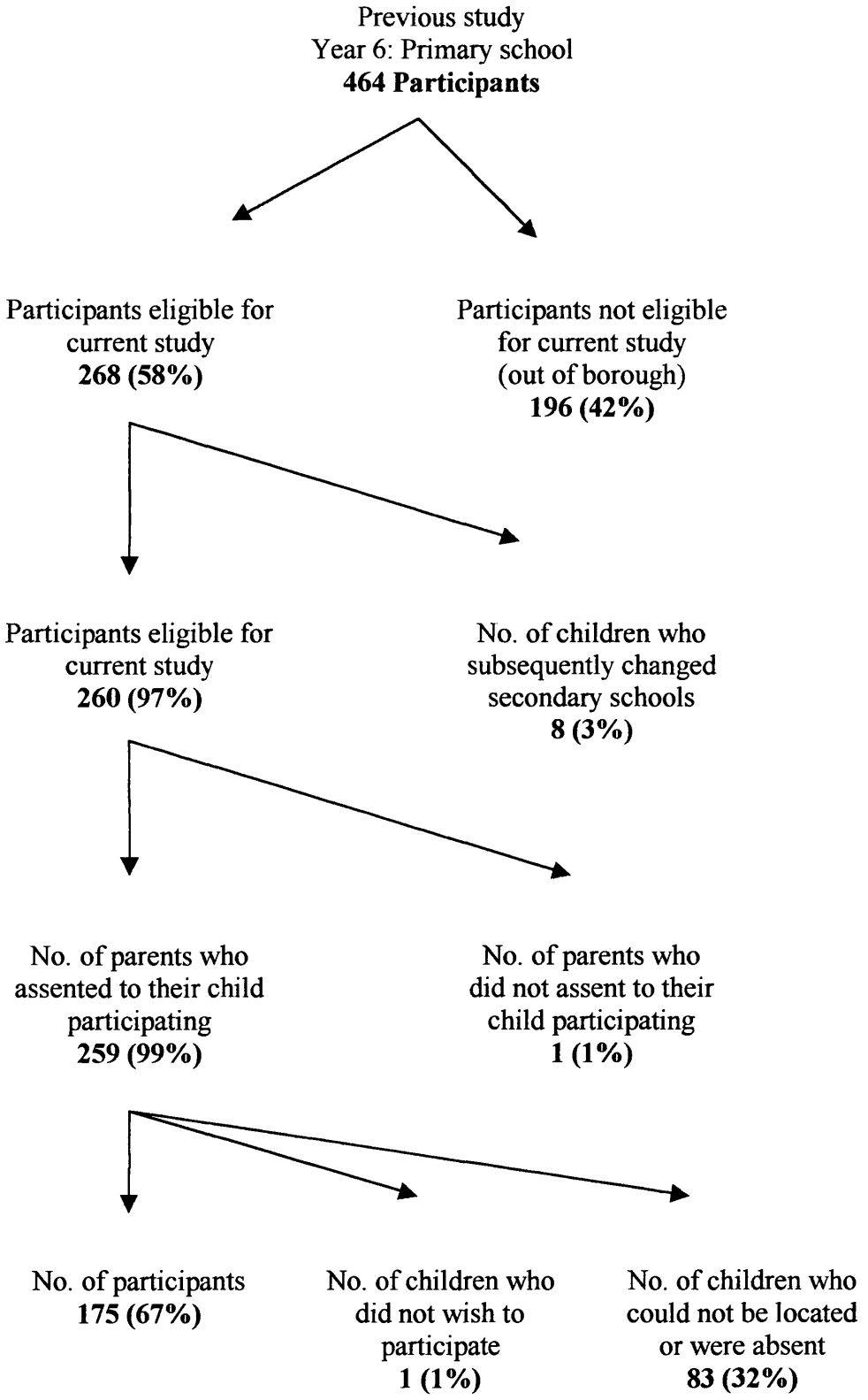
In the previous study, data were collected on a total of 464 children of a possible 507 children from 15 primary schools in an inner London borough (43 children were either absent on the day of assessment or the children or their parents declined to participate).

2.4.1 Recruitment

In the current study, no selection criteria were applied, other than entrance to one of the nine secondary schools identified by the LEA as being the main schools that the 15 primary schools that participated in the earlier study fed into.

Figure 2.1 shows the flowchart of recruitment into the current study. Of the 464 children who participated in the previous study, 196 (42%) children went to secondary schools outside of the borough and so were not eligible for the current study. A further 8 children subsequently changed their choice of secondary school and were no longer available for participation. Of the 260 children eligible for the current study, one child's parent returned the assent form stating their child could not participate in the study. Of the remaining 259 children whose parents assented to their participation, 83 were either absent on the day the questionnaires were administered or could not be located within the school at the time of administration. Of the remaining 176 children approached, 175 gave their written consent to participate in the study and one child did not wish to take part. Thus, the 175 children represented 38% of the original sample of 464 children, and 65% of the 268 children who were eligible to participate in the current study.

Figure 2.1: Rates of consent



As described earlier, the 464 children who participated in the previous study were not significantly different from children attending the other primary schools in the borough on several key demographic indicators. Therefore the 175 children who consented to participate in the current study were considered to be representative of the children in the borough.

2.4.2 Participants

The final sample of 175 children consisted of 96 boys (55%) and 79 girls (45%), all in their first term of year 7, with ages therefore ranging between 11 and 12 years. The sample was quite diverse in terms of socio-economic status and ethnicity and was representative of the borough. 26% of children were on their school's register of Special Education Needs. The majority of the sample (70%) had good rates of school attendance for the first half of term one of secondary school. In English Special Attainment Tests (SATs) taken in primary school, 58% scored either the reported average or above (Levels 4 and 5) and 30% scored below average (Levels 1 to 3). In Maths SATs, 60% of children attained the reported average or above, while 26% scored below average. In Science SATs, 68% of children attained the reported average or above and 18% scored below average (Tables 2.2 & 2.3).

In terms of the ethnicity of the sample, due to low numbers in each category, children were grouped into two ethnic categories for the purpose of statistical analyses. The two categories were, white UK or non-white UK, the latter of which contained all children from ethnic minorities. 84 children (48%) were classed as white UK, 87 (50%) as non-white UK, and 4 cases (2%) were missing.

Table 2.2: Demographic characteristics (n=175)

	No. of children (%)
Gender	
Male	96 (55%)
Female	79 (45%)
SEN register	
Yes	46 (26%)
No	127 (73%)
Missing	2 (1%)
Eligible for free school meals	
Yes	72 (41%)
No	85 (49%)
Missing	18 (10%)
Attendance	
<80%	10 (6%)
80-90%	28 (16%)
91-100%	123 (70%)
Missing	14 (8%)
Ethnicity	
White	84 (48%)
Black African	19 (11%)
Black Caribbean	15 (9%)
Mixed	15 (9%)
Turkish	15 (9%)
Bangladeshi	7 (4%)
Black other	7 (4%)
Latin American	4 (2%)
Missing	4 (2%)
Chinese	3 (1%)
Indian subcontinent	2 (1%)

Table 2.3: SATs profiles (n=175)

	No. of children (%)		
	Levels 1 to 3	**Levels 4 and 5**	**Missing**
English	52 (30%)	101 (58%)	22 (12%)
Maths	46 (26%)	105 (60%)	24 (14%)
Science	32 (18%)	119 (68%)	24 (14%)

2.5 Procedure

Ethical approval was obtained from the joint UCL/UCLH research committees to extend the previous study conducted by Creswell, et al. (Unpublised manuscript) (Appendix A). The LEA was approached in order to find out which secondary schools the children who had participated in the previous study had gone to and to obtain permission to contact these schools to see if they would be willing to participate.

Nine secondary schools in the borough were sent a letter and information sheet outlining the study (Appendix B). The researcher met with the Head Teachers of these schools in order to obtain their informed consent to conduct the research within their school and to answer any questions. All Head Teachers agreed to participate in the current study. Once informed consent had been obtained from the Head Teacher, a letter and information sheet about the aims of the study and an assent form were sent to parents (Appendix C). Parents were asked to return the form if they did not want their child to participate in the study.

The study was explained to the children as a group before they were approached for informed, signed consent (Appendix D). Children provided written consent immediately prior to completing the questionnaires. The questionnaire booklets were administered to children in a group basis. Where possible the questionnaires were administered in a private classroom, however where this was not possible due to space restrictions, the assembly hall and canteen areas were used (during times when these areas were not in use for other activities). The children were encouraged to ask questions about the research or to ask for clarification on individual questions throughout. If indicated by the teachers or the children, questions were read out to individuals with low literacy in English. The children were told that the researcher would remain behind at the end of testing should they have any worries or concerns raised by the study that they wanted to discuss in private.

2.6 Design

The current study followed up a cohort of children that were first assessed between October and December 2001 (Creswell, et al., Unpublished manuscript). In the previous study, a cohort of 446 year 6 children were assessed across 15 primary schools in an inner London borough. A screening survey was administered in the first term of the school year in order to investigate psychological aspects of anxiety amongst school children. The current study re-assessed as many of the original sample of children as possible in their first term of year 7 at secondary school, between November and December 2002. Table 2.4 shows the measures employed at each time point. In the current study, data was collected in the second half of the first term, as opposed to the beginning, to allow the children sufficient time to have settled in to their new school.

Table 2.4: Measures employed at each assessment

Measures	Previous study Year 6: Primary school	Current study Year 7: Secondary school
▪ The *Spence Children's Anxiety Scale* (SCAS: Spence, 1997)	✓	✓
▪ The *Children's Depression Inventory* (CDI: Kovacs, 1981)	✓	✓
▪ The *Strengths and Difficulties Questionnaire* (SDQ: Goodman, 1997)		
Full child rated SDQ	✓	✓
Teacher rated emotional symptoms and conduct problems SDQ subscales	✓	X
▪ The *Life Events Checklist* (LEC: Johnson & McCutcheon, 1980)	X	✓
▪ The *Friendship Quality Questionnaire* (FQQ: Parker & Asher 1989)	X	✓

In the previous study the primary schools provided information regarding the ethnicity, gender, Special Education Needs (SEN) status and eligibility for free school meals (the most commonly used index of social deprivation) for the participating children. In the current study the secondary schools provided the children's scores in English, Maths and Science SATs and absences for the first half of term one.

2.7 Measures

A copy of each questionnaire measure can be found in Appendix E.

2.7.1 The Strengths and Difficulties Questionnaire (SDQ: Goodman, 1997)

The SDQ is a brief behavioural screening questionnaire that can be completed by parents and teachers of children aged from 4-16 or by children aged from 11-16. Although the teacher-rated emotional symptoms and conduct problems subscales were employed in addition to the child rated SDQ in the previous study (Creswell et al., Unpublished manuscript) only the child rated SDQ was employed in the current study. This was because it was felt that the children's teachers may not yet know all the children well enough to make accurate ratings of their emotional and conduct problems so early on in the first term.

The SDQ is a 25-item measure consisting of 5 subscales all with 5 items each, namely: conduct problems; emotional symptoms; inattention-hyperactivity; peer relationships and pro-social behaviour. A sample item on the conduct problems subscale is, "I get very angry and often lose my temper." Each item is rated on a 3 point Likert scale, from 0 = "not true", 1 = "a bit true" to 2 = "very true." The scores

for conduct problems, emotional symptoms, inattention-hyperactivity and peer relationships can be summed to generate a total difficulties score ranging from 0 to 40, with higher scores indicating greater difficulties. Individual subscales are also summed (range 0-10). Child-rated total difficulties scores of 20-40 are considered abnormal, and scores of 16-19 as borderline (Goodman, Meltzer & Baily, 1998).

In terms of construct validity, high correlations have been reported between the teacher and parent completed measures with Rutter's Questionnaires (Goodman, 1997). Goodman et al. (1998) reported good internal reliability of the children's self-rated SDQ with Cronbach alpha coefficients of .82 for total difficulties; .72 for conduct problems; .75 for emotional symptoms; .69 for inattention-hyperactivity; .61 for peer relationships and .65 for pro-social behaviour.

2.7.2 The Spence Children's Anxiety Scale (SCAS: Spence, 1997)

The SCAS, which consists of 38 anxiety items, measures children's self-reported level of anxiety. It has six subscales, each tapping a specific aspect of child anxiety (as defined in DSM-IV) namely: panic attack and agoraphobia (9 items); separation anxiety (6 items); physical injury fears (5 items); social phobia (6 items); obsessive compulsive disorder (6 items); and generalised anxiety disorder/overanxious disorder (6 items). The scale also consists of six filler items (non-scored) and one open ended, non-scored item. A sample item on the panic attack and agoraphobia subscale is, "My heart suddenly starts to beat too quickly for no reason."

Responses are rated on a 4 point Likert scale according to how often each of the items happens to them (0 = "never"; 1 = "sometimes"; 2 = "often"; or 3 = "always").

This yields a maximum score of 114, with higher scores indicating a problem. Whilst the questionnaire was not designed to provide a clinical diagnosis, a score of 42.48 or above is considered in the clinical range (Spence, 1997).

The scale has been subjected to considerable investigation. Spence (1997) reported the scale to have high internal reliability with a coefficient alpha of .92 and a split-half reliability of .90. In terms of concurrent validity, Spence (1997) found that the SCAS was significantly correlated with the Revised Children's Manifest Anxiety Scale (Reynolds & Richmond, 1978) and the CDI (Kovacs, 1981).

2.7.3 The Children's Depression Inventory (CDI: Kovacs, 1981)

The CDI is a 27-item self report measure of depressive symptoms, designed for school-aged children and adolescents (aged from 7 to 17 years). It serves as an index of the severity of depression and as a measure of change.

The CDI assesses a range of depressive symptoms including disturbed mood, self-evaluation, anhedonia and interpersonal behaviours. Several items focus on the consequences of depression in contexts that are specifically relevant to children e.g. school. The inventory requires the lowest reading level of any depression measure of children.

Each item consists of three statements. The child indicates which statement best describes him or her for the past two weeks. For each item, the meaning of each statement can be summarised as follows; 0 = absence of symptom, 1 = mild symptom and 2 = definite symptom. Using an epidemiologically based cut-off point

suggested by Hodges (1990), children scoring greater than or equal to 19 are identified as being potentially clinically depressed.

A sample item on the CDI is, 0 = "I have fun in many things", 1 = "I have fun in some things", or 2 = "nothing is fun at all." The total score ranges from 0 to 54, with high scores suggesting a problem, and low scores indicating the absence of a problem.

The CDI has been subjected to extensive psychometric evaluation in normal and clinical populations. It has been utilised in hundreds of clinical and experimental studies and its validity has been well established. Reliability coefficients range from .71 to .89, indicating good internal consistency (Smucker et al., 1986; Weiss et al., 1991).

2.7.4 The Life Events Checklist (LEC: Johnson & McCutcheon, 1980)

The LEC is a self-report measure of child and adolescent life stress, consisting of a list of 46 events likely to be experienced by young people (plus an additional four spaces to allow children to indicate significant events experienced but not listed on the checklist). A sample item of the LEC is, "increased number of arguments between parents." Children are asked to identify the events that they have experienced during the past 12 months. They are then asked to rate each event experienced as being either a positive (good) or a negative (bad) event for him or her, and are subsequently asked to rate the impact of each event on his or her life (0 = "no effect"; 1 = "some effect"; 2 = "moderated effect" or 3 = "a great effect"). Impact ratings are summed separately for good and bad events to create a score for positive

life change and a score for negative life change. In terms of normative data, in a large sample of 213 adolescents drawn from the general population, the mean score for impact of positive events was 6.88 and for negative events, 5.46 (Johnson & McCutheon, 1980).

Several studies, e.g. Gad and Johnson (1980) Greenberg, Siegel and Leitch (1983) and Greene, Walker, Hickson and Thompson (1985), have yielded preliminary support for the validity of the LEC as a measure of the amount of life events experienced by children. The test-retest stability of the LEC over a 2-week interval has been shown to be adequate (Brand & Johnson, 1982). Johnson and Bradlyn (1988) also reported adequate test-retest and correlations between the LEC and a number of relevant dependent measures. Negative life event scores have been found to correlate with psychological adjustment (Johnson & McCutcheon, 1980; Johnson & Bradlyn, 1988).

2.7.5 The Friendship Quality Questionnaire (FQQ: Parker & Asher, 1989)

The FQQ is a 40 item measure designed to assess children's perceptions of various qualitative aspects of their best friendship. The FQQ consists of 6 subscales, namely: Validation and Caring, i.e. the degree to which the friendship is characterised by interest, support and caring; Conflict Resolution, i.e. the degree to which disagreements in the friendship are resolved; Conflict and Betrayal, i.e. the extent to which the friendship is characterised by disagreements, annoyance and mistrust; Help and Guidance, i.e. the extent to which effort is made to assist one another in tasks; Companionship and Recreation, i.e. the extent to which enjoyable times are spent together, and Inmate Exchange, i.e. the extent to which the friendship is

characterised by disclosure of personal feelings and information. A sample item on the validation and caring subscale is, "My friend tells me I'm good at things."

Children are asked to indicate on a 5 point Likert scale how true a particular quality is of their relationship with a specific friend. The scale ranges from "not true" (0); to "a bit true" (1); to "sometimes-true" (2); to "quite true" (3); to "very true" (4). A child's score for each subscale is the average for his or her ratings, after reverse scoring where appropriate (range 0-4). The total score is the sum of all averaged subscale scores (range 0-24). High total scores were indicative of children perceiving their friendship to be of good quality.

The internal consistency of the six subscales has been shown to be satisfactory, indicating that children can reliably describe features of their close peer relationships, and each subscale has been found to be moderately to highly intercorrelated with coefficients ranging from .16 to .75 (Parker & Asher, 1993).

CHAPTER 3

RESULTS

Following preliminary analyses to assess normality of the data, the demographic characteristics of the final sample are presented. This includes a comparison of the current sample with children who did not participate in this study, in order to look at the representativeness of the current sample. The results are then presented according to each of the hypotheses of this study. The impact of secondary school transition on children's psychological functioning is addressed, which includes an examination of the association between gender and transition outcome. This is followed by an examination of the risk factors associated with psychological difficulties. Finally the chapter investigates characteristics of children who reported a decrease in psychological functioning post-transition compared with children who reported an increase in psychological functioning or who reported no change, in order to build up a profile of those children who undergo stressful transitions.

3.1 Preliminary analyses

Prior to statistical analyses, the data were screened for the presence of outliers. Using the cut-off point of three standard deviations from the mean, scores identified as outliers were replaced by the next highest score for that variable plus one (Tabachnick & Fidell, 1996). On the total anxiety subscale of the SCAS, three scores at pre-transition and two scores at post-transition were identified as outliers. One score on the teacher-rated total difficulties subscale of the SDQ, two scores on the CDI post-transition, one score on the impact of positive life events subscale and 4 scores from the impact of negative life events subscale of the LEC and six scores on

the attendance variable, were also identified as outliers and were subsequently replaced according to the procedure described by Tabachnick and Fidell (1996).

Data screening also revealed missing data across the data set, due to some children not fully completing the questionnaire booklet. The missing data was distributed across several variables, and therefore no single variable needed to be excluded. For the three dependent variables measured at pre and post-transition (i.e. the total difficulties subscale on the SDQ, the total anxiety subscale of the SCAS, and the CDI depression score) scores were estimated using the Missing Value Analysis function in SPSS (Norusis, 2002). Given that this estimation method for predicting missing scores is based on regression techniques, the correlation between the variables needs to be high for good quality estimations. In this case, the three dependent variables correlated well with each other both at pre-transition (with coefficients ranging from .45 to .56) and at post-transition (with coefficients ranging from .43 to .61). The scores from the SDQ, the SCAS and the CDI were estimated from each other at each time point i.e. at pre-transition and again at post-transition, rather than estimating scores across time points.

For the SDQ, there were 27 missing scores at pre-transition and 41 missing scores at post-transition. For the SCAS, 20 scores were missing at pre-transition, while no scores were missing at post-transition. Finally for the CDI, 18 scores were missing at pre-transition and 3 were missing at post-transition. Data was only estimated for cases that had at least one score from the three dependent variables. 18 cases had scores missing on all three dependent variables and so were excluded from the

analyses on this basis, therefore the total number of participants was reduced from 175 to 157.

Missing values for the following variables were replaced using the Transform function in SPSS (Norusis, 2002): SATs scores for English, Maths and Science (which had 22, 23 and 24 missing values respectively); the impact of positive and negative life events scores of the LEC (in which 38 values were missing on each scale), the total score on the FQQ (which had 40 missing values), the teacher-rated total difficulties subscale of the SDQ (which had 23 missing values), the child-rated pro-social behaviour subscale of the SDQ pre and post-transition (which had 3 missing values at pre-transition and 41 at post-transition) and attendance scores (which had 13 missing values).

Preliminary normality checks also included an examination of normal distribution curves. The following variables had either significant kurtosis or skewness: the total anxiety subscale score on the SCAS and the CDI depression score at pre and post-transition; the total score on the FQQ; the impact of positive and negative life events score on the LEC; the teacher-rated total difficulties subscale of the SDQ and attendance scores. Square root transformations were effective in achieving normal distribution for all variables except the attendance scores. However, in the current study, attendance was used as an independent variable rather than a dependent variable. Given that assumptions about normality concern the dependent variables (specifically the residuals), lack of normality in the independent variable is not specifically a problem (Tabachnick & Fidell, 1996). The transformed variables were

used in all analyses. Untransformed data are presented in all tables and figures representing means and standard deviations for clarity for the reader.

Several measures used in the current study have a relatively large number of subscales. The SDQ contains five subscales, while both the SCAS and the FQQ contain six subscales. Correlation matrices for the subscales of each measure were examined to see whether subsequent analyses should be conducted on only the total scores for each measure, or whether the subscales should also be examined. There were high correlations between total and subscale scores for the FQQ and the SCAS pre and post-transition, therefore it was decided to conduct subsequent analyses on the total scores only. For the SDQ, all subscales were highly correlated with the total difficulties score pre and post-transition, except the pro-social score, and so this latter subscale needed to be examined along with the total difficulties SDQ score.

3.2 Demographic analysis

3.2.1 Demographic characteristics of the current sample

In the Method chapter, the demographic characteristics of the sample were given. However, as outlined in the previous section, as a result of the missing data analyses, scores on several variables were replaced and 18 cases were excluded from the analysis due to having missing data on all three dependent variables, reducing the total number of participants from 175 to 157. The demographic characteristics of the final sample are presented in tables 3.1 & 3.2.

Table 3.1: Demographic characteristics (n=157)

	No. of children (%)
Gender	
Male	87 (55%)
Female	70 (45%)
SEN register	
Yes	42 (27%)
No	113 (72%)
Missing	2 (1%)
Eligible for free school meals	
Yes	65 (41%)
No	75 (48%)
Missing	17 (11%)
Attendance	
<80%	9 (6%)
80-90%	25 (16%)
91-100%	123 (78%)
Ethnicity	
White UK	71 (45%)
Non-white UK	82 (52%)
Missing	4 (3%)

Table 3.2: SATs profiles (n=157)

	No. of children (%)	
	Levels 1 to 3	**Levels 4 and 5**
English	45 (29%)	112 (71%)
Maths	38 (24%)	119 (76%)
Science	27 (17%)	130 (83%)

The final sample of 157 children consisted of roughly an even gender split, with 87 boys (55%) and 70 girls (45%) participating in the current study. The sample contained a broad range of ethnicity which was representative of the borough. However as mentioned in the method section, due to low numbers in each category, for the purpose of statistical analyses, children were grouped into two ethnic categories, either white UK or non white UK, the latter of which contained all children from ethnic minorities. The sample was also diverse in terms of social economic status. Just over a quarter of the sample (27%) were on their schools register of special educational need. In English, Maths and Science SATs taken at primary school, 77% of the sample scored at or above the average (levels 4 and 5), whilst 23% of the sample scored below the average (levels 1 to 3).

3.2.2 Comparisons between the current sample and children who did not participate in the study

In order to examine the representativeness of the current sample with the wider sample of 464 children participating in the previous study pre-transition (Creswell et al., Unpublished manuscript), the 157 children that participated in the current study were compared with the 307 children who participated in the previous study, but who did not participate in the current study. This sample of 307 children included the 196 children who went to out of borough schools (and were therefore not eligible to participate in the current study), the 8 children who subsequently changed secondary schools, the child whose parents did not assent to their child participating, the child who did not wish to participate, the 83 children who could not be located or were absent on the day the questionnaires were administered and finally the 18 children who missed out items on all three outcome measures. The two groups, i.e. those who

participated in the current study and those who did not, were compared on the following variables measured at pre-transition: the child-rated and teacher-rated total difficulties subscale of the SDQ; the total anxiety subscale of the SCAS; the CDI depression score; SEN status, and socio-economic status.

In order to look at whether the children who participated in the current study were significantly different from the children who did not participate in terms of SEN and socio-economic status, chi square tests were conducted (Table 3.3). There were no significant differences in gender, SEN status, eligibility for free school meals (SES status) or ethnicity between the two samples.

In order to examine whether the children who participated in the current study had significantly different scores on the variables measured at pre-transition from the children who did not participate in the current study, a series of independent sample t-tests were conducted (Table 3.4). Children in the current study reported significantly more general emotional and behavioural difficulties (SDQ) ($t(362)=2.49$, $p\leq.01$) and to be more depressed (CDI) ($t(384)=2.13$, $p<.05$) pre-transition compared to the children who did not participate in the current study. However, the children's teachers at primary school did not report that children who did not participate in the current study had significantly more general emotional and behavioural difficulties (SDQ) compared with children who did participate. Finally, children in the current study did not report greater anxiety levels (SCAS) pre-transition compared to the children who did not participate in the current study.

Table 3.3: Demographic characteristics for children who participated in the current study and children who did not participate.

	No. of children (%)			
	Non participating n=307	**Current sample n=157**	**χ^2 (df)**	**p**
Gender			.65 (1)	.420
Male	158 (51%)	87 (55%)		
Female	149 (49%)	70 (45%)		
SEN register			3.89 (2)	.143
Yes	55 (18%)	42 (27%)		
No	227 (74%)	113 (72%)		
(Missing)	25 (8%)	2 (1%)		
Eligible for free school meals			.56 (1)	.455
Yes	124 (40%)	65 (41%)		
No	167 (55%)	75 (48%)		
(Missing)	16 (5%)	17 (11%)		
Ethnicity				
White UK	135 (44%)	71 (45%)	.00 (1)	.977
Non-white UK	155 (50%)	82 (52%)		
(Missing)	17 (6%)	4 (3%)		

* p<.05; ** p<.01; *** p<.001

Table 3.4: Independent sample t-tests comparing means and standard deviations of variables measured at pre-transition for children who participated in the current study and children who did not participate

	Non participating Mean (SD) (n>233)	Current sample Mean (SD) (n>129)	t (df)	p
SDQ total difficulties subscale - Child-rated[a]	11.59 (5.52)	13.09 (5.53)	2.49 (362)	.013**
SDQ total difficulties subscale - Teacher-rated[a]	7.96 (6.87)	9.10 (7.54)	1.53 (405)	.127
SCAS total anxiety subscale[b]	26.90 (13.74)	28.79 (14.37)	1.26 (372)	.208
CDI depression (CDI)[c]	9.61 (7.79)	11.34 (7.41)	2.13 (384)	.034*

[a] scale ranges from 0-40; [b] scale ranges from 0-114; [c] scale ranges from 0-54

* $p<.05$; ** $p\leq.01$; *** $p<.001$

Therefore, the children who participated in the current study reported themselves to be significantly different from children who did not participate on two key variables. Children in the current study reported greater levels of general emotional and behavioural difficulties (SDQ) and depression (CDI) pre-transition, compared to those children who did not participate. This should be borne in mind when examining the findings, as it suggests that the children who participated in the current study were a slightly higher risk group compared to the wider sample.

3.3 Outcome of transition

The following set of analyses examine children's psychological status post-transition to secondary school.

3.3.1 Assessment of stability of the dependent variables

A series of bivariate correlations were conducted to assess whether children's self-reports of total difficulties, anxiety and depression remained stable between primary school and secondary school. There was a moderate positive correlation between the total difficulties subscale on the SDQ at pre-transition and post-transition ($r(157)=.38$, $p<.001$). There was a moderate positive correlation between the total anxiety subscale on the SCAS at pre-transition and post-transition ($r(157)=.45$, $p<.001$). There was also a moderate positive correlation between the CDI depression score at pre-transition and post-transition ($r(157)=.43$, $p<.001$). These moderate positive correlations indicated a moderate level of stability between pre and post-transition, implying that children's levels of total difficulties, anxiety and depression at pre-transition remain similar at post-transition.

3.3.2 Descriptive statistics for transition outcome

Table 3.5 shows the number of children falling within the clinical and non-clinical range for each of the dependent variables pre and post secondary school transition.

For children's self-reported total difficulties on the SDQ, the Goodman et al. (1998) criteria, was used to define clinical status, where a score of between 0-15 is considered in the normal range, between 16-19 in the borderline range and 20 or above in the abnormal range. In the previous study (pre-transition) 16 children (10%) fell within the abnormal range and 31 (20%) fell within the borderline range of self- rated total difficulties. 110 (70%) fell within the normal range. In the current study (post-transition) 18 children (11%) fell within the abnormal and 14 (9%) within the borderline range. 125 children (80%) fell within the normal range.

For children's self-reported anxiety on the SCAS, a cut off-point suggested by Spence (1997) was used to define clinical status, where a score of 42.48 or above is considered in the clinical range. In the previous study 27 children (17%) fell within the clinically anxious range of self-rated total anxiety, while 130 (83%) fell within the normal range. In the current study 20 (13%) fell within the clinically anxious range, while 137 (87%) fell within the normal range.

For children's self-reported levels of depression on the CDI, an epidemiologically based cut-off point suggested by Hodges (1990) was used, where a score of 19 or above indicates a significant level of depression. In the previous study 30 children (19%) were identified as potentially depressed, 127 (81%) fell within the normal range. In the current study 21 (13%) were identified as potentially depressed while 136 (87%) fell within the normal range.

Table 3.5: Descriptive statistics for transition outcome (n=157)

	Outcome of transition	
	Pre-transition	**Post-transition**
	N (%)	**N (%)**
SDQ total difficulties		
Abnormal range	16(10%)	18 (11%)
Borderline range	31 (20%)	14 (9%)
Normal range	110 (70%)	125 (80%)
SCAS total anxiety		
Clinical range	27 (17%)	20 (13%)
Non-clinical range	130 (83%)	137 (87%)
CDI		
Clinical range	30 (19%)	21 (13%)
Non-clinical range	127 (81%)	136 (87%)

Inspection of the data reveals a decrease in the degree of symptomatology post-transition and this will be examined statistically in the following section.

3.3.3 Tests of hypotheses about transition outcome

As a main test of the hypothesis that children's psychological difficulties would increase following their transition to secondary school, a series of paired sample t-tests were conducted comparing differences between scores on the SDQ, SCAS and CDI at pre and post-transition (Table 3.6).

It was predicted that following the transition there would be an increase in children's self-reported emotional and behavioural symptoms as measured by the SDQ, and an increase in anxiety and depression as measured by the SCAS and the CDI respectively. These predictions did not hold. On the contrary, children reported an average decrease in their general emotional and behavioural symptoms ($t(156)=4.01$, $p<.001$), level of anxiety ($t(156)=4.13$, $p<.001$), and their level of depression ($t(156)=3.07$, $p<.01$), following the transition to secondary school.

There were no significant differences found between the child-rated pro-social behaviour subscale of the SDQ at pre and post-transition, i.e. children reported themselves to have a similar number of strengths both before and after the secondary school transition.

Table 3.6: Paired sample t-tests comparing means and standard deviations on the dependent variables (n=157)

	Pre-transition Mean (SD)	Post-transition Mean (SD)	t (df)	p
SDQ total difficulties subscale[a]	13.16 (5.54)	11.05 (6.27)	4.01 (156)	.000***
SDQ pro-social beh. subscale[b]	7.21 (1.97)	7.54 (1.85)	1.70 (156)	.091
SCAS total anxiety subscale[c]	29.05 (13.44)	24.17 (14.74)	4.13 (156)	.000***
CDI depression score[d]	11.23 (7.67)	9.27 (7.28)	3.07 (156)	.003**

[a] scale ranges from 0-40; [b] scale ranges from 0-10; [c] scale ranges from 0-114; [d]scale ranges from 0-54

* p<.05; ** p<.01; *** p<.001

Despite the finding that overall children reported a decrease in their psychological distress from pre to post-transition, by looking at the distributions of difference between pre and post-transition means for each dependent variable, it is evident that a substantial proportion of the sample deteriorated in their psychological functioning from pre to post-transition (Figure 3.1, 3.2 & 3.3). Positive values indicate that children improved in psychological functioning from pre to post-transition and negative values indicate that children deteriorated over this period. A value of 0 indicated no change.

3.3.4 *Association between gender and transition outcome*

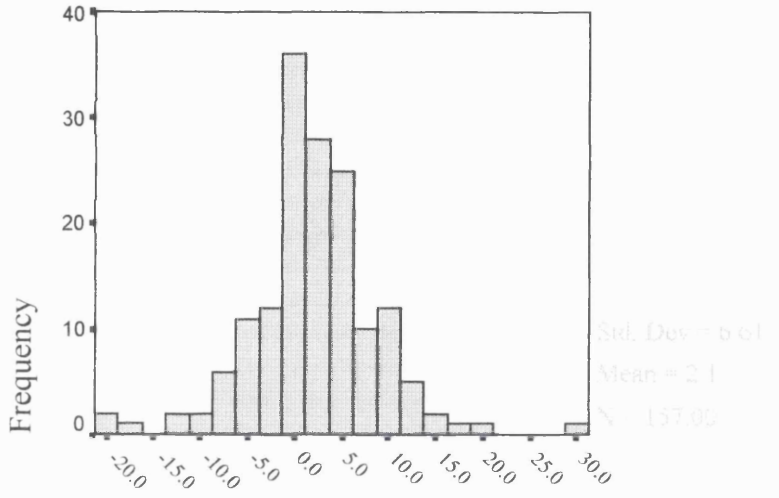
To examine the hypothesis that girls will be at a greater risk of psychological distress post-transition compared to boys, an ANCOVA test was conducted. The ANCOVA test allows for the measurement of change from pre to post-transition by controlling for the levels of psychological distress reported at pre-transition (Table 3.7).

Contrary to the prediction that girls would be at greater risk of psychological distress post-transition, boys reported themselves to have significantly more general emotional and behavioural difficulties (SDQ) compared to girls ($F(1,154)=4.85$, $p<.05$), whilst girls reported themselves to have more strengths than boys at secondary school ($F(1,154)=12.57$, $p\leq.001$).

There were no significant differences between males and females on the total anxiety subscale of the SCAS nor on the CDI depression scale post-transition. Overall, there was no support for the hypothesis that girls would be reporting more psychological distress following the secondary school transition compared to boys.

Figure 3.1

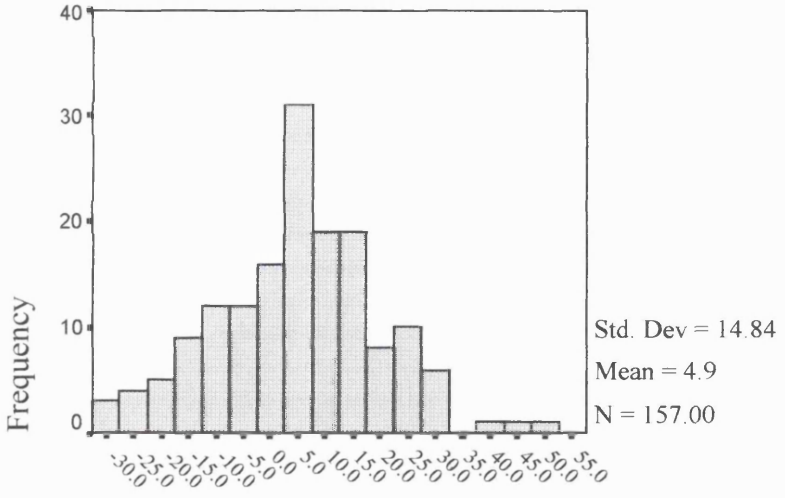
Distribution of difference between pre and post-transition means - SDQ



Difference between pre and post-transition means

Figure 3.2

Distribution of difference between pre-and post-transition means - SCAS



Differences between pre and post-transition means

Figure 3.3

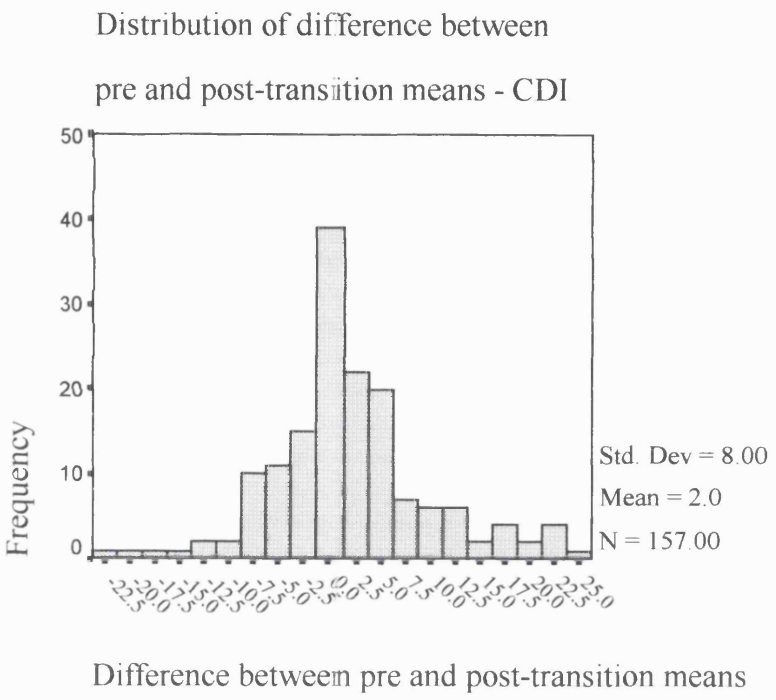

Distribution of difference between
pre and post-transition means - CDI
Frequency
50
40
30
20
10
0
Std. Dev = 8.00
Mean = 2.0
N = 157.00
-22.5
-20.0
-17.5
-15.0
-12.5
-10.0
-7.5
-5.0
-2.5
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
20.0
22.5
25.0
Difference between pre and post-transition means

Table 3.7: ANCOVA tests comparing means on the dependent variables for males and females

	Males Mean (n=87)	Females Mean (n=70)	F (df)	p
SDQ total difficulties subscale[a]	11.95	9.92	4.85 (1,154)	.029*
SDQ pro-social behaviour subscale[b]	7.10	8.10	12.57 (1,154)	.001***
SCAS total anxiety subscale[c]	24.80	23.38	.023 (1,154)	.879
CDI depression score[d]	9.94	8.44	.82 (1,154)	.366

[a] scale ranges from 0-40; [b] scale ranges from 0-10; [c] scale ranges from 0-114; [d] scale ranges from 0-54

* $p<.05$; ** $p<.01$; *** $p\leq.001$

3.4 Predictors of transition problems

Partial correlations were conducted for each of the specific hypotheses regarding the potential risk factors associated with psychological difficulties. A series of regression analyses were then conducted in order to address the extent of overlap between any associations found.

3.4.1 Partial correlations

Due to the pre and post-transition scores on each of the three dependent variables being significantly correlated with each other, pre-transition scores on each of the three dependent variables were controlled for. Using partial correlations allows for the examination of predictor variables that are associated with change in scores from pre to post-transition, by controlling for the initial levels of symptomatology at pre-transition.

Table 3.8 presents partial correlations among the potential predictor variables and the children's scores on the three dependent variables (SDQ, SCAS and CDI) controlling for the effect of the specific variable at pre-transition (e.g. the correlation with total difficulties controlled for total difficulties reported pre-transition, the correlation with anxiety controlled for anxiety pre-transition and the correlation with depression controlled for depression pre-transition).

Table 3.8: Partial correlations between the predictor and dependent variables (n=136)

Predictor variables	Post-transition dependent variables: SDQ total difficulties[b] controlling for total difficulties pre-transition	SCAS total anxiety[b] controlling for total anxiety pre-transition	CDI depression[b] controlling for depression pre-transition
Gender[a]	-.20*	.01	-.08
Ethnicity[a]	-.04	.09	-.03
Attendance[b]	-.18*	-.03	-.14
SEN status[a]	.17*	-.00	.20*
SATs English[a]	-.07	-.04	-.12
SATs Maths[a]	-.02	-.11	-.09
SATs Science[a]	-.08	-.10	-.10
SES status[a]	-.13	-.11	-.06
LEC - negative events[b]	.25**	.32***	.38***
LEC - positive events[b]	-.04	.02	-.05
FQQ -friendship quality[b]	.11	-.09	.18*
SDQ - total difficulties[a]	-	.10	.27**
SDQ - teacher-rated[a]	.03	-.10	.02
SDQ - pro-social beh.[a]	-.03	-.07	-.02
SCAS - total anxiety[a]	-.01	-	.16*
CDI - depression score[a]	.08	.17*	-

* $p \leq .05$; ** $p < .01$; *** $p < .001$

[a] variable measured at pre-transition; [b] variable measured at post-transition

a) SEN status and poor academic ability;

In support of the hypothesis that SEN status would be a risk factor for greater levels of distress post-transition, there was a significant correlation between SEN status and levels of general emotional and behavioural difficulties reported by children post-transition, after controlling for general emotional and behavioural difficulties reported at pre-transition (SDQ: $r(136)=.17$, $p<.05$). There was also a significant correlation between SEN status and levels of depression reported by children post-transition, after controlling for levels of depression reported at pre-transition (CDI: $r(136)=.20$, $p<.01$). Thus indicating that having special education needs is a potential risk factor for reporting general emotional and behavioural difficulties and depression post-transition. However SEN status was not correlated with anxiety levels post-transition, after pre-transition anxiety had been controlled for.

In terms of academic ability, negative correlations were found between children's SATs scores for English Maths and Science, and levels of psychological distress post-transition i.e. low SATs scores were associated with greater levels of psychological distress post-transition. However, these associations did not reach significance.

b) Low socio-economic status;

Contrary to the hypothesis that low socio-economic status would be a risk factor for greater levels of distress post-transition, there were no significant correlations between low socio-economic status and levels of psychological distress post-transition.

c) Impact of significant life events;

In line with the hypothesis that reporting a significant impact of negative life events would be a risk factor for greater levels of psychological distress post-transition, there were significant associations between the impact of negative life events measured by the LEC and the total difficulties subscale of the SDQ ($r(136)=.25$, $p<.01$), the total anxiety score of the SCAS ($r(136)=.32$, $p<.001$) and the depression score of the CDI ($r(136)=.38$, $p<.001$) post-transition. Thus indicating that children who report greater impact of negative life events in the year prior to the transition, also report greater levels of psychological distress post-transition after controlling for pre-transition symptomatology. No correlations were found for impact of positive life events.

d) Poor quality friendships;

There was a significant positive correlation between friendship quality (FQQ) and levels of depression (CDI) reported post-transition, after controlling for levels of depression reported pre-transition ($r=(136).18$, $p<.05$). This indicates that contrary to the hypothesis, which stated that having poor quality friendships would be a risk factor for greater levels of psychological distress post-transition, children who reported themselves to have good quality friendships, reported greater levels of depression post-transition. Friendship quality was not found to be associated with total difficulties (SDQ) nor levels of anxiety (SCAS) post-transition.

e) High levels of psychological distress pre-transition;

As reported previously, in order to assess the stability of the dependent variables from pre to post-transition, a series of bivariate correlations were conducted, which

found significant correlations between pre and post-transition levels of psychological distress, i.e. those children who reported greater general emotional and behavioural difficulties at pre-transition, also tended to report greater general emotional and behavioural difficulties at post-transition, those children who reported themselves to feel depressed at pre-transition, also reported greater levels of depression post-transition, and those children who reported themselves to be anxious pre-transition, also reported more anxiety post-transition. However only moderate correlations were found which suggests that previous levels of symptomatology alone do not predict which children report psychological distress post-transition. It is therefore important to investigate which other factors are predictive of post-transition distress.

Using partial correlations, controlling for pre-transition symptomatology, partial support was found for the hypothesis that children reporting greater levels of psychological distress prior to the transition would report greater levels of psychological distress post-transition.

Significant associations were found between the total difficulties subscale of the SDQ at pre-transition and the CDI depression scale at post-transition ($r(136)=.27$, $p<.01$) and between the total anxiety subscale of the SCAS at pre-transition and the CDI depression scale at post-transition ($r(136)=.16$, $p<.05$) and between the CDI depression scale at pre-transition and the total anxiety scale at post-transition ($r(136)=.17$, $p<.05$).

Thus, children who reported greater levels of anxiety (SCAS) and general emotional and behaviour difficulties (SDQ) at pre-transition, reported greater levels of

depression post-transition, and children who reported greater levels of depression at pre-transition, reported greater levels of anxiety post-transition. However, there were no associations found between the level of general emotional and behavioural difficulties (SDQ) reported at pre-transition and anxiety levels (SCAS) reported at post-transition, nor between the level of self-reported anxiety (SCAS) and depression (CDI) pre-transition and general emotional and behavioural difficulties (SDQ) reported at post-transition. Thus, not all children who reported greater levels of psychological distress prior to the transition were reporting greater levels of psychological distress on all dependent variables post-transition, after controlling for pre-transition symptomolgy.

As reported earlier, gender was associated with the total difficulties subscale of the SDQ post-transition ($r(136)=-.20$, $p<.05$), that is, boys were reporting more general emotional and behavioural problems post-transition. This contradicts the hypothesis that girls not boys would be at a greater risk of experiencing psychological distress post-transition. However gender was not found to be associated with levels of anxiety or depression post-transition.

Finally, attendance (measured at post-transition) correlated with the total difficulties subscale of the SDQ, after controlling for total difficulties pre-transition ($r(136)=-.18$, $p<.05$), that is, the poorer the attendance level, the greater levels of general emotional and behavioural difficulties (SDQ) are reported post-transition. This suggests that attendance may be an indicator of psychological problems. However, attendance was not found to be associated with levels of anxiety (SCAS) or depression (CDI) post-transition.

3.4.2 Regression analyses

In the previous section, it was shown that the following variables predicted general emotional and behavioural difficulties post-transition as measured by the SDQ: SEN status; impact of negative life events; gender; and attendance. The following variables predicted level of anxiety post-transition as measured by the SCAS: impact of negative life events and level of depression pre-transition (CDI). The following variables predicted level of depression post-transition as measured by the CDI: SEN status; impact of negative life events; friendship quality; general emotional and behavioural difficulties (SDQ); and level of anxiety (SCAS) at pre-transition. All the correlations controlled for pre-transition levels of symptomatology and so findings reflect the change in psychological functioning subsequent to the transition.

Three hierarchical multiple regression analyses were conducted in order to assess the extent of independence or overlap between these univariate correlations. Just as with the partial correlations, change is assessed by examining post-transition symptomatology after controlling for pre-transition symptomatology.

The potential predictor variables for the total difficulties subscale of the SDQ post-transition were: SEN status, impact of negative life events, gender and percentage of attendance for the first half of term one of secondary school. The potential predictor variables for the total anxiety subscale of the SCAS were impact of negative life events and pre-transition levels of depression. The potential predictor variables for the CDI post-transition were SEN status, impact of negative life events (LEC), friendship quality (FQQ) and pre-transition general emotional and behavioural difficulties (SDQ) and level of anxiety (SCAS).

The hierarchical regressions were carried out in two stages. The pre-transition score for the dependent variable was entered in the first step to control for the impact of previous symptoms on difficulties post-transition. The predictors of change were entered in the second step. The significance of the predictor variables in accounting for change was tested using the change in R square from the first step to the second step.

The first dependent variable to be considered was the total difficulties subscale of the SDQ (Table 3.9). The final regression equation accounted for 26% of the variance in total difficulties post-transition. As would be expected, Step 1 (total difficulties at pre-transition) was highly predictive of total difficulties at post-transition, accounting for 14.3% of unique variance ($F(1,153)=25.54$, $p<.001$). Adding step 2: gender; SEN status; impact of negative life events (LEC) and attendance, to the equation, explained a further 12.1% of unique variance over and above the variance explained by total difficulties at pre-transition (R2 change =.12, $F(4,149)=10.68$, $p<.001$).

The two predictor variables which maintained a unique association with total difficulties reported post-transition were attendance and impact of negative life events (LEC). There was no evidence that the remaining predictor variables, e.g. gender and SEN status, were independently predictive of total difficulties at post-transition.

Table 3.9: Hierarchical multiple regression of total difficulties post-transition (SDQ)

	B	Std. Error	Beta	R Square
Step 1 (control variable)				**.14**
Pre-transition total difficulties (SDQ)	.43	.08	.38***	
Step 2 (predictor variables)				**.26**
Gender	-1.53	.91	-.12	
SEN status	1.78	1.03	.13	
Impact of negative life events (LEC)	1.13	.44	.20**	
Attendance	-.18	.06	-.20**	

* p<.05; ** p≤.01; *** p≤.001

The next dependent variable to be considered was level of anxiety as measured by the SCAS (Table 3.10). The final regression equation accounted for 29% of the variance in levels of anxiety post-transition. As would be expected, step 1 (total anxiety at pre-transition) was highly predictive of total anxiety at post-transition, accounting for 21% of unique variance ($F(1,155)=40.01$, $p<.001$). Adding step 2: impact of negative life events (LEC) and levels of depression pre-transition (CDI) to the equation, explained a further 8% of unique variance over and above the variance explained by total anxiety at pre-transition (R2 change =.08, $F(2,153)=21.16$, $p<.001$).

The predictor variable which maintained a unique association with post-transition total anxiety was impact of negative life events (LEC). There was no evidence that level of depression (CDI) at pre-transition was independently predictive of total anxiety at post-transition.

Table 3.10: Hierarchical multiple regression of total anxiety subscale post-transition (SCAS)

	B	Std. Error	Beta	R Square
Step 1 (control variable)				**.21**
Pre-transition total anxiety (SCAS)	.57	.09	.45***	
Step 2 (predictor variables)				**.29**
Pre-transition level of depression (CDI)	.15	.10	.12	
Impact of negative life events (LEC)	.40	.10	.27***	

* p<.05; ** p<.01; *** p≤.001

The final dependent variable to be considered was level of depression as measured by the CDI (Table 3.11). The final regression equation accounted for 37% of the variance in levels of depression at post-transition. As would be expected, step 1 (level of depression at pre-transition) was highly predictive of levels of depression at post-transition, accounting for 18.8% of unique variance ($F(1,153)=35.36$, $p<.001$). Adding step 2: friendship quality (FQQ); impact of negative life events (LEC); levels of general emotional and behavioural difficulties pre-transition (SDQ); level of anxiety pre-transition (SCAS) and SEN status, explained 18.2% of unique variance over and above the variance explained by level of depression at pre-transition (R2 change=.18, $F(5,148)=14.48$, $p<.001$).

The three predictor variables which maintained a unique association with levels of depression at pre-transition were: friendship quality (FQQ), SEN status and impact of negative life events (LEC). There was no evidence that the remaining predictor variables, e.g. level of general emotional and behavioural difficulties (SDQ) at pre-transition and level of anxiety (SCAS) pre-transition, were independently predictive of levels of depression at post-transition.

Table 3.11: Hierarchical multiple regression of level of depression post-transition (CDI)

	B	Std. Error	Beta	R Square
Step 1 (control variable)				**.19**
Pre-transition level of depression (CDI)	.45	.08	.43***	
Step 2 (predictor variables)				**.37**
Friendship quality (FQQ)	.24	.10	.16*	
SEN status	.49	.19	.17**	
Impact of negative life events (LEC)	.34	.08	.29***	
Pre-transition total difficulties (SDQ)	.02	.02	.10	
Pre-transition total anxiety (SCAS)	.07	.08	.07	

* $p<.05$; ** $p\leq.01$; *** $p\leq.001$

3.5 Further Investigations

Despite the finding that overall children reported a significant decrease in psychological distress following the transition, a number of children did report levels of general emotional and behavioural difficulties (SDQ), anxiety (SCAS) and depression (CDI) in the clinical range post-transition. The next section examines the frequencies of children who fell within the clinical and non-clinical range for each of the dependent variables pre and post-transition. The demographic characteristics for children who reported a decrease in psychological functioning compared with children who reported an increase or no change in levels of functioning post-transition are then presented, in an attempt to build up a profile of the children for whom the transition may be difficult.

3.5.1 Frequencies of children falling within the clinical and non-clinical range for each of the dependent variables pre and post-transition

Table 3.5 in the previous section (3.3) showed the number of children who fell within the clinical and non-clinical range for each of the dependent variables pre and post-transition. These figures are repeated again here, but in addition the actual frequencies are reported in order to show more clearly the change in status from pre to post-transition.

For the total difficulties subscale on the SDQ, children were divided into three groups: normal, borderline and abnormal range based on their pre-transition scores on the SDQ, using the Goodman et al. (1998) criteria. This was also carried out for their post-transition scores. Table 3.12 shows the frequencies of children in each of the three groups at pre and post-transition. Of the 110 children who reported general

emotional and behavioural difficulties within the normal range pre-transition, 96 remained in the normal range post-transition. However several children reported themselves to have more general emotional and behavioural problems post-transition; 6 children within the borderline range and 8 in the abnormal range.

For the anxiety subscale of the SCAS, children were divided into two groups: clinical and non-clinical range based on their pre-transition scores on the SCAS, using a cut-off point suggested by Spence (1997). This was also carried out for their post-transition scores (Table 3.13). Of the 130 children who reported anxiety levels in the non-clinical range pre-transition, 115 continued to remain within the non-clinical range post-transition, whereas 15 children reported an increase in their anxiety levels and were within the clinical range post-transition.

For levels of depression measured by the CDI, children were divided into two groups: clinical and non-clinical range based on their pre-transition scores on the CDI, using an epidemiologically based cut-off point suggested by Hodges (1990). This was also carried out for their post-transition scores (Table 3.14). Of the 127 children who reported levels of depression in the non-clinical range pre-transition, 115 continued to remain within the non-clinical range post-transition, whilst 12 children reported an increase in their levels of depression falling within the clinical range post-transition.

Table 3.12: No. of participants who fell within the normal, borderline and abnormal range on the total difficulties subscale of the SDQ, at pre and post-transition

	Post-transition			
	Normal	Borderline	Abnormal	**Total**
Pre-transition				
Normal	96	6	8	**110**
Borderline	19	6	6	**31**
Abnormal	10	2	4	**16**
Total	**125**	**14**	**18**	**157**

Table 3.13: No. of participants who fell within the clinical and non-clinical range on the total anxiety subscale of the SCAS, at pre and post-transition

	Post-transition		
	Non-clinical range	Clinical range	**Total**
Pre-transition			
Non-clinical range	115	15	**130**
Clinical range	22	5	**27**
Total	**137**	**20**	**157**

Table 3.14: No. of participants who fell within the clinical and non-clinical range on the CDI, at pre and post-transition

	Post-transition		
	Non-clinical range	Clinical range	**Total**
Pre-transition			
Non-clinical range	115	12	**127**
Clinical range	21	9	**30**
Total	**136**	**21**	**157**

In order to look at whether children scoring in the clinical range on one outcome measure were the same children who were scoring in the clinical range on the other outcome measures, children were divided into four groups: (A) those who reported an increase in their psychological functioning post-transition or who reported no change, (B) those who reported a decrease in psychological functioning on one of the three dependent variables, (C) those who reported a decrease in functioning on two of the three dependent variables, and (D) those who reported a decrease in functioning on all three dependent variables. In total, 125 children (80%) either reported an increase in their psychological functioning or reported no change post-transition; 25 children (16%) reported a decrease in psychological functioning on one dependent variable, 5 children (3%) reported a decrease in functioning on two dependent variables and only 2 children (1%) reported a decrease in functioning on all three dependent variables. Thus in total, 32 children (20%) reported a decrease in their psychological functioning, sufficient enough to move them from the non-clinical range to the clinical range post-transition on at least one measure.

Therefore, it was not the same children who fell within the clinical range on all the outcome measures at post-transition, rather children reported experiencing greater difficulties in some areas but not others.

3.5.2 Demographic characteristics and inferential statistics for children reporting a decrease in psychological functioning post-transition

As described in the previous section, children were divided into four groups. In order to build a clearer picture of those children who reported a decrease in psychological functioning post-transition, these groups were combined to form two

groups: (A) those that reported a decrease in their psychological functioning post-transition on any one of the three dependent variables (i.e. children who were within the non-clinical pre-transition but fell within the clinical range post-transition) and (B) those that reported no decrease (i.e. children who were in the clinical range pre-transition but fell within the non-clinical range post-transition, or children who remained either in the clinical or non-clinical range across the transition).

In order to examine whether these groups were significantly different in terms of the demographic predictor variables, chi square tests were conducted (Tables 3.15 & 3.16). Consistent with earlier findings that overall boys reported more general emotional and behavioural difficulties compared to girls (SDQ), significantly more boys than girls reported a decrease in psychological functioning post-transition ($\chi^2(1)=4.41$, $p<.05$). Significantly more children in this group were on their schools SEN register, compared to those children who did not report a decrease in functioning ($\chi^2(1)=6.40$, $p\leq.01$). No differences were found between the two groups in terms of SES status, attendance or ethnicity.

There were also significantly more children performing below average in English SATs in the group who reported a deterioration in their psychological functioning post-transition, compared to the group who reported an increase in their psychological functioning or who remained the same ($\chi^2(1)=11.28$, $p\leq.05$). However no significant differences were found between the two groups on SATs for Maths or Science.

Table 3.15: Demographic characteristics for children who reported a decrease in their psychological functioning and children who reported no decrease

	No. of children (%)			
	Decrease (n=32)	**No decrease (n=125)**	**χ^2 (df)**	**p**
Gender			4.41 (1)	.036*
Male	23 (72%)	64 (51%)		
Female	9 (28%)	61 (49%)		
SEN status			6.40 (1)	.011**
Yes	14 (44%)	28 (22%)		
No	17 (53%)	96 (77%)		
(Missing)	1 (3%)	1 (1%)		
SES status			.44 (1)	.509
Yes	11 (34%)	54 (43%)		
No	16 (50%)	59 (47%)		
(Missing)	5 (16%)	12 (10%)		
Attendance			20.01 (22)	.582
<80%	5 (16%)	4 (3%)		
80-90%	3 (9%)	22 (18%)		
91-100%	24 (75%)	99 (79%)		
Ethnicity			.14 (1)	.707
White UK	13 (41%)	58 (46%)		
Non-white UK	17 (53%)	65 (52%)		
(Missing)	2 (6%)	2 (2%)		

Table 3.16: SATs profiles for children who reported a decrease in their psychological functioning post-transition and children who reported no decrease

	No. of children (%)					
	Decrease (n=32)		No decrease (n=125)		χ^2 (df)	p
	Level 1-3	Level 4-5	Level 1-3	Level 4-5		
English	14 (44%)	18 (56%)	31 (25%)	94 (75%)	11.28 (5)	.046*
Maths	10 (31%)	22 (69%)	28 (22%)	97 (78%)	8.46 (5)	.133
Science	9 (28%)	23 (72%)	18 (14%)	107 (86%)	6.99 (5)	.221

* $p \leq .05$; ** $p < .01$; *** $p < .001$

For the continuous data, those children who reported a decrease in psychological functioning were compared with those who did not. This was investigated using independent t-tests (Table 3.17). Children who moved from the non-clinical to the clinical range reported themselves to have significantly greater levels of general emotional and behavioural difficulties (SDQ) pre-transition compared to children who remained in either the clinical or non-clinical range or who moved from the clinical to non-clinical range ($t(155)=2.11$, $p<.05$). They also reported experiencing a greater impact of negative life events ($t(155)=4.89$, $p\leq.001$) and reported having poorer quality friendships ($t(155)=2.18$, $p<.05$), compared to children who either reported an increase in psychological functioning post-transition or who remained the same across the transition.

Overall, the 32 children who showed a deterioration on any of the three indices of psychological functioning, were significantly different from the rest of the sample on a number of variables. This group had more boys than girls and had a greater number of children with special education needs and who were performing below average in English SATs. This group also reported more general emotional and behavioural difficulties at pre-transition and to have experienced a greater impact of negative life events within the past year and have poorer quality friendships compared to the children who either reported an increase in psychological functioning post-transition or who remained the same across the transition.

Table 3.17: Means and standard deviations on the continuous data for the children who reported a decrease in psychological functioning post-transition and those who reported no decrease

	Mean (SD)			
	Decrease (n=32)	**No Decrease (n=125)**	**t (155)**	**p**
Total difficulties (SDQ) [a]	14.98 (4.97)	12.69 (5.59)	2.11	.04*
Pro-social beh. (SDQ) [b]	6.72 (2.11)	7.34 (1.95)	1.60	.11
Total anxiety (SCAS) [c]	31.99 (11.64)	28.30 (13.80)	1.39	.17
Depression (CDI) [d]	13.41 (7.36)	10.67 (7.67)	1.82	.07
Teacher-rated total difficulties (SDQ) [a]	10.82 (7.72)	8.61 (6.58)	1.63	.11
Friendship quality (FQQ) [e]	14.76 (5.67)	16.79 (4.43)	2.18	.03*
Impact of:				
Positive life events (LEC) [f]	3.55 (3.50)	3.78 (3.25)	.35	.73
Negative life events (LEC) [f]	8.74 (6.40)	4.55 (3.63)	4.89	.000***

[a] scale ranges from 0-40; [b] scale ranges from 0-10; [c] scale ranges from 0-114; [d] scale ranges from 0-54; [e]scale ranges from 0-24; [f] scale ranges from 0-138.

* p<.05; ** p<.01; *** p<.001

CHAPTER 4

DISCUSSION

This study was a follow up of a cohort of children who had made the transition into secondary school. The study examined the impact of secondary school transition on children's psychological functioning and attempted to identify which risk factors influenced this adjustment. The main finding was that, contrary to prediction, there was no overall negative impact of transition, in fact there was a decrease in general emotional and behavioural difficulties (SDQ), levels of anxiety (SCAS) and levels of depression (CDI) post-transition for most children. However, a subgroup of children showed negative changes in some aspects of their functioning post-transition, suggesting a greater vulnerability to stressors. Several risk factors were found to predict psychological distress post-transition after controlling for pre-transition levels of symptomatology, these were: impact of negative life events; being on the school's register for special education needs; poor attendance and rather surprisingly, good friendship quality. Children who reported difficulties in the non-clinical range at pre-transition, but at post-transition were reporting difficulties within the clinical range tended to be male with special education needs and who had poor literacy skills. This group also reported more general emotional and behavioural difficulties at pre-transition, had experienced a greater impact of negative life events and had poorer quality friendships, compared to children who did not report a decrease in psychological functioning post-transition.

This chapter examines the theoretical implications of the findings and addresses methodological issues that are raised. Finally, the implications of this study for clinical services and for future research are addressed.

4.1 Specificity of the indices of adjustment

As mentioned in the Introduction, school adjustment is a broad construct with multiple facets. The current study focussed on three facets to represent this dimension: general emotional and behavioural difficulties (measured by the SDQ) and level of depression (measured by the CDI). The study also looked at levels of anxiety (measured by the SCAS) since the role of anxiety in the transition literature has not extensively been investigated. As reported in the Results section (3.1), there were moderate correlations between each of these indices at post-transition, which may imply that they are measuring a similar construct. However, given that the measures were not perfectly correlated with each other, it is important to examine each specific aspect of outcome. Throughout this section, results are discussed in relation to all three aspects of adjustment.

4.2 Prevalence of difficulties in secondary school

The number of children falling within an abnormal range on the outcome measures depended on the criterion being applied. For the SDQ, using the Goodman et al. (1998) criteria, 11% of children in the current study fell within an abnormal range and 9% were borderline. These figures are consistent with findings from research using the SDQ. For example, Goodman et al. (1998) found that 5% of a community sample of 11-16 year olds fell within an abnormal range, and 18% within a borderline range on the SDQ. For the SCAS, using Spence (1997) criteria, 13% of children in the current study fell within an abnormal range. This finding is similar to that reported for other community samples, for example, Barrett and Turner (2001) found that 18% of children were classified as clinically anxious in their community sample of 10-12 year olds. For the CDI, using an epidemiologically based cut-off

point suggested by Hodges (1990), 13% of children in the current study fell within an abnormal range. This is similar to findings reported by Cole et al. (1998) who found that 8% of a community sample of early adolescents met the criteria for depression.

These findings are compatible with other epidemiological research. In a review of epidemiological studies, Bird (1996) reported that the overall population prevalence rates for child and adolescent mental health disorders range from 12.4% – 51.3% with a mean of 29%. Target and Fonagy (1996) state that psychiatric impairment among children and adolescents is estimated between 10-33%. Variation in estimates is accounted for by differences in populations studied, sampling, definition of disorders, informants and data collection methods (Davis, Day, Cox, & Cutler, 2000). According to Peterson and Leffert (1995) and Rutter, Cox, Tupling, Berger and Yule (1975), the highest rates of psychiatric impairment tend to be in inner city areas and in adolescents. In a recent community based study of children and adolescents aged 0-16 in an inner London borough, similar to the one studied in the current research, Davis et al. (2000) estimate 37% of children as having three or more psychological problems, and 25% as expressing a need for help. This suggests that problem prevalence in the present sample was similar to other community studies.

4.3 Impact of secondary school transition

There was no evidence to support the hypothesis that secondary school transition negatively affects children's psychological functioning. There was no significant change in children's self-reported general emotional and behavioural difficulties (SDQ), levels of anxiety (SCAS) or depression (CDI) after transition. There was

also no significant change in children's self-rated pro-social behaviour on reaching secondary school. Indeed, contrary to a predicted increase in problems, there was some evidence that reported problems decreased after the transfer, with self-reported general emotional and behavioural problems and levels of anxiety and depression decreasing after secondary school transition for the majority of children. Therefore, overall, the results imply that children's psychological functioning remains broadly stable from primary to secondary school.

These findings concur with other studies that report stability in difficulties between primary and secondary school or some positive effects across the transition (Forgan & Vaughn, 2000; Hirsch & Rapkin, 1987; Nottleman, 1987; Roeser et al., 1999; Taylor, 2000; Wallis & Barrett, 1998). These findings contrast with studies that have reported negative impact of transition (Blyth et al., 1983; Chung et al., 1998; Seidman et al., 1994; Simmons & Blyth, 1987; Wigfield et al., 1991). This is despite the fact that the study's sample was at high risk of experiencing transition problems, being from an inner city, and having high levels of diversity and social disadvantage. The findings from the current study therefore offer support for the growing consensus that rather than early adolescence being a time of great psychological turmoil, there is a general rise in psychological functioning, even across the transition (O'Malley & Backman, 1983; Simmons et al., 1987).

One should exercise caution when interpreting the decrease in general emotional and behavioural problems and levels of anxiety and depression after secondary school transition, to mean that problems improved after the transfer. Consistent with normative data on children's self-report measures, including the SDQ, the SCAS and

the CDI, there appears to be a developmental trend that in general scores tend to decline slightly with age. Therefore, a decrease in scores may not necessarily suggest an improvement in psychological functioning, but just reflect the tendency for younger children to over-report symptoms or conversely, for older children to under-report symptoms.

If however, the problems are stable, there are several possible explanations for the apparent stability in problems. The transition from primary to secondary school may not be difficult for the majority of children, or a very small factor in predicting psychological distress. According to Caprara and Rutter (1995) adolescent psychopathology is influenced by a multitude of environmental and biological factors including individual differences in vulnerability to environmental risks, multiple negative life events, cognitive processing and timing of experiences. It is possible that against the myriad of factors influencing the psychological functioning of early adolescents, the impact of a normative stressor such as school transition may be minimal.

Positive effects of secondary school transition may be attributed to positive changes in the school environment. Forgan and Vaughn (2000) found that children preferred middle school to elementary school, citing increased independence, feeling more grown-up, changing classes, making new friends and liking teachers as reasons for their preference, whilst acknowledging the disadvantages of elementary school such as increased academic competition, being victimised and teachers not taking a personal interest. In addition, a change in peer and teacher networks may be conducive to increases in well-being. For example, a child may have left behind

peers or teachers that he or she had significant problems with. Furthermore, emotional support and discipline may be better at secondary schools compared to primary schools. More formal teaching and monitoring of disciple in secondary schools may for example decrease conduct problems.

The lack of negative effects of transition may be specific to cultural factors. For example, the results may reflect experiences of current British children, who are within a different educational environment from previously researched cohorts, the majority of which have been in North America. These results may also be specific to the environments of the schools taking part in the current study. The schools had many procedures in place for easing the transition from primary to secondary school, including good liaison between primary and secondary school staff and thorough induction and monitoring of all pupils, including pre-transition visits to the secondary school and visits from secondary school staff to the primary school.

The findings do not however preclude the possibility that transition is not important for a sub-section of children. Wallis and Barrett (1998) found that whilst the transition was not found to be a major stressor associated with decreased psychological adjustment for the majority of children, a substantial number were experiencing psychological disorders which under normal circumstances may not have been picked up. Similarly, in the current study, a subgroup of children reported more difficulties post-transition, which may indicate that school transition is likely to be more difficult than for others. Indeed, 20% of children in the current study reported a decrease in functioning sufficient enough to move them from the non-clinical range at pre-transition to the clinical range post-transition. This group of

children were significantly different from the rest of the sample on a number of variables. They were more likely to be male, have special education needs and low levels of literacy, have experienced a multitude of negative life events, have poor quality friendships and have a high level of pre-existing general emotional and behavioural difficulties compared to children who either reported an increase in psychological functioning post-transition or who remained the same across the transition. This suggests that changing school may interact with such factors, which may produce problems for subgroups of children.

Roeser et al. (1999) identified subgroups of well adjusted and poorly adjusted children in primary school. Whilst children's self-esteem remained stable across the transition, there were deteriorations over time in perceived academic competence and motivation within the poorly adjusted groups. These declines were particularly pronounced across the transition period. They argued that poorly adjusted groups might start on a destructive pathway in early adolescence, with increasing use of inappropriate behaviour determining later social and occupational outcomes.

4.4 Predictors of transition problems

This section addresses the potential risk factors hypothesised to be associated with psychological difficulties post-transition.

4.4.1 Gender as a risk factor for psychological distress post-transition

In terms of gender differences, contrary to the hypothesis which stated that girls would be at a greater risk of experiencing psychological distress post-transition, boys reported more general emotional and behavioural difficulties (SDQ) post-transition,

after controlling for general emotional and behavioural difficulties pre-transition. However gender was not found to have a unique predictive role after taking into account the impact of negative life events and attendance. There were no gender differences in reported levels of anxiety and depression post-transition.

Overall, there was no support for the hypothesis that girls would be reporting more psychological distress following the secondary school transition compared to boys, on the contrary, boys appeared to be more at risk of psychological problems post-transition. This contradicts findings reported by many researchers including Chung et al. (1998), Hirsch and Rapkin (1987) and Simmons and Blyth (1987), who found greater vulnerability among girls during the transition. Developmental differences have been proposed to account for greater vulnerability across the transition amongst girls, that is the transition is more likely to coincide with significant pubertal change for girls that for boys (Hamburg, 1974). Rosenberg (1986) suggested that girls are more affected by the physical changes occurring at puberty and predicted that their self-concepts would therefore be more unstable compared to boys during the transition period. Perhaps girls in this study had not yet begun significant pubertal change and as a result were not affected by such changes. However no measure of puberty was used in the current study to explore this hypothesis.

The findings are more in line with a study by Wigfield et al. (1991), which found that the transition had a negative effect on girls and boys. There were no gender differences in reported levels of anxiety and depression post-transition. Some researchers have also failed to find significant gender effects in psychological functioning post-transition (Nottelman 1987; Seidman et al., 1996).

4.4.2 Poor academic ability as a risk factor for psychological distress post-transition

There was some evidence to support the hypothesis that having special education needs is a risk factor for psychological difficulties post-transition. There were significant correlations between children who were on the SEN register and levels of general emotional and behavioural difficulties (SDQ) and levels of depression (CDI) post-transition, after controlling for levels of symtomology at pre-transition, that is, children who had special education needs reported greater change levels of general emotional and behavioural difficulties and depression post-transition compared to children without special education needs. However, children who were on the SEN register did not report greater change levels in their levels of anxiety at post-transition.

This finding supports findings reported by Chung et al. (1998), Reyes et al. (2000) and Lord et al. (1994), that children with higher academic ability have higher self-concepts or self-esteem post-transition, and contradicts Forgan and Vaughn's (2000) finding that both children with and without specific learning disabilities reacted similarly to secondary school transition.

SEN status was found to predict level of depression on the CDI at post-transition, i.e. it had a unique predictive role even after taking into account friendship quality, impact of negative life events, and pre-transition levels of general emotional and behavioural difficulties (SDQ) and anxiety (SCAS). However, SEN status was not found to predict general emotional and behavioural difficulties on the SDQ over and above any of the other potential risk factors, i.e. it did not have a unique predictive

role after taking into account impact of negative life events and attendance. This finding may in part be due to the recording of the SEN data. Compilation of a SEN register is to some extent dependent on each school's criteria for SEN and will inevitably exclude some children who are on the borderline of this criterion. In some schools children are placed on the register due to having emotional and behavioural difficulties while in others the register is specifically for children who are not making sufficient progress in a mainstream setting. In the current study no distinction was made between children who were on the register due to learning difficulties or emotional and behavioural difficulties or the extent of these difficulties, which may have confounded the results.

Consistent with this view, poor academic ability (measured by performance in SATs) was not significantly correlated with levels of psychological distress post-transition. This may be due to the characteristics of the sample. The majority of the sample (77%) performed above the national average in standardised tests, with only a minority achieving below average results. With so many children performing above average, academic ability may not affect transition. Perhaps this sample did not have enough children performing below average to detect a great effect.

4.4.3 Low socio-economic status as a risk factor for psychological distress post-transition

Contrary to the hypothesis that low socio-economic status would be a risk factor for psychological difficulties post-transition, no significant interaction was found. Thus, problem levels remained stable over the transition period regardless of a child's socio-economic status.

This result could be due to the large numbers of missing data for this variable, which may have confounded the results, alternatively it may be due to the measure used to assess socio-economic status. Although eligibility for free school meals is a commonly used index of social deprivation, it is not necessarily an accurate one. Jason et al. (1992) found that children from lower socio-economic status families might be most at risk for developing emotional problems. However, they used Hollingshead's (1975) socio-economic scale to look at the representation of social class. In addition they found that low socio-economic status also predicted continuing academic, social and health problems post-transition, variables not examined in the current study. Therefore having low socio-economic status should not be disregarded as a potential risk factor for experiencing psychological distress post-transition.

4.4.4 Impact of negative life events as a risk factor for psychological distress post-transition

The hypothesis that received the strongest support was impact of negative life events as a risk factor for psychological difficulties post-transition. The greater impact of negative life events reported, the more general emotional and behavioural difficulties children reported (SDQ) and the more anxious (SCAS) and depressed (CDI) they were post-transition, independently of the other predictor variables. This was found to be the case for negative life events, but not for positive life events, which therefore suggests that experiencing positive life events may not serve as a protective factor against developing psychological problems post-transition.

This finding is consistent with research on the association between life events and anxiety, depression and behavioural problems. Robinson et al. (1995) found that an accumulation of negative life events were predictors of depression and behavioural problems following secondary school transition. Numerous studies have revealed associations between stressful life events and depressive symptoms in children and adolescents (Compas et al., 1994; Johnson & McCutcheon, 1980; Nolen-Hoeksema, Girgus & Seligman, 1986) and actual cases of depressive disorder (Daniels & Moos, 1990).

According to Garber and Flynn (2001) exposure to negative life events, especially aversive or traumatic events, can affect a child's outlook on life, their sense of self, their world and their future. Such events may lead to cognitions of helplessness and hopelessness and consequently can provide the foundation for the formulation of negative beliefs. Nolen-Hoeksema, Girgus and Seligman (1986) examined the association between attributional style and negative life events, and showed that exposure to negative life events predicted a negative change in children's cognitions about themselves and their future, and was subsequently a risk for increased depression.

Associations between stressful life events and anxiety disorders have also been observed. Rapee and Szollos (cited in Rapee, 2003) found that clinically anxious children reported more stressful events in their lives compared to non-clinically anxious children. Finlay-Jones and Brown (1981) showed an association between the onset of stress and anxiety disorders, and found that the type of stressful event differed between anxiety and depression. Loss related events tended to precede the

onset of depression, whereas threatening events were associated with the onset of anxiety.

However, in a study examining stress at onset in anxiety, Rapee, Litwin and Barlow (1990) found no differences between groups in the number of life events experienced, but anxious participants reported a significantly greater negative impact of the events compared with non-clinical participation, despite the fact that blind raters did not objectively rate the events as any more negative. Therefore suggesting that their pre-existing personality or vulnerability made the event more distressing.

4.4.5 Poor quality friendships as a risk factor for psychological distress post-transition

Contrary to the hypothesis that poor quality friendship would be a risk factor for psychological problems post-transition, no association was found between friendship quality and general emotional and behavioural difficulties (SDQ) or levels of anxiety (SCAS) post-transition. Rather surprisingly, a positive association was found between friendship quality and levels of depression (CDI) post-transition. That is, children who reported having a good quality friendship reported greater levels of depression post-transition. Friendship quality had a unique role in predicting the level of depression post-transition, after taking into account SEN status, impact of negative life events, and pre-transition levels of general emotional and behavioural difficulties (SDQ) and anxiety (SCAS).

This finding contradicts Stocker's (1994) finding that friendships were associated with lower levels of depressive mood. It also contradicts evidence provided by many

other studies demonstrating the association between peer support and psychological well-being (Compas, 1987; Hirsch & Rapkin, 1987; Jason et al., 1992).

These findings could be due to the extent of missing data on this particular questionnaire, which may confound the results, and as such the findings should be interpreted with caution. Another possible explanation for this finding is that perhaps these children may posses a broader range of emotional literacy, that is, they are more in tune with what feeling low means and can recognise this within themselves and are able to share how they are feeling with their friends. Secondly there may be more scope in a close friendship for social comparison, which may adversely affect a child's self-identity if they perceive themselves unfavourably, and as a result report more depressed feelings. The finding may also simply represent a bias in the reporting, for example, perhaps children were over-reporting the quality of their friendships, when in fact they were of poor quality. More likely, the results may be explained by two of the measures being confounded with each other, i.e. in addition to the FQQ, the LEC also contained several items relating to friendships, and as such this overlapping of items between a measure of support and a measure of stress may have confounded the results.

4.4.6 High levels of psychological distress pre-transition as a risk factor for psychological distress post-transition

There was some evidence to support the hypothesis that children who reported high levels of psychological distress pre-transition would be at risk for greater levels of psychological distress post-transition. There was a moderate level of stability between psychological distress reported at pre and post-transition, implying that

children's levels of general emotional and behavioural difficulties (SDQ), anxiety (SCAS) and depression (CDI) at pre-transition remained similar at post- transition.

There were significant correlations between children who reported a greater level of general emotional and behavioural difficulties (SDQ) and anxiety (SCAS) with levels of depression post-transition, after controlling for pre-transition levels of depression, i.e. children who reported greater general emotional and behavioural difficulties and anxiety at pre-transition, reported greater change levels of depression post-transition compared to children who did not report high levels of general emotional and behavioural difficulties and anxiety pre-transition. However, neither the pre-transition levels of general emotional and behavioural difficulties or anxiety were found to predict levels of depression post-transition over and above any of the other potential risk factors, i.e. they did not have a unique predictive role after taking into account friendship quality, SEN status and impact of negative life events.

There was a significant correlation between children who reported a greater level of depression (CDI) pre-transition with levels of anxiety (SCAS) post-transition, after controlling for pre-transition level of anxiety, i.e. children who were depressed at pre-transition reported greater change levels in anxiety at post-transition compared to children who did not report a high level of depression at pre-transition. However, pre-transition depression did not have a unique predictive role after taking into account impact of negative life events.

Finally, there was no significant correlation between pre-transition levels of anxiety (SCAS) and depression (CDI) with general emotional and behavioural difficulties

(SDQ) post-transition, after controlling for general emotional and behavioural difficulties pre-transition, i.e. children who reported high levels of anxiety and depression at pre-transition, did not necessarily report more general emotional and behavioural difficulties post-transition.

Overall there is some evidence suggesting that children who report high levels of distress pre-transition may be at a greater risk than their peers of more problems post-transition, which would support findings by Chung et al. (1998). However, not all children who reported psychological difficulties prior to the transition reported problems in all areas post-transition (after controlling for pre-transition symptomatology). Also only moderate correlations were found between the pre and post-transition scores on each of the three dependent variables. This would suggest that psychological distress pre-transition alone is not sufficient to predict which children experience difficulties post-transition and implies that there are additional factors playing a predictive role.

4.4.7 Additional findings

Of interest, there was no association between primary school teacher's reports of children's general emotional and behavioural difficulties and children's self-reported general emotional and behavioural difficulties (SDQ), or levels of anxiety (SCAS) and depression (CDI) post-transition. Cole et al. (1992) and Stanger and Lewis (1993) found that teacher reports of externalising behaviour problems represented one of the most accurate predictors of future contact with mental health services and concluded that the inclusion of teacher report of adjustment is therefore of importance in the identification of 'at risk' adolescents. However, according to La

Greca (2001) work with preadolescent children suggests that teachers may not be accurate informants of children's social anxiety. Silverman and La Greca's study (as cited in Silverman & Treffers, 2001) found that peers' ratings corresponded better to children's self-reports of social anxiety than did teachers' ratings. Teacher's were similarly inaccurate in their ratings of conduct problems.

Level of attendance (taken for the first half of term one of secondary school) was associated with general emotional and behavioural difficulties (SDQ) after controlling for general emotional and behavioural difficulties at pre-transition, i.e. the poorer the child's attendance, the greater their level of general emotional and behavioural difficulties reported post-transition. Attendance maintained a unique contribution after taking into account gender, SEN status and impact of negative life events. However, attendance was not found to be associated with levels of anxiety (SCAS) or depression (CDI) post-transition. Given that attendance data was taken at post-transition and not pre-transition, it cannot be regarded as a predictive variable as such, rather poor attendance may be an indicator of general emotional and behavioural difficulties. It would be interesting to investigate whether pre-transition levels of attendance were associated with psychological distress post-transition.

Children who participated in the current study were found to be a slightly higher risk group compared to the wider sample who participated in the previous study (Creswell et al., Unpublished manuscript), as children in the current study reported greater levels of emotional and behavioural difficulties (SDQ) and depression (CDI) at pre-transition. Therefore the findings have limited generalisability to the wider sample.

In summary, of all measured predictor variables, the most salient predictors of decline for levels of general emotional and behavioural difficulties (SDQ) post-transition were: pre-transition level of general emotional and behavioural difficulties, impact of negative life events and attendance (although as mentioned earlier, attendance cannot be regarded as a predictor variable as such given that the measure was taken for post-transition attendance). These risk factors maintain a unique association with post-transition general emotional and behavioural difficulties, even after controlling for pre-transition levels of general emotional and behavioural difficulties. The most salient predictors of decline for levels of anxiety (SCAS) post-transition were: pre-transition levels of anxiety and impact of negative life events, which maintained a unique predictive role even after pre-transition levels of anxiety were controlled for. The most salient predictors of decline for depression (CDI) post-transition were: pre-transition levels of depression, friendship quality, SEN status and impact of negative life events. These risk factors maintain a unique association with post-transition levels of depression, even after controlling for pre-transition levels of depression.

The risk factors differed depending on which aspect of adjustment was being considered. The only risk factor found to predict post-transition psychological distress on all three aspects of adjustment was the impact of negative life events. This highlights the importance of looking at different aspects of adjustment, when attempting to identify potential predictors of risk.

20% of the sample reported a decease in their psychological functioning, which was sufficient enough to move them from the non-clinical to the clinical range post-

transition on at least one measure. This suggests that this subgroup were more vulnerable to the transition. Consistent with earlier findings this group was predominantly male. It contained a greater number of children with special education needs, with below average levels of literacy. This group also reported more general emotional and behavioural difficulties (SDQ) at pre-transition and reported a greater impact of negative life events within the past year and reported poorer quality friendships, compared with children who did not show a decrease in their psychological functioning post-transition. By identifying the risk factors that predict post-transition psychological distress, one can begin to build up a profile of the children for whom transition may be difficult.

4.5 Strengths and limitations of the study

This study had a number of strengths. It studied an under-researched sample in the transition literature, namely children from British inner city schools. The study had a large sample size in comparison to much of the existing transition research, thus increasing the likelihood of identifying the small number of children for whom transition is particularly difficult. This study looked at multiple risk factors affecting adjustment simultaneously, rather than simply looking at the independent contribution of variables, which existing transition research has tended to do. It also investigated the impact of pre-existing anxiety on secondary school transfer, which has not been thoroughly addressed in previous research. However, there are limitations to this study, which limit the conclusions that can be drawn from the findings. These are outlined alongside suggestions for future research.

Using a one-group design made it difficult to study the precise impact of secondary school transition. Ideally, a control group of same aged children who did not undergo the transition would have been used, which would have allowed for the control of maturational and historical factors. The absence of comparison groups, which are not making the school transition, precludes one from attributing the cause of the changes to the transition per se rather than other concomitant factors, such as entry into adolescence. In a study by Blyth et al. (1978) children who remained in primary school showed an increase in self-esteem compared to those children who made the transition to secondary school, and concluded from this that changing school affects normal development. The current study was clearly unable to detect such an effect. Unfortunately, the British educational system makes it impossible to recruit a control group of similar aged children from a similar background not undergoing the secondary school transition. However, a direct measure of stress would have improved assessment of the impact of transition, in the absence of a control group.

Another factor, which may have affected the type of transition effect detected, was the timing of the assessment. The current study took measurements relatively early on in the first year of secondary school, and thus only provided a measure of the short-term impact of secondary school transition. It is possible that taking measurements later in the school year, once the 'honeymoon period' was over, may have produced a transition effect. However, this is unlikely, since most research which has detected a decrease in psychological functioning post-transition has done so early in the first year of secondary school (Seidman et al., 1994; Wigfield et al.,

1991). However, additional assessment points would be beneficial in specifying the duration of effects.

Many of the measures used in the study were self-report rather than direct observations, except for the teacher-rated SDQ used in the previous study (Creswell et al., Unpublished manuscript) and the SATs which are a performance measure. Self-report measures may be of limited validity since results will undoubtedly be influenced by informant bias. These results would be strengthened by the inclusion of multiple sources of measurement, such as parent, teacher and peer ratings, which would provide a broader perspective than the current study. Such approaches seem especially suitable for measuring symptoms that are manifested in observable behaviours such as the low affect and behavioural symptoms of depression and many of the externalising problem behaviours. Structured clinical interviews may also be useful in providing a more thorough assessment of adolescent's psychological adjustment. For example, the life events checklist may not capture the essence of events because they do not take into account the appraisals surrounding them, that is, what it is that makes these events more or less stressful for individuals. By using interview methods, one may obtain a more precise index of the objective threat for each individual caused by particular life events.

One of the aims of the study was to examine which risk factors influence adjustment to secondary school. However, the range of predictor variables used in the study was not exhaustive of all important characteristics relevant to the transition. For example, this study did not examine children's personal coping resources such as their personality, attitudinal and cognitive dispositions that promote effective

adaptation, which may reduce the potentially harmful effects of stress, as outlined by Fenzel (cited in Lord et al., 1994). Other personal coping resources that are hypothesised to buffer against the detrimental effects of stress include, a sense of autonomy, a sense of personal efficacy and confidence in one's competence (Bandura, 1986; Compas, 1987; Garmezy, 1983; Harter, 1990). It would be interesting to investigate the value of different personal traits in adjustment to the transition in future research.

Another area not examined in the current study is characteristics of the family environment. Based on evidence that early adolescence is a transitional developmental period in which children disengage and distance themselves from their parents while simultaneously increasing their time with peers (Fuligni & Eccles, 1995), it is likely that factors from the family context would influence school adjustment. A number of variables in the family environment have been studied in terms of their ability to influence child and adolescent development. Lord et al. (1994) found that characteristics of the family environment were influential in determining whether children were able to adapt to the changes associated with the transition to high school. They found that parents who were able to adjust to their child's need for autonomy facilitated a positive transition. Other studies have investigated the negative impact of interparental conflict on child and adolescent psychological adjustment and development (Dadds & Powell, 1991; Kempton et al., 1989; Ohannessian et al., 1994). Given that family related variables appear to play an important role in the aetiology and maintenance of internalising emotional and behavioural problems, future studies should attempt to explore contemporaneous

family dynamics by accessing and engaging families, to gain a more thorough understanding of how family environment affects adjustment to the transition.

A further factor, which may be associated with adjustment not investigated in the current study, is the effects of pubertal development. Simmons and Blyth (1987) reported that girls, especially early maturing girls who made transition, evidence a decline in self-esteem, which might suggest that early pubertal developers might find the change easier. However, longitudinal studies to date have reported no consistent puberty status effects (Hawkins & Berndt, cited in Lord et al., 1994; Petersen & Crokett, 1985). It may have been interesting to include an indicator of pubertal development in future research to look at the ways in which it may interact with the social changes.

The current study did not control for the impact of secondary school characteristics on transition and thus did not allow the detailed examination of the many microstructure or school climate variables that might be relevant, including degree of perceived victimisation at school and various secondary school characteristics, for example, size of school, levels of attainments in national tests and the preparations in place for secondary transfer. Further investigation of the mediating role of structure and organisation of schools in moderating the negative effects is critical.

Another moderating factor not explored here but which warrants further attention is whether or not peers make the transition to the same school. This may be of importance given that research has suggested that a factor which may discriminate between children who make the transition successfully and those that find the

transition more difficult is making the move with a number of peers (Proctor & Choi, 1994).

To develop a more comprehensive picture of adaptation to the transition, future research must incorporate a wider range of indices, including individual coping resources, family-related variables and characteristics of various secondary schools. These variables could potentially be moderating transition adjustment, and may be contributing to some of the variance not accounted for by the variables used in the current study.

Whilst the current study found that secondary school transition did not adversely impact on psychological functioning for the majority of children, the results should be interpreted in view of the particular characteristics of the sample. The results were obtained from predominantly white, working and middle-class children in an urban community. Whilst the findings may be generalisable to other inner city settings, they may differ for other samples with different characteristics, therefore the findings may have limited generalisability. Future research could investigate the transition for non-white, low socio-economic populations.

There was a substantial amount of missing data in the current study. In social research, it may well be that the reason why data are missing is in some way related to the question being investigated. For example, those who avoided filling in the questionnaires, or who did not attend the session, may well have different views from those who responded. It is difficult to quantify the effect that missing data had on the conclusions drawn, and as such it is important to interpret the findings with caution.

However, the results are consistent with other research in this area and so it is reasonable to assume that the conclusions drawn are acceptable. For future research it would be well worth spending considerably more time, effort and ingenuity in seeking to ensure a full response.

4.6 Clinical implications

Despite the limitations, the results of the current study have useful implications both for educational and mental health services. A full set of implications from these findings has to await studies that replicate and investigate further. However, some policies can be suggested based on the results.

Based on the findings of the current study, transition to secondary school does not appear to affect the majority of children, with problems in primary school continuing to persist at a similar or to a slightly less degree in secondary school. However, there was a subgroup of children who reported themselves to be experiencing problems typical of children attending psychiatric out-patient clinics. This finding was in line with other community samples, but is nevertheless still high, with 20% of children (or one in five) reporting an increase in psychological distress sufficient enough to move them from the non-clinical to clinical range post-transition.

There is an abundance of empirical data demonstrating the high costs of not ensuring continuity in the lives of children. For example, children who do not make effective secondary school transition may be less successful in school and may be vulnerable to mental health and adjustment problems. Given the chronic nature of emotional and behavioural problems in early adolescence (Farrington, 1995), from a clinical

service point of view, it is vital that these vulnerable children be identified as early as possible so that support can be offered.

Since many symptoms of depression and anxiety are internal to the child, parents or carers may not recognise children's difficulties and not present to their GP, and so vulnerable children may not receive the mental health help that they need. It is unlikely that children could refer themselves for help, as often they may not realise that they could benefit from professional input. Whilst teachers could be relied on to refer children, it was apparent from the current study that primary school teachers may be less adept at identifying children's emotional and behavioural problems and thus a child's problems may go undetected.

The findings from the current study suggest that it may be possible to detect troubled children, by screening for mental health problems. Children who were on their schools register for special education need, had below average levels of literacy, had poor quality friendships and who reported more general emotional and behavioural difficulties at primary school and reported a greater impact of negative life events were found to be the most vulnerable for experiencing psychological difficulties post-transition. Other risk factors include reporting greater levels of depression and anxiety at primary school and being male. School transition may be taken for granted by many, perhaps because of its normative nature. If primary and secondary schools are aware of these potential risk factors, they could play an important role in the early identification and in referring children to appropriate mental health resources. Screening for mental health problems is one way of identifying such children and clinical psychologists could play a role in helping education services

employ good screening measures to identify vulnerable children. However, a general problem with screening is its potential to stigmatise children by labelling and the problem of producing false positive rates. Employing school-wide screening as part of general school based medical care may address the problem of stigmatisation.

Primary schools may play a particularly important role in the early detection and intervention of troubled children given the smaller size of school and the regular contact with one teacher, which would make monitoring the children more feasible. There is also a need for the close liaison between primary and secondary school teachers before the transition takes place, to ensure the secondary schools are aware of vulnerable and/or disruptive children so they can continued to be monitored or extra support be provided for them.

Given that for most children the transition does not lead to an increase in psychological distress, children who do show signs of psychological distress following the transition may have other co-existing difficulties, such as chronic stressors or mental health problems that pre-date the transition. Secondary school staff need to be alert to the possibility that apparent transition difficulties may actually signify more chronic problems that require assessment and possible treatment as early as possible from an appropriate professional e.g. an educational welfare officer or mental health worker, before further deterioration.

A large proportion of the subgroup of children who moved from the non-clinical to the clinical range post-transition were on their schools SEN register and had below average levels of literacy (SATs English). This implies that this subgroup requires

special monitoring for mental health needs. Special Needs Co-ordinators could play an important part in this respect and may require some training in how psychological problems may manifest themselves in children. If emotional issues are interfering with learning, it is important that psychological input is available alongside extra learning support.

Cooper (1995) believes the emotional upheaval involved in the transition is often underestimated. Transition involves leaving behind many people who have been important in a child's life, as well as the more sheltered environment of early childhood and she believes that this loss may be particularly painful for children who have suffered physical or emotional upheaval. Cooper suggests that support may be necessary to make a successful transition and has been involved in group-work in order to help such children develop a way of managing their anxieties and negotiating change. Since consultation is best utilised before severe problems have developed (Parsons & Meyers, 1984), schools may wish to become involved in such preventative work, possibly working with the subgroups of individuals who are particularly vulnerable to such changes and who may be helped by an awareness of the problems they are likely to face. Clinical psychologists can be involved in supporting schools conduct such group work. Furthermore both primary and secondary schools could provide school-based services offering professional help such as a school counsellor, whom children could refer themselves too, thus reducing the need for referral to child psychiatry.

4.7 Summary and conclusions

This study explored the impact of secondary school transition on children's psychological functioning and looked at some potential risk factors that may be influencing adjustment to secondary school.

The study found no evidence for an overall negative effect of transition. The majority of children seemed to negotiate the transition and were able to adapt without undue difficulty to their new social environment with its higher standards for performance and behaviour. However, the presence of a poorly adjusted group suggests that not all children experience positive changes in their psychological functioning over the transition. Children in this group started out with levels of psychological functioning within the non-clinical range, but showed negative changes in some aspects of their functioning during the period from primary to secondary school. These findings suggest that while many children cope with, adjust to, and grow during the experience of transition, a subset of children had greater vulnerability to stressors.

A number of methodological problems affect the reliability and validity of the findings. These include: the absence of a control group of children not undergoing secondary school transition; relying on self-report data; not controlling for the impact of secondary school characteristics on the transition and the substantial amount of missing data. Despite these limitations, the current study has both theoretical and practical implications. In terms of theoretical implications, this study suggests that secondary school transition may be stressful for a small subgroup of children, rather than for the majority of children. By understanding the different developmental

patterns of adjustment associated with the transition, one can begin to identify the children at risk in order to provide interventions and preventative strategies to ease the transition.

On a practical level, the findings imply that schools could play an important role in the early identification of and intervention with children's mental health problems. Detection and treatment of vulnerable children would be helped by close liaison between education and local health services and /or by school based mental health services.

There are several areas for future research which have been suggested by this study. Investigation of other psychological variables affecting reactions to transition, such as characteristics of the family environment and children's personal appraisals and coping resources, would also be helpful in building up profile of 'at risk' children. The current study focussed on three facets to represent the child's adjustment dimension, namely level of anxiety, depression and general emotional and behavioural difficulties. Since school adjustment is a broad construct with multiple facets it would be interesting to include additional facets, for example, current academic performance and ability self-concept, which may help to explain further variation in the amount of psychological distress and problem behaviours. It would also be interesting to look at the extent to which children were able to overcome or recover from any disruptive effects that might have occurred. Finally, in order to determine the causal relationship between risk factors identified and psychological distress, more longitudinal and prospective studies, carried out within the British educational system, are needed that can control for previous levels of distress.

In conclusion, by looking at multiple risk factors affecting adjustment, this study has begun to build up a profile of the salient factors influencing adjustment to secondary school. Through developing a more comprehensive picture of the factors associated with adjustment to the transition, we can begin to understand and help children undergoing stressful transitions.

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APPENDIX: A

ETHICAL APPROAVAL CORRESPONDENCE

University College London Hospitals NHS

NHS Trust

The Joint UCL/UCLH Committees on the Ethics of Human Research: Committee Alpha

Chairman:
Professor André McLean

Please address all correspondence to:
Marieta Odendaal
Research & Development Directorate
UCLH NHS Trust
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20 June 2002

Our ref: 02Alpha015

Ms R Beardsley
Trainee clinical Psychologist
Sub-Department of Clinical health Psychology
UCL

Dear Ms Beardsley

Study No: **01/0141** *(Please quote in any correspondence)*
Title: **Anxiety in children and their parents**

Thank you for your letter dated 17 May 2002. The proposal can go in as an amendment to Dr Creswell's ~~comment~~ Project. Please complete the attached protocol amendment form.

As a comment I draw to your attention the view expressed by the Ethics Committee that a number of the questionnaires seem to have a negative series of statements. The questions seem to take on the form "I hate myself" – true/false. Would it be less depressing and distressing if phrased "I like the way I am" – true/false? Probably quite different types of response will be elicited towards extend as this has been validated.

Yours sincerely

Professor André McLean, BM BCh PhD FRC Path
Chairman

Cc: Dr C Creswell

APPENDIX B:

LETTER AND INFORMATION SHEET FOR HEAD TEACHERS

APPENDIX B:

LETTER AND INFORMATION SHEET FOR HEAD TEACHERS

CONFIDENTIAL

Dear Head Teacher

Camden & Islington Local Education Authority is supporting some research looking into children's reaction to the move from primary to secondary school. The study will provide valuable information for schools and clinical services regarding the potential risk factors that affect children's adjustment to secondary school.

A previous researcher, Dr Cathy Creswell, carried out the first part of the study in September 2001. Questionnaires were given to 440 year 6 children across 15 different primary schools in the region. We would like to ask the same children (who are now in year 7 of their secondary school) to complete the same questionnaires again, along with 2 additional questionnaires, so we can study the impact of the transition.

We would be most grateful for the opportunity to conduct this research within your school. This proposal has been approved by Thanos Morphitis, Assistant Director of Schools Services, however it is for each individual school to decide whether to participate.

I hope it will be okay for me to contact you next week to check whether you would be happy for this research to go ahead and if so, who you would like me to liase with. I have enclosed an information sheet outlining the study, and also an information sheet and consent form to be sent to parents as well as a consent form and information sheet to be read to participants. I have also enclosed a list of the children who took part in the first part of the study and who are now attending (name of school) school.

If you have any concerns that we have not taken into account, please do not hesitate to contact me at the above address.

Yours sincerely

Rachel Beardsley
Trainee Clinical Psychologist

Cc Deputy Head of Pastoral Support

INFORMATION FOR HEAD TEACHERS

Study Title: Risk factors affecting psychological adjustment following transition to secondary school

Name of Investigators: Rachel Beardsley, Dr Cathy Creswell, Dr Chris Barker & Debra Potel.

What will the research involve for your school?

The children who took part in the first part of the study will complete the questionnaires during the second half of the first term of secondary school (between October and Mid December 2002). The investigator would require a time slot of approximately 30 minutes within the school day to administer the questionnaires to the children.

Children will be asked about their thoughts and feelings about the transition, their perceived strengths and difficulties, friendships, worries and concerns. At no point will children be asked about his or her home life, family, school history or teachers. We will ask the school to provide information regarding the ethnicity, special educational needs, absences and lateness and the children's SAT result for the participating children. However, teacher reports will not need to be taken.

Parental consent and confidentiality

All parents will be sent an information sheet about the study, and asked to sign and return a reply slip if they do not wish their child to participate in the study. If possible we would like information regarding the study to be sent out from the school. Children will also be asked for their informed consent before participating.

The completed questionnaires will be used for research purposes only, and no names will be attached to them. Teachers will not see children's completed forms, and we cannot provide information to parents or teachers about individual children's responses. However, if a child appears to have problems, parents and the school will be consulted, and if appropriate the child will be referred to local child clinical psychology services.

Who is doing the research?

This research is being conducted by Rachel Beardsley, an employee of Camden and Islington Community Health Services NHS Trust, as part of a Doctorate in Clinical Psychology. Rachel Beardsley is being supervised by Dr Cathy Creswell, Clinical Research Fellow, University College London (who was also the investigator in the first part of the study) Dr Chris Barker, Senior Lecturer, University College London and Debra Potel, Consultant Clinical Psychologist, Child & Adolescent Health Service and Islington Behaviour Support Service.

Are there any drawbacks in this research for the children?

All the questionnaires have been developed and tested with children aged between 10 and 12 years, and ask about good and bad experiences. We consider it highly unlikely that any of the questions being asked will cause new problems or distress to the children. However, should any child wish to discuss any worries raised by participating in the research, the investigator will be available to do so. Children will be informed that their teacher or parent may be notified if significant concerns are raised and the investigator will be able to facilitate referrals to local services if this is indicated.

All proposals for research in which people take part are reviewed by an ethics committee before they can begin. This proposal was reviewed by the Joint UCL/UCLH Committees on the Ethics of Human Research. If you did have any concerns, however, you are free to contact us at the address given below.

We would be most grateful for the opportunity to conduct this research within your school. If you have any concerns that we have not taken into account, please contact Rachel Beardsley.

Thank you very much for attending to this information sheet.

Yours sincerely

Rachel Beardsley
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Email: rachelebeardsley@hotmail.com

APPENDIX C:

LETTER AND INFORMATION SHEET FOR PARENTS

APPENDIX C:

LETTER AND INFORMATION SHEET FOR PARENTS

CONFIDENTIAL

Dear Parent

Last year you kindly agreed for your child to participate in a study focussing on children's thoughts and feelings as they move towards secondary school, for which we were very appreciative. The information we collated proved very valuable in thinking about how we should target appropriate support for primary school children who are experiencing difficulties.

We would like to invite your child to take part in an extension of this study, which will focus on children's reaction to the move from primary to secondary school. (name of school) school is co-operating with this research, which is being carried out at University College London.

Before you decide whether your child can take part in the current study, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish.

Should you require any further information about the study, please do not hesitate to contact me at the above address.

Yours sincerely

Rachel Beardsley
Trainee Clinical Psychologist

PARENT INFORMATION SHEET

Study Title: Risk factors affecting psychological adjustment following transition to secondary school

Name of Researchers: Rachel Beardsley, Dr Cathy Creswell, Dr Chris Barker & Debra Potel.

What is the purpose of the study?

There is a general agreement that some children will find the transition from primary school to secondary school difficult. The aim of the current study is to try and find out what helps some children and what makes it difficult for others to adjust to the transition. More specifically, the study will consider the role of social and school anxiety during the transition period.

Why is my child being chosen to take part?

Dr Cathy Creswell gave questionnaires to 440 year 6 children across 14 different primary schools between September and December 2001. Your child took part in this study. In the current study, the same children (who are now in year 7 of their secondary school) will be asked to complete the same questionnaires again, along with 2 additional questionnaires, so we can study the impact of the transition.

What does the research involve?

Children will be seen in school time, in the second half of the first term of secondary school (between October and December 2002). They will be asked to fill in some brief questionnaires, which are especially designed for children their age. These questionnaires ask about children's thoughts and feelings and about the move to secondary school. Completing the questionnaires will take no longer than about 30 minutes and will take place within lesson time. We will also ask for the child's SAT result. At no point will children be asked about their home life or family.

Is the research confidential?

Yes. The questionnaires completed by the children will be used for research purposes only and names will be removed from them to keep answers confidential. Teachers will not see the forms the children complete. However, if we find a child is having problems, we will discuss how best to help them with parents and schools.

Are there any risks from taking part?

There is no reason to believe that taking part in this study would be harmful in any way and taking part in the study will not affect your child's schooling.

All proposals for research in which people take part are reviewed by an ethics committee before they can begin. This proposal was reviewed by the Joint UCL/UCLH Committees on the Ethics of Human Research. If you did have any concerns, however, you are free to contact us at the address given below.

What happens now?

Your child does not have to take part in this study if he or she does not want to. If your child does decide to take part, they may withdraw at any time without having to give a reason. Your child's decision to take part or not, will not affect their schooling or teaching in any way. Please sign and return the slip at the bottom of this information sheet if you do not want your child to participate in the study.

Who should I contact if I have any questions?

Please contact Rachel Beardsley, if there is anything that is not clear or if you would like more information.

Thank you for taking the time to read this information sheet.

Yours sincerely

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Risk factors affecting psychological adjustment following transition to secondary school

Rachel Beardsley, Dr Cathy Creswell, Dr Chris Barker & Debra Potel.

Please complete this slip and return it to your child's class teacher, if you **DO NOT** wish your child to take part in the study.

I have read the information sheet, but I do not wish my child to take part in this study.

Signed .....Date .....

Name in capital letters.....

If you are happy for your child to take part, you do not have to return this slip.

APPENDIX D:

CHILDREN'S INFORMATION SHEET AND CONSENT FORM

APPENDIX D:

CHILDREN'S INFORMATION SHEET AND CONSENT FORM

CONFIDENTIAL

Information for Participants
(to be read by the investigator, prior to questionnaire administration)

My name is Rachel Beardsley. I am interested in how pupils feel about leaving primary school and going to secondary school. I want to find out what helps pupils to settle in to their new school.

You may remember meeting a colleague of mine who asked you to fill out some questionnaires in Year 6 of your primary school. I would like to invite you to help in the second part of this study. If you decide that you would like to take part, I will ask you to fill out the same questionnaires again, and 2 extra questionnaires that you were not given last time.

All the questionnaires have been especially made for people of your age. They ask about your thoughts and feelings and the move from primary to secondary school. Your names will be removed from the forms so no one will know what you have written. What you tell me will not be given to your teachers or parents. However, if I feel a person might be helped by other people knowing about their worries, I may talk to their parents or school about my concern and how best to help them.

If you find anything hard to understand, or you would prefer to do the questionnaires with me, just ask. This is not a test, and there are no right answers. If you don't want to take part then that would be fine. If after you have started you feel that you want to stop, then that would be fine too. If you have any questions, or any worries about the questionnaires, I hope you will be able to tell me straight away.

Do you have any questions?

CONFIDENTIAL

CONSENT FORM

Title of Study: Risk factors affecting psychological adjustment following transition to secondary school

Name of Researchers: Rachel Beardsley, Dr Cathy Creswell, Dr Chris Barker & Debra Potel.

Please ring your answer

I have been told about this study, and had the chance to ask questions **YES NO**

I agree to take part, and know that I can stop at any time **YES NO**

Please write your name here .....

Thank you for your help

APPENDIX E:

QUESTIONNAIRE BOOKLET

Code number:

Everything you write will be kept private, but you do not have to answer any of the questions if you don't want to. It is up to you.

Please write your name on this front page. To keep what you have written private, your name will not be written on any of the other sheets.

It is useful to have your name on this front sheet though, so we know who has taken part and so we can give you the same code number that you were given when we came in before and asked you about your thoughts and feelings.

Thank you very much for your help.

Please write your name here:_____

Please write today's date here:_____

Please write your class name or number here: _____

CONFIDENTIAL

SPENCE CHILDREN'S ANXIETY SCALE

Please tick the word that shows how often each of these things happens to you.
There are no right or wrong answers.
If you are not sure what a sentence means, please ask!

	Never	Sometimes	Often	Always
1. I worry about things	Never	Sometimes	Often	Always
2. I am scared of the dark	Never	Sometimes	Often	Always
3. When I have a problem, I get a funny feeling in my stomach	Never	Sometimes	Often	Always
4. I feel afraid	Never	Sometimes	Often	Always
5. I would feel afraid of being on my own at home	Never	Sometimes	Often	Always
6. I feel scared when I have to take a test	Never	Sometimes	Often	Always
7. I feel afraid if I have to use public toilets or bathrooms	Never	Sometimes	Often	Always
8. I worry about being away from my parents	Never	Sometimes	Often	Always
9. I feel afraid that I will make a fool of myself in front of people	Never	Sometimes	Often	Always
10. I worry that I will do badly at my school work	Never	Sometimes	Often	Always
11. I am popular amongst other kids of my own age	Never	Sometimes	Often	Always
12. I worry that something awful will happen to someone in my family	Never	Sometimes	Often	Always
13. I suddenly feel as if I can't breathe when there is no reason for this	Never	Sometimes	Often	Always
14. I have to keep checking that I have done things right (like the switch is off, or the door is locked)	Never	Sometimes	Often	Always
15. I feel scared if I have to sleep on my own	Never	Sometimes	Often	Always
16. I have trouble going to school in the mornings because I feel nervous or afraid	Never	Sometimes	Often	Always
17. I am good at sports	Never	Sometimes	Often	Always
18. I am scared of dogs	Never	Sometimes	Often	Always

19. I can't seem to get bad or silly thoughts out of my head	Never	Sometimes	Often	Always
20. When I have a problem, my heart beats really fast	Never	Sometimes	Often	Always
21. I suddenly start to tremble or shake when there is no reason for this	Never	Sometimes	Often	Always
22. I worry that something will happen to me	Never	Sometimes	Often	Always
23. I am scared of going to the doctor or dentist	Never	Sometimes	Often	Always
24. When I have a problem, I feel shaky	Never	Sometimes	Often	Always
25. I am scared of being in high places or lifts (elevators)	Never	Sometimes	Often	Always
26. I am a good person	Never	Sometimes	Often	Always
27. I have to think of special thoughts (like numbers or words) to stop bad things from happening	Never	Sometimes	Often	Always
28. I feel scared if I have to travel in the car, or on a bus or train	Never	Sometimes	Often	Always
29. I worry what other people think of me	Never	Sometimes	Often	Always
30. I am afraid of being in crowded places (like shopping centres, the movies, buses, busy playgrounds)	Never	Sometimes	Often	Always
31. I feel happy	Never	Sometimes	Often	Always
32. All of a sudden I feel really scared for no reason at all	Never	Sometimes	Often	Always
33. I am scared of insects or spiders	Never	Sometimes	Often	Always
34. I suddenly become dizzy or faint when there is no reason for this	Never	Sometimes	Often	Always
35. I feel afraid if I have to talk in front of my class	Never	Sometimes	Often	Always
36. My heart suddenly starts to beat too quickly for no reason	Never	Sometimes	Often	Always
37. I worry that I will suddenly get a scared feeling when there is nothing to be afraid of	Never	Sometimes	Often	Always
38. I like myself	Never	Sometimes	Often	Always
39. I am afraid of being in small closed places, like tunnels or small rooms	Never	Sometimes	Often	Always
40. I have to do some things over and over again (like washing my hands, cleaning or putting things in a certain order)	Never	Sometimes	Often	Always
41. I get bothered by bad or silly thoughts or pictures in my mind	Never	Sometimes	Often	Always

42.I have to do some things in just the right way to stop bad things happening	Never	Sometimes	Often	Always
43.I am proud of my school work	Never	Sometimes	Often	Always
44.I would feel scared if I had to stay away from home overnight	Never	Sometimes	Often	Always
45.Is there something else that you are really afraid of? **Yes NO** Please write down what it is:				
44. How often are you afraid of this thing?	Never	Sometimes	Often	Always

CONFIDENTIAL

CHILDREN'S DEPRESSION INVENTORY

Kids sometimes have different feelings and ideas.

This form lists the feelings and ideas in groups. From each group of three sentences, pick one sentence that describes you best for the past two weeks. After you pick a sentence from the first group, go on to the next group.

There is no right or wrong answer. Just pick the sentence that best describes the way you have been recently. Put a mark like this X next to your answer. Put the mark in the box next to the sentence that you pick

Here is an example of how this form works. Try it. Put a mark next to the sentence that describes you best.

	I read books all the time
	I read books once in a while
	I never read books

Remember to pick out the sentences that describe you best in the PAST TWO WEEKS

	I am sad once in a while
	I am sad many times
	I am sad all the time

	Nothing will ever work out for me
	I am not sure if things will work out for me
	Things will work out for me O.K.

	I do most things O.K.
	I do many things wrong
	I do everything wrong

	I have fun in many things
	I have fun in some things
	Nothing is fun at all

	I am bad all the time
	I am bad many times
	I am bad once in a while

	I think about bad things happening to me once in a while
	I worry that bad things will happen to me
	I am sure that terrible things will happen to me

	I hate myself
	I do not like myself
	I like myself

	All bad things are my fault
	Many bad things are my fault
	Bad things are not usually my fault

	I do not think about killing myself
	I think about killing myself but I wouldn't do it
	I want to kill myself

	I feel like crying everyday
	I feel like crying many days
	I feel like crying once in a while

	Things bother me all the time
	Things bother me many times
	Things bother me once in a while

	I like being with people
	I do not like being with people many times
	I do not like being with people at all

	I cannot make up my mind about things
	It is hard to make up my mind about things
	I make up my mind about things easily

	I look O.K.
	There are some bad things about my looks
	I look ugly

	I have to push myself all the time to do my schoolwork
	I have to push myself many times to do my schoolwork
	Doing schoolwork is not a big problem

	I have trouble sleeping every night
	I have trouble sleeping many nights
	I sleep pretty well

	I am tired once in a while
	I am tired many days
	I am tired all the time

	Most days I do not feel like eating
	Many days I do not feel like eating
	I eat pretty well

	I do not worry about aches and pains
	I worry about aches and pains many times
	I worry about aches and pains all the time

	I do not feel alone
	I feel alone many times
	I feel alone all the time

	I never have fun at school
	I have fun at school once in a while
	I have fun at school many times

	I have plenty of friends
	I have some friends but I wish I had more
	I do not have any friends

	My schoolwork is alright
	My schoolwork is not as good as before
	I do very badly in subjects I used to be good in

	I can never be as good as other kids
	I can be as good as other kids if I want to
	I am just as good as other kids

	Nobody really loves me
	I am not sure if anybody loves me
	I am sure that somebody loves me

	I usually do what I'm told
	I do not do what I'm told most times
	I never do what I'm told

	I get along with people
	I get in to fights many times
	I get into fights all the time

CONFIDENTIAL

LIFE EVENTS CHECKLIST

Below is a list of things that sometimes happen to people.

Put and X in the space by each of the events you have experienced during the past year (12 months).

For each of the events you check, also indicate whether you would rate the event as a good event or as a bad event.

Finally, indicate how much you feel the event has changed or has had an impact or effect on your life, by placing a circle around the appropriate statement (no effect, some effect, moderate effect, great effect).

Remember, for each event you have experienced during the past year:
(1) place an X in the space to indicate you have experienced the event
(2) indicate whether you viewed the event as a good or bad event, and
(3) indicate how much effect the event has had on your life.

Here is an example of how this form works

Event	X	Type of event		Effect of event on your life			
Going to the cinema		Good	Bad	No effect	Some effect	Moderate effect	Great effect

Remember, only respond to those events you have actually experienced during the past year.

Event	**X**	**Type of event**		**Effect of event on your life**			
Moving to new home		Good	Bad	No effect	Some effect	Moderate effect	Great effect
New brother or sister		Good	Bad	No effect	Some effect	Moderate effect	Great Effect
Changing to new school		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Serious illness or injury of family member		Good	Bad	No effect	Some effect	Moderate effect	Great Effect
Parents divorce		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Increased number of arguments between parents		Good	Bad	No effect	Some effect	Moderate effect	Great effect

Mother or father lost job		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Death of a family member		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Parents separated		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Death of a close friend		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Increased absence of parent from home		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Brother or sister leaving home		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Serious illness or injury of close friend		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Parent getting into trouble with law		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Parent getting a new job		Good	Bad	No effect	Some effect	Moderate effect	Great effect
New stepmother or stepfather		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Parent going to jail		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Change in parents' financial status		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Trouble with brother or sister		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Special recognition for good grades		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Joining a new club		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Losing a close friend		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Decrease in number of arguments with parents		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Male: girlfriend getting pregnant		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Female: getting pregnant		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Losing a job		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Making the honour roll		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Getting your own car		Good	Bad	No effect	Some effect	Moderate effect	Great effect
New boyfriend/ girlfriend		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Failing a grade		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Increase in number of arguments with parents		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Getting a job of your own		Good	Bad	No effect	Some effect	Moderate effect	Great effect

Getting into trouble with police		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Major personal illness or injury		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Breaking up with boyfriend/girlfriend		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Making up with boyfriend/girlfriend		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Trouble with teacher		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Male: Girlfriend having abortion		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Female: Having abortion		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Failing to make an athletic team		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Being suspended from school		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Making failing grades on report card		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Making an athletic team		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Trouble with classmate		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Special recognition for athletic performance		Good	Bad	No effect	Some effect	Moderate effect	Great effect
Getting put in jail		Good	Bad	No effect	Some effect	Moderate effect	Great Effect
Other events which have had an impact on your life:							
		Good	Bad	No effect	Some effect	Moderate effect	Great effect
		Good	Bad	No effect	Some effect	Moderate effect	Great effect
		Good	Bad	No effect	Some effect	Moderate effect	Great effect

CONFIDENTIAL

ME AND MY BEST FRIEND

In this questionnaire you will be asked about your friendship with your best friend.
Write in your best friend's first name .....
How long have you known him/her (how many months)? .....

The questions describe how you and your friend get along with each other. For each item, please indicate how true the descriptions are of your friendship, by tricking the appropriate box for each question.

	Not true	A bit true	Sometimes true	Quite True	Very true
Cares about my feelings	Not true	A bit true	Sometimes true	Quite True	Very true
Always sit together at lunch	Not true	A bit true	Sometimes true	Quite True	Very true
Get mad a lot	Not true	A bit true	Sometimes true	Quite True	Very true
Tells me I am good at things	Not true	A bit true	Sometimes true	Quite True	Very true
Sticks up for me if others talk behind my back	Not true	A bit true	Sometimes true	Quite True	Very true
Make each other feel important and special	Not true	A bit true	Sometimes true	Quite True	Very true
Always pick each other as partners for things	Not true	A bit true	Sometimes true	Quite True	Very true
Says "I'm sorry" if (he/she) hurts my feelings	Not true	A bit true	Sometimes true	Quite True	Very true
Sometimes says mean things about me to other kids	Not true	A bit true	Sometimes true	Quite True	Very true
Has good ideas about games to play	Not true	A bit true	Sometimes true	Quite True	Very true
Talk about how to get over being mad at each other	Not true	A bit true	Sometimes true	Quite True	Very true
Would like me even if others didn't	Not true	A bit true	Sometimes true	Quite True	Very true
Tells me I am pretty smart	Not true	A bit true	Sometimes true	Quite True	Very true
Always tell each other our problems	Not true	A bit true	Sometimes true	Quite True	Very true
Makes me feel good about my ideas	Not true	A bit true	Sometimes true	Quite True	Very true
Talk to her when I'm mad about something that happened to me	Not true	A bit true	Sometimes true	Quite True	Very true
Help each other with chores a lot	Not true	A bit true	Sometimes true	Quite True	Very true
Do special favours for each other	Not true	A bit true	Sometimes true	Quite True	Very true

Do fun things together a lot	Not true	A bit true	Sometimes true	Quite True	Very true
Argue a lot	Not true	A bit true	Sometimes true	Quite True	Very true
Can count on to keep promises	Not true	A bit true	Sometimes true	Quite True	Very true
Go to each others' houses	Not true	A bit true	Sometimes true	Quite True	Very true
Always play together at recess	Not true	A bit true	Sometimes true	Quite True	Very true
Gives advice with figuring things out	Not true	A bit true	Sometimes true	Quite True	Very true
Talk about the things that make us sad	Not true	A bit true	Sometimes true	Quite True	Very true
Make up easily when we have a fight	Not true	A bit true	Sometimes true	Quite True	Very true
Fight a lot	Not true	A bit true	Sometimes true	Quite True	Very true
Share things with each other	Not true	A bit true	Sometimes true	Quite True	Very true
Talk about how to make ourselves feel better if we are mad at each other	Not true	A bit true	Sometimes true	Quite True	Very true
Does not tell others my secrets	Not true	A bit true	Sometimes true	Quite True	Very true
Bug each other a lot	Not true	A bit true	Sometimes true	Quite True	Very true
Come up with good ideas of ways to do things	Not true	A bit true	Sometimes true	Quite True	Very true
Lone each other things all the time	Not true	A bit true	Sometimes true	Quite True	Very true
Helps me so I can get done quicker	Not true	A bit true	Sometimes true	Quite True	Very true
Get over our arguments really quickly	Not true	A bit true	Sometimes true	Quite True	Very true
Count on each other for good ideas on how to get things done	Not true	A bit true	Sometimes true	Quite True	Very true
Doesn't listen to me	Not true	A bit true	Sometimes true	Quite True	Very true
Tell each other private things	Not true	A bit true	Sometimes true	Quite True	Very true
Help each other with school work a lot	Not true	A bit true	Sometimes true	Quite True	Very true
Tell each other secrets	Not true	A bit true	Sometimes true	Quite True	Very true

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MY STRENGTHS AND DIFFICULTIES (SDQ)

Please tick the box to show if each sentence is not true, a bit true or very true of you over the last six months.

Please try to answer all the questions as best you can, even if you are not sure or the sentence seems daft!

There are no right or wrong answers. If you are not sure what a sentence means please ask.

	Not true	A bit true	Very true
1. I try to be nice to people, I care about their feelings	Not true	A bit true	Very true
2. I can't stay still for long	Not true	A bit true	Very true
3. I get a lot of headaches, stomach-aches or sickness	Not true	A bit true	Very true
4. I usually share with others (for example food, games, pens etc)	Not true	A bit true	Very true
5. I get very angry and often lose my temper	Not true	A bit true	Very true
6. I am usually on my own. I play alone or keep to myself	Not true	A bit true	Very true
7. I usually do as I'm told	Not true	A bit true	Very true
8. I worry a lot	Not true	A bit true	Very true
9. I am helpful if some-one is hurt, upset, or feeling ill	Not true	A bit true	Very true
10. I am constantly fidgeting or squirming	Not true	A bit true	Very true
11. I have one good friend or more	Not true	A bit true	Very true
12. I fight a lot. I can make other people do what I want	Not true	A bit true	Very true
13. I am often unhappy, down-hearted or tearful	Not true	A bit true	Very true
14. Other people my age mostly like me	Not true	A bit true	Very true
15. I find it hard to concentrate	Not true	A bit true	Very true
16. I am nervous in new situations, I easily lose confidence	Not true	A bit true	Very true
17. I am kind to younger children	Not true	A bit true	Very true

18. I am often told off for lying and cheating	Not true	A bit true	Very true
19. Other children or young people pick on me or bully me	Not true	A bit true	Very true
20. I often try to help other people (parents, teachers, children)	Not true	A bit true	Very true
21. I think before I do things	Not true	A bit true	Very true
22. I take things that are not mine from home, school or other places	Not true	A bit true	Very true
23. I get on better with adults than people my own age	Not true	A bit true	Very true
24. I have many fears, I am easily scared	Not true	A bit true	Very true
25. I finish the work I'm doing. I am good at paying attention	Not true	A bit true	Very true

THAT'S IT – YOU ARE FINISHED.
THANK YOU FOR ALL YOUR HELP.