

Grandparental Involvement and Adolescent Adjustment in Lone Parent and Nuclear Families

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Supervisor: Lauren Wild

Word Count:

Abstract: 249

Main Body: 9618

**The financial assistance of the National Research Foundation (NRF) towards this research is hereby acknowledged. Opinions expressed and conclusions arrived at, are those of the author and are not necessarily to be attributed to the NRF.**

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### Acknowledgements

We would like to extend our thanks to the following people who supported us in completing this thesis:

All the children who participated in the study and the teachers who made undertaking this research possible.

Colin Tredoux for his valuable advice regarding the statistical analyses used in this project.

Our co-researchers Jess Levetan and Wade Profe for their collaboration and moral support.

Finally and most importantly, our supervisor, Lauren Wild, for her constant guidance, encouragement and commitment. Her timeous and constructive feedback, as well as continued availability has allowed us to complete our thesis to the best of our ability.

### Abstract

Grandparental involvement may contribute positively to the wellbeing of adolescent grandchildren. In particular, involved grandparents may be protective for adolescents in lone parent families, who tend to experience more adjustment difficulties than adolescents in nuclear families. The purpose of this study was to investigate the association between grandparental involvement and adolescent adjustment in nuclear and lone parent families. Cross-sectional survey data were collected from grade 8 and grade 9 learners from two high schools in Cape Town, resulting in a sample of 398 participants between the ages of 13 and 17. Correlational and hierarchical multiple regression analyses were used to examine the relationship between grandparental involvement and six adjustment outcomes as measured by the self-report version of the Strengths and Difficulties Questionnaire. Levels of grandparental involvement did not vary across family structure. Grandparental involvement was associated with fewer total difficulties and with more prosocial behaviour in the whole sample. However, when parental involvement and demographic covariates were controlled for, only the association between grandparental involvement and prosocial behaviour remained significant. Grandparental involvement did not moderate the relationship between family structure and adolescent adjustment, nor the relationship between parental involvement and adolescent adjustment. These results indicate that although grandparental involvement was associated with prosocial behaviour in the whole sample, it did not appear to be particularly protective for adolescents in lone parent families. Thus, whilst the findings underscore the relevance of considering grandparents as a potential resource for adolescents' wellbeing, the need for additional research in this area is highlighted.

*Keywords:* lone parents, family structure, grandparents, intergenerational relationships, adolescent adjustment, SDQ

## **Grandparental Involvement and Adolescent Adjustment in Lone Parent and Nuclear Families**

The nuclear family is defined as a family structure in which two biological parents are present (Attar-Schwartz, Tan, Buchanan, Flouri, & Griggs, 2009). In today's society, this type of family is becoming less common due to the high prevalence of divorce and single motherhood. Consequently, contemporary adolescents are increasingly likely to be raised by only one parent (Amato, 2005). Because of the AIDS pandemic, the migrant labour system and the effects of poverty, the lone parent family is particularly prevalent in South Africa (Holborn & Eddy, 2011). Approximately 37% of children under the age of 17 were living in lone parent families in South Africa in 2010, a percentage that is expected to have increased in recent years (Department of Social Development, 2012). Growing up within a lone parent family is a risk factor for adolescents' emotional and behavioural wellbeing (Tan, Buchanan, Flouri, Attar-Schwartz, & Griggs, 2010). In comparison to children who grow up in nuclear families, research consistently demonstrates that children and adolescents growing up in lone parent families have poorer adjustment outcomes in the short- and long-term (O'Connor, Dunn, Jenkins, Pickering, & Rasbash, 2001). For example, adolescents from lone parent families are more likely to drop out of school and have a higher rate of teenage pregnancy (Dunn, Deater-Deckard, Pickering, & O'Connor, 1998) - two prevalent concerns in the South African context (Panday, Makiwane, Ranchod, & Letsoalo, 2009). It is therefore important to identify accessible resources that can help to prevent poor adjustment outcomes for adolescents growing up in lone parent families.

Although grandparents have traditionally been involved in the lives of their grandchildren, researchers have only recently considered the potential of grandparents to be protective resources. There is growing evidence that now, more than ever, grandparents are playing a prominent role in their grandchildren's lives (Griggs, Tan, Buchanan, Attar-Schwartz, & Flouri, 2010). For example, in South Africa, grandparents frequently care for and support their grandchildren, particularly in situations where parents are unable to fulfil their childcare responsibilities (Madhaven, 2004). It is therefore important to understand the influence that grandparents may have on adolescents' wellbeing, especially for adolescents growing up within lone parent families. Despite this, adolescent-grandparent relationships have thus far received relatively little attention in the research literature.

### **Theoretical Framework**

The present study is situated within a risk and resilience framework. It views grandparents as a potential protective factor that can promote positive adjustment outcomes

in adolescents despite their experience of growing up within a lone parent family. In a resilience framework, risk and protective factors can be identified. Risk factors are the characteristics of a person or their environment that may precipitate negative adjustment outcomes. Protective factors on the other hand are qualities of the individual and resources within their environment that allow the individual to cope with adversity, and as a result predict positive adjustment outcomes in situations of high risk (Wright & Masten, 2006). Increasingly, an adolescent's developmental outcomes are now understood as resulting from the unique interaction between risk and protective factors in their life (Evans, Marsh, & Weigel, 2009). Growing up within a lone parent family may be considered a risk factor, as it is associated with a host of negative outcomes for children and adolescents (Attar-Schwartz et al., 2009). However, because not all children residing in lone parent families experience maladjustment (Amato & Keith, 1991), it is clear that certain protective factors can make individuals resilient to the disadvantageous outcomes that may be associated with this family structure. Although researchers investigating the effect of living in lone parent families have long been interested in such protective factors (Wolchik, Schenck, & Sandler, 2009), the focus has for the most part been on parent-child relationships (e.g. Amato & Keith, 1991; Kelly & Emery, 2003). The potential influence of other relatives, such as grandparents, has been largely neglected.

### **Defining the Problem: The Lone Parent Family and Adolescent Adjustment**

Resulting from divorce, parental death, or a child being born out of wedlock, the lone parent family is defined as a family structure in which only one parent is present (Attar-Schwartz et al., 2009). In comparison to adolescents growing up in nuclear families, adolescents growing up in lone parent families are more likely to experience a variety of factors that put them at risk for poor adjustment (O'Connor et al., 2001). Adjustment is a general term used to refer to the emotional and behavioural wellbeing of an individual (Tan et al., 2010). The lone parent family is associated with poor adjustment because the presence of only one parent in the household influences the psychological, economic and social resources available to the child (Ruiz & Silverstein, 2007). For example, because lone parent families usually rely on only a single income, children in this family structure are more likely to live in poverty, and thus experience greater stress associated with financial strain. In line with this, access to resources varies across family structure, with children in lone parent families being more likely to live in low-income neighbourhoods and attend poor quality schools (Deleire & Kalil, 2002). Furthermore, parenting in lone parent families may be compromised as single parents face increased time and economic constraints (Amato, 2005). Children in

lone parent families on average receive less parental attention and are less likely to be supervised than children in nuclear families (Lansford, Ceballo, Abbey, & Stewart, 2001). Parental absence may have negative consequences for children's adjustment, because it exposes children to deficits in socialisation and fewer adult role models (Hetherington, Bridges, & Insabella, 1998). Additionally, the transitions that may occur to form the lone parent family, such as parental death or divorce, may be accompanied by grief, conflict and a breakdown in familial relationships. These processes require adapting to changes in family roles, which can be related to increases in problem behaviours for adolescents (Dunn & Deater-Deckard, 2001).

Resultantly, research consistently reports that in comparison to children residing in nuclear families, children in lone parent families are more likely to experience lower educational achievement and a greater number of health, conduct, peer and psychological problems (Deleire & Kalil, 2002; Lansford et al., 2001). Dropping out of school, engaging in substance abuse and falling pregnant at a young age are also more common among children from lone parent families (Amato, 2005; Dunn et al., 1998; O'Connor et al., 2001). Individuals from lone parent families may remain at risk for adverse outcomes, for example unemployment and depression, up into adulthood (Hetherington & Stanley-Hagan, 1999).

It must, however, be noted that there is great diversity in how adolescents adjust to living within a lone parent family (Dunn, 2002). Although this family structure is more likely to be associated with risk factors for maladjustment, not all children growing up in lone parent families will necessarily experience these risks. The way the child adjusts is shaped both by the amount of risks present, as well as the protective resources available to mitigate these risks (Hetherington & Stanley-Hagan, 1999). For example, in instances where parents are highly involved in their children's lives and provide them with warmth and support, adolescents in lone parent families are less likely to experience negative adjustment outcomes. Additionally, when divorce reduces the conflict within the family, children may fare better on measures of adjustment than children who remain in highly conflicted nuclear families (Hetherington et al., 1998). These findings indicate that it is not the lone parent family structure *per se* that influences adjustment outcomes, but rather the risk factors that may be more likely to accompany this family structure (Biblarz & Gottainer, 2000).

### **The Grandparent-Grandchild Relationship**

The grandparent-grandchild relationship is still a developing area of research but existing findings suggest that grandparents occupy a wide variety of practical, emotional and supportive roles in their grandchildren's lives (Tan et al., 2010). In many types of families,

grandparents and grandchildren see each other regularly and share close and valuable relationships (Elder & Conger, 2000). Thus, grandparental involvement encompasses both the frequency of contact between the grandparent and the grandchild, as well as the qualitative strength of the grandparent-grandchild bond (Tan et al., 2010).

Roles that grandparents take on include the provision of emotional support, as well as the provision of financial support when family circumstances necessitate it (Wild, Gaibie, & Mia, 2012). Grandparents act as mentors through aiding children with homework, partaking in educational activities and providing career advice (Lavers & Sonuga-Barke, 1997; Yorgason, Padilla-Walker, & Jackson, 2011). By upholding traditions and imparting grandchildren with knowledge about their family history, grandparents also frequently fulfil the role of family custodian (Tan et al., 2010). Finally, grandparents participate in leisure activities with their grandchildren by, for example, teaching them skills or sharing hobbies with them (Elder & Conger, 2000). During situations of high risk or instances of family upheaval, grandparents may be particularly important resources (Flouri, Buchanan, Tan, Griggs, & Attar-Schwartz, 2010). For example, in situations where parents struggle to fulfil their parenting responsibilities, grandparents may provide childrearing assistance (Lussier, Deater-Deckard, Dunn, & Davies, 2002). They may also offer grandchildren affection and encouragement when support is lacking from other sources (King & Elder, 1997). When experiencing family difficulties, for example, grandchildren may seek grandparents as confidants and advice-givers (Elder & Conger, 2000).

Because grandparents may provide additional support in difficult times, it makes intuitive sense that grandparents may be more involved in family structures associated with increased risk, such as the lone parent family (Ruiz & Silverstein, 2007). In line with this, Kennedy and Kennedy (1993) found that adults who had grown up in lone parent families reported higher levels of grandparental involvement than those who had grown up in nuclear families. However, not all studies have supported this, as both Attar Schwartz et al. (2009) and Lussier et al. (2002) found no significant differences in levels of grandparental involvement across different family structures. A possible reason for this discrepancy may be that grandparents' involvement in their grandchildren's lives is often contingent on the parent-grandparent relationship (Mueller & Elder, 2003). Parents may act as gatekeepers, either facilitating or restricting contact between grandparents and their grandchildren. For example, in divorced families, parental conflict may lead the custodial parent to restrict their children's contact with grandparents on the noncustodial side (Mueller & Elder, 2003). The grandparent's age, health and geographical proximity to the grandchild's family are



additional factors that may influence how involved grandparents are (Hilton & Macari, 1998). Thus, while family structure might influence the level of grandparental involvement, various additional factors also contribute towards how involved grandparents are in the lives of their grandchildren.

### **Grandparental Involvement and Grandchild Adjustment**

From a socio-ecological perspective, meaningful relationships outside the immediate family contribute to the development and wellbeing of a child (Bridges, Roe, Dunn, & O'Connor, 2007). Therefore, close relationships with a grandparents may be beneficial to grandchildren's adjustment. Although relatively little research has examined this possibility, the few existing studies generally show that grandparental involvement is associated with better psychosocial adjustment and more prosocial behaviour in grandchildren (Attar-Schwartz et al., 2009; Flouri et al., 2010; Henderson, Hayslip, Sanders, & Loudon, 2009). Other studies have linked close grandparent-grandchild relationships to fewer depressive symptoms (Ruiz & Silverstein, 2007), reduced stress (Denham & Smith, 1989), better school engagement (Yorgason et al., 2011), and protection against the negative effects of harsh parenting (Barnett, Scaramella, Neppl, Ontai, & Conger, 2010).

Grandparents may therefore be a resource for promoting positive adolescent development in any type of family. Having a close, involved grandparent may, however, be even more important for adolescents in lone parent families, because grandparents may help to mitigate the risks associated with this family structure (Bridges et al., 2007). To date very little is known about the specific role that grandparents play within lone parent families. In some cases, the association between grandparental involvement and adolescent psychosocial adjustment has been found to be stronger in lone parent families than in nuclear families (e.g. Attar-Schwartz et al., 2009; Henderson et al., 2009). Ruiz and Silverstein (2007), for example, found an association between greater adolescent-grandparent closeness and reduced depressive symptoms, which was particularly salient for children from lone parent families. Furthermore, there is some evidence to suggest that grandparental involvement may be able to moderate the association between parental involvement and adolescent adjustment (Bridges et al., 2007). According to the latent function hypothesis, grandparental involvement is less likely to have an effect on adolescents' adjustment when the role of the grandparent is rendered redundant by the presence of highly involved parents. In contrast, in situations where parental involvement is low, the support that grandparents provide may have a stronger influence on adolescent adjustment (Barnett et al., 2010). The latent function hypothesis may partly be able to explain why grandparental involvement may have a greater impact on

adolescent adjustment in lone parent families because parents in lone parent families tend to be less involved (Deleire & Kalil, 2002).

Evidence from other studies, however, suggests that grandparental involvement may be equally beneficial to all children regardless of family structure (e.g. McLanahan & Sandefur, 1994; Yorgason et al., 2011). More surprisingly, one study reported that greater closeness to paternal grandparents was associated with poorer adjustment outcomes for adolescents in lone parent families (Lussier et al., 2002). Therefore, on one hand there is empirical evidence to support the notion that grandparents are particularly protective for adolescents residing in lone parent families. However, the presence of contradictory findings means that at present, research reveals no clear understanding of the association between grandparental involvement and adolescent adjustment across lone parent and nuclear families.

### **Methodological Concerns**

Parental involvement is an important correlate of both adolescent adjustment and grandparental involvement (Hetherington et al., 1998). Therefore, in order to fully understand the specific influence that grandparents have upon adolescent adjustment, the role of parents needs to be taken into consideration. However, across the research on grandparenting, only a handful of studies have controlled for the relationship between parental involvement and adolescent adjustment. Gaibie (2012) found that once parental involvement was taken into consideration, the associations between grandparental involvement and certain adjustment outcomes were no longer significant. In two other studies however, grandparental involvement remained a significant predictor of adolescent adjustment outcomes even when parental involvement was controlled for (Ruiz & Silverstein, 2007; Yorgason et al., 2011). The latter findings suggest that grandparents may have their own unique influence upon adolescent adjustment. However, with so few studies having included measures of parental involvement, researchers have yet to elucidate whether and in which areas of adjustment such an influence may be present.

Furthermore, across studies in this area, little attention has been paid to defining the concept of grandparental involvement. Some studies have simply asked participants how close or important they perceive the grandparental relationship to be (e.g. Lussier et al., 2002). Others have used more comprehensive measures including questions on involvement in different kinds of activities (e.g. Attar-Schwartz et al., 2009), although there has been no specification of which activities should be included. Studies that relied on only one question

to measure the closeness of the relationship (Bridges et al., 2007; Lussier et al., 2002) found weaker associations between grandparental involvement and grandchild adjustment than did studies that relied on more substantive measures (Attar-Schwartz et al., 2009; Griggs et al., 2010). Therefore, it might be the actual involvement in activities rather than simply the feeling of closeness that contributes to grandchildren's development (Griggs et al., 2010). In addition, while some studies have focused on the relationship to the closest grandparent, others have assessed relationships to all living grandparents. Different studies have also used a variety of outcome measures and have studied different age groups (Dunifon, 2013). Thus, the limited number of studies in this area have differed substantially in certain aspects of their methodological approaches. It is therefore difficult at this stage to understand inconsistencies in results across studies.

### **Conclusion and Rationale for Research**

Whilst grandparents have always been involved in their grandchildren's lives, research suggests that grandparents may be playing an even more prominent role in today's society (Griggs et al., 2010). Resultantly, understanding how grandparental involvement can influence adolescent adjustment is becoming more relevant. Current research suggests the existence of a relationship between grandparental involvement and adolescent adjustment. In addition, this association may be stronger for adolescents in lone parent families than for adolescents in nuclear families, and grandparents may also be more involved within lone parent family structures. Therefore, grandparents may help to protect adolescents in lone parent families from the negative adjustment outcomes associated with this family structure. However, due to the paucity of research and lack of methodological consistency in this area, there is as yet no clear understanding of whether and how grandparents may be protective resources for adolescents in lone parent families.

By examining the relationship between grandparental involvement and adjustment, the present study therefore adds to a research domain currently lacking in empirical knowledge. In South Africa, over a third of the country's children reside in lone parent families (Department of Social Development, 2012). Therefore, the possibility that involved grandparents may help to decrease adolescent adjustment difficulties in this type of family is important to investigate. By focusing on lone parent and nuclear families, the research addresses some of the inconsistencies in the literature pertaining to differences in grandparental involvement across family structures. Research in this area is valuable to practitioners and policy makers in the design of interventions aimed at children at risk for maladjustment. Currently, the potential of grandparents to influence their grandchildren's

development is largely unacknowledged amongst child-based professionals and institutions (Attar-Schwartz et al., 2009).

### **Aims and Hypotheses**

The primary objective of the present study was to investigate the association between grandparental involvement and adolescent adjustment in lone parent and nuclear families. As a preliminary step, we examined whether adolescents from lone parent families had poorer adjustment outcomes than adolescents from nuclear families. Secondly, we investigated whether levels of grandparental involvement differed between lone parent and nuclear family structures. We then addressed whether grandparental involvement was associated with adjustment outcomes for adolescents across the whole sample. To ascertain whether family structure and grandparental involvement had unique associations with adolescent adjustment, we tested whether these associations remained significant when parental involvement and demographic characteristics of the sample were taken into consideration. Finally, we aimed to establish whether grandparents might be a protective resource for adolescents in lone parent families, by testing whether grandparental involvement moderated the association between family structure and adolescent adjustment. Given that low parental involvement is more common in lone parent families, we also investigated whether grandparental involvement moderated the association between parental involvement and adolescent adjustment. The following specific hypotheses were tested:

1. Adolescents in lone parent families have poorer adjustment outcomes than adolescents in nuclear families.
2. Adolescents in lone parent families have higher levels of grandparental involvement than adolescents in nuclear families.
3. Grandparental involvement is positively associated with adolescent adjustment in the sample as a whole.
4. Grandparental involvement moderates the relationship between adolescent adjustment and family structure. We predicted that the association between grandparental involvement and adolescent adjustment is stronger for adolescents in lone parent families than it is for adolescents in nuclear families.
5. Grandparental involvement moderates the relationship between adolescent adjustment and parental involvement. We predicted that the association between grandparental

involvement and adolescent adjustment is stronger for adolescents with low levels of parental involvement than for adolescents with high levels of parental involvement.

## Method

### Design

This study employed a quantitative, correlational design to investigate the relationship between the predictor variable (level of grandparental involvement) and the outcome variable (level of adjustment) for adolescents living in lone parent and nuclear family structures. Correlational methods are particularly useful for studying relationships between naturally occurring variables (such as family structures and grandparental involvement) that cannot be directly manipulated (Wilson & MacLean, 2011). Data for this research were collected using a cross-sectional survey design. Surveys were well suited to this research because they are easy to administer, cost-effective and make it possible to gather information from participants about their personal relationships (Wilson & MacLean, 2011).

The current study constitutes one part of a larger pilot study, investigating the relationship between grandparental involvement and adolescent adjustment. The pilot study forms the groundwork for the implementation of a larger longitudinal study, which will be representative of school-going adolescents in Cape Town and aim to track the adjustment trajectory of adolescents with involved grandparents over a two-year period. The present study provides an indication of whether the hypotheses investigated here are promising areas of focus for the larger, representative study.

### Participants

**Sampling procedure.** Due to time constraints, we used a convenience sampling technique. Participants were recruited from two co-educational, English medium high schools in Cape Town. The two communities in which the schools are situated differ considerably in terms of socioeconomic status (SES), educational attainment and unemployment level (Romanovsky & Gie, 2006). Both schools have a student population that predominantly belongs to the ethnic group known as Coloured. In the South African context, the term “Coloured” is used to describe an individual of mixed ethnic origin. Although almost half of Cape Town’s population is Coloured (Small, 2008), this ethnic group has been under-represented in South African research on grandparenting. Previous research has focused primarily on Black African families and is typically located in the context of the HIV/AIDS pandemic (e.g. Schatz & Ogunmefun, 2007). However, due to the value placed on grandparents in the Coloured community, this population was identified as one in which

grandparental involvement is likely to be common (Bray, Gooskens, Kahn, Moses, & Seekings, 2010).

From the two schools, all students who were enrolled in either grade 8 or grade 9 (ages 13 to 17) were eligible to participate in the study. This particular age range was chosen to permit comparability to other research on grandparenting and grandchild adjustment, which has often focused on adolescents (e.g. Attar-Schwartz et al., 2009; Bridges et al., 2007). In addition, mental health problems often develop in adolescence and are related to other developmental and health concerns (Patel, Flisher, Hetrick, & McGorry, 2007). Identifying protective resources is therefore particularly relevant for this age group. Only results from adolescents residing in either a lone parent or a nuclear family, with at least one living grandparent, were included in the analyses.

**Sample size calculation.** The multiple regression analyses used in this study require a sufficiently large sample size in order to be reliable. The following equation, suggested by Field (2009), provides an estimate for the minimum required sample size ( $N$ ) when a specific predictor in a multiple regression model is to be tested, where  $k$  is the number of predictors:

$$N \geq 104 + k$$

Since eight predictors were used in this study (gender, race, SES, age, parental involvement, family structure, grandparental involvement and the interaction term), this sample size calculation yielded a minimum sample size of 112.

**Participant characteristics.** Overall, 722 participants took part in the study. From these, 299 participants (41% of the original sample) were excluded because they lived in family structures other than a lone parent or nuclear family ( $n = 255$ ), because they did not have any living grandparents ( $n = 20$ ), or because they did not complete enough of the survey to allow for meaningful analysis of their data ( $n = 24$ ). This resulted in a sample size of 423 participants. Preliminary inspection of the data revealed that the subgroups of the participants who classified themselves as 'White', 'Indian' and 'Other' were not large enough to include in the analyses ( $n = 8, 3$  and  $14$  respectively). All analyses were therefore conducted with a final sample that included only the 398 participants who classified themselves as 'Coloured' or 'Black African'. The final sample exceeded the minimum requirement for the analyses as calculated above.

The participants ranged in age from 13 to 17 years, with the mean age being 14.05 years ( $SD = 0.84$ ). Of these participants, 67% resided in nuclear families ( $n = 268$ ) and 33% resided in lone parent families ( $n = 130$ ). Gender and race of participants in the whole sample as well as in the nuclear family and lone parent family subgroups are displayed in Table 1.



Table 1

*Gender and Race of Participants in the Whole Sample , Nuclear Family Subgroup and Lone Parent Family Subgroup*

	Whole sample		Nuclear family		Lone parent family	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
<b>Gender</b>						
Male	172	43.2	121	45.1	51	39.2
Female	226	56.8	147	54.9	79	60.8
<b>Race</b>						
Coloured	347	87.2	235	87.7	112	86.2
Black African	51	12.8	33	12.3	18	13.8

### Measures

The measures used in this study form part of a survey developed for the larger research project that this study is nested in. Only the measures relevant to the proposed study are discussed here. The questionnaire was translated from English into Afrikaans and isiXhosa using standard back translation procedures. Although we made the questionnaire available to participants in all three languages, all participants chose to answer the English version, which is included in Appendix A.

**Demographic information.** Adolescents were asked to provide their age, gender and to indicate to which racial group they belong (either *Black African*, *Coloured*, *White*, *Indian*, or *Other*). As a measure of household SES, participants indicated whether 15 household items were present or absent in their household. Asset index approaches such as this one have been found to provide a parsimonious, robust and child-centred proxy measure of SES in South Africa (Barnes, Wright, Noble, & Dawes, 2007; Booysen, 2001).

**Family structure.** Family structure was determined by asking adolescents to indicate whom they live with most of the time from a range of provided responses such as *mother*, *father*, and *grandmother*. Participants who indicated that they lived with both their mother and father most of the time, and with no other adults, were classified as residing in a nuclear family. Participants who indicated that they lived solely with either their mother or their father most of the time, and with no other adults, were classified as residing in a lone parent family.

**Parental involvement scale.** Mother involvement and father involvement were both assessed using six items from the 1979 US National Longitudinal Survey of Youth. Participants completed the scales for each living parent. The items assess both the quantity and quality of the time parents spend with their adolescent children in terms of behavioural,



cognitive and emotional components of involvement. Responses are scored on a 4-point Likert-type scale and summed to create a composite involvement score with higher scores indicating greater parental involvement. Following Ruiz and Silverstein (2007), the score for the most involved parent was used in the analyses except in cases where adolescents from lone parent families only had one living parent. The items of the scale have been found to load strongly onto a single factor representing high quality parental involvement (Carlson, 2006; Pleck & Hofferth, 2008). Currently, little is known about the psychometric properties of the parental involvement scale, but preliminary analyses were conducted in South Africa with a population similar to the one under study. These have indicated that it has acceptable internal consistency with a mean Cronbach's alpha of .74 (Gaibie, 2012).

**Grandparental involvement scale.** Grandparental involvement was measured using a scale developed by Griggs et al. (2010), which has been modified to make it more applicable to the South African context based on the results of a pilot study conducted by Mia (2010). This comprehensive, multidimensional measure incorporates the activities and types of support that qualitative research has identified as relevant to grandparental involvement (Griggs et al., 2010), relying in particular on Mueller and Elder's (2003) six forms of grandparental involvement (face-to-face contact, participation in activities, intimacy, mentorship, authority and instrumental assistance). The scale includes questions about how supportive grandchildren perceive their grandparents to be; how much they can discuss problems or concerns with their grandparents; grandparents' involvement in activities and personal projects; and grandparents' financial involvement. The grandparental involvement scale has 11 items measured on a 3-point Likert-type scale (0 = *not much/never*, 1 = *some/occasionally*, 2 = *a lot/often*). Scores are summed to create a composite involvement score with higher scores indicating more involvement. Participants answered the scale for all of their living grandparents. In addition, following Attar-Schwartz et al. (2009) and Yorgason et al. (2011), adolescents were asked to indicate which grandparent they feel closest to. The involvement score of this 'closest grandparent' was used in the statistical analyses. The grandparental involvement scale has only been used once before in this modified form. However, preliminary analyses have indicated good internal consistency scores for each type of grandparent: maternal grandmother ( $\alpha = .84$ ), maternal grandfather ( $\alpha = .88$ ), paternal grandmother ( $\alpha = .87$ ), and paternal grandfather ( $\alpha = .90$ ) (Gaibie, 2012).

**Adolescent adjustment.** The outcome variable, adolescent psychosocial adjustment, was assessed using the adolescent self-report version of the Strengths and Difficulties Questionnaire (SDQ), a behavioural screening tool suitable for adolescents between 11 and

17 years of age (Goodman, 1997). The questionnaire consists of 25 items scored on a 3-point Likert-type scale (0 = *not true*, 1 = *somewhat true*, 2 = *certainly true*). Participants respond to each item by indicating to what extent a statement about individual emotions and behaviour is true for them on the basis of the last six months. The scale is divided into five subscales consisting of five questions each. The subscales measure four adjustment difficulties common in children and adolescents (hyperactivity, emotional problems, conduct problems, and peer problems), as well as prosocial behaviour, which is a measure of strength (Goodman, 1997). Each subscale is summed to form a composite score and in addition, all four difficulty subscales are summed together to form a total difficulties score.

Internal consistency for the subscales and the total difficulties score has been established: total difficulties ( $\alpha = .82$ ), emotional symptoms ( $\alpha = .75$ ), conduct problems ( $\alpha = .72$ ), hyperactivity ( $\alpha = .69$ ), peer problems ( $\alpha = .61$ ) and prosocial behaviour ( $\alpha = .65$ ) (Goodman, Meltzer, & Bailey, 1998). Good test-retest reliability of the SDQ has been reported ( $r > .70$  for all subscales except prosocial behaviour where  $r = .59$ ; Muris, Meesters, & van den Bergh, 2003) and the concurrent, discriminant and construct validity of the SDQ are well-established (Hawes & Dadds, 2004; Muris et al., 2003; Van Roy, Veenstra & Clench-Aas, 2008). The SDQ is widely used internationally (see Woerner et al., 2004) and in South Africa (e.g. Cluver, Gardner, & Operario, 2007) both in research and in practice as a screening instrument. Its psychometric properties have been validated cross-culturally including in lower-income countries (Woerner et al., 2004).

### **Procedure**

Approval to conduct this research was obtained from the Research Ethics Committee of the Psychology Department of the University of Cape Town (UCT) and the Western Cape Education Department (WCED). Because of the minimal risk involved in the research, we obtained passive parental consent. All parents of eighth and ninth grade learners were given a form outlining the proposed study, including a reply slip that the parents could sign and return to the school if they wished for their child not to participate in the research (see Appendix B). If the form was not returned, the parents were assumed to have given their consent. Both participants and their parents were informed of the purpose and procedures of the study; that participation in the study was voluntary; and that participants could choose not to answer particular questions or to withdraw from the study at any point without incurring any negative consequences. Participation was completely anonymous as participants did not provide names or other contact information on the surveys.

Data collection took place at the schools during the month of June 2013. The time and date were chosen in collaboration with the schools such that the research would cause minimal disruption to academic learning. Before distributing the surveys, the researcher explained the nature and purpose of the study and gave the adolescents the opportunity to ask questions. The adolescents were required to give assent (see Appendix C). At this point, those students whose parents did not give permission or who themselves chose not to participate were occupied with a different activity. The survey took approximately 40 minutes for the adolescents to complete. During this time the researcher and assistants were on hand to answer questions or address any problems that arose. After completing the questionnaire, participants were thanked and debriefed.

### **Data Analysis**

The data were analysed using the statistical software package SPSS version 21.0. Because the grandparental involvement scale and the parental involvement scale have only been used once before in their current forms, we calculated Cronbach's alpha for each scale to establish their internal consistency. Descriptive statistics were also calculated to determine the means and standard deviations of the measured variables.

Then, Pearson product-moment correlation coefficients were calculated between all the variables. In order to test the first hypothesis, we examined the point-biserial correlations between family structure (coded as 0 for participants from nuclear families and 1 for participants from lone parent families) and the six adjustment outcome variables (emotional symptoms, conduct problems, hyperactivity, peer problems, total difficulties, and prosocial behaviour). Subsequently, to test whether or not the level of grandparental involvement differed across family structures (hypothesis 2), the point-biserial correlation between grandparental involvement and family structure was analysed. Finally, the correlations between the grandparental involvement and the adjustment outcomes were examined in order to test the third hypothesis that grandparental involvement is positively associated with adolescent wellbeing.

Next, we ran a set of hierarchical multiple regression models, to test hypotheses 4 and 5. In addition, we used the regression models to provide a more sophisticated analysis of hypotheses 1 and 3, by determining whether associations identified in the correlational analyses remained significant when controlling for parental involvement and the demographic covariates. We ran different regressions for each of the six adjustment outcome variables. Eight predictor variables were entered into each of the regression models. In the first step, we controlled for the associations between demographic covariates and the

outcome variables. Gender was included as a control variable because past research indicates an association between gender and outcomes on the SDQ, with boys being more likely to score higher on measures of conduct problems and hyperactivity, and girls being more likely to score higher on measures of emotional symptoms and prosocial behaviour (Turi, Toth, & Gervai, 2011). Previous research using the SDQ or similar adjustment measures has also found differences related to SES, age and race of the participants (Attar-Schwartz et al., 2009; Bridges et al., 2007; Muris et al., 2003). As a result, we entered the demographic covariates gender, SES, age and race in the first step of the regression model. Parental involvement was centred and added to the regression model in the second step and family structure was added in the third step. The  $\Delta R^2$  between step two and step three indicated whether family structure accounted for any additional variance in the outcome variables once parental involvement and the demographic covariates had been controlled for (hypothesis 1). Next, the grandparental involvement variable was centred and added to the regression model in the fourth step. The  $\Delta R^2$  between step three and step four indicated whether grandparental involvement accounted for any additional variance in the outcome variables after having controlled for parental involvement and the demographic covariates (hypothesis 3).

Next, we conducted a moderation analysis in order to test whether the association between grandparental involvement and adjustment was stronger for adolescents in lone parent families than for adolescents in nuclear families (hypothesis 4). An interaction term between family structure and grandparental involvement was calculated and entered as a fifth step into the same regression model used to test the previous hypotheses. This is referred to as Step 5a in the regression table (Table 4). A significant interaction would indicate that the association between family structure and adolescent adjustment is moderated by grandparental involvement.

Lastly, we conducted another moderation analysis to test whether the association between grandparental involvement and adjustment was stronger for adolescents with low levels of parental involvement than for adolescents with high levels of parental involvement (hypothesis 5). The interaction term from the previous model was removed. Instead, we calculated an interaction term between parental involvement and grandparental involvement and entered it into the model in the fifth step. This is referred to as Step 5b in the regression table (Table 4). Once again, a significant interaction would indicate that the correlation between parental involvement and adjustment is moderated by grandparental involvement.

Before running the regression analyses, we evaluated the descriptive statistics. No multicollinearity or non-linearity were detected in the data, thus it was feasible to continue

with the regression. For all regression analyses, the alpha level was set at 0.05 and the listwise deletion method was used to deal with missing data. For all outcome variables, final models were calculated which included only the significant predictors at each step. Subsequent diagnostic tests detected no outliers, influential cases or heteroscedasticity. However, for all outcome variables other than hyperactivity and emotional symptoms, the standardised residuals of the regression analyses showed some deviations from normality. When prosocial behaviour was used as the outcome variable, the residual plots were negatively skewed whilst when total difficulties, peer problems and conduct problems were used as outcome variables the residual plots were positively skewed. To correct for this skew, prosocial behaviour was transformed using a reflected square root transformation, total difficulties was transformed using a square root transformation, and peer problems and conduct problems were transformed using log transformations. After transforming the variables, slight deviations from normality remained for the residuals in the regression analyses containing peer problems and conduct problems. However, several authors have argued that in large samples such as the one utilized in this study, multiple regression results are generalisable even when there are slight deviations from normality of the residuals due to the central limit theorem (Allison, 1999). Appendix D shows the untransformed and transformed residual plots for the regression analyses.

## **Results**

### **Reliability Analyses**

The Cronbach's alpha scores calculated for the grandparental involvement scales indicated good to excellent internal consistency for each of the scales (maternal grandmother involvement scale:  $\alpha = .87$ , maternal grandfather involvement scale:  $\alpha = .91$ , paternal grandmother involvement scale:  $\alpha = .91$ , paternal grandfather involvement scale:  $\alpha = .90$ ). The father involvement scale had an acceptable level of internal consistency,  $\alpha = .77$ . The Cronbach's alpha value of the mother involvement scale was .66 which, although lower than ideal, is deemed acceptable for research purposes according to Nunnally (1978).

### **Descriptive Statistics**

Descriptive statistics for the whole sample and the family structure subgroups are displayed in Table 2.

Table 2  
*Means and Standard Deviations of Variables for the Whole Sample, Nuclear Family Subgroup and Lone Parent Family Subgroup*

Variables	Whole sample ( <i>n</i> = 398)		Nuclear family ( <i>n</i> = 268)		Lone parent family ( <i>n</i> = 130)	
	Mean	SD	Mean	SD	Mean	SD
Age (years)	14.05	0.84	14.03	0.78	14.08	0.95
SES	13.61	1.54	13.92	1.36	12.98	1.71
Parental involvement	13.59	3.05	13.86	2.89	13.02	3.29
Grandparental involvement	13.44	5.42	13.58	5.89	13.13	5.72
Emotional symptoms	3.58	2.31	3.45	2.28	3.85	2.35
Conduct problems	2.36	1.75	2.34	1.78	2.40	1.70
Hyperactivity	3.72	2.09	3.69	2.10	3.79	2.07
Peer problems	1.94	1.74	1.81	1.69	2.20	1.82
Total difficulties	11.59	5.03	11.27	5.17	12.24	4.66
Prosocial behaviour	7.79	1.71	7.84	1.63	7.69	1.86

### Correlational Analyses

Pearson product-moment correlation coefficients between all of the variables are displayed in Table 3. In partial support of hypothesis 1, family structure was positively associated with the following adjustment outcomes: emotional symptoms, peer problems and total difficulties. This indicated that adolescents living in a lone parent family had more emotional symptoms, peer problems and total difficulties than adolescents living in a nuclear family. Although statistically significant, these correlations were fairly weak. Family structure was not associated with the other three adjustment outcomes (conduct problems, hyperactivity and prosocial behaviour).

A significant negative correlation was also found between family structure and SES, indicating that the lone parent family structure was associated with lower SES than the nuclear family structure. Furthermore, family structure was negatively associated with parental involvement, indicating that adolescents residing in lone parent families experienced lower levels of parental involvement than adolescents residing in nuclear families. Lower levels of parental involvement were also significantly associated with more adjustment difficulties on each of the difficulty subscales as well as with less prosocial behaviour.

The correlation between family structure and grandparental involvement was not statistically significant. Hypothesis 2 was therefore not supported because there was no difference between the level of grandparental involvement in lone parent and nuclear families.

The correlational analyses provided partial support for hypothesis 3. Grandparental involvement was significantly associated with prosocial behaviour and total difficulties, but not with any of the other adjustment outcomes. Higher levels of grandparental involvement were modestly correlated with more prosocial behaviour and weakly correlated with fewer total difficulties. In addition, a significant positive correlation was found between grandparental involvement and parental involvement.

Table 3

*Correlations Between Demographic Characteristics, Parental Involvement, Family Structure, Grandparental Involvement and the SDQ Adjustment Outcomes*

	1	2	3	4	5	6	7	8	9	10	11	12
1. Age	-											
2. Gender <sup>a</sup>	-.09*	-										
3. Race <sup>b</sup>	-.03	-.05	-									
4. SES	-.02	-.16**	.19***	-								
5. Parental involvement	-.09*	.06	.15**	.10*	-							
6. Family structure <sup>c</sup>	.01	.05	.00	-.27***	-.12**	-						
7. Grandparental involvement	-.02	-.06	-.06	.05	.21***	-.04	-					
8. Emotional symptoms	.09*	.29***	.04	-.11*	-.17***	.09*	-.04	-				
9. Conduct problems	.13**	-.03	-.07	-.07	-.27***	.04	-.08	.14**	-			
10. Hyperactivity	.06	-.04	.06	-.01	-.19***	.02	-.07	.21***	.35***	-		
11. Peer problems	.12*	.06	-.07	-.19***	-.20***	.11*	-.04	.31***	.12*	.02	-	
12. Total difficulties	.16**	.12**	-.01	-.14**	-.34***	.10*	-.09*	.71***	.59***	.66***	.50***	-
13. Prosocial behaviour	.04	.14**	-.03	.10*	.14**	-.02	.14**	-.01	-.15**	-.21***	-.09	-.18***

a. 0 = male, 1 = female

b. 0 = Black African, 1 = Coloured

c. 0 = nuclear family, 1 = lone parent family

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$



### **Multiple Regression Analyses**

Results from the multiple regression analyses (Table 4) showed that adolescents' adjustment difficulties and prosocial behaviour differed according to their personal characteristics. Across all difficulty subscales other than hyperactivity, older adolescents had more adjustment difficulties than younger adolescents. Girls reported more emotional symptoms, total difficulties and prosocial behaviour than boys. Adolescents with a higher SES had fewer peer problems and total difficulties, as well as more prosocial behaviour. None of the adjustment outcomes varied by race. After controlling for the relationship between the adjustment outcomes and the demographic covariates, low levels of parental involvement remained significantly correlated with poorer adjustment on all of the outcomes.

The multiple regression analyses provided a more sophisticated test of hypotheses 1 and 3, by showing whether the associations identified in the correlational analyses remained significant when controlling for several covariates of adjustment. Although preliminary correlational analyses provided partial support for hypothesis 1, family structure was no longer associated with any of the adjustment outcomes after controlling for parental involvement and the demographic variables. Thus, hypothesis 1 was no longer supported.

Overall, hypothesis 3 was partially supported. Although correlational analyses indicated an association between grandparental involvement and total difficulties, this association was no longer significant once parental involvement and the demographic variables were controlled for. In contrast, however, the association between grandparental involvement and prosocial behaviour identified in the correlational analyses remained significant even after controlling for the covariates.

### **Moderation Analyses**

Hypothesis 4 was not supported because no significant interactions were found between family structure and grandparental involvement (see step 5a of Table 4). Similarly, hypothesis 5 was not supported as no significant interactions were found between grandparental involvement and parental involvement (see step 5b of Table 4). Grandparental involvement thus did not moderate the relationship between family structure and adolescent adjustment, nor the relationship between parental involvement and adolescent adjustment.

The final model predicting prosocial behaviour including only the significant predictors (gender, SES, parental involvement, grandparental involvement) accounted for 6% of the variance in prosocial behaviour,  $F(4, 385) = 6.43, p < .001$  (see Table 5). The final models for the difficulty outcomes are provided in Appendix E.

Table 4  
*Results of Hierarchical Multiple Regression Analyses Predicting Adolescents' Adjustment*

	Emotional symptoms		Conduct problems		Hyperactivity		Peer problems		Total difficulties		Prosocial behaviour	
	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B	B	SE B
<b>Step 1</b>												
Age	0.32*	0.13	0.04*	0.02	0.16	0.13	0.04*	0.02	0.16**	0.05	-0.03	0.03
Gender <sup>a</sup>	1.35***	0.23	-0.02	0.03	-0.16	0.22	0.02	0.03	0.19*	0.08	-0.16**	0.05
Race <sup>b</sup>	0.53	0.34	-0.04	0.04	0.40	0.33	-0.03	0.04	0.05	0.12	0.06	0.08
SES	-0.11	0.08	-0.01	0.01	-0.04	0.07	-0.03**	0.01	-0.05*	0.03	-0.04**	0.02
<b>Step 2</b>												
Parental involvement	-0.15***	0.04	-0.02***	0.00	-0.12***	0.03	-0.02***	0.00	-0.07***	0.01	-0.02**	0.01
<b>Step 3</b>												
Family Structure <sup>c</sup>	0.17	0.24	0.00	0.03	-0.03	0.24	0.03	0.03	0.07	0.08	-0.02	0.05
<b>Step 4</b>												
Grandparental involvement	0.01	0.02	0.00	0.00	-0.01	0.02	0.00	0.00	0.00	0.01	-0.01*	0.01
<b>Step 5</b>												
a. Family structure × grandparental involvement	0.07	0.04	0.00	0.01	-0.04	0.04	0.00	0.01	-0.01	0.01	0.00	0.01
b. Parental involvement × grandparental involvement	-0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00
R <sup>2</sup>	0.15		0.07		0.05		0.09		0.15		0.07	
Adjusted R <sup>2</sup>	0.14		0.05		0.03		0.07(a), 0.08(b)		0.14		0.05	
n	389		388		389		388		384		390	
Step 1	$\Delta R^2 = 0.11***$		$\Delta R^2 = 0.02$		$\Delta R^2 = 0.01$		$\Delta R^2 = 0.05**$		$\Delta R^2 = 0.06***$		$\Delta R^2 = 0.04**$	
Step 2	$\Delta R^2 = 0.04***$		$\Delta R^2 = 0.06***$		$\Delta R^2 = 0.04***$		$\Delta R^2 = 0.03***$		$\Delta R^2 = 0.10***$		$\Delta R^2 = 0.02**$	
Step 3	$\Delta R^2 = 0.00$		$\Delta R^2 = 0.00$		$\Delta R^2 = 0.00$		$\Delta R^2 = 0.00$		$\Delta R^2 = 0.00$		$\Delta R^2 = 0.00$	
Step 4	$\Delta R^2 = 0.00$		$\Delta R^2 = 0.00$		$\Delta R^2 = 0.00$		$\Delta R^2 = 0.00$		$\Delta R^2 = 0.00$		$\Delta R^2 = 0.01*$	
Step 5a	$\Delta R^2 = 0.01$		$\Delta R^2 = 0.00$		$\Delta R^2 = 0.00$		$\Delta R^2 = 0.00$		$\Delta R^2 = 0.00$		$\Delta R^2 = 0.00$	
Step 5b	$\Delta R^2 = 0.00$		$\Delta R^2 = 0.00$		$\Delta R^2 = 0.00$		$\Delta R^2 = 0.00$		$\Delta R^2 = 0.00$		$\Delta R^2 = 0.00$	

a. 0 = male, 1 = female

b. 0 = Black African, 1 = Coloured

c. 0 = nuclear family, 1 = lone parent family

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Note. Prosocial behaviour was reflected thus for this outcome variable, negative B values represent positive associations, and vice versa.

The R<sup>2</sup> and adjusted R<sup>2</sup> values were the same when using steps 5a and 5b unless otherwise indicated.

Table 5  
*Final Model Predicting Prosocial Behaviour*

	B	SE B	$\beta$	t	p
(Constant)	2.29	0.23		10.14	< .001
Gender	-0.15	0.05	-0.16	-3.12	.002
SES	-0.04	0.02	-0.11	-2.22	.027
Parental involvement	-0.01	0.01	-0.08	-1.57	.118
Grandparental Involvement	-0.01	0.01	-0.12	-2.39	.017
R <sup>2</sup>	0.06				
Adjusted R <sup>2</sup>	0.05				

Note.  $F(4, 385) = 6.12, p < .001,$

Prosocial behaviour was reflected thus negative B and  $\beta$  values represent positive associations and vice versa.

### Discussion

The aim of the study was to investigate the relationship between grandparental involvement and adolescent adjustment in lone parent and nuclear families. The findings indicate that adolescents from lone parent families reported poorer adjustment outcomes than adolescents from nuclear families, although this association was no longer significant once covariates were controlled for. In the sample as a whole, grandparental involvement was associated with adolescents' prosocial behaviour but not with adjustment difficulties once parental involvement and the demographic covariates were taken into consideration. Neither the level of grandparental involvement nor the strength of the association between grandparental involvement and adolescent adjustment differed by family structure. Furthermore, grandparental involvement did not moderate the association between parental involvement and adolescent adjustment. Support for the hypotheses was thus limited, highlighting the need for more research in this domain.

#### The Lone Parent Family and Adolescent Adjustment

The results of the correlational analyses show that living in a lone parent family is associated with more emotional symptoms, peer problems and total difficulties than living in a nuclear family. This finding is in line with a substantial body of literature that has linked the lone parent family structure with adolescent adjustment problems (e.g. see Attar-Schwartz et al., 2009; Lansford et al., 2001). Research has typically explained this association through the specific risk factors that are more common within the lone parent family, such as low parental involvement and economic deprivation (Deleire & Kalil, 2002). The present study supported this view as individuals residing in lone parent families experienced, on average, lower levels

of parental involvement and had a lower SES than individuals from nuclear families. Furthermore, when SES and parental involvement were controlled for, family structure was no longer a significant predictor of any of the adjustment outcomes.

Overall, the results therefore indicate partial support for the first hypothesis. Although the lone parent family was associated with several adjustment difficulties, SES and parental involvement appeared to be more important predictors of adolescent wellbeing than family structure in and of itself. The findings therefore lend credence to the argument that it is not the lone parent family structure *per se* that influences adolescent adjustment outcomes, but rather the risk factors that may be more likely to accompany this type of family (Biblarz & Gottainer, 2000).

### **Level of Grandparental Involvement in the Lone Parent Family**

In contradiction to the second hypothesis, the present study did not find any differences in the level of grandparental involvement across nuclear and lone parent family structures. Given that one would expect grandparents to be more involved in family structures associated with increased risk, this finding appears counterintuitive. However, previous research in this domain has yielded conflicting findings and thus, the results of the present study do have some support in the literature. For example, Attar-Schwartz et al. (2009) and Lussier et al. (2002) also found no differences in level of grandparental involvement across different family structures.

This finding suggests that family structure is not an accurate predictor of grandparents' level of involvement within the family. This may imply that grandparents are stable and reliable figures in all types of families irrespective of levels of familial risk (Attar-Schwartz et al., 2009). Furthermore, it may be that other factors, such as the parent-grandparent relationship and the geographical proximity of the grandparent, are more important determinants than family structure of how involved grandparents are in their grandchildren's lives. Existing research shows that grandparents who live near to their grandchildren and have close relationships with their grandchildren's parents tend to be more involved (Hilton & Macari, 1998; Mueller & Elder, 2003). However, because these factors were not included in the present study, we were not able to examine this possibility further.

### **Grandparental Involvement and Adolescent Adjustment**

The main aim of this study was to investigate the relationship between grandparental involvement and adolescent adjustment in lone parent and nuclear families. In partial support of hypothesis 3, correlational analyses showed an association between grandparental involvement and improved adjustment outcomes related to fewer total difficulties and more prosocial behaviour across the whole sample. This finding is in line with a growing body of literature that has found an association between grandparental involvement and adolescent wellbeing (Attar-Schwartz et al., 2009; Flouri et al., 2010; Ruiz & Silverstein, 2007).

However, once parental involvement was taken into consideration in the regression analyses, the relationship between grandparental involvement and total difficulties was no longer significant. Thus, it appears that the association between grandparental involvement and adolescent total difficulties may be explained by the parent-child relationship rather than the grandparent-child relationship. The observed correlation between grandparental involvement and adolescent total difficulties may therefore merely be reflective of a close and cohesive family unit (Flouri et al., 2010). Consistent with this explanation, higher levels of parental involvement were associated with higher levels of grandparental involvement in the correlational analyses of the present study.

In support of our findings, Bridges et al. (2007) controlled for the mother-child relationship and reported no association between grandparental involvement and adolescent externalizing behaviours. On the other hand, several other studies have reported an association between grandparental involvement and adolescent difficulties (e.g. Attar-Schwartz et al., 2009; Flouri et al., 2010; Ruiz & Silverstein, 2007). However, these studies have typically not controlled for the association between parental involvement and adolescent adjustment. It is therefore not clear whether these studies reported a unique association between grandparental involvement and adolescent difficulties, or whether these associations could similarly have been accounted for by levels of parental involvement.

Whereas controlling for parental involvement rendered the relationship between grandparental involvement and total difficulties insignificant, the association between grandparental involvement and prosocial behavior remained significant. Across studies on grandparenting, prosocial behaviour is the area of adjustment that has been shown to have the most robust and consistent association with grandparental involvement (Attar-Schwartz et al., 2009; Flouri et al., 2010; Yorgason et al., 2011). One interpretation of this relationship is

that grandparents help to foster prosocial behaviour in their grandchildren. Because non-residential grandparents are unlikely to take on parenting responsibilities (Cherlin & Furstenburg, 1985), they may focus more on mentoring, support and other functions that contribute to children's positive development, and less on regulating problem behaviours (Yorgason et al., 2011). However, since the present study cannot infer causation, we cannot rule out the possibility that grandparents are simply more willing to be involved in the lives of grandchildren who are kind and respectful.

Many authors have argued that the influence of grandparenting may be redundant in circumstances in which adolescents have highly involved parents (Barnett et al., 2010; Denham & Smith, 1989; Ruiz & Silverstein, 2007). However, the results of the present study indicate that higher levels of grandparental involvement are associated with higher levels of prosocial behaviour in adolescents, irrespective of levels of parental involvement. In support of our finding, Yorgason et al. (2011) also found a positive relationship between grandparental involvement and prosocial behaviour after controlling for parental involvement. Furthermore, the findings of the present study are particularly similar to those of Gaibie (2012), who investigated the same adolescent adjustment outcomes as we did and found that when controlling for parental involvement, grandparental involvement was only related to prosocial behaviour. Although the present study cannot infer causation, this finding may imply that grandparents are able to take on roles in the family that promote the development of prosocial behaviour in their grandchildren, even when parents are highly involved.

### **Grandparental Involvement and Family Structure**

Grandparent involvement was not found to moderate the relationship between family structure and adolescent adjustment, hence disconfirming the fourth hypothesis. Grandparents therefore did not appear to be protective resources for adolescents in lone parent families. This contradicts the findings of several previous studies, which have found grandparental involvement to have particularly salient, and in certain cases unique, associations for children residing within lone parent family structures (Attar-Schwartz et al., 2009; Ruiz & Silverstein, 2007). These previous findings have suggested that grandparents may be able to mitigate the risks for maladjustment associated with the lone parent family structure. However, in our study, family structure in and of itself was not a significant risk factor for adolescent adjustment outcomes once parent involvement and the demographic covariates were taken into account. Given that a protective factor cannot operate in the absence of risk, it therefore

is unsurprising that grandparental involvement was not protective for adolescents in lone parent families.

Grandparental involvement also did not moderate the association between parental involvement and adolescent adjustment, hence disconfirming the fifth hypothesis. Therefore, in the present study, grandparental involvement does not appear to be protective against the effects of low parental involvement. This finding does not support the latent function hypothesis, which suggests that the influence of grandparental involvement upon adolescent adjustment is stronger in families where parental involvement is low (Barnett et al., 2010). One reason for this finding may be that the relationship between parental involvement and adolescent adjustment is particularly strong and robust (Barnett et al., 2010). In general, influences outside of the immediate family such as non-residential grandparents tend to affect children's adjustment outcomes less strongly than proximal influences such as parents (Hetherington et al., 1998). Overall, the findings of this study thus suggest that grandparents are not particularly protective resources for adolescents in lone parent families, nor for adolescents experiencing low levels of parental involvement.

### **Strengths and Limitations**

The findings of the present study should be interpreted in light of its limitations. Due to the cross-sectional nature of the research, causality cannot be inferred. Therefore, one cannot rule out that rather than grandparental involvement influencing adolescents' adjustment, it may be that grandparents are more likely to be involved in the lives of kind and helpful grandchildren, or that both are caused by a third variable. Furthermore, because the sample in this study was non-random, caution needs to be taken when generalising these results to other populations. In particular, it is not apparent whether the results would generalise to grandparents other than the closest grandparent, to families with residential grandparents or to younger children. Moreover, although using self-report data allowed us to access participants' own perspectives of their personal relationships, the reliance on self-report may have biased the results. In particular, social desirability bias may have influenced how adolescents responded to the questions about their adjustment on the SDQ.

In addition, this study only considered the grandchild's view of their grandparents. However, Lussier et al. (2002) have demonstrated that children, parents and grandparents differ in their views of the grandparent-grandchild relationship. Grandchildren may also be unaware of some of the indirect impact that grandparents have on their lives, for example through assisting parents financially (Ruiz & Silverstein, 2007). Thus, although it is important to consider children's views on matters that affect them, research also needs to

consider the view of parents and grandparents in order to fully understand grandparents' involvement in their grandchildren's lives.

Whilst these limitations are important to note, the present study has several strengths, which underscore the relevance of the results obtained. Firstly, the role that grandparents play in their grandchildren's lives is still under-researched and poorly understood. Thus, by investigating the grandparent-grandchild relationship, this study makes an important contribution to a research domain currently lacking in empirical knowledge. Additionally, by exploring the association of grandparental involvement and family structure, the study contributes to a broader body of literature aimed at identifying protective resources for adolescents and children at increased risk of maladjustment. A further strength of this study is that, unlike much of the previous research, parental involvement was used as a control variable. Thus, the association between grandparental involvement and adolescent adjustment could be analysed beyond the effect of the parent-child relationship. Lastly, the study used a comprehensive, multi-dimensional measure of grandparental involvement that captured the variety of activities that grandparents may be involved in.

### **Directions for Future Research**

Overall, the findings of this study provide a basis for further research. This study shows that parental involvement may be able to explain some of the association between grandparental involvement and adolescent adjustment. Therefore, future research should continue to take parental involvement into account in order to investigate the influence of grandparents over and above the parent-child relationship. In this regard, examining how this influence may vary depending on the quality of the parent-grandparent relationship would also be worthwhile.

Additionally, the present study confirms the existence of a relationship between grandparental involvement and prosocial behaviour. Given that the present study cannot infer causation, prospective longitudinal research is necessary to unpack the nature and direction of this relationship. Understanding whether or not grandparents can foster prosocial behaviour in their grandchildren has important implications, because higher levels of prosocial behaviour have been linked to a reduction in aggression, fewer peer problems and higher academic achievement in children and adolescents (Caprara, Barbaranelli, Pastorelli, Bandura, & Zimbardo, 2000).

In order to shed light on the currently conflicted evidence, future research should also look at the roles that grandparents take on in the family. While previous research has investigated the roles that grandparents typically engage in (e.g. Elder & Conger, 2000); little



research has attempted to link specific grandparenting roles to adjustment outcomes. Specifically, as we have suggested in the interpretation of our findings, grandparents may take on roles that are particularly relevant for promoting the development of prosocial behaviour. Qualitative research may be beneficial for exploring these possibilities.

Furthermore, the conflicting body of evidence regarding grandparental involvement in diverse family structures emphasizes that understanding this association is complicated. As the results of the present study have highlighted, it may not be the lone parent family structure *per se* which influences negative adjustment outcomes, but rather the risk factors that may accompany this type of family. In the present study, we considered low levels of parental involvement as one risk factor that tends to be more common in lone parent families. It would be useful for future research to test moderations between grandparental involvement and other risk factors that may be more likely to occur in lone parent families such as low levels of SES or high levels of parental conflict. In this regard, it may also be worthwhile to differentiate between the different processes that result in the formation of the lone parent family. For example, parental death, divorce and children being born to single mothers are three different circumstances that result in the same type of family structure. However, they may not necessarily have the same consequences for children's adjustment. Understanding grandparental involvement in different family structures may therefore require moving beyond the simplistic distinction between nuclear families and lone parent families towards investigating the processes and events that are more likely to occur in certain family structures.

### **Conclusion**

In conclusion, this study investigated the association between grandparental involvement and adolescent adjustment in nuclear and lone parent families. The results provide evidence for a relationship between grandparental involvement and prosocial behaviour over and above the effects of parental involvement. However, grandparental involvement did not appear to be protective for adolescents in lone parent families or for adolescents experiencing low levels of parental involvement. This study emphasizes the need to view adolescent adjustment from an ecological perspective, and take influences outside of the immediate family into account. Practitioners should perhaps consider including grandparents as a potential additional resource for strengthening the capacities of the family. Furthermore, the study highlights that understanding the impact that grandparents may have in different family structures is complicated. It requires moving beyond the distinction of nuclear families and lone parent families towards considering the specific risks that may

accompany each type of family. Overall, the findings underscore the relevance of considering grandparents as a potential resource for contributing to adolescent wellbeing but highlight the need for additional research to better understand the nature of this relationship.

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Appendix A  
Questionnaire

# My grandparents and me

## Teen survey



What do you think?

# Your views matter!

A. Can you tell us something about yourself?

1. How old are you? (please tick one)



- 13
- 14
- 15
- 16
- 17

If you do not fit any of the above, please tell us your age in years .....

2. Are you a boy or a girl? (please tick one)

- Boy
- Girl

3. What is the language that you speak most often at home? (please tick one)

- Afrikaans
- English
- isiXhosa
- isiZulu

If you do not fit any of the above, please tell us what language you speak

.....

4. Are you.... (please tick one)

- Black African
- Coloured
- Indian
- White

If you do not fit any of the above, please tell us how you would describe your

population group .....

Don't want to answer

5. What is your religion? (please tick one)

Christian

Hindu

Jewish

Muslim

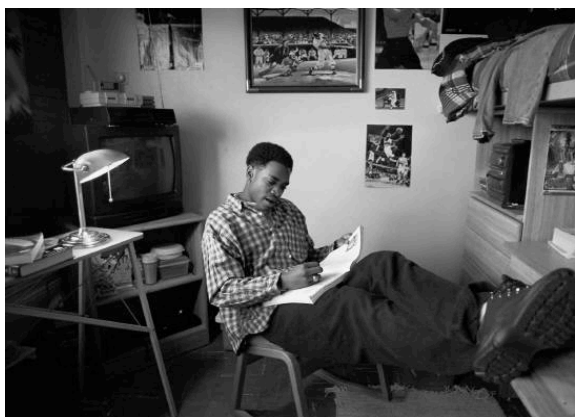
No religion

If you do not fit any of the above, please tell us what your religion is

.....

**B. About your household**

1. Who do you live with most of the time? (please tick as many as necessary)



Mother

Father

Stepfather or your mother's

partner

Stepmother or your father's

partner

Grandmother(s)

Grandfather(s)

Aunt(s)

Uncle(s)

Sister(s)

Brother(s)

Someone else. Please tell us their relationship to you (e.g. foster mother, friend) .....

2. Which of the following do you have in your household at the present time?  
(please tick as many as necessary)



Running water inside home



Electricity inside home



Flush toilet inside the home



Radio/Hi-fi



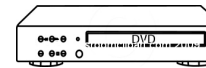
Motor vehicle



Television



Fridge



Video machine/DVD



Microwave



DSTV/Satellite



Washing machine



Computer



Landline telephone



Internet



Cell phone

C. School

1. What grade are you in at school?

Grade 8

Grade 9

2. Have you ever repeated a school year?

Yes

No

3. Are your school marks better than the marks of most of the children in your

class?

Yes

No

**D. These questions are all about you.**

---

For each of these items, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain or the item seems daft! Please give your answers on the basis of how things have been for you over the last six months.

	<b>Not true</b>	<b>Somewhat true</b>	<b>Certainly true</b>
I try to be nice to other people, I care about their feelings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am restless, I cannot stay still for long	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I get a lot of headaches, stomach-aches or sickness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I usually share with others (food, games, pens etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I get very angry and often lose my temper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am usually on my own, I generally play alone or keep to myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I usually do as I am told	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I worry a lot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am helpful if someone is hurt, upset or feeling ill	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am constantly fidgeting or squirming (wriggling)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have one good friend or more	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I fight a lot. I can make other people do what I want	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am often unhappy, down-hearted or tearful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other people my age generally like me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am easily distracted, I find it difficult to concentrate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

---

I am nervous in new situations. I easily lose confidence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am kind to younger children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am often accused of lying or cheating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other children or young people pick on me or bully me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I often volunteer to help others (parents, teachers, children)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think before I do things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I take things that are not mine from home, school or elsewhere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I get on better with adults than with people my own age	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have many fears, I am easily scared	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I finish the work I'm doing, my attention is good	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

---

E. And now some questions about some things that young people may have experienced.

	Have you ever experienced any of these?		If yes, did you experience these in the last six months?	
	Yes	No	Yes	No
Someone in the family died	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Family member was seriously injured	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Saw a crime or an accident	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lost a close friend (broke/split up)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Close friend was seriously sick or injured	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Negative change in parent's financial situation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Family had drug/alcohol problem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Got seriously sick or injured	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parents argued more than previously	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mother/father figure lost job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
One parent was away from home more often	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Someone in the family was arrested	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Close friend died	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Family member had mental/emotional problem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brother or sister left home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Being a victim of crime/violence/assault	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parents separated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parent(s) got into trouble with the law	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attended a new school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Family moved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parents got divorced	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
One of the parents went to jail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Got a new stepmother or stepfather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parent got a new job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Broke up with boyfriend/girlfriend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Yes	No
In the <i>past month</i> , have you smoked a whole cigarette?	<input type="checkbox"/>	<input type="checkbox"/>
In the <i>past month</i> , did you use alcohol other than a few sips?	<input type="checkbox"/>	<input type="checkbox"/>
In the <i>past year</i> , did you smoke dagga?	<input type="checkbox"/>	<input type="checkbox"/>
In the <i>past year</i> , did you use tik?	<input type="checkbox"/>	<input type="checkbox"/>
In the past year, did you use Ecstasy?	<input type="checkbox"/>	<input type="checkbox"/>
Have you ever used any other illegal drug, such as cocaine, heroin, stimulants, hallucinogenics such as LSD, Nexus, MMDA?	<input type="checkbox"/>	<input type="checkbox"/>



### G. Can you tell us something about your parents?

---

- |   | Mother                   | Father                   |
|---|--------------------------|--------------------------|
| 1. What parents do you have living? (tick those that apply) | <input type="checkbox"/> | <input type="checkbox"/> |

**With all the following questions, only answer for those parents who are still alive**

- |                  |                          |                          |
|------------------|--------------------------|--------------------------|
| 2. Do they work? |                          |                          |
| Yes part time    | <input type="checkbox"/> | <input type="checkbox"/> |
| Yes full time    | <input type="checkbox"/> | <input type="checkbox"/> |
| No               | <input type="checkbox"/> | <input type="checkbox"/> |
| Don't know       | <input type="checkbox"/> | <input type="checkbox"/> |

- |                              |                          |                          |
|------------------------------|--------------------------|--------------------------|
| 3. How good is their health? |                          |                          |
| Very good                    | <input type="checkbox"/> | <input type="checkbox"/> |
| Good                         | <input type="checkbox"/> | <input type="checkbox"/> |
| Poor                         | <input type="checkbox"/> | <input type="checkbox"/> |
| Very poor                    | <input type="checkbox"/> | <input type="checkbox"/> |
| Don't know                   | <input type="checkbox"/> | <input type="checkbox"/> |

- |  |                          |                          |
|--|--------------------------|--------------------------|
| 4. What is the highest level of education they have completed? |                          |                          |
| No schooling   | <input type="checkbox"/> | <input type="checkbox"/> |
| Primary school only  | <input type="checkbox"/> | <input type="checkbox"/> |
| Some high school   | <input type="checkbox"/> | <input type="checkbox"/> |
| Grade 12/Std. 10   | <input type="checkbox"/> | <input type="checkbox"/> |
| At least some college/university                               | <input type="checkbox"/> | <input type="checkbox"/> |
| Don't know   | <input type="checkbox"/> | <input type="checkbox"/> |



H. **Can you now tell us something about your relationship with your parents?**  
 (Remember, we only need you to answer about your parents who are still alive)

	Mother	Father
1. How often does each of your parents talk over important decisions with you?		
Never	<input type="checkbox"/>	<input type="checkbox"/>
Hardly ever	<input type="checkbox"/>	<input type="checkbox"/>
Sometimes	<input type="checkbox"/>	<input type="checkbox"/>
Often	<input type="checkbox"/>	<input type="checkbox"/>
2. How often does each of your parents listen to your side of the argument?		
Never	<input type="checkbox"/>	<input type="checkbox"/>
Hardly ever	<input type="checkbox"/>	<input type="checkbox"/>
Sometimes	<input type="checkbox"/>	<input type="checkbox"/>
Often	<input type="checkbox"/>	<input type="checkbox"/>
3. How often does each of your parents know whom you are with when you are when not at home?		
Never	<input type="checkbox"/>	<input type="checkbox"/>
Hardly ever	<input type="checkbox"/>	<input type="checkbox"/>
Sometimes	<input type="checkbox"/>	<input type="checkbox"/>
Often	<input type="checkbox"/>	<input type="checkbox"/>
4. How often does each parent miss the events or activities that are important to you?		
Never	<input type="checkbox"/>	<input type="checkbox"/>
Hardly ever	<input type="checkbox"/>	<input type="checkbox"/>
Sometimes	<input type="checkbox"/>	<input type="checkbox"/>
Often	<input type="checkbox"/>	<input type="checkbox"/>
5. How close do you feel to each of your parents?		
Not at all close	<input type="checkbox"/>	<input type="checkbox"/>
Not very close	<input type="checkbox"/>	<input type="checkbox"/>
Quite close	<input type="checkbox"/>	<input type="checkbox"/>
Very close	<input type="checkbox"/>	<input type="checkbox"/>

6. How well do each of your parents and you share ideas or talk about things that really matter?

Not at all well	<input type="checkbox"/>	<input type="checkbox"/>
Not very well	<input type="checkbox"/>	<input type="checkbox"/>
Quite well	<input type="checkbox"/>	<input type="checkbox"/>
Very well	<input type="checkbox"/>	<input type="checkbox"/>

I. Can you tell us something about your grandparents?

	Mother's mother	Mother's father	Father's mother	Father's father
1. What grandparents do you have living? (tick all that apply)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Which grandparent do you have the closest relationship with? (tick one)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**With all the following questions, only answer for those grandparents who are still alive.**

3. How often do you see them?				
Just about every day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
About once a week	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
About once a month	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Several times a year	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Once a year or less	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Never	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. How often do you have contact with them by telephone, the internet (e.g., email, Facebook) or letter?				

Just about every day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
About once a week	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
About once a month	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Several times a year	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Once a year or less	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Never	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



## 5. Where do they live?

With me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In Cape Town (but not with me)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Further away (in South Africa)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Further away (in another country)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Don't know	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## 6. How often do they look after you?

Just about every day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
About once a week	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Several times a year	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Never	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		Mother's mother	Mother's father	Father's mother	Father's father
7.	Have you ever lived in your grandparent's home, without either parent?				
	Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	If yes, how long did you live with your grandparent?	_____	_____	_____	_____
8.	How old are your grandparents?				
	Younger than 50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In their 50s	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In their 60s	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	In their 70s	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Over 80	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Don't know	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	Do they still work?				
	Yes part time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Yes full time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Don't know	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	Are they married?				
	Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Don't know	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	What is the highest level of education they have completed?				
	No schooling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Primary school only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Some high school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Grade 12/Std. 10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	At least some college/university	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Don't know	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		Mothe r's mothe r	Mothe r's father	Father 's mothe r	Father 's father
12.	How good is their health?				
					
	Very good	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Good	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Poor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Very poor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Don't know	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	How many grandchildren do they have?				
	Just you	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2 or 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	4 or 5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	6 or more	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.	How well does your mother get on with your grandparents?				
	Very well	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Well	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Not so well	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Not well at all	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Don't know	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Don't have this parent	<input type="checkbox"/>			
15.	How well does your father get on with your grandparents?				
					
	Very well	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Well	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Not so well	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Not well at all	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Don't know	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Don't have this parent	<input type="checkbox"/>			
16.	Do your parents encourage you to spend time with your grandparents?				
	Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**J. Can you now tell us something about your relationship with your grandparents?**

	Mother's mother	Mother's father	Father's mother	Father's father
1. How much can you depend on your grandparent to be there when you really need him/her?				
Not much	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Some	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A lot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. How much does your grandparent make you feel appreciated, loved, or cared for?				
Not much	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Some	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A lot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. How often do you talk to them about personal matters or things that are important to you?				
Never	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Occasionally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. How often does your grandparent help you by giving you advice or helping solve problems you have?				
Never	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Occasionally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Do you talk to them about your future plans?				
Never	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Occasionally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Do they help you to learn or understand things? (for example, school work, your family history)				
Never	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Occasionally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Mothe	Mothe	Fathe	Fathe
r's	r's	r's	r's
mothe	father	mothe	father
r		r	

7. Do they get involved with things you like? (for example, sport, making things, doing enjoyable things together)



Never	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Occasionally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Do they come to school events or other activities that are important to you? (for example, sporting matches, plays, religious activities)

Never	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Occasionally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. How often do you help your grandparent with something they are doing or making? (for example, household jobs)

Never	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Occasionally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. Does your grandparent get involved in telling you what you can and cannot do?

Never	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Occasionally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. Do they give you or your family money or gifts?



Never	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Occasionally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Often	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



## Appendix B

## Passive Informed Consent Form for Parents

## UNIVERSITY OF CAPE TOWN



## Department of Psychology

University of Cape Town, Rondebosch, 7701, South Africa  
Telephone (021) 650-4605  
Fax: (021) 650-4104

12 June 2013

Dear Parent

**My grandparents and me: Research study at your child's school**

Researchers from the Department of Psychology at the University of Cape Town have arranged to conduct a study of grandparental involvement and child well-being at your child's school.

Many grandparents play an important role in South African families. International research suggests that support from grandparents can help to protect adolescent children from many stresses that occur in their lives, and contribute to their well-being. To date, however, children's relationships with their grandparents have received little research attention in South Africa.

We would like to invite your child to fill in a questionnaire during an ordinary school period. They will be asked questions about their relationships, experiences and behaviours. This is a voluntary exercise and your child will be able to choose whether or not to participate. If they do participate, they will be free to withdraw from the study at any time, or to leave out certain questions. All information provided by your child will be anonymous and confidential. They will not be asked to put their name on the questionnaire, and the information from all learners who participate will be combined in the presentation of the results. As a result, no child who participates in the research will be personally identifiable.

If you are at all unhappy about your child's participation in this study, please fill in the reply slip below and return it to school by (date). No response will be regarded as permission for your child to participate.

Thank you for your cooperation.

Yours sincerely

Dr Lauren Wild  
Principal Investigator

If you have any questions or complaints about this study, please contact:

Katharina Keck  
Psychology Honours Student  
Tel.: 076 276 5719  
Email: kckkat001@myuct.ac.za

Dr. Lauren Wild  
Principal Investigator  
Tel: (021) 650 4607  
Email: [lauren.wild@uct.ac.za](mailto:lauren.wild@uct.ac.za)

---

I **do not** wish for my son / daughter to participate in the research study being conducted by the UCT Psychology Department at my child's school.

Child's Name:

---

Class: \_\_\_\_\_

Parent's / Guardian's Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## Appendix C

### Informed Assent Form for Participants

# My grandparents and me: Teen survey

Please take time to read this sheet carefully and decide whether you do or don't want to take part. Ask the researcher if there is anything that is not clear, or if you have questions. Thank you for reading this.

### **What is the study about?**

We would like to know more about young people and their relationships with their grandparents.

### **What would I have to do?**

If you decide to take part, you will first sign a consent form (on the next page), and then spend about 45 minutes answering a questionnaire. The questions will ask about your relationships, experiences, and behaviours.

### **What are the risks?**

Some of the questions may talk about things that some people find quite personal. If any of the questions make you feel uncomfortable or you don't want to answer them, you do not have to. If any of the questions upset you, or if you would like to talk to someone about the feelings you experienced during the interview, please let your school counsellor know, or call Childline on 080 005 5555.

### **What are the benefits?**

You will not benefit directly from participating in this study. However, we may learn something that will help other children at some point in the future. Your thoughts and opinions are very valuable.

### **Do I have to take part?**

Not at all. It is up to you to decide whether or not to take part. You will not get in any trouble if you do not want to take part. If you decide to take part, you are still free to stop at any time. You don't have to give a reason.

### **Will what I say be kept confidential?**

Anything you tell us about yourself will be kept strictly confidential. This means it will be private between you and the research team, and will not be told to anyone else. You will not be asked to put your name on the questionnaire.

**Who is conducting the research?** The research is being conducted by the Department of Psychology at the University of Cape Town.

**Contact for further information**

If you have any questions or complaints about this study, you can contact Dr Lauren Wild, Department of Psychology, University of Cape Town, Rondebosch 7701, South Africa. Tel. (021) 650-4607. Email: Lauren.Wild@uct.ac.za

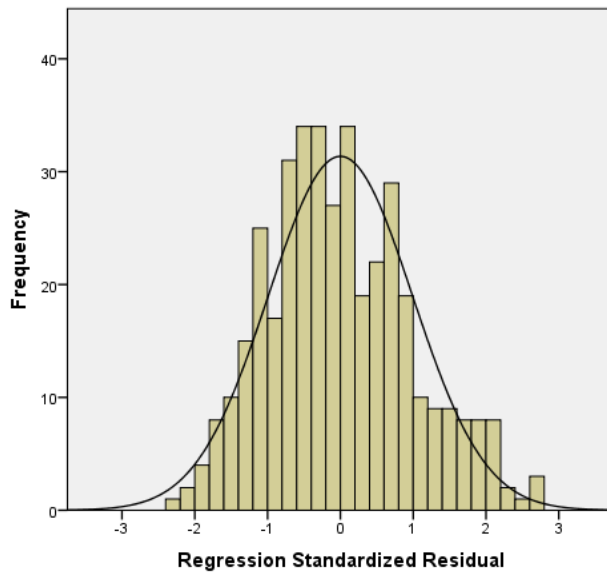
Thank you for reading this sheet. If you have any questions, please raise your hand now. If you feel comfortable with everything, you can fill in the box below:

**Do I want to take part?**

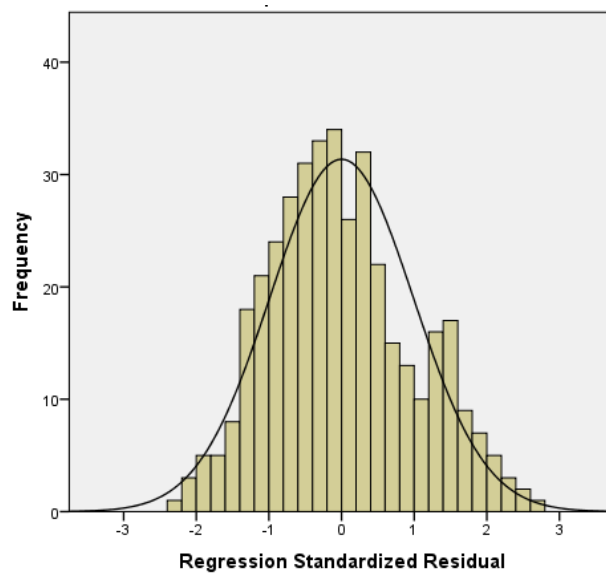
	Tick
1. I have read and understand the information sheet for this study and have had the chance to ask questions.	<input type="checkbox"/>
2. I understand that I have chosen to take part and that I am free to stop at any time, without giving any reason.	<input type="checkbox"/>
3. I agree to take part in the study	<input type="checkbox"/>
Name of participant .....	
Signature .....	Date.....

## Appendix D

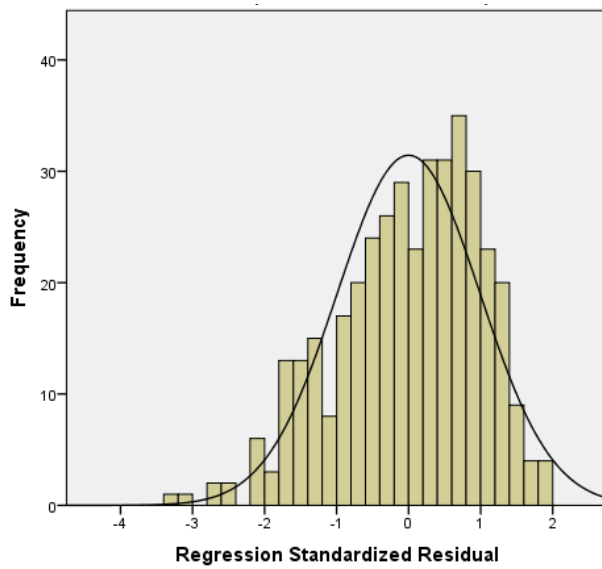
## Untransformed and Transformed Residual Plots for the Regression Analyses



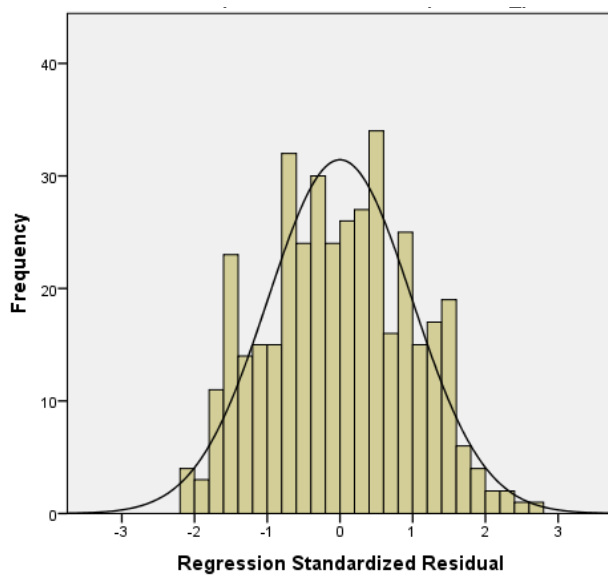
*Figure D1.* Standardised residuals plot of the regression model predicting the hyperactivity variable



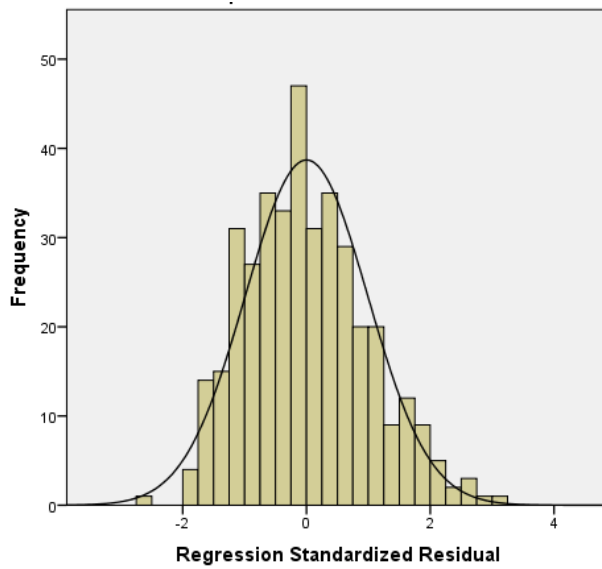
*Figure D2.* Standardised residuals plot of the regression model predicting the emotional symptoms variable



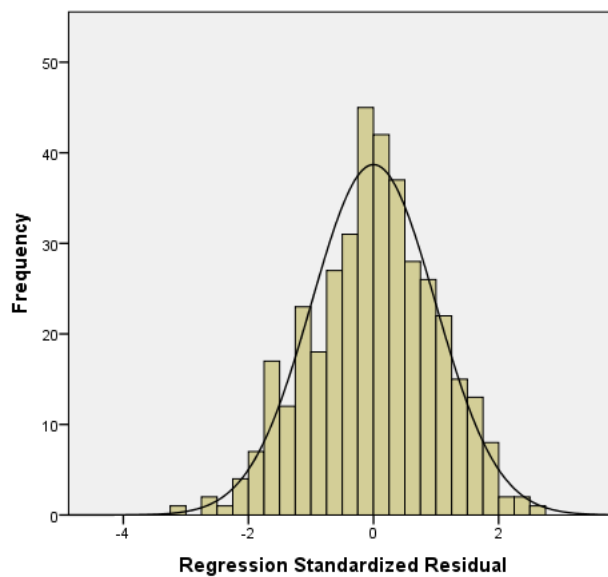
*Figure D3.* Standardised residuals plot of the regression model predicting the untransformed prosocial behaviour variable



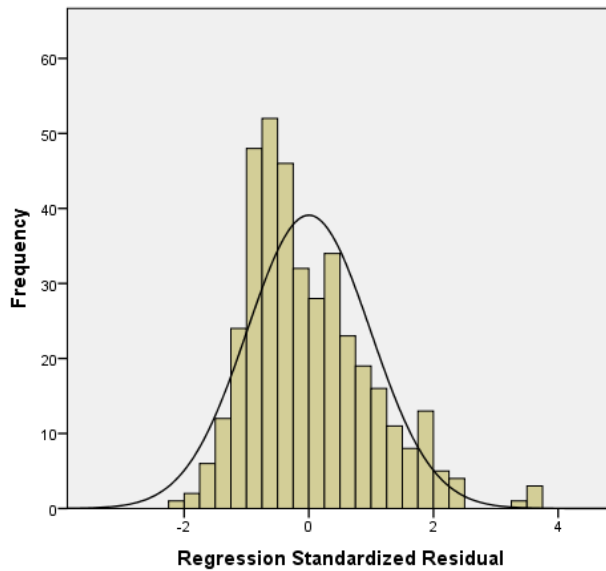
*Figure D4.* Standardised residuals plot of the regression model predicting prosocial behaviour after a reflected square root transformation



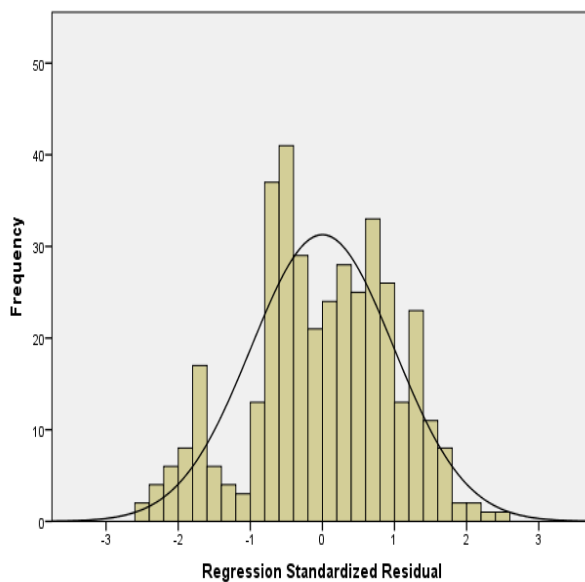
*Figure D5.* Standardised residuals plot of the regression model predicting the untransformed total difficulties variable



*Figure D6.* Standardised residuals plot of the regression model predicting total difficulties after a square root transformation

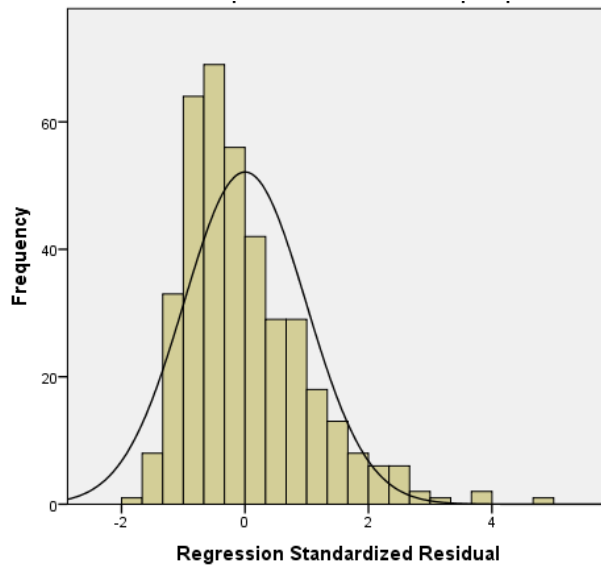


*Figure D7.* Standardised residuals plot of the regression model predicting the untransformed conduct problems variable

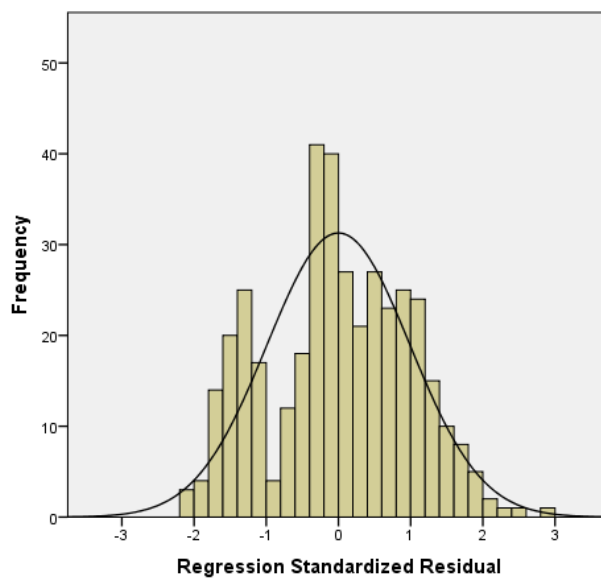


*Figure D8.* Standardised residuals plot of the regression model predicting conduct problems after a log transformation





*Figure D9.* Standardised residuals plot of the regression model predicting the untransformed peer problems variable



*Figure D10.* Standardised residuals plot of the regression model predicting peer problems after a log transformation

Appendix E  
Final Models from the Regression Analyses

Table E1  
*Final Model Predicting Emotional Symptoms*

	B	SE B	$\beta$	t	p
(Constant)	-0.47	1.86		-0.25	.801
Age	0.23	0.13	0.08	1.77	.078
Gender	1.40	0.22	0.30	6.36	< .001
Parent involvement	-0.14	0.03	-0.20	-4.21	< .001
R <sup>2</sup>	0.13				
Adjusted R <sup>2</sup>	0.13				

Note.  $F(3, 390) = 19.92, p < .001$

Table E2  
*Final Model Predicting Conduct Problems*

	B	SE B	$\beta$	t	p
(Constant)	0.09	0.20		0.46	.645
Age	0.03	0.01	0.09	1.88	.061
Parent involvement	-0.02	0.00	-0.23	-4.63	< .001
R <sup>2</sup>	0.07				
Adjusted R <sup>2</sup>	0.06				

Note.  $F(2, 390) = 13.74, p < .001$

Table E3  
*Final Model Predicting Hyperactivity*

	B	SE B	$\beta$	t	p
(Constant)	3.71	0.10		35.83	< .001
Parent involvement	-0.13	0.03	-0.20	-3.94	< .001
R <sup>2</sup>	0.04				
Adjusted R <sup>2</sup>	0.04				

Note.  $F(1, 392) = 15.49, p < .001$

Table E4  
*Final Model Predicting Peer Problems*

	B	SE B	$\beta$	t	p
(Constant)	0.36	0.24		1.48	.139
Age	0.03	0.02	0.09	1.84	.061
SES	-0.03	0.01	-0.16	-3.25	.001
Parent involvement	-0.02	0.00	-0.21	-4.22	< .001
R <sup>2</sup>	0.09				
Adjusted R <sup>2</sup>	0.08				

*Note.*  $F(3, 389) = 12.25, p < .001$

Table E5  
*Final Model Predicting Total Difficulties*

	B	SE B	$\beta$	t	p
(Constant)	1.92	0.71		2.71	.007
Age	0.12	0.04	0.13	2.77	.006
Gender	0.22	0.07	0.14	2.96	.003
SES	-0.03	0.02	-0.06	-1.32	.186
Parent involvement	-0.07	0.01	-0.31	-6.56	< .001
R <sup>2</sup>	0.15				
Adjusted R <sup>2</sup>	0.14				

*Note.*  $F(4, 384) = 16.83, p < .001$