THE RELATIONSHIP BETWEEN FAMILY STRUCTURES AND SCHOOL-BASED PROBLEMS: TOWARDS THE DEVELOPMENT OF AN INTERVENTION MODEL

BY

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DECLARATION

I, SIBONGILE PRIMROSE ZULU, hereby declare that the work on “The relationships between the selected family structures and school-based problems: towards the development of a model of intervention” is my own initiative in both conception and execution, and has been conducted on the learners and educators at Kwa-Zulu Natal Schools. All sources consulted or cited have been acknowledged in the text as well as in the list of references.

SIGNED BY_____

on this _____ **day of** _____ _____

DEDICATION

The project is dedicated to all educators - young and old, male and female, educators, all stakeholders in the Department of Education - for your contributions to the completion of this project. May God the Almighty be with you and bless you and your families.

ABSTRACT

The family is a child's primary context for socialisation and may greatly affects a child's well-being negatively or positively. The family context might affect the child's entire life and also interferes with learning. Historically, families have been changing for ages due to social and economic factors, thus resulting in various family structures worldwide. It appears that a stable family structure is most conducive to a child's academic success whereas unstable family structure predicts academic problems. This situation seems to be a major obstacle to the quality of education. Thus, it was imperative for the researcher to undertake this study. The researcher reviewed different theories on how family structures may contribute to school-based problems. Over and above that, current study is underpinned by three theories, namely behaviouralism, system theory and Bandura's social learning theories. The objectives of the study were to ascertain the extent to which a relationship exists between selected family structures and school-based problems; to determine whether there was any association between school-based problems and the variables such as learners' age, learners' gender and learners' educational level, and to establish educators' recommendations so as to develop an intervention model. The mixed approach design was employed. A cluster sampling technique was used to randomly select 165 participants in six districts of KwaZulu-Natal province. The educators were requested to rate learners. A biographical questionnaire, the "Student Behaviour Survey" (SBS) and an open-ended questionnaire were used to collect data.

The data were analysed qualitatively and quantitatively. This implies that the SBS manual, thematic approach, Person Chi squire and Log-Linear analysis techniques were utilized to analyse data. A computer package known as Statistical Packages for Social Sciences (SPSS) was also employed.

The findings of the present study revealed that learners from KwaZulu-Natal schools experienced various problems due to the influence of their family background or family structures and learners' characteristics such as age, gender and educational level. The study also revealed that family structure was influential on the following problems: academic habits, interpersonal relations and emotional distress. Learners' age was found to be associated to conduct problems, interpersonal relations, social withdrawal, emotional distress, as well as physical aggression. Gender was found to have an impact on learners' health and social interactions. The study focused on nuclear, extended, single parent, child-headed, grand parenting, polygamous and divorced families.

Finally, the model of intervention was developed. This model also aimed at introducing a school-based approach that will empower both parents and teachers to handle and prevent school-based or psychological problems among learners in different grades. These problems were found in a sample which was constituted of predominately African learners. The present study also reflected that there is a need of contributions from different specialists, including parents. Educational psychologist and other mental health professions should assist educators to implement the developed model and also play their role in changing and minimising the various problems faced by learners in KwaZulu-Natal schools, more especially in rural areas. The Department of Education should support all stakeholders with the resources needed to implement the proposed intervention model to improve the entire physical environment of the school, as well the infrastructure.

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CHAPTER ONE

MOTIVATION OF THE STUDY

1.1 INTRODUCTION

The family is the first social context the child encounters in life. For centuries, family structures have been changing due to social and economic factors, resulting in various types of family forming. It has been claimed that a positive family context or background is conducive to the academic success of a child (Tillman, 2007). Vygotsky's theory of 1925 emphasised the importance of the child's family in cognitive and emotional development (Alexandra, 1984). Vygotsky also believed that the child's cognitive growth relied on social interaction, particularly, within the family (Fieldman, 2008). It appeared that if the family context was dysfunctional, it was likely that the child would underperform in school. It was therefore crucial to investigate whether different family structures indeed had an influence on learners' school-based problems, and also to develop an intervention model. The study focussed mainly on the following family structures: nuclear, extended, single parent, child headed, grand parenting, polygamous and divorced families.

It has become of major concern that problems within family structures could impede a child's learning and well-being (Maris & Meie, 2010). In South Africa, family structures take various forms, namely: cohabiting, divorced, single, blended, nuclear, extended, child-headed families, blended, grand parenting, foster or polygamous. It appeared that the increasing modernisation or urbanization or changing of family structures was associated with an increase in psychosocial maladjustment and academic problems among children and adolescents (Tillman, 2007). As modern families in this country have increased, I have also observed an increase in the number of children with psychosocial and

academic problems. Such changes in families could place educators and the school in a predicament, and also lead to a dysfunctional educational environment. This could be attributed to the damaging impact of changed family circumstances on learners' performance both at school and at the tertiary level. This was one of the reasons why the present study sought to investigate the relationship between selected family structures and school-based problems.

Amato and Keith (1991) argued that different children reacted in different ways to these changes in family structures. Some reactions were mild and short-lived, but for other children they could be long-term. They further pinpointed that the influence of family structure may lead to a range of child behaviours that could bear directly on learning, namely, school misbehaviour, drug and alcohol consumption, sexual activity, teenage pregnancy and psychological distress (Centre for Marriage and Families, 2005). Previous researchers (Centre for Marriage and families, 2005; Fieldman, 2008; Milslead & Perkins, 2010), investigated whether family structures (married, single, divorced, and remarried) had an influence on children's educational performance. The results confirmed that family structures affected the child's school readiness and academic achievement in lower grades as well as at secondary and college levels. A comparative study by Astone and McLanahan (1991) revealed that children growing up in single parent families were less likely to complete college than children from homes with both biological parents. Other studies (Lenhart & Chudzinski, 1994; Kerr & Michalski, 2004) confirmed that children from non-traditional families (with step parents, guardians and/or single parents) experience emotional and behavioural problems at schools. Huges (2005) stated that adjusting to step family situations could be stressful. There is, in fact earlier information available indicating that children from these family structures are subject to stress, achievement problems and psychological problems (Amato & Keith, 1991; Astone & McLanahan, 1991; Kerr & Michalski, 2004). Thus the

present study intended to investigate the relationship between selected family structures and a broad range of school-related problems such as adjustment, academic performance, and disruptive behaviours.

Divorced and single-parent families are most common in South Africa, and have been viewed by researchers as having a damaging impact on both children and adolescents (Ahuja & Stinson, 1993). Parents or spouses seemed to be unaware of the impact on children when they decided to divorce. Some parents took it for granted that most children could recover rapidly. Yet, that may not always be the case. Instead, the effect of divorce on children may cause long-lasting psychological damage. Divorce has been associated with a number of psychosocial problems such as an increased rate of delinquency, adolescent pregnancies, runaways, drug abuse, anxiety, school drop-outs, poor scholastic achievement and child abuse (Carely, 2005; Hughes, 2005; Fraley, Waller, & Brennan, 2013). Studies from European countries revealed that divorce rates have increased since 1921, with the sharpest increases occurring from the mid-1960s to the late 1970s (Lehohla, 2001). According to these studies, an increase in divorce rate has led to a substantial increase in the number of children who live with only one parent and experience problems at schools.

Within the South African context, data released by Statistics South Africa (Lehohla, 2001) illustrated a steady increase in the divorce rate from 1997 to 1999. In 1999, there were 37,098 divorces officially recorded in South Africa – a rate of 83 per 100,000 of the population. For white people, divorces began early, at ages 20–24 years, and peaked at 30–34 years, thereafter they gradually declined with age. For Africans, the age pattern of divorce showed a rapid rise from ages 25–29 years, peaking at 35–39 years and thereafter declining. For South Africa as a whole, 83% of all registered divorces were from marriages lasting less than 20 years. The highest percentage of divorces occurs in

marriages lasting between 5–9 years (28%), followed by those lasting for a maximum of 4 years (Kelly & Emery, 2003).

A study conducted by Lehohla (2004) presented the statistics, which reflected that in 2002 a total of 31,370 divorces were recorded in South Africa compared to the 34,045 in 2001. The modified divorce rate for South Africa was 526 per 100,000 married couples. Such an escalating rate of divorced families in South Africa signifies an increase in the number of problems facing children of this millennium. According to statistic South Africa (Department of Social Development, 2012), the total number of divorcees from 2001 -2010 took a fluctuation in trend and the highest proportion of divorce was from the white population.

According to Holborn and Eddy (2011), more than 40 percent of all households in South Africa were headed by a single parent. About only 34.3 percent of children were living with both biological parents, a decrease from 37.8 percent. In an analysis of the characteristics of single parents in urban areas, Holborn and Eddy (2011) also noted that the single parents were “overwhelmingly African, female and between the ages of 25 and 34”. Financial constraints among urban single parents were also high.

Table 1: Portion of families by type and racial group in rural areas

Race	Both parents	Mother only	Father only	Neither parents
African	41.9%	3.3%	2.8%	26.7%
Coloured	34.2%	3.4%	50.8%	11.8%
Indian	11.2%	2.1%	80.9%	5.8%
White	16.1%	3.3%	77.5%	3.1%
South Africa	**39.3%**	**3.3%**	**33.5%**	**23.9%**

Adapted from South Africa Country Report (2010)

Table 1 showed that the majority of children who were living with their biological parents were among the African population. The highest percentage of families who were headed by fathers was among Indians, followed by whites and coloureds. There were a high percentage of child-headed families among the African population.

It has emerged that the divorce rate in South Africa is assuming frightening proportions (Burman & McLennan, 1996; Kaplan & Smith, 2007). Although divorce is generally a traumatic process for all concerned, the South African government and schools focus more on child support systems. This is because they believe that children are emotionally and psychologically more vulnerable than adults, and are therefore more likely to suffer from adjustment and learning problems (Wallenstien, Lewis, & Blakeslee, 2000). The high rate of divorce and disintegration in South African families resulted in massive damage to learners. It is one of the reasons that have motivated me to investigate school-based problems.

Single parenthood, on the other hand, is a worldwide issue, and could vary from one region or nation to another for a variety of reasons. It emerged that many children are raised by single parents in South Africa and abroad (Mboya & Nesengani, 1999).

Table 2: Single parenthood and race in South Africa (2010)

Race	Mother only	Father only
African	3.3%	28.0%
Coloured	3.4%	50.8%
Indian	2.1%	80.9%
White	3.3%	77.5%
South Africa	***3.3%***	***33.5%***

Sources: Race Statistics South Africa (2011), (Mislead & Perkins, 2010).

Table 2 reflects that the majority of single parent homes who were headed by fathers only were among the Indian population, followed by whites and coloureds. There were very few families who were headed by fathers only among the African population as compared to other races. According to Mislead and Perkins (2010), single parent families headed by female parents in South Africa seemed to be declining.

Single parent homes are common in today's society, with more children born from unmarried couples and from couples where one partner had died. Mboya and Nesengani (1999) discovered that in single parent families where the father was absent, the situation generally affected the child's school performance. In addition, Milslead & Perkins (2010) concurred that children from single parent

families were more likely to perform poorly in schools; become pregnant before the age of twenty; and have behavioural and emotional problems. They noted, however, that single parent families resulting from widowhood showed less harmful effects than those due to divorce (Milslead & Perkins, 2010). However, a study by Uwaifo (2012) argued that in some instances children in single parent households performed better academically than those with both parents. The present study intended to investigate the extent to which family structure was perceived to contribute to school-based problems.

According to my knowledge, there was limited literature available on selected family structures and school-based problems in South Africa. However, there are many related studies conducted on the effect and impact of divorce; changing family structure and adolescent wellbeing; differences in adjustment to family transition; comparison of father-absent and mother-absent adolescents; effect of family structure on academic achievements and adolescent well-being (Wallerstein, 1991; Akerman, 1995; Shaw & Ingoldsby, 1996; Rodriguez & Arnold, 1998; Engelbrecht, 1999; Bezuidenhout, 2000; Kingbeil, 2000; Wallerstein, 2000; Stewart, 2001; Carely, 2005). Based on this information, it was, therefore, of paramount importance to conduct the present study.

Transition in family structures put younger children at greater risk scholastically (Wallerstein & Kelly, 2001). Most families changed their structure when children were between the ages of 5 and 12. At the primary school level, the majority of learners in their first year experienced learning problems. If children in the primary grades were too distracted to develop basic learning skills, they would experience problems throughout their school years. Since previous studies held varying views on factors that influence adjustment of children in schools after divorce or death of parents, it became evident that a number of variables needed to be taken into account. In this study significant characteristics such as age,

gender, and educational levels (in primary, secondary and high schools), as well as school-based problems, were looked at.

The issue of family structures and their effects on children and adolescents in schools seemed to have been given little attention, yet there were many children who were suffering. According to Wallerstein and Kelly (2001), educators were in a position to support learners who were not coping with the effects of divorce. He further declared that school becomes more important to children whose families were in transition because it offered them structure, stability and continuity during a time when their homes were being disrupted. The role of educators in the lives of children whose parents had recently divorced was a sensitive one and, in fact, placed them in a dilemma. The researcher noted that it was scarcely possible to teach children effectively without paying some attention to what was happening in their lives outside of school. Educators should be made aware of possible symptoms of stress so that they could provide relevant interventions. Gloger-Tippelt and König (2007)acknowledged the potential importance of the primary school teacher for young children who were hurt by their parental divorce. These researchers stated that primary school learners spent all of their classroom contact periods with a single teacher. It was therefore desirable that these teachers created a supportive, purposeful and safe learning environment for learners, in particular, in the foundation phase.

Table 3: The number of children from different family structures in South Africa

Family type	Number of children	Percentage
Both parents present	583 341	32.64
Father only	40 674	2.30
Mother only	584 963	32.75
Both parents absent	577 893	32.31

Calculations by Makiwane from data sourced from Statistics South Africa (2011)

Table 3 illustrates that the highest number of children were from single parent families (mother only), followed by those who were from nuclear families. The third category was children who had neither parent, with a few children from households headed by single fathers. Educators in South African schools were overwhelmed with a number of problems in their classrooms, children from dysfunctional families faced. Most commonly manifested problems were drug intake, school violence, violating class rules, opposing class teacher, fighting and insulting teachers, teenage pregnancy, poor concentration, rejection, truancy and poor school performance (Makiwane, 2011).

Child-headed families are another issue of great concern in South Africa and worldwide. Government policies and acts have been set in place in order to minimise problems and challenges encountered by children from this family structure. South Africa in particular, has enforced some acts such as the school act 84 of 1996, the child care grant and the child care act. Human rights' laws have emphasised the importance of a child's right to have a family and the right to a healthy family life (White paper on families, 1996; White paper 6, 2001). Studies conducted in this area have recommended a number of intervention strategies that could be implemented by educators in schools in order to assist

these learners to cope with such challenges (Akon, 2002; Makiwane, 2010; Nel, Nel & Hugo, 2012). These strategies need to be adjusted to suit the needs of South African learners. I believe that what is required is to develop a comprehensive programme of intervention which will include the input of educators and be relevant to South African context.

1.2 BACKGROUND OF THE STUDY

A review of literature in South Africa and abroad reflected numerous school-based problems due to dysfunctional family structures (Hetherington, Cox, & Cox, 1985; Fauber, Forehand, Thomas, & Wierson, 1990; Flosi, 1993; Hetherington & Kelly, 2002). On the other hand, educators were spending more time with children than their parents did. This implied that educators were often the first ones to see a dramatic change in behaviour, as well as scholastic problems, when a child's parents decided to break up their marriage or when a family was dysfunctional. It would become, then, the responsibility of educators and others at school to support and assist the child and family (Kingbeil, 2000; Killian, Brakarsh, Richter, Dawes, & Higson-Smith, 2004; Sherrer & Louw, 2004). Though some educators managed to deal with these problems, others did not feel comfortable with the increased needs of these children and their own lack of skills (Nel, Nel & Hugo, 2012). Teacher training in South Africa seemed to be focusing more on skills development than on emotional healing. Thus teachers were not well equipped to handle children's personal problems or psychological problems. If they managed these problems, it was only through intuition (Sibaya, 1992; Robert, 2009; Biyela, 2013). It was therefore clear that there was a burning need for the study of this nature to be undertaken, to examine the nature of the family relationship and so that those affected learners could receive proper attention and professional assistance. Furthermore, an intervention model that could assist these learners needs to be developed. However, not all children from divorced or single families experienced problems in schools. Some have

been reported to work harder at their school work to compensate for their situation (Amato, 2001). Nevertheless, Killian et al. (2004) gave evidence which indicated that these children were more vulnerable to problems than children from nuclear families. The escalation of child problems in South Africa is reaching an extreme, both because of the epidemic proportions and the traumatic impact on the child, family and the larger community. Despite increased awareness of these problems in South Africa, research in this regard has been limited, or remains unpublished. Some of these problems maybe common to children from single parent families and intact families; it was therefore compelling to investigate the extent to which problems associated with each of these types of families affect learning.

Many studies (Johnson & Wiechers, 2002; Lowenstein, 2006; Rose, 2009) conducted in South Africa and abroad, have highlighted effective intervention models that could be used by educators to assist learners to cope with the effects of family transitions or dysfunction. Francke and Kelly (2007)suggested specific recommendations about what could be done in schools to help children from divorced families. These authors were in substantial agreement that educators could give learners the opportunity to express their feelings and could acknowledge these feelings. Empathy, rather than advice, was an appropriate response. Hetherington et al., (1985) suggested an intervention model, including divorce education, for educators in staff development across school districts in the country. These workshops could cover the effects of divorce at various developmental levels and could offer strategies for improving communication between divorced parents. A workshop had been developed for parents, in which parent-educator organisations and other adult groups had participated. According to the researchers' knowledge, these workshops only benefited divorced families from United States of America. Dilton and Emery (1994), on the other hand, suggested that a multifaceted treatment model should be used in order to deal

with the complex issues facing children from dysfunctional families. For example, using the systemic approach model of child development by Bronfenbrenner could be effective (Donald, Lazarus, & Lolwana, 2010; Landsberg, Krüger, & Nel, 2011).

The current existing therapeutic interventions for addressing learners' school-based problems in South Africa are somehow inappropriate. Most of the existing programmes of intervention that are currently used are Eurocentric and did not meet the needs of school-going children in South Africa (Nel, Nel & Hugo, 2012). These programmes included the systemic approach/ecological system by Russian psychologist Brofenbrenner (1979), which focused holistically on the child and his or her surroundings. A further one was the structural model by Munichin (1974), which dealt with family processes that might affect the child's well-being. Furthermore, the psycho-education model by Anderson, Linder, and Bennion (1992) focused on managing chronic family illnesses, stress reduction and mastering of family adaptational challenges. The psychoanalytic model addressed the child's earliest influences, which determined negative or positive child development (Walsh, 1993). Intervention models designed by Burns and Ysseldyke (2006) involved behaviour intervention, support, problem solving skills, and structures to deal with learners' problems in schools. All of these approaches were developed in European countries for clinical purposes and may have little impact on South African children.

Kingbeil (2000), in "Comprehensive Review and critique of literature on effects of divorce on primary school level", also stated that schools could contribute positively to children who were experiencing symptoms of divorce by offering a classroom that felt stable, safe, and consistent. Communication between school

and home was an essential element in assisting the child to cope with his/her parents' divorce in an emotionally, socially and intellectually healthy manner (Amato, 2007). Existing programmes have concentrated on divorced parent families and overlooked other family structures, yet children from other family structures have also experience problems in schools. Research to fill this gap is essential.

Another study was carried out by the Wilder-Research-Center (2003) on the implementation of a midsize school districts' programme as to reduce children's school dropout. In an experimental study, Munoz (2002) concluded that a programme for secondary students should be designed to reduce dropout. It was surmised that all these existing programmes presented by researchers as effective were not relevant to the South African context.

While I was doing my internship as an educational psychologist, I attended to a number of learners who were experiencing many problems from in schools. These learners were from grade R to grade 12 educational levels. The majority of these problems were among children from single parent, divorced families. A child growing up under such circumstances was much more at risk than a child who enjoyed two actively involved parents (Akon, 2002). Many problems such as gangs or youth crime, high school dropouts, and increased teenage pregnancy rates were found to be experienced by the children from divorced and single parent families (Odennino, 1995).

1.3 STATEMENT OF THE PROBLEM

A fledgling South African democracy has been overwhelmed by complex problems, among other things, the movement from traditional families to modern types of families such as child-headed, single parent, divorced parent, step parent and parents in conflict. Many children in South Africa have grown up in fractured families. Hence, children have experienced a number of problems in schools. Holborn and Eddy (2011) confirmed that children from broken or single parent families (father absent) were more likely to experience poor educational performance, antisocial behaviour and delinquency. If children experienced such problems repeatedly, they could find themselves in a dysfunctional education situation. This would have a negative impact on learners' performance in schools and would seem to constitute a significant impediment to the quality of education. Educators, on the other hand, seemed not to be aware of what should be done to assist learners in school, let alone to understand some of the problems (Nacker, 2006).The South African government has also introduced "inclusive education (IE) for all" in schools to address learners' problems and dysfunctional families (Nel, Nel & Hugo, 2012). This has been accompanied by giving attention to Special Educational Needs. Engelbrecht, Green, Naiker, and Engelbrecht (1999) asserted that one of the goals of IE is to establish an interdisciplinary team which consists of a School Support Team (SST) and a District Support Team (DST). The purpose of the SST was to support learners in schools with any difficulties they experienced in the process of learning. Nonetheless, the researcher observed that there were few, if any, schools with well-established adequate support structures (Nel, Nel & Hugo, 2012). Most educators did not appear to be well versed in the principles of IE and SST. The level of support from the South African government, with reference to resources and infrastructure (White paper 6, 2001; Nacker, 2006), could not be overlooked. In spite of all this evidence of the government's initiatives to improve the situation, problems have still escalated.

In the light of these problems, it is therefore, imperative to determine whether or not a relationship exists between the family structures and school-based problems. The focus of the study is on nuclear, extended, polygamous, grand parenting, single, divorced, step parenting and child-headed families. The school-based problems to be investigated are conduct, academic, social interaction, strange behaviour, social withdrawal, emotional distress and physical aggression.

The study set out to explore the following research questions:

1.3.1 To what extent does a relationship exist between selected family structures and school-based problems?

1.3.2 Is there any association between school-based problems and the following variables:

- learners' age;
- learners' gender;
- learners' educational level across different family structures?

1.3.3 What intervention strategies do teachers recommend in order to develop an intervention model?

1.4. AIMS OF THE STUDY

The study aimed at achieving the following:

1.4.1 To find out the extent to which a relationship exists between the selected family structures and school-based problems.

1.4.2 To determine whether there is any association between school-based problems and the following variables:

- learners' age;
- learners' gender;

- learners' educational level across different family structures.

1.4.3 To establish what intervention strategies educators recommend towards developing a model for intervention.

1.5 RESEARCH HYPOTHESES

The research hypotheses were formulated as follows:

1.5.1 There is a relationship between family structures and problems manifested by learners in schools.

15.2 There is an association between the school-based problems and the following variables:

- learners' age;
- learners' gender;
- learners' educational level across different family structures.

1.6. OPERATIONAL DEFINITION OF CONCEPTS

For better understanding of this study, the following concepts have been clearly explained:

1.6.1 Family structures

Operationally, this concept refers to families or households headed by both parents, by either parent (single or divorced), by a step parent, by a child, or by the adults in the extended family, or by one father and several mothers. Family structure and family background are terms that have been used interchangeably. They refer to the way in which a family has been formed. The concept "nuclear family" has been used interchangeably with biological family or two-parent family, and had referred to a family consisting of the husband, the wife and children in the demarcated area of the study.

1.6.2 School-based problems

This term refers to a wide range of problems that have been manifested by learners within the school setting due to the effects of dysfunctional families. In this study, the term has been used interchangeably with school-related problems or learning problems. School-based problems could be manifested in the form of behavioural, social, physiological, or emotional and spiritual difficulties. It has been alleged that all these problems could impede learning in one way or the other.

1.7. METHODOLOGY

The methodology used in the present study was of utmost importance. The design chosen generated answers to research questions and tested the hypotheses. It was important to plan ahead and ensure that the projected analysis was of a logical type that enabled the researcher to answer the research questions. It was the research problem or question that determined the method. The methods of data collection had to be considered against the background of differences. The study in nature was cross-sectional since it aimed at exploring the influence of family structures and school-based problems and also examined factors contributing to learners' problems.

1.7.1 Research design

The present study is cross-sectional in nature, and the researcher used a descriptive research design. This design was considered to be a viable option for this study because it enabled the researcher to determine the relationship between the selected family structures and school-based problems of grade R-12 learners (primary, secondary and high schools) in KwaZulu-Natal schools (Shaugnnessy & Zechmeister, 1997; Neuman, 2003; Lamnek, 2005; Strydom & Delport, 2005; Cohen, Manion & Morrison, 2007). This design was appropriate

because it allowed the researcher to obtain the participants' views, in their usual environment, on the association between two variables from different sample groups, without any manipulation of independent variables. The design also assisted me to gain a broader understanding of the subjects who were being studied. In this study, there was a research question: What intervention strategies do educators recommend in order to develop a programme of intervention? This research design provided answers to this research question. The researcher obtained detailed information from the viewpoint of the participants. Many other studies of family structures in relationship to children's problems were also used this research design (Mboya & Nesengani, 1999; Kingbeil, 2000; Hetherington & Kelly, 2002; Madu & Matla, 2003; Hughes, 2005; Lueken, 2006).

1.7.2 Sampling design

Cluster sampling was used as the selection procedure in this study. According to Neuman (2002) cluster sampling is being defined as a sampling method which focuses on geographical areas. A cluster can be a region or a ward. Clusters were drawn from various districts in KwaZulu-Natal using a table of random digits/numbers. Thus, schools and teachers were randomly selected from different districts of KwaZulu-Natal. This technique involved the classification of respondents according to districts, circuits and type of school, and elements within each cluster were all given the probability of being part of the sample. Participants in this study were educators were from all phases and government or public schools. Each educator was requested to identify relevant learners for the study (Shaugnnessy & Zechmeister, 1997; Neuman, 2003; Lamnek, 2005; Strydom & Delport, 2005; Cohen et al., 2007). The study sample consisted of 165 educators from different school levels (foundation, intermediate, senior and FET phases).

1.7.3 Data collection procedures

In this study, a questionnaire and the "Student Behaviour Survey" (SBS) were used to collect data. The SBS, in particular, was administered to educators to gather information relevant to the first and third aims of the study. The requirements of the second aim of the study were achieved by using children's biographical data, as obtained from learners' profile of SBS. To satisfy the third aim, educators were asked to recommend intervention strategies that could assist learners who were experiencing a variety of problems in schools.

1.7.4 Data analysis

The manner in which data were analysed provided the flexibility to allow for qualitative as well as quantitative analysis. For the purpose of quantitative analysis, appropriate statistical tests (non-parametric) were used to test the null hypothesis. The data were presented in a form of frequencies, percentages and tables. The SBS manual, person chi-squire and log-linear analysis were considered suitable for the analysis of data. The degrees of freedom that complied with all tests varied from one to thirty nine. The level of significance chosen for all the data analysed in this study was 0.05. A computerised package known as the SPSS programme was also used. This is an acronym of statistical package for Social Sciences which can perform highly complex manipulation and analysis with simple instructions.. An open-ended questionnaire was analysed thematically, and this fell under qualitative paradigm (Robert, 2009). All ethical issues were adhered to, that is, all subjects were made aware of anonymity, privacy, purpose of the study, debriefing and the limitations on the requirement of confidentiality. An informed consent forms were signed by all participants, and they were informed about any risk factors in the study and of the fact that their involvement in the project was voluntary.

1.8 SIGNIFICANCE OF THE STUDY

The present study could shed light on school-based problems displayed by children from different dysfunctional family structures, specifically among black families. Such information could enable educators and other stakeholders to provide effective strategies that could help children and their families to cope better with difficulties, which in turn could improve learners' performance. The results of the study would assist the School Management Team to improve support structures and facilitate the provision of adequate resources for effective intervention.

In addition, improved understanding of this phenomenon and its treatment would enhance the effectiveness of remedial interventions in schools. It would also highlight and eliminate some challenges that educators face in implementing these strategies in schools. It would also contribute to the body of international knowledge about school-based problems and the impact of divorce, single parenting and family conflict as to address them. Since the majority of children in South Africa are from single parent families, it has therefore been considered crucial that a study of this nature be undertaken in order to intensify intervention strategies.

1.9 PLAN OF STUDY

The study is organised as follows:

CHAPTER ONE

Chapter one is a general orientation, consisting of the motivation for the study, statement of the problem, aims of the study, research hypothesis, definition of terms, research methodology and organisation of the study.

CHAPTER TWO

Chapter two reviewed theories on family structures such as divorce, and single-parent, extended, child-headed and step parent families and their consequences.

CHAPTER THREE

A review of previous and relevant empirical studies in this field has been discussed in this chapter.

CHAPTER FOUR

This chapter detailed the research design and methodology of the study. This included discussion of the selection of subjects, how data were to be collected, and a plan for the organisation and analysis of data.

CHAPTER FIVE

This chapter concerns itself with empirical investigation that is, a description of fieldwork that was carried out and the scale on which it was administered. It deals with analysis and interpretation of data. Formulated hypotheses are tested.

CHAPTER SIX

Chapter six focused on the main findings of the investigation. A summary, recommendations, limitations and avenues for future research were also presented. This chapter therefore, discussed results of the analysis which was done in the previous chapter. The results of statistical analysis were scrutinised

for meaning in relations to the aims of the study and the significance of the findings. Factors that affect children from the selected family structures in schools were also dealt with, as well as how to establish connection between presenting problems and intervention strategies as recommended by educators.

CHAPTER SEVEN

This chapter includes a research report. The introduction, implications of study, recommendations, ideas towards the development of intervention model and conclusion will be presented.

CHAPTER TWO

THEORETICAL FRAMEWORK UNDERPINNING THE CURRENT STUDY

2.1 INTRODUCTION

This chapter reviews different theories on the influence of family structures and development of problems among school going children.

According to Akon (2002), the most demanding shift in the South African families over the past decade has been the decline in the number of families as a result of industrialization, where children have been raised in households with both parents. Social scientists, researchers, policy-makers and society at large believed that a two-parent household is the normal setting for children's development (Kingbeil, 2000; Wallerstein & Kelly, 2001; Hughes, 2005; Amato, 2007; Tillman, 2007; Milslead & Perkins, 2010). The decline in the number of such households has generated a widespread concern about the well-being of children. It was therefore imperative that different theories be reviewed in this chapter in order to see how they explained the link between family structures and the development of pathology among school-going children. Sibaya and Pillay (2012) stated that there were various terms for behaviour problems in schools, such as emotional problems, emotional difficulties, emotionally disturbed children, exceptional children, children in conflict, children with disabilities and children with behavioural problems. In the present study, however, school-based problems was used as the generic term to refer to what a learner may encounter in a school setting due to the influence of his or her family background. These theories therefore acted as practical guides in understanding the influence of family structures on behavioural and learning problems among school-going children.

2.2 SOUTH AFRICAN POLICIES TO SUPPORT FAMILY STRUCTURES

The South African (SA) government has enacted different policies and legislation to promote and support South African families in order that they may function optimally, with the aim of building and developing the country. Such initiatives have been instituted to encourage all family members to live a normal and intact life and also to protect the rights of children. According to the "Bill of Rights, Constitution of the Republic of South Africa," (1996) the following laws have been enforced: the Child Care Grant and the Child Care Act no 96 (The South African Constitution 108, section 34 of 1996).

The White Paper on families (Department of Social Development, 1995) reflected the acknowledgement on the part of government of the fact that many social problems in South Africa have been due either to weak family systems or disorganised families. This indicated that there were a number of dysfunctional families in this country. It appears, then, that the family structure is facing a major crisis which urgently needs to be remediated. The crisis in families has contributed immeasurably to the malfunctioning education system. In 2012, the white paper (Department of Social Development, 2012) on families also emphasisedthe importance of implementing educational programmes that would empower families with regards to communication within families, as well as with regards to family responsibilities. Programmes should also have supported and reinforced the role of parents in raising children and helping to prevent the development of psychological problems or negative patterns of interaction in children and young people (Department of Social Development, 2012). To reduce the possibility of family breakdown, the government has also provided preventative public education programmes through seminars, workshops, and media programmes (Department of Social Development, 2012). Despite these initiatives, problems in families have become a source of further problems for young people in this country. The implementation of such strategies could be

successful if empirical investigations on families' and children's well-being were conducted. It was one of the present study's aims to establish educators' recommendations for the development of models of intervention. The white paper, on the other hand, was commissioned by the Department of Social Development to strengthen families in South Africa. The main aim was to deal with socio-economic issues related to HIV and AIDS, housing, education, poverty and the well-being of children in all families (Mkhize, 2006; Department of Social Development, 2012).

Section 28 of the South African Constitution also emphasised the following with regard to a South African child:

"Every child has the right:

a. to family care or parental care, or to appropriate alternative care when removed from the family environment;
b. to basic nutrition, shelter, basic health care services and social services;
c. to be protected from maltreatment, neglect, abuse or degradation;
d. to be protected from exploitative labour practices;
e. not to be required or permitted to perform work or provide services that
    i. are inappropriate for a person of that child's age; or
    ii. place at risk the child's well-being, education, physical or mental health or spiritual, moral or social development;"

(Bill of Rights, Constitution of the Republic of South Africa, 1996)

These provisions emphasised the rights of children to belong to a family, to have good shelter, to be well-fed, and to be protected from any exploitation, abuse or

maltreatment so as to promote development. However, many children are being deprived of the opportunity to go to school, thus their “right to education” is automatically violated. Mkhize (2006) also contended that children in some families are deprived of their right to education irrespective of the government’s provision for “education for all” regardless of socio-economic status.

Some children were not encouraged and motivated to learn because of losing their parents at a tender age. Mkhize, (2006) mentioned hardships that children from child-headed households encountered. These problems included school dropout and having to resort unskilled labour as employment. It is clear that such problems could contribute to the impaired social development of children and constitute a violation of children’s rights to education (South African constitution 108, section 34 of 1996). Some children from child-headed households were not aware that they are exempted from paying school fees. The researcher has observed that most of these children were deprived of the opportunity to go to school at all because they are bread winners.

It has been noted that this school fee exemption has not been fully enforced in some schools in South Africa. Children do not attend school due to financial problems. Section 3 of South African School Act no 94 of 1996 (Motshekga, 2012) stated that parents had a responsibility to encourage their children to go to school and support them, from age seven to nineteen. Unfortunately, children from child-headed households did not have parents who could encourage and support them. Most children from child-headed homes seemed to be deprived of their rights, as defined in the Child Care Amendment Act no.96 of 1996, the South African School Act no.94 of 1996 and the Social Grant laws.

2.3 THE CONCEPT OF FAMILY TYPE AND ITS VARIATIONS

There have been many variations in family structures, thus the concept of "family" has numerous definitions or meanings. A family has been defined as the primary organisation to which the child belongs. In all societies, family has been viewed as the oldest and most basic and important social institution. According to Adams (1998), the family was recognised as the most ancient institution in the history of human existence worldwide. Ellis and Adams (2009) were of the opinion that a family was governed by established rules that guided its members. It was in a family that a child could learn concepts, creativity, language, norms and values. In a family, the child also developed social skills. According to Franklin (1983), it was through the family that a child formed a sense of self-identity, dignity, and belonging and also learns to care for others and to relate to others. Adams (1995) supported this idea, stating that the family was meant to offer unconditional love, care, provision and sense of identity to children. The child then would take what he or she had learnt from home to school. Social learning theorists believed that a child's immediate source of knowledge was the family (Gredler, 1992). The family thus formed a basic foundation for the development of normal or abnormal behaviour. Abnormal or normal behaviours were learnt through observation of family members (Woolfolk, 2010). It was alleged that in a dysfunctional family, where parents were abusive, aggressive and violent, children may tend to be violent, aggressive and arrogant as well, and the child would behave in the same way even at school (Tillman, 2007).

Previously, people defined family on the basis of their societal norms and traditional customs; however, South African families are currently diverse and varied. This diversity pertains to cultural norms, customs and values that have led to a variation in the concept of a family.

2.3.1 Families in South Africa

From the South African perspective, family has been defined as a group of individuals occupying the same household and linked by legal or traditional marriage, blood and/or adoption (Ellis & Adams, 2009), whereas, in America, family has been perceived as a normal support structure involving two married individuals, who provide care and stability for their biological children (the nuclear family). It could also include adoption. Constitutional rights were on what modern societies and contemporary nuclear families base their practices. In other words, a normal family should be regarded as the one with one husband and one wife, who were legally united and who had children. According to Akon (2002), marriage was the only incubator to raise a balanced, socially functional child. Akon (2002) viewed this type of family constellation as the normal one in which to raise a child without psychosocial problems. It was viewed as the normal institution that could nurture complementary relationships between and among family members. Family seemed to be failing to play its function as a primary agent of society (Skolnick & Skolnich, 1994). Children found themselves with no option but to abide by these conflicting and mixed cultural norms, beliefs and values which were currently practised. Television has become the prime medium for transmitting sophisticated and unrealistic norms to contemporary families. As a result, children imitate what they have observed through TVs. It has shaped and reflected values that could be unacceptable to African culture (Prinsloo & Du Plessis, 1998). Such transitions in the family as a social unit, that add complications to the child rearing process and, have resulted in social problems such as increases in delinquency, teenage pregnancy, cases of school dropouts, reported cases of child abuse, family violence and a number of children being placed outside the home in foster care or institutions (Patterson, 1992); SASE, 2011).

2.3.2 Traditional families

The traditional African family constellation is one where extended family members are included. This traditional support system includes other family members, namely, aunts, uncles, grandparents and cousins, and these give significant emotional and economic support to biological parents. Such inclusion has not been apparent in modern African families since they have adopted western cultures (Tembo, 2012). However, white South African families exclude extended family members.

Initially, the family is meant to be beneficial to its members, in particular, to children. The role of the family is to provide children with social, economic and emotional security (Thomas, 1990; Adams, 1998). In African societies, it is the responsibility of all family members to supply food, clothing, shelter and medical care for their offspring. It is the role of the adult in a family to teach a child to distinguish between right and or wrong (Thomas, 1990). In a healthy family, a child can learn good moral, cultural norms and values, as well as responsibility and respect. It ensures children's physical health and level of trust and offered cooperation with the school and the community with regards to the provision of educational and learning experiences (Adams, 1998). The school, on the other hand, trains a child for life in the larger society and transmitted values to a child. However, changes in families have affected family roles and functions. This in contrast with what is taking place in contemporary nuclear families, where the younger generations move out of the family as early as 21 years old, and start their own lives in suburbs. Previously, in an extended or polygamous family, children stayed with their parents and shared finances together, to save money for their personal needs such as *'lobola'*. Then the adolescent young man moved out when he has saved enough money. His parents continue to assist and support in whatever way they can.

If children had misbehaved at school, they may be reflecting the type of a family to which they belong. Family members rarely carry core responsibilities in their households since the birth of industrialisation or colonisation in Africa. Traditional families, namely, nuclear, extended and polygamous are more beneficial to children than modern family structures such as contemporary nuclear, divorced/single parent, child-headed and blended families (Robinson, 1991; Walsh, 1993). Nonetheless, any family can be healthy or unhealthy, depending on the situation that it is facing at that time. The healthy family would impact the children positively, whilst an unhealthy family could affect them negatively (Mswela, 2009).

2.3.3 Family variations

In South Africa, children grow up in different family set ups, namely: cohabiting households, families with stepparents or blended families, lesbian or gay (homosexual) families, single parent or divorced families, child-headed families and grandparent families. Ellis and Adams (2009) acknowledged that diverse families were legally recognised in South Africa. The culture of South Africa has been known for its ethnic and cultural diversity. The South African black majority still have a substantial number of rural residents who are economically disadvantaged. It is among this people where cultural traditions have survived. African people in urban areas have become more westernised and that way cultural aspects had declined. The South African constitution has enforced laws that promote equal rights for everyone (The Bill of Rights, 1996). However, the concept of “equal rights” has been misinterpreted. These shifts and disparities of families in South Africa have resulted in a number of problems among school-going children (Okon, 2012). It has been of concern that families and schools have experienced difficulties in reprimanding children and providing effective disciplinary measures. Sometimes, children fail to understand that each and every right goes with a responsibility.

Spruijt and De Goede (1997) mentioned changes in family structures. The first change in family life is the transition from the intact, stable family to a problematic situation in the modern nuclear family, which can then be defined as the conflict, intact family. The second structural change is a transition from a conflict, intact family to single-parent family after divorce. The third structural change is the remarriage of the custodial parent, that is, the transition from a single parent family to stepfamily. Such a transformation could have long term effects on children and adolescents.

2.4 TYPES OF FAMILY STRUCTURES AND PSYCHOSOCIAL THEORIES

Family structure has been viewed as the way that a household or family could be set up. It is diverse for every household, as a family may be made up of single parents, may have both parents or may have stepparents involved, may have consisted of parents and their relatives, grandparents, husbands with several wives and children, foster parents, gay and lesbian couples, be childless or be child headed households (Garcia-Shelton & Vogel, 2002; Ellis & Adams, 2009). These were common family structures in South Africa.

2.4.1 Nuclear family

Generally, Watson (2008) defined a nuclear family as a household consisting of one husband, one wife and children. It is bound by legal processes. This family is known as normal/intact family (Holborn & Eddy, 2011). According to Edward (1984) and Ervin, Daly, and Merrell (2010) the nuclear family is viewed as monogamous or conjugal family. In this family, the husband takes his one wife and children and brings them to live under his domain. In addition to the constellation of three, there could be adoptive descendants. The nuclear family is a common traditional family pattern in Africa (Garcia-Shelton & Vogel, 2002). This family structure is regarded as constructive for child development.

Nonetheless, children from this household may also experienced problems, especially if parents are using authoritarian or permissive parenting styles, or are abusive or financially unstable (Patterson, 2002b). Previously, the nuclear family was seen as a nurturing place for child-rearing. Parents were responsible for giving love, enough time, praise and recognition, security, emotional support, and constant economic provision for children (Franklin, 1983; Prinsloo & Du Plessis, 1998). In the contemporary nuclear family (Hilborn & Eddy, 2011), some of these characteristics are absent. Consequently, if one of the child's basic needs is not met or is inadequately met, the child may feel isolated, neglected, rejected and timid. Some children are brought up by people who are not passionate about raising them or may not have a family lineage bond (Franklin, 1983).

In an attempt to explain the nuclear family, **functionalism theory** emerged. According to functionalism theory, the nuclear family plays a very important and positive role in the life of the child (Watson, 2008). This theory posits that in a nuclear family, two married parents with their children are typical members. Functionalists view this family as normal and as capable of producing a stable child (Watson, 2008). Members of this type of family live in separate dwellings from the rest of other relatives to ensure personal space and privacy. This family set up is characterised by a division of labour and a stable value system. It is expected of the women to care and to nurture family members, while the men bring in economic earnings. In these modern times, women can also bring economic earnings to the household (Franklin, 1983); Watson, 2008, p. 4). This was one of the reasons why (Wise, 2004) argued that the nuclear family is economically independent of broader systems of relations. In this kind of family, members look after one another in times of ill health, old age and lack of work. In such a family environment, children are less likely to develop social and academic pathology. According to functionalism, this family structure creates a conducive family environment for the child's well-being. It is surmised that if a

child came from this family structure, it is rare for that child to experience adjustment problems. This family type is also seen as promoting family values and enabling a positive attitude in the child (Watson, 2008).

Attachment theory also offers an insight about child development. This theory emphasises the importance of the bond between the child and its caregiver at the earliest stages of the child's life. According to Bowlby and Ainsworth (1991) child development and subsequent interpersonal relationships depends on parental support from both mother and father (Bowlby & Ainsthworth, 1991). These researchers (Bowlby & Ainsworth, 1991) stated that in a nuclear family, children may have developed secure attachment, avoidant attachment or ambivalent or anxious attachment. Both parents are regarded as architects of the health and pathological development of offspring. It was noted that parents should provide love, support and security in order to support the child in forming healthy attachments. Landsberg et al. (2011) maintained that parental support is the key for the child's success in school. According to Lee (2003), the absence of parental support, or lack of understanding and acceptance may have caused unhealthy relationships and long term psychopathology in children. For instance, the adolescent may have tended to completely avoid problems encountered in life, which may have led to future problems within attachment relationships. This could also have led to depression and other problems such as moodiness, tension, and emotional instability in adolescents. Lee (2003) attested that parents have an important role in their children's attachment**.** These attachments shaped the child's interpersonal relations with others. Woolfolk, (2010) declared that insecure attachment may develop as a result of authoritarian or permissive parenting styles. If parents are too strict, children may develop fear, anxiety, sadness, rejection, separation anxiety and anger against others. It appeared from Lee (2003) and Woolfolk (2013) that the child may have interpersonal and adjustment problems in the nuclear family, since he or she had learnt to interact

with only a few persons. It is surmised from this theory that the support of both parents in the nuclear family is vital for the child's personal, emotional and cognitive development. In today's societies, children often do not establish an adequate bond with their mothers because of insufficient time and unavailability (Prinsloo and Du Plessis, 1998). Thus children may felt insecure, rejected and emotional distressed. This is one of the reasons why the study sought to establish the extent to which certain family structures related to school-based problems, and also to discover whether children from nuclear families were exposed to psychopathology, as suggested by previous studies.

The **Bowen theory of nuclear family emotional system** also sheds light on the nuclear family and child development. In this theory, Bowen (1978) describes four basic relationship patterns that obtain in a nuclear family. Bowen believes that people's attitudes and beliefs play a major role in the patterns, but that the forces which primarily drive these are part of the emotional system. Clinical problems usually develop during a period of sensitive and continued family tension. The level of tension depends on the level of stress a family encounters, how a family adapts to stress, and on family connection with extended family and other social networks. Tension increases increased activity in one or other of the four relationship patterns. The higher the tension, the greater the likelihood that those symptoms will be severe. According to this theory, child psychopathology may develop in families where there is an ongoing and severe tension in parents, which can be projected onto children. This belief is supported by previous studies (Amato, 2007; Coontz, 2007; Schimmele, Hou, & Ouellel, 2009;Scott, 2010), which shows that there are fewer tensions in families with both parents. Impairment of one or more children is aggravated when the spouses focus their anxieties on a child. The child's anxiety can impair school performance, social relationships and even health. The researcher observed that this theory focused on problems within families that are due to an individual spouse's reaction to

stressors. It was also indicated that any problem within families needs to be dealt with properly.

Limitations highlighted in each theory showed that there are many issues that these theorists have overlooked. One wonders what happens. The question was if members of certain family structures are able to minimise problems, would the other family structures follow the same relationship patterns highlighted by Bowen. Different authors and theories documented above viewed the nuclear family structure as the most ideal, intact and normal one. It could be deduced, however, that the nuclear family is also a source of problems because divorced and remarried families emerge from it. For instance, if there is a quarrel between spouses in a nuclear family, the child has no one to turn to. In extended and polygamous families, there is a pool of family members in the household and the child rearing function is communal (Tembo, 2012).

2.4.2 Extended family structure

The extended family is a household that consists of a husband, a wife, children and other relatives such as grandparents, aunts, uncles and cousins. In other words, it consists of generations of relatives. The extended family originates when two or more nuclear families are coupled together and live with their children Adams (1995). According to Matson (2006), an extended family is based on communal child rearing patterns, and its members are economically interdependent. Child care and economic support are often shared among family members (Martin & Martin, 1978). In this way, children's needs are taken care of (Woolfolk, 2010). Such practices have been diminished, however, due to industrialisation, which has led to family transformation. In recent times, more couples have preferred to stay with their children than to stay together as extended family members.

Nowadays, children are brought up by their grandparents only when their parents have died or are not available to take care of them. What worsens the situation is that children grew up in unhealthy conditions such as slums, streets, overcrowded homes, combative relationships and blended families. Some children in these circumstances are raped, kidnapped, hurt, tortured and tormented due to human trafficking. Urban working class families tend to be nuclear families or small families. With reference to this, Wise, (2003) reported that children may be at risk when their families lived in isolation from extended family networks and the surrounding community (Buchanan & Ten Brinke, 1998). In addition, Wise (2003) argued that aspects of the parental relationship have an impact on child adjustment. Factors such as the balance of engagement and participation in childrearing tasks and the consistency of rules and expectations of child behaviour are the important contributing factors to child adjustment. Thus, it is important to have support structures like schools, churches and other family members to help raise children together. Wise (2003) declared that an absence of supportive social networks and local services such as schools and child care could cause parental stress, mood shifts and negative parenting behaviour, which then directly affects the child's immediate environment. On the other hand, socio-economic support for families seem to reduce family stress and improved quality parenting and good family functioning (Wise, 2003). Family functioning is a measure of the whole-family unit in the context of whole-family interaction. When a family faces a new situation, the family members have to adjust and establish new patterns of relationships and coping (Minuchin, 2002). Johnson and Wiechers (2002) stated that whole-of-family functioning is considered to have an indirect impact on child development. According to Johnson and Wiechers (2002), family conflict and family cohesion are two main characteristics of whole-of-family functioning that studies have shown to be linked to child development.

Previous researchers pointed out that the importance of collaborative co-parenting of both parents and other family members is vital to the well-being of the child. Thus the extended family is recommended as the most functional type of family structure for child development (Forehand, Long, Brody, & Fauber, 1986; Borrine, Handal, Brown, & Searight, 1991; Johnson & Wiechers, 2002; Wise, 2004).

Family system theory also emerged to explain the extended family. This theory focuses on how people relate to each other within the extended family. It posits that members build a collection of interactions called a system. This system can be a family or a collection of friends. In the system, there are different elements that help to determine what members are and what they can become within the family (Minuchin, 2002). This theory views the extended family as a living organism which stresses boundaries, rules, expectations and behaviours that help the family to maintain equilibrium (Minuchin, 2002). If these rules, boundaries and expectations are clearly instituted within the family, children experience few adjustment or academic problems, because upbringing in this family structure is everybody's business. According to the **family systems theory,** extended families and social groups affect how children think, feel, and act, but individuals vary in their susceptibility to "group thinking". Social groups vary in the amount of pressure they exert for conformity. According to this theory, if the child's self-esteem is negatively impacted, he or she may be easily influenced by peer pressure. That can affect the child's life and the child may then fail to have control over his or her life.

Minuchin (2002) believed that changes in one part of the family affect the other parts. For example, conflict between spouses can create imbalance within the

whole family and other systems that surround the family. Problems among children may stem from disorganization of the whole system within and outside the family situation (Wise, 2004; Donald, et al, 2010). Bowen mentioned four patterns that govern the development of problems in an extended family. These patterns are managing anxiety; marital conflict; dysfunction in one spouse and impairment of one or more children's emotional distance. The way family members relate to one another creates differences which are transmitted across generations and the interaction shapes the child's life and behaviour. As a result the child will rarely experience social interaction problems (Walsh, 1993).

Bowen also expanded his theory to the extended family by stating that emotional, biological and environmental influences are considered as crucial for an individual to adapt within the family unit across the generations. Bowen also believes that the level of emotional maturity of self in relation to other family members is crucial (Walsh, 1993).

2.4.3 Polygamy

Polygamy is a practice in which a man marries more than one wives. The man takes his wives and children and brings them all under his control. Such a household is acceptable in some African societies. Children that are raised within a traditional polygamous family have better socialising abilities, since they are always among siblings from various wives. Child rearing is the responsibility of many wives in the household. It is however noted that emotional commitment between spouses in this household is very weak because of rotation (Joel, 1971; Robinson, 1991). Children are exposed to a variety of developmental styles because they interact with many siblings at home. Polygamy is also a safe environment for child development Edward (1965). According to Al-Krenawi,

Graham, and Al-Krenawi (1997), polygamous families are characterised by competition between the co-wives and among the co-wives children. For instance, the husband may choose to stay with the junior wife over the senior wife. As a result the other wife with her children will be jealous of the junior wife and her children. Such an environment may be unhealthy for all children and may lead to problems in schools such as below average academic performance and behavioural problems such as self-esteem, timid, selfishness and aggression and rejection (Al-Krenawi et al., 1997; Elbedour, Onwuegbuzie, Caridine, & Abu-Saad, 2002).

According to Kalule-Sabiti, Palamuleni, and Makiwane (2007) polygyny "was common among older women aged over 30 (6.5 percent), among the less educated women with primary or no education (9.6 percent), among rural women (8.3 percent) and among African women (7.6 percent). As far as provinces go, [polygyny] was more prevalent in Limpopo (14.0 percent), Mpumalanga (12.0 percent) and KwaZulu-Natal (9.0 percent). It is lowest in the Western Cape and Free State provinces (1.7 percent)." Polygyny is one of the cultural practices and customs that have been criticised for contributing towards, and reinforcing women's subordinate position in society, increasing the levels of HIV infection, and exacerbating the incidence of gender violence (Mswela, 2009).

Modern families today, on the other hand, may lose their value systems and become unstable. The following factors have led to a decline of polygamous families' social conditions: increase in democracy, increase of compassionate marriages, decline of arrange marriages, and am an increase in education on recognition of foreign human rights for the protection of everybody (Bailey, Baines, Amani, & Kaufman, 2010).

Different studies have held different opinions on the value of the polygamous family: According to Awino (2010), polygamous marriages or traditional marriages were far much better than other forms of modern families. Bailey et al. (2010), on the other hand, maintained that children from polygamous families are at a high risk of experiencing marital conflict and relationship problems at a later stage.

Symbolic interaction theory attempts to explain polygamy. The theory states that children in polygamous family are able to learn the meaning of things in their surroundings (Delamater, 1987). It is in this family that the child acquires the symbols of what is normal or abnormal in that subculture at very early age. Vygosky's theory on language acquisition and child's development concurs that child development depends on family interaction and cultural norms (Woolfolk, 2010). Increasing the number of children growing up together, as in polygamous families, could minimise academic problems and limit cognitive impairment among learners. It is logical that when children are brought up in an organised family with clear lines of authority, that they would be able to conform to school rules. The foundation of the child's respect and behaviour are formed first within the home. It is clear that the child has a greater opportunity to interact and develop social skills in a polygamous family (Statistics South Africa, 2010; Holborn& Eddy, 2011).

2.4.4 Single or divorced parent family

A single parent family is a household with a single or one parent and the children. The parents are not on good terms and are out of relationship. One of the parents may have decided to leave home, while the other spouse may be the custodial parent. Garcia-Shelton (2002) defined the single parent family as a

family that consists of one parent due to death of the one parent, or teenage pregnancy or migration. In other words, a single parent is a parent who cares for his or her children without the physical availability of the other biological parent in the home (Moerbeek, Niehof, & Ophem, 2007). The divorced family on the other hand, is a family that has become legally dismantled for different reasons. This type of the family has emerged from the nuclear family. They are families wherein spouses have legally separated. Louw (1995) viewed divorce as the most disrupting factor that can affect a child's development. Amato (2007) indicated that the number of single parents became noticeable from 1950. Thereafter, in the 1970s, divorce became more common, leading to a rapid increase in the number of families headed by one parent. Davison (2006) stated that the most common type of single parent family consists of the mother and her children, as opposed to being headed by the father. This difference is due to the common view that childrearing is a female role. It is evident that single parent households are at risk of a lower level of educational attainment due to financial problems experienced by the single mother (Davison, 2006). According to the Department of Social Welfare (2011), more than 40 percent of all households in South Africa have been headed by a single parent. In an analysis of the characteristics of single parents in urban areas, Holborn and Eddy (2011) noted that the single parents were "overwhelmingly African, female and between the ages of 25 and 34. Unemployment rate among urban single parents were also high.

The analytical profile of a single parent family is that there is one adult and a dependent child or children; the other parent is absent; and there is no reasonable prospect of that parent returning within a short period of time. Many single parent or divorced families are faced by multiple challenges, especially low income, including money for rent, childcare and other necessities required in maintaining a healthy and safe home. Garcia-Shelton (2002) proclaimed that

single parent families experienced a higher rate of poverty than couple families. On average, single mothers had poorer health than mothers within couple. In spite of these financial problems, Garcia-Garcia-Shelton (2002) was also of the opinion that in single parent families children are taken care of, since both parents are more eager to work together with each other to find solutions to solve problems and different ways to perform household chores than in divorced families. Furthermore, Davison (2006) highlighted further factors that could influence the well-being of children from single parent families. These factors were: parent's age, educational level, and occupation, the families' income and the family support network of friends and extended family members. In South Africa, the majority of single parent households are headed by women (Ficco, 1997). This pattern has implications for family poverty given that female-headed households have been shown to be generally disadvantaged in terms of access to important socio-economic resources such as land, livestock, credit, education, health care and extension services (Connell, 2003; UNECA, 2009).

Erik Erikson's psychosocial theory (1959) also focuses on a divorced family structure. He furnished an overview of human, social and emotional development with reference to specific crises in life. Erikson believed that human beings are faced by eight major crises during the course of their lives. He stated that each stage of development is influenced by both biological maturation and social demands. His argument is that conflict emerges when the child needs to identify himself or herself with the mother or a father figure. In a single parent or divorced parent family only one parent is present. As a result, the child will experience a crisis, which is a role of confusion (Ficco, 1997). According Erikson, custodial mothers are sometimes overwhelmed by responsibilities and their own emotional reactions to divorce, often become edgy, impatient, and insensitive to their children's needs, and they typically adopt more punitive and coercive methods of child rearing. Consequently, if parents did not meet the child's basic needs at this

stage, (identity versus role of confusion) the child will feel rejected and neglected, thus the child views the world as a dangerous, filled with untrustworthy and unreliable people (Ficco, 1997).

In a family setup where there is only one parent, children may inevitably suffer due to lack of parental support. In this situation, a child would become shy and lacking in self-esteem. In this context, effective parenting skills are essential in order to achieve positive outcomes (Parke, 2003). However, parenting tends to be ineffective in single parent families. Parents may be overly strict with their children or fail to reprimand them altogether. Poor parenting skills may cause low self-esteem or confidence and interpersonal relationship problems (Department of Social Development, 2011).

Parke (2003) believed that at a fifth stage of life, the child fails to resolve one of the developmental stages is at risk. Erikson's theory may account for some of social and emotional difficulties demonstrated by primary level children from divorced families when parenting skills are negatively affected. Children at a certain stage normally experience self-discovery and transition in the family. Both parents at home and peers at school have a great influence in shaping their self-image. When parents broke up at a later stage, the adolescents may blame themselves for being somehow responsible for their parents' breakup (Parke, 2003).

The family structure model is based on the assumption that the association between the family structure and children's academic outcome is attributed to a combination of family background factors, such as parent's education income and ethnicity. This perspective holds that the absence of a parent or the loss of a parent is frameworks for explaining differences in child adjustment. Firstly, the

loss of a parent through separation, divorce or death has been found to be associated with child distress in the short term. It is not considered to have harmful long term effects (Rodgers, 1998; Pryor & Rodgers, 2001). Partial support for this position is provided by evidence that depression in adulthood is just as common in those whose parents divorced while they were young, as it is in those whose parents stayed together during their childhood, but divorced subsequently (Rodgers, 1998).

Comparisons of children who experienced parental death, compared with parental separation, showed that parental death does not have the same degree of adverse social and psychological outcomes as divorce. Amato (1993) suggested that other factors may have been more significant in explaining children's poor development. Further, several studies had shown that children suffered significant disadvantage before separation (Elliott & Richards, 1991), and that some children may have been better off after family change if relationships within the family of origin were hostile, conflictual or abusive (Burns, 1981; Amato, 1993). Absence of a parent is often advanced as an explanation for difficulties in adjustment and functioning among children who grow up in single-parent families, as compared with children who grow up with both parents. However, the evidence for poor outcomes is not as consistent among children in single-parent families, as compared with children in stepfamilies. For example, earlier researchers (Amato & Keith, 1991; Adcock & Demo, 1994) suggested that the absence of a second parental figure was not the crucial factor. On the other hand, the economic deprivation theory suggests that economic hardship in single parent families is likely to require adolescents to work for long hours and to take great responsibilities for younger brothers or sisters. These time-consuming activities are likely to be related to lower achievement (Amato, 2007).

2.4.5 Stepparents or blended families

A stepfamily emerged when two married spouses legally terminated their marriage and decided to remarry (on both the mother's side and the father's side, with children belonging to both). In this family, an extended stepparenting system has to be taken into consideration. Meyerhoff (2006) described stepparent/blended family as having mixed parents, where one or both parents remarried, bringing children of the former family into the new binuclear family. Woolfolk (2010) described blended families, as those where parents, children and stepchildren are merged into families through remarriages (Meyerhoff, 2006). Most stepparenting families arise from dissolution of the nuclear family, or the death of one spouse, or from single parents who decide to become married. It is evident that the relative incidence of re-marriages is low in South Africa, with data for civil marriages in 2010 showing that about 83.1 percent of bridegrooms were bachelors, 3.2 percent were divorcees and 1.6 percent were widowers (Statistics South Africa, 2010). For the brides, 87.3 percent were never married, whilst 2.2 percent were divorcees and 1.3 percent was widows. It was also observed that irrespective of their marital status, men generally married women who had never been married.

Meyerhoff (2006) stated that in a remarried family, if parenting is solely the domain of the married couple, with one biological parent and one stepparent in different households, then it becomes more of an open system than a nuclear family, taking into consideration also grandparents and stepgrandparents. Typically, children are moving in and out of the household for visitation. This means members are not confined to one household and it is not clear who is actually present in the family. Children do not have the assurance that the parents are indeed their real parents. Spouses rarely have consensus about parenting issues, and stepchildren may not be reprimanded by the stepparents. In addition, Robinson (1991) stated that disciplinary problems occurred in stepparent families when single parent mothers decide to remarry.

Another complication in stepparenting is that both parents and children have to deal with a strong sense of loss in remarried families, coming from other families that are no longer intact. If family members had not dealt with these losses, continued fears of loss and abandonment and emotional scars may exist (Robinson, 1991). The children suffer from conflicting loyalties, and the new marriage could suffer as well. What often happened was that children ended up in the middle of conflictual relationships, or even used as spies between one household and the other. Integration of members in a stepfamily could take some years. Child ranking in stepfamilies often changed in relation to other stepchildren. For instance, the eldest child may become the second child (Robinson, 1991). That change may be common because stepsiblings were not blood relatives. In that way, the child's self-identity, confidence and character would be affected.

Healthy transition is based on spouses' understanding that roles have shifted as different family members come in and out. Unfortunately it is not easy for stepfamily members to understand this transition. It is imperative for children to know that the past has not been forgotten or negated by this new family. Sometimes, the stepchildren may have even compared stepparents with their biological parents, but in these situations the stepparents sometimes overreacted and became defensive. As a result, stepchildren found it difficult to establish a friendly relationship with a new step parent. Meyerhoff (2006) stated that both spouses' support in parenting roles is essential, failing which, the stepchildren may come to disrespect the stepparent or choose one parent over the other.

Frequently, both spouses enter into remarriage in the name of love and overlooked future implications. The bond between stepparents and stepchildren

is not there, and this causes attachment problems towards stepsiblings. Very often, instant love is an unrealistic expectation that causes stepparents to try to be excellent parents. In a stepparent family, there is a discrepancy between the love given to stepchildren and that given to the biological children, and therefore stepchildren feel rejected. Robinson (1991) reported that children from stepparent families had less self-esteem. He also indicated that stepchildren were often exposed to physical, emotional and sexual abuse by a stepparent or the stepsiblings. Parke (2003) supported Robinson's idea by stating that children from stepparent families experience physical, emotional and sexual abuse.

The decision of the remarried couple to have a child very soon, with the intention that the new child would strengthen the relationship is not ideal, since the stepsiblings could feel excluded and unimportant. The situation could be further complicated by the fact that both spouses have new children immediately after they remarried. All of the existing children are exposed to adjustment problems such as frustrations, anxiety, conflict and conduct problems, some becoming street children (Sun, 2001).

Robinson (1991) highlighted seven lifecycle phases in the stepfamily: namely new beginnings, effort at assimilation, awareness, restructuring, action, integration and resolution. The new beginnings phase entails the recognition of myths and fantasies that occur in this family. With regard to an effort at assimilation, it is advised that all family members should allow time and space for each other to develop their own relationship. In the awareness stage, it is advisable that members reaffirm generational and household boundaries by recognising the key positions and authority of all members. Restructuring is when family members have to accept that changes are necessary for the family to be

restructured, extended and functional. The next cycle in the stepfamily is “action”. Family members should begin to work together by forming different rules, rituals and boundaries. These could be achieved through negotiations and forming networks with the extended family. Integration is the sixth phase where members achieved contact and intimacy. In the resolution stage, the family members would adjust by accepting interrupted parenting and family life.

Remarried families are very complex because the roles and relationships are being altered. The researcher suggests that respective family members should communicate and cooperate in order to become functional.

2.4.6 Child-headed family structure/household

The rise of child-headed households was first noted in the 1980s within communities affected by HIV and AIDS (Awino, 2010). Sub-Saharan Africa (Tanzania, Angola, Zambia, and South Africa) is mostly affected by the pandemic and many children have lost their parents to the diseases and been left alone to head families (Jamieson, Bray, Viviers, Lake, Pendlebury & Smith, 2011). According to Nkomo (2006), child-headed household is defined as a household where a child up to 18 years is called upon to carry care-giving responsibilities. Child-headed households can also be described as households with no adult members, where children live without parents or prime-aged adults (Hosegood, 2009; Meintjes, Hall, Marera, & Boulle, 2009). Furthermore, a child-headed household can come into existence when the eldest child, male or female, in the home heads the family. Children can find themselves leading their household due to the death of parents, accidents, war, family violence, etc. Sometimes, children lost their parents due to the HIV and AIDS pandemic. Once the parent died, the chances of mourning and dealing with the loss are minimal for the child,

who ends up assuming the responsibilities of running a household (Nkomo, 2006). For a child, such responsibility is very challenging. This is complicated by the fact that the child involved has to confront the stress and pressures of juggling and responding to conflicting demands. The child is no longer only a child but is also expected to fulfill the role of a parent to siblings at the same time.

An estimated 92 365 of South African children were living in such households in 2010. Mentjies et al. (2009) declared that child-headed households are at risk of having to cope not only without adults who died, but also with poorer living conditions than children in mixed-generation households.

Child-headed households seem to be a growing problem in South Africa and other country due to numerous psychosocial challenges (Moffet, 2007). These psychosocial challenges arise when prospective child heads are faced either with the task of looking after a very sick parent/sibling or dealing with death (pre- and post-bereavement). In addition, Moffet (2007) declared that child-headed households are faced with problems alone without adult help, so that the stressors are likely to be more severe and prolonged. These children are found to lack financial support to meet the basic needs of clothing, food, shelter, health care (including early childhood care), and access to education. Most of them experienced threats to their education due to poverty, and often dropped out of school to work (Ellis & Adams, 2009). According to Ellis and Adams (2009) that experiences such as psychological trauma, due to parental loss; rejection; social stigma; and discrimination, are more prominent in child-headed homes. It is also likely that witnessing a parent succumbing to the devastating effect of an AIDS related illness is a very traumatic experience for the child looking after him or her. The stress of increasing responsibilities and the trauma of witnessing a parent or parents endure the ravaging effects of an AIDS related illness are coupled with anxieties and concerns over future prospects in the face of the impending death.

Significantly, this is often a time of intense loneliness and isolation for the children concerned.

All these problems could also be manifested at school. Child-headed families are insecure within their communities and also at home, due to HIV and AIDS and their economic status. These children are vulnerable to their peers' harassment and adult exploitation such as violence, physical and sexual abuse by neighbours and relatives. Many of them opt for child labour in order to make a living. As a result, they become exposed to HIV infections through sexual abuse, substance abuse, and emotional instability leading to high risk relationships and poor health (Mkhize, 2006). Children from these households are too emotionally immature to cope with adult responsibilities. These children did not have time for recreation because they were too preoccupied with so many responsibilities. Some did not have identity documents. All of the endless problems from these families were carried along to school.

In some instances, children decide to stay together in their own home because they wanted to keep the family property; others may have had a fear of being maltreated and exploited by their relatives. They may have become victims and may have become frustrated, easily irritated, and restless, abused or neglected. Sometimes, the older child simply tired of having a younger child around and wanted to go out and have some fun, because they were still young themselves. Instilling discipline in child-headed homes was complicated because the responsible child may not be that much older than his or her sibling.

Besides these psychosocial effects of child-headed households, studies (Moffet, 2007; Ellis & Adams, 2009) indicated that this situation often resulted in teenage or early pregnancy for girls and substance abuse for boys. Meyerhoff (2006)

observed that teen mothers tend to have additional children more rapidly, which meant that they were even less likely to be able to offset child care costs with an income, often dropped out from school, and qualified only for poorly paying jobs. Nkomo (2006)was of the opinion that children raised by teen mothers encountered educational and emotional problems later on. Teens who had children often ended up living with one or both their parents. The United Kingdom, reported from the Social Issue Research Centre (SIRC, 2008), showed a huge discrepancy in the educational attainment of teen fathers and their children compared to their peers (Rutter, 2000; Patterson, 2002a). Teen fathers often want to help the mother and child, but they themselves need assistance and support. In the Republic of South Africa, teenage pregnancy also had major social and health implications for the young mothers and their children, including dropping out of school, curtailed personal development and increased vulnerability to exploitative sexual relationships, higher rates of maternal mortality and greater risks of clandestine abortion (Dickson, 2003). High levels of teenage pregnancy furthered reflect a pattern of sexual activity that put teenagers at risk of HIV and other sexually transmitted infections (Swartz, 2003). Unfortunately, until recently, little or no attention had been paid to the problems of the teen fathers. Many of these young men had never had father figures themselves, and they just did not know how to father a child. Mkhize (2006) also argued that since a child-headed household created a “parental vacuum”, the school remained the only setting for the child to have his or her needs fulfilled. Educators seemed not to be well-versed with strategies they could use to fulfill learners’ needs.

Looking at all these responsibilities, frustrations and anxieties that children from this family structure (child-headed family) are facing, one could assume that there is a high probability that these children would experience school related problems and other social problems. The situation was aggravated when children lacked supervision, mentoring, sympathy, respect, love and assurance from an

adult person. Their needs were not met or fulfilled since their parents were no longer there (Mkhize, 2006; Nkomo, 2006).

The ecological system model by Bronfenbrenner came about to explain the child's development (Donald et al., 2010). This theory was conceptualised to attempt to explain how a child's growth is affected by environmental factors, including the family. The relationship between children and their families as part of the system are viewed as "mutually shaping". Bronfenbrenner saw an individual's experiences as a set of nested structures. This model is also known as development in context, because it viewed children as embedded in a set of five nested environmental systems, namely, the microsystem, mesosystem, exosystem, macro-system and chronosystem. Bronfenbrenner (1979) maintained that the child's development should be seen as happening within these five nested systems (Donald et al., 2010). The interactions that occurred within and between overlapping ecosystems influence each other. One of these subsystems is the family. The family, which is the main focus of this chapter, is called a microsystem. The influence of the family on child development, according to Bronfenbrenner (1979), is of vital importance. If there is dysfunction in the family, other subsystems will also be affected. For example, in a child-headed family almost all systems are affected.

This model focuses on changing relations between the child and the family. Bronfenbrenner (2004) believed that how the child interacts depends on the support, guidance and structure of the family in which he/she lives, hence, in a child-headed family, support and guidance are absent. According to Awino (2010), different family systems influence and mould the everyday life of children and adolescents in child-headed families. On the basis of this information, one can understand that children from this family structure are vulnerable to a number of problems which will bear directly upon their behaviour in school. Thus

child-headed households always create an impediment to the child's school work. The mesosystem aspect on the other hand, involves the relationships between the microsystems in the child's life. The child's family experience may be linked to the school experience. For example, if the child is neglected by his parents or parents are not part of the child's life, he or she may develop a negative attitude towards teachers and may resort to withdraw from his or her peers. The exosystem is an aspect in which there is a relationship between the context where the child doesn't have any active role, and the context itself is actively participating. For instance, in the child headed family, parents are normally absent and children are automatically deprived from developing the bond with their parents. Furthermore, the microsystem actually refers to the child's culture, which might involve the socioeconomic status of the family headed by the child and living in a third developed country.

The foresaid perspectives on different family structures, namely, attachment theory, family development theory, family systems theory, power control theory, attachment theory, and psychological theories act as the basic ground of the current study. However, the current study was embedded on three theories, namely, behaviourism, family systems and systems perspective. These theories expounded on the fundamental basis of the development of certain behavioural problems among school going children. In other words, as the study intended to investigate the influence of the family type on school-base problems, the presenting theories behind the causal factors of these problems were explained.

2.5 CURRENT STUDY AND THEORIES UNDERPINNING IT

2.5.1 Behaviourism

The current study is underpinned or embedded or linked to behaviourism. Behaviourism as founded by John B Watson (1913), as the second school of

thought came about after Freudian or psychoanalytic theories of personality. Behavioural theories are based on the assumption that anychild's problem or behaviour, normal or abnormal is acquired or learned from the environment (Watson, 2008). This theory is concerned about the here and now of the child's environment rather than the child's unconscious mind. Watson (2008) also maintains that any behaviour can be measured, trained and changed. According to behavioural theories of child development, children learn to behave in ways they do through association, observation, modelling, reward and reinforcement. Ervin et al., (2010) stated that learning may occur when the child interacts with his or her environment. Basically, the primary context where children start to learn certain behaviour, good or bad is a family or home environment. Deviant or abnormal behaviour can therefore, be traced back to the child's home environment.

Children acquire basic knowledge and skills through informal and informal education, thus that behaviour may also be learned or observed from any situation (Ervin et al., 2010). The school then becomes second environment where the child learned and can manifest behaviours acquired from home. At school, children engage in more formal education as oppose to the initial informal learning which was started at home. According to Ervin et al. (2010), behaviourists further believed that learning at more advanced levels involves thinking, cognition and behaviour change.

In learning through association, a child learns to place two related events or behaviours together in order to come to a decision and conclusion. A child, for example, is quick to sense a welcoming or unwelcoming response from a parent and thus modify behaviour accordingly. In this way a child learns to behave in a particular way by making an association from an environment. With regard to modelling, a child learns from significant others through observation. Children

learn best by imitating their parents. For example, when parents physically punish a child, a child may learn that corporal punishment is an acceptable way of solving a problem. Through using a reward system, a child may learn to associate a behaviour and the reward that goes with it. For an example, a child learns to behaviour well if good behaviour is acknowledged and rewarded.

Another way in which acceptable or unacceptable children behaviours can be learnt is through using appropriate reinforcement techniques. Skinner (1958), as cited by Ward (2007), was concerned about how the behaviour is influenced by external forces.In reinforcing behavior, an association is made between a behavior and its consequence. It was therefore noted that when a desirable behaviour is followed by a reward, the behavior becomes more likely to recur in future. On the other hand, the behaviours that are not rewarded are not likely to occur if compared to those that are rewarded. The drivers of behavior change, therefore, could be intrinsic or extrinsic motivation and or positive and negative reinforcement depending on the behavior techniques that are used as demanded by the situation at hand. With regard to positive reinforcement, parents give rewards, tokens and praises to children in order to increase the desirable behaviour, whereas, negative reinforcement has to do with an increase of discomfort to terminate inappropriate behaviour (Ervin, et al., 2010). The theory suggests that any problem that a child displays could have been learned from his or her immediate environment, which could home or family.

In cases where reinforcement fails, other cases may use punishment which is always used with caution. It is recommended that for punishment to be effective, it has to be immediate, consistent and severe enough to alter the target behaviour (Halonen & Santrock, 1996).

Misbehaviour can be unlearned if the parents punishes the child. The parent would increase the desired behaviour by removing the pleasant stimuli to the child. Controversially, positive punishment deals with removing away the desired stimuli to obtain the desired behaviour.

2.5.2 Social learning theory

Bandura's social learning theory (1961) also indicates that children could learn some behaviors though observation and imitation. Bandura suggests that parents play a significant role in assisting children learn from others or their environment through imitation and modeling behaviour of others. Observational learning requires general basic understanding and cognitive processes as it advances. Bandura, observed that children could learn to be sociable or aggressive through observing and modeling the behavior of others starting from home or family (Bandura, 1994; Halonen & Santrontrock, 1996).

2.5.3 The systems theory

This study is further embedded on the systems theory which links the child with the systems around him or her, which could be the home, family, friends, school and other institutions important in the child's life.

The systems perspective is a structural approach in which the family as a whole is considered to be more than its individual component parts. The family is viewed as a social system as its members are interdependent and of influence to one other. A change in the behaviour of one member may influence the behaviour of others members and the whole system or its subsystems (Baker, 2001). This theory is incorporated to the current study because it sheds light on how family type can influence the child's behavior at school. The family system

seems to contribute immensely in understanding the problems experienced by leaners at schools when reviewing the family relationships. This perspective is also grounded on the assumption that the child's problematic behaviour at school may be rooted more in the family than in the child who could be just the symptom bearer. Unless the family is assisted with its problems, the negativity in the system may reflect the family's inability to operate effectively as whole, thus indicating dysfunctional family patterns of the past (Corey, 2001).This implies that according to this theory, a child cannot be blamed for any deviation but the dysfunction of the family system and complex interaction between various parts of the system. The theory is also based on the assumption that the understanding and interpretation of family-related issues enables role-players to locate the family in the society (Department of Social Development, 2011).

2.6 SUMMARY

The chapter has revealed a range of theories on family structures and child development underpinning the current study. The theories discussed family structures such as nuclear, extended, polygamous, divorced and single parent, blended, child or youth headed and grand-parent headed families. The explanations given by different theories of family structures indicate that the destabilisation of nuclear and extended family system has resulted in numerous problems among family members, in particular children. An analysis of published journal articles in chapter three will indicate the status of theories in this field.

CHAPTER THREE

LITERATURE REVIEW

EMPIRICAL STUDIES ON FAMILY STRUCTURES AND SCHOOL-BASED PROBLEMS

3.1 INTRODUCTION

The majority of learners in schools have been confronted by a number of problems. In today's school communities, learners have come from diverse family structures that have gone through changes such as separation and divorce, including single parent, child-headed and grandparent only, or dysfunctional families. Some of these children go to school with emotional, social and cognitive difficulties. Typical classroom problems that learners may manifest include conduct problems, aggression, Attention Deficit Hyperactivity-impulsivity Disorder (ADHD), anger, depression, mistrust and low self-esteem. Shaffer and Kipp (2006) believed that when children are at primary school level, home and school should work collaboratively, so that they could help learners. Parents should build skills for dealing with daily problems, while increasing learners' self-confidence and self-esteem.

This chapter focuses on empirical research conducted on the relationship between some family structures and school-based problems. Related work that was conducted is reviewed and presented according to the study objectives.

Firstly, the study intended to determine the extent to which a relationship between selected family structures and school-based problems. Secondly, the

study also proposed to find out whether there is an association between school-based problems and learner's characteristics such as age, gender and educational level across different family structures. Finally, strategies recommended by educators are reviewed for the purpose of developing a programme of intervention.

3.2 STUDIES ON THE RELATIONSHIP BETWEEN FAMILY STRUCTURES AND SCHOOL-BASED PROBLEMS.

Studies on family structures and learners' academic and psychological problems have been conducted worldwide. Most studies focussed, among other things, upon the effects of divorce on children (Amato & Keith, 1991; Hughes, 2005; Amato, 2007), parental influence and teenage pregnancy, family structures and schooling outcomes (Centre for Marriage and Families, 2005; Francesconi, Jenkins & Siedler, 2010), influence of family structure on sexual abuse of children (Schneider, Attebery & Owen, 2005), family structure and university enrolment problems (Schimmele et al., 2009), the origin of modern divorce: family processes, link between family structure and adolescent academic status (Canavanagh, Schiller, & Riegle-Crumb, 2006), single parent families and scholastic achievements; and grandparent households and school adjustment (Amato & Keith, 1991; Mboya & Nesengani, 1999). Investigations conducted in South Africa concentrated mainly on the effect of divorce, children's academic achievements and psychosocial problems, while those conducted in other countries focussed primarily on different family structures and academic success (Mboya & Nesengani, 1999; Johnson & Wiechers, 2002; Coontz, 2007; Nyasani, Sterberg, & Smith, 2009; Gasa, 2012). Research conducted in other countries differs from that conducted in the Republic of South Africa with regard to problems displayed by children from different family structures. The influence of family structure on learners' academic performance seemed to be an

international concern. It was, however, noted that few studies in this area have been conducted in South Africa. A number of studies found a high correlation between certain family structures and school-related problems (Amato & Keith, 1991; Mboya & Nesengani, 1999; Centre for Marriage and families, 2005; Hughes, 2005; Schneider, Attebery, & Owen, 2005; Cavanagh, Schiller, & Riegle-Crumb, 2006; Amato, 2007; Coontz, 2007; Schimmele et al., 2009; Quarmby, Dagkas, & Bridge, 2010).

A study conducted on family structure and child educational attainment by Schneider et al. (2005) confirmed these findings. The study revealed that the influence of family on child educational attainment is significant. The relationship was confirmed when a comparison was made between married, single and cohabiting mothers. The results uphold that most children in non-intact families (single and cohabiting relationships families) performed badly in school, compared to those who were from traditional families (Watson, 2008) This disadvantage, according to Schneider et al. (2005), was linked with income discrepancies, time constraints and level of commitment to the child's well-being, especially in stepparent families.

A longitudinal study similar to that of Schneider et al. (2005) was conducted by Cavanagh et al. (2006) in South Africa. The purpose of the study was to explore the link between family structure and children's academic achievements. The findings of this study (Cavanagh et al., 2006) revealed that family structure was linked to learners' academic achievements. Another study conducted in the United State of America, by Amato (2005) in the Centre for Marriage Families (CFM) on family structure and children's educational attainment, attested that a child's family structure (whether parents were married, divorced, singled or

cohabiting) had a significant influence on a child's educational performance. This study by Amato (2005) also revealed that family structure affected educational achievement at elementary, secondary and college levels. Schneider et al. (2005)also interviewed four groups of different families, namely, single, cohabiting, stepparents and foster families. The findings showed that parents from single parent and stepparent households were found to spend equal time with regard to supervision of their children's homework, whereas parents from intact families were found to be more capable of providing adequate resources for their children, but spent less time with them.

Schneider et al. (2005)further interviewed parents about their involvement in their children's learning. The results indicated that parents from intact/nuclear families were less involved in their children's homework than parents from single parent households. Consequently**,** these children failed to complete their homework. This may have affected learners' academic progress, since parental involvement in a child's school work was the predictor of the child's academic success. In addition, Schneider et al. (2005) maintained that children from single parent families were found to be associated with behavioural problems such as smoking, drug intake and teenage pregnancy. Amato (2007) also did research on "how recent changes in US family structure affect the social, emotional well-being of the nations' children". The results showed that children who grew up in a nuclear family were less likely to experience cognitive, emotional, and social problems during both childhood and adolescence stages.

Mboya and Nisengani (1999) conducted a comprehensive study in South Africa to determine whether or not significant differences exist in academic achievement of adolescents with and without fathers. Data were collected from

276 grade twelve learners in 29 high schools. The Scholastic Achievement Test (SAT) was used to collect data. The main focus was on three learning areas i.e. biology, English (second language) and mathematics. The study revealed that adolescents who stayed with their fathers were found to score significantly higher in SATs than those without fathers. These findings implied that a fatherless household had harmful effects on the scholastic performance of children. In addition, the research (Montare & Boone, 1980) revealed that children whose fathers were absent from home, due to a variety of reasons, have shown academic and conduct problems. Mboya and Nesengani (1999) further revealed a significantly higher difference in SAT on mathematics and on SAT English scores between present and absent father situations. Thus, it is crucial to undertake a study of various families and a wide range of problems to get a clear picture of the extent to which the relationship exists between selected family structures and school based problems.

A research project on school performance of children from nuclear and single parent families was conducted in USA by Fomby and Cherlin (2007). The participants in this study were 5 000 parents and their children from both nuclear and single-parent families and it was carried out over three decades. Amazingly, the results revealed that a nuclear household was found to be disruptive to a child's well-being in the same way as a single parent's household (Ohio, 2009) The only exception in this study (Ohio, 2009) was found among black children, where children from nuclear families consistently scored better in mathematics and reading tests than those from single parent families. This might have been due to the fact that children in single parent families received less parental support due to lack of time, transport and other additional parental responsibilities (Quarmby, Dagkas, & Bridge, 2010). Sheehan (2010) also investigated broken homes, and in particular, single parent homes. The results revealed that single parent homes were more likely to account for delinquency.

Similarly, Dunst, Trivette, Hamby, and Pollock (1990)investigated the level of adjustment of four-year-old children in nuclear, step and single parent families. Dunst et al. (1990)pointed out that membership of a single parent family was not found to be associated with children's adjustment when family income, housing and maternal employment were assured. Rose (2009),in the United Kingdom (UK),also found that family processes such as mother-child interaction, parenting style and parenting values had a greater role in influencing child adjustment in single-parent families. Such findings offered new insight that any family, other than the nuclear family, could be stable.

As early as 1991, Amato and Keith conducted a series of studies (92) on divorce(Amato & Keith, 1991). The sample comprised of 13000 preschool and adolescent children from divorced families. The study was conducted specifically to determine the effect of divorce on children between the ages of 5-12. Diagnostic interviews were held, and a children depression inventory (CDL) was administered to collect data. The findings indicated that the children had extreme difficulty in school. They manifested behaviour problems, negative self-concepts and antisocial problems. Over and above, divorce was found to be associated with increased chances of anxiety, depression, delinquency, mood swings, sleep disturbances and alcohol intake. Amato's update of the findings (1993) indicated that children from divorced families were underperforming. Kingbeil (2000), on the other hand, attested to Amato's (1993) ideas by stating that the stress associated with divorce led to academic difficulties and conduct problems. This was also supported by Wallerstein (2000), who stated that learners stress in the classroom could show up in the form of daydreaming, forgetfulness, nervousness, dependence and acting out or physical complaints.

A previous study conducted by Rodriguez and Arnold (1998)indicated that divorce had both long term and short term effects on children. The short term

effects of divorce in families placed children at an increased risk of cognitive deficits (Shaw & Ingoldsby, 1996; Amato, 2001). It also led to problems such as delinquency, aggression and disobedience in schools. Consequently, children experienced a number of learning problems, evidenced by their scholastic performance. In the long term effects of divorce, children were found to have relationship problems with the opposite sex. In addition, Pryor and Rodgers (2001) agreed that long term disadvantages for children from divorced parents included the following: growing up in households with lower income, leaving school with fewer educational qualifications, withdrawal behaviour, aggression and delinquency, health problems, early independence, early sexual activity, depression and substance abuse. Wallerstein (1998) reported that the children from divorced parent homes experienced long-term worry and insecurity that adversely affected their love and work relationships in the future. Some of these problems could be attributed to the fact that divorce interfered with effective parenting and deprived children of parental resources.

Another study conducted by Guidubaldi, Cleminshaw, Perry, and McLoughlin (1983), on the effects of parental divorce on young children, revealed that children from divorced parents performed worse than children from nuclear families in schools. It was also evident with9 out of 30 mental health measures, showing among other things, inattention and less work effort on children from the above mentioned family structure(Kelly, 2000). Guidubaldi et al. (1983) also discovered that children who were exposed to divorce were twice as likely to repeat a grade.

Hughes (2005)extended this view from a study of the effect of divorce on children. These results indicated that children from divorced parent families might have experienced more major psychological and behavioural problems than

children in nuclear families. That study added other factors that contributed to problems experienced by children from divorced families. Those risk factors were documented as a loss of contact with a parent, economic difficulties, stress, parental adjustment and competence, and inter-parental conflict. Those results provided significant inferences to the researcher that those were factors that should be considered when designing a model of intervention for children in divorced parent families.

In another study, Coontz (2007) offered an expanded view on the effects of divorce on children. Coontz (2007) declared that divorce affected some children positively, while some children were affected in a negative manner. Coontz maintained that some children in divorced families were more likely to drop out of school, exhibit emotional distress, get in trouble to follow rules and abuse drugs or alcohol, than children from nuclear families. Coontz (2007) further believed that those problems were due to other co-existing separate factors such as financial loss, withdrawal of the attention of a parent and change of residence or school (Coontz, 2007). From this study, it appears that divorce may not have been a direct cause of learning problems among school going children.

Wallerstein and Kelly (2001) reported findings related to that of Coontz (2007).These researchers point out that children can respond positively to divorce. They (Wallerstein & Kelly, 2001) also stated that one-third of children from divorced families were found to experience learning problems and two-thirds showed noticeable changes in their behaviour at school. For example, the study of Children of Divorce Project (2005) discovered that some children compensated for disruption in their homes by excelling at school and becoming more involved in extracurricular activities.

Hetherington and Kelly (2002), in the United States of America, also conducted a longitudinal study with 1400 divorced families. The findings revealed that in children's new life situation, they continued to develop into reasonably or extremely well-adjusted individuals. It was confirmed from the aforesaid researchers that children sometimes reacted or responded positively to divorce. However, it was not clear what caused them to react differently to that situation. A study of this nature was warranted, so as to determine whether or not factors such as gender and age have an influence on school-based problems in children from divorced families.

There is an abundance research done on divorce as a family structures and school-based problems. This implies that divorce has been given more attention than other family structures. It is evident that previous research has found an association between divorce and problems in the child. A few studies had reported conflicting ideas with regard to the effect of divorce on learners' performance. The research results, taken as a whole, could not be used to determine which type of household was most harmful to children. There s also insufficient information about a wide range of problems across school-going ages, in particular concerning children and adolescents. Hence, divorce had been viewed as an indirect cause of learners' problems in schools.

According to the researcher's knowledge there was a shortage of literature on child-headed families in South Africa. Only a few studies concerning that topic were conducted in Zimbabwe. Nevertheless, the child-headed family seemed to be an issue of concern for the South African government. Van Breda (2010) conducted a study on child-headed families in Zimbabwe. The findings revealed that child-headed households were associated with problems such as dropping out from school; not completing education; dearth of opportunities to undertake

vocational training due to lack of funds for school fees and to buy uniforms and stationery, and having to overcome stigmatisation. The results also showed that children from child-headed families were found to have the following psychological problems: sense of helplessness, low self-esteem and feelings of trauma and stress as a result of the experiences they had been through. On the same note, Goronga and Moyo (2013) conducted a study on adolescent secondary school learners living in child-headed households at Harare high schools. A case study was carried out on eight adolescents from child-headed households. The modes of data collection were semi-structured questionnaires, interviews and focus-group discussion. The study established that children from child-headed families faced challenges such as inadequate basic needs like food, clothing and accommodation, as well as having limited resources. They did not have access to health facilities, did not attend school regularly, and had to seek part time employment for survival. The majority of researchers have focused on orphans and the effect of HIV and AIDS (Mkhize, 2006; Moffet, 2007; Nyasani et al., 2009; Van Breda, 2010).

South Africa statistics reflected the declined rate (7%) of children raised by their grandparents (Hosegood, 2009). Grandparents were found to be struggling with their own personal health, custodial matters, financial constraints and obligations, and their grandchildren were found to be suffering psychosocial and behavioural problems (Toremann, 2009).A study conducted in KwaZulu-Natal by Lunga (2009), investigated challenges faced by grandparents in raising their grandchildren. The results of the study showed that grandparents experienced physical and financial challenges, which thus affected their grandchildren scholastic performance. Fuhri (2013)conducted a study on the psychosocial effect of grandchildren raised by their grandparents in Gauteng. The findings of the study revealed that extraneous variables on psychosocial effects of children

raised by their grandparents were poverty, socio economic status and cultural differences.

Solomon and Marx (1995)conducted a national study in USA to examine the health and school adjustment levels of children raised solely by their grandparents. In that study (Solomon & Marx, 1995), the comparison of three family structures, namely, grandparent families (448), nuclear families (10,086), and single parent families as well as blended families (5,646), was made. The findings illustrated that children raised solely by grandparents appeared to be more sociable than children raised within other family structures. Another study attested that children raised solely by grandparents were healthier and had fewer behavioural problems in schools than children from single parent and remarried parent families (Rashid, 2011). Moreover, the study (Solomon & Marx, 1995) also revealed that in their relationship with teachers, children living in grandparent-headed families were not significantly different from children living with both parents. These children also appeared to have fewer health problems than children living in single parent households. Indeed, according to this study (Solomon & Marx, 1995), the only point of concern for those children was in the area of academic performance. Grandmothers were more likely than mother figures to report average or below performances. Furthermore, these grandchildren were also more likely than children in nuclear families to have repeated a grade. Nevertheless, the children from grandparent families were not found to be performing worse than other children in other ways. A similar study to that of Solomon and Marx (1995) was conducted by Edwards and Daire (2006)in the United States of America. The study focussed on the social, emotional, behavioural, and school functioning of school age children raised by their grandparents. The study revealed that grandparents who raised their grandchildren also significantly affected the educational functioning, developmental outcomes, and well-being of their grandchildren. It was also

suggested that grandparents who raised their grandchildren could provide a loving, familial home environment that was more positive than foster care or other such governmental arrangement (Edwards & Daire, 2006).

The literature on grandparent-households revealed that research had been done in South Africa and abroad. Literature reviewed in this area showed that grand parenting was not conducive for rearing a well-adjusted child and that grand parent household seemed to be not recorded.

Previous study was conducted by Elbedour, Onwuegbuzie, and Alatamin (2003)in Nigeria to determine behavioural problems and scholastic adjustment among Arab children from polygamous and nuclear families. This study involved 255 third grade children from Negev Bedouin in Israel (153 children from nuclear and 102 from polygamous). The study was conducted to assess whether polygamy is a risk factor in children's school maladjustment and negative developmental outcomes. The Achenbach child behavioural checklist and teacher's report form were used to collect data. The findings of the study showed that children from polygamous families had high rates of absenteeism and lower levels of overall performance than nuclear family counterparts. In the same vein, Al-Krenawi and Slonim-Nevo (2008)did an investigation on psychosocial functioning of children from polygamous and monogamous families. Their sample consisted of 352 children from both types of families. A self-report inventory was used as the instrument of data collection. The results of that study revealed that children from polygamous families reported poorer school achievement than children from nuclear families. In addition, Akomolafe and Olorunfemi-olabisi (2011) explained that family structure had an influence on the academic performance of secondary school learners.

In the light of the reviewed literature on the association between family structure and school-based problems, it was noted that there was a dearth of research on child-headed, polygamous, grandparent and extended families.

3.3 STUDIES ON THE ASSOCIATION BETWEEN SCHOOL-BASED PROBLEMS AND LEARNER CHARACTERISTICS ACROSS DIFFERENT FAMILY STRUCTURES

The association between variables such as learners' age, gender, educational levels and school related problems across different family structures was confirmed by various authors (Amato & Keith, 1991; Neuman, 1998; Schneider et al., 2005; Amato, 2007; Jaegera, 2012). Previous literature revealed a close association between academic achievement and the social and emotional symptoms manifested by children from divorced families. However, the researchers did not indicate specific reasons for these difficulties because of various factors that affected each child individually. Yet, there were some general ideas in child's development theories that may have given insight into the academic decline experienced by some children following their parents' divorce and other family backgrounds. Jaegera (2012) indicated that factors shared by all immediate extended family members' accounts for children academic success in divorced families.

Age is strongly linked with the children's reactions to family problems. An annual survey (Schneider et al., 2005) conducted in the United States of America revealed an association between children's ages and school based problems across different family structures. The multivariate study was conducted on a sample of age 12 and above children. These children were engaged via semi-structured interviews. The study showed that intact nuclear families had the

lowest rates of adolescent use of alcohol (8.3%); marijuana (6.9%) and other drug use (6.2%).Adolescents from stepfather, stepmother, father only, and other relative only families, were the most likely to use marijuana and other drugs. Sexual activities and teenage pregnancy were also found to be associated with adolescents from non-intact families. The study revealed that differences were found in the sexual behaviour of adolescents from single parent versus two parent families. Adolescents at age 12-15 from non-intact families were found to be engaged more commonly in sexual activities than those from intact families. It was also noted by the author of the Sandcastles' Divorce therapy programme (2009) that children in the primary school level, from ages three to eight, experienced problems after their parents' divorce in a different way from adolescents. Older children were more likely to understand their feelings associated with their parents' divorce, but younger children were so egocentric that they did not have the capacity to understand divorce from anyone's point of view but their own. One result of this self–centeredness was that pre-school children actually believed that they were the cause of much of what happened in their world, including their parents' divorce. This misplaced guilt may have been damaging to a child's self-image. Furthermore, it was also indicated that preschool children may feel angry but afraid to express it directly. Instead, aggressive behaviour may be manifested towards classmates or siblings. Regression was another common symptom displayed by pre-schoolers in response to the stress experienced through parental divorce. Kingbeil (2000) also stated that many of these children, especially the five to eight year olds, very worried about their home situation, and thus it reduced their levels of concentration in class. It appeared that learners in primary schools experienced the effects of divorce in various degrees (Kingbeil, 2000). In other words, children experienced outcomes of divorce differently. According to Kingbeil (2000), some primary school learners from divorced families had demonstrated anger, antisocial behaviour and mistrust in the classroom. Presenting differing findings, another piece of research (Francesco, Jerkins, & Siedler, 2010), conducted in

Germany on childhood family structure and schooling outcomes, stated that children from divorced families were found to be associated with poor outcomes regardless of their age. There were also some strong associations of attainment with observable characteristics of parental and maternal education and family income, among others.

There was little research evidence on the relationship between learners' gender and school-related problems. A meta-analysis study by Amato and Keith (1991) provided evidence that the impact of divorce on social adjustment was stronger for boys than girls. In other focus areas, such as academic achievement, and psychological adjustment, no differences between boys and girls were apparent. Amato and Keith (1991) also explicated that the estimated effects of divorce on children's conduct were more marked in boys than in girls, although no other gender differences were evident. Nevertheless, these findings should be accepted with caution, because conduct problems were normally more common among male adolescents than among females. In previous research (Kingbeil, 2000; Hughes, 2005), boys in divorced families were found to have more adjustment problems than girls. This was due to the fact that boys usually lived with their mothers following family dissolution; the loss of contact with the same gender could account for such differences. Similar findings to that of Amato and Keith (1991) were reported by Soomro and Clarbour (2012). These researchers confirmed a correlation between aggressiveness and poor academic achievements in boys rather than in girls. Schneider et al. (2005) also presented findings which revealed that divorce was associated with a higher incidence of school difficulties for boys than for girls. Girls were found to be more psychologically resilient after their parents' divorce or separation. About 35% of boys were found to have school problems as compared to 19% of girls who experienced parental divorce (Schneider et al. 2005). In addition, it was possible that boys, as compared with girls, may be exposed to more conflict, received

more support from others, and be picked on more by the custodial mother (Amato, 2007). In addition, Adenike (2006) conducted a study on "The effect of interrelationship between family type and academic achievement of students in Nigeria" (University of Ibadan). This study involved 300 students from nuclear and polygamous families. A questionnaire was used to collect data. The overall findings of this study showed a significant relationship between academic achievements of students from both families. However, the study revealed that gender was not found to be linked with academic achievements of these students (table value of 3.48 at the level of significance of 0.005). It was recommended in this study that counsellors and psychologists should assist these learners' and their parents.

Previous studies have found a correlation between learners' educational level and school problems. Schneider et al. (2005) conducted a study on learners' reading skills and grade level. These researchers declared that learners' ability to read demonstrated growing proficiency in basic subject areas in grade 3. The study revealed that from the primary school grade to the higher grade, children may be hindered by growing up in stepparent, single or divorced parent (non-traditional family) homes. The multivariate analysis also showed a strong link between two parent families and higher achievement scores in grade 1.The negative effect of growing up in a non-traditional family was significant with respect to achievement, for instance, children from non-traditional families received lower scores than those from nuclear (traditional) families. This study (in a Southern African city, school district, from second grade to fourth grade) further reported a significant correlation between household composition of two parents and mothers only. This study also revealed that grade 4 learners, in families with both parents, scored higher on reading comprehension than children living in blended, single parent, and other types of non-traditional families. With respect to achievement in mathematics, non-traditional family life had a negative and

significant impact on children's achievements at the lower grade levels. In secondary education, Schneider et al. (2005) investigated the effect of having one parent only (mother or father) on grades and standardised scores. The findings reflected that learners from both single father and single mother homes had test scores that were on average three-tenths of a standard deviation lower than those of learners from two parent homes. Adolescent misbehaviour was also evident in non-traditional families. Misbehaviour such as school tardiness/absence, not doing homework and too-frequent dating were confirmed to be associated with adolescents from non-traditional homes. The author concluded that adolescent misbehaviour was strongly linked with non-traditional families. In other words, misbehaviour such as the high school dropout rate, low high school graduation and early pregnancy were most common in adolescents from non-traditional family structures. Students from stepfamilies were almost twice as likely to drop out as those from traditional families. Children from father only families were about three times more likely to drop out than children from families headed by never married women.

The reviewed literature revealed a strong positive correlation between the variables of learners' age, gender and educational level in different family structures. Studies that reflected this relationship focussed on divorced and stepparent, single parent and nuclear families. There were no studies conducted that showed the association between these variables in families such as extended, polygamous, child-headed and grandparent families. Yet, South African children come from various kinds of families, including the ones overlooked by researchers (gay and lesbians).This was one of the reasons this study sought to determine whether a relationship exists between school based problems and variables such as age, gender and educational level across other family structures.

3.4 STUDIES ON INTERVENTION STRATEGIES AS RECOMMENDED BY EDUCATORS

Research on what educators recommended as intervention strategies seemed to be lacking. Instead, supplementary research had been conducted on recommendations for intervention model, and suggestions that could be implemented in schools in order to assist children who were affected by different family backgrounds. The rationale behind the study in this chapter was to establish what educators recommended as intervention strategies to assist learners, specifically in KZN schools. Since it was envisioned that this section would establish what could be recommended by educators, it was appropriate for the researcher to review previous related work. Since educators were the ones who spent time with learners in schools, it was appropriate to allow educators to recommend intervention strategies for the children who were most vulnerable to family problems. These recommendations would assist towards the development of an intervention model.Akomolafe and Olorunfemi-olabisi (2011)stated that there was a need of teachers and parental training as an intervention strategy to promote learners maximum academic success regardless of the family type.

Few studies had been conducted specifically on what educators recommend as intervention strategies to assist learners across different family structures. Abba (2009), for instance, conducted a study in Cape Town on teachers' preparedness to deal with learners' social problems. Four teachers were interviewed to collect data. The findings of this study showed that educators dealt with learners' problems through trial and error methods. According to Abba (2009), these teachers also acknowledged that the teacher training programme had failed to equip them to deal with learners' problems in school. They further stated that even some in-service training they received had not been effective in assisting them. Yet, in another study, Kathleen and Eric (2010) contented that teachers

were in a position to deal with learners who were struggling with English as a medium of instruction. These authors (Kathleen & Eric, 2010) stated that teachers could encourage learners to participate in classroom discussions, accept learners' contributions, and give them opportunities to ask questions. According to Kathleen and Eric (2010), it was the teachers' responsibility to probe and elicit more information from learners who were silent in the classroom. Learners would always require social and educational support from teachers in order to succeed and to develop language skills (Week & Erradu, 2013). A similar study to that of Abba was conducted by Schalkwyk and Sit (2013) in the United Kingdom. This study explored the views of teachers about the role they could play in dealing with psychological problems experienced by learners in schools. The results revealed that all educators had a strong feeling that problems experienced by learners in schools needed the intervention of educational psychologists.

A very recent study conducted by Navisaria, Pascoe, and Kathard (2011)related to that of Abba (2009). The researchers (Navisaria et al., 2011) in South Africa engaged teachers in a series of semi structured interviews about strategies they could recommend to help with learners who had language difficulties. The findings showed that teachers did not have any idea of how to deal with such problems, in particular reading problems. Instead, educators recommended referrals to speech and occupational therapists. They felt that they would need intensive training to assist them to be able to handle learners with speech problems (Mohr & Mohr, 2007).Teachers also suggested that they needed support, clear assessment guidelines, remedial assistance for learners and a safe, nurturing home environment. These teachers further stated that there was a need to look beyond learners' problems and apply a systemic approach (Scott, D.H., 2010).

Kalma (2011) conducted a study to ascertain classroom problems that educators faced and possible resolutions. The sample consisted of 196 educators. Both questionnaire and interviews were used as methods of data collection. Findings of this study indicated that educators proposed that school supervisors should limit their visits to schools because that destroyed learners' concentration. They also felt that there was a need to increase the provision of teaching and learning support material in schools. These educators also recommended that their fellow educators should refrain from using corporal punishment. These teachers believed that encouraging parental involvement in learners' learning process may improve the situation.

It appeared from the aforementioned studies that educators seemed to be unsure of what to do when learners encountered problems in school. Such situation exerted pressure on teachers, since they were not clear how they could assist learners. Current existing intervention models and programmes seemed to be imposed upon teachers without being accompanied by proper training and monitoring. For example, Additionally, Lowenstein (2006) suggested the Basketball Game as an intervention strategy. This strategy has been used for children to help them express their feelings related to divorce and separation. The study Lowenstein (2006) also stressed that the programmes assisted these children to share their feelings, problems and experiences. This intervention treatment programme was highlighted as the most effective strategy in dealing with children from divorced, single and intact families (Lowenstein, 2006). One of the reasons why the study was undertaken was so that educators could contribute towards the development of a model for intervention. Additionally, Rose (2009) conducted a study on school-based intervention models for elementary school children in grades 1-6.The study revealed that this programme benefited fourth and sixth grade children in dealing with depression, stress, anxiety and low self-esteem.

Previous researchers seemed to be imposing on educators what should be used or done, without having a clear picture of the context of the learners. Such a situation frustrated educators. Educators should have been encouraged to draw on the knowledge they had. At the same time, it was true that educators and parents needed to be trained how to handle children with school-based problems due to the influence of family structure. In addition, allowing educators to contribute towards the development of an appropriate intervention model would enhance their sense of ownership. Kingbeil (2000) supported this idea when he mentioned that educators and other school personnel had the ability to give children from divorced homes a non-judgemental classroom that represented stability and trust. He further stated that a classroom should be a place where a child from a divorced family felt secure and safe and was encouraged to do his or best. Children of divorce needed a place where self-esteem could flourish, confidence could grow and self-discipline was developed. A well-managed classroom could achieve this. Schools could also be more supportive of single-parent homes by providing child care during school events.

Educators should be able to provide pastoral care to learners as the code of conduct and school act 98 of 1996 stipulated. Francke, Wallerstein, and Kelly (2007)also indicated that children from divorced, single-parent and stepparent homes were more likely to have problems in school than their classmates from nuclear households. These researchers, however, believed that there were many things educators could do to help these learners cope with their situations and to create a learning environment that was congenial to them. For instance, using special materials available at schools such as films or tapes with students or parents would be helpful. Francke et al. (2007) mentioned that it was the educators' role to contact a parent, give guidance and communicate with counsellor or school administrator if a learner seemed to be having problems. Occasionally, children's television specials would include programmes that

portrayed children coming to terms with divorce. It was suggested that educators could assign as homework the viewing of carefully selected TV programmes (Hetherington & Kelly, 2003). Based on this information, it seemed that there may have been a lot that educators could do to deal with learners' problems in schools.

The deduction to be made from previous research was that the child's family structure intensely affected children's behaviour, especially in a way that could hinder educational success. One was tempted to believe that this situation applied to an increasing number of children in schools. This necessitated the strengthening of intervention models that could support educators in schools as crucial. Most existing intervention models were recommended to educators. Hence, educators failed to implement them because they lacked psychological skills. In doing so, the researcher was convinced that problems could be lessened if teachers were intensely involved in the development of an intervention model. Thus it was essential to develop a model of intervention that could deal with school-based problems.

The researcher has also noted that empirical research has been conducted in this area, but problems among learner in the schools were evident. Such a situation necessitated the conducting of a comprehensive study on family structures in order to intensify the intervention model. It appeared that there was a shortage of intervention model educators could use to deal directly with learners' problems. It was thus compelling for the present researcher to develop a new model of intervention.

3.5 THEORETICAL FRAMEWORK BEHIND THE DEVELOPMENT OF SCHOOL-BASED PROBLEMS

This discussion is based on theoretical framework on article publications. It is also imperative to explore how the family type contributes as causal factor to these problems. According Charton and David (1993), social class and social advantage were seen to be contributing to the development of disruptive behaviour such as conduct, physical and verbal aggression. With regard to social class, Charton and David (1993) were of the idea that behaviour difficulties were found frequently in children from families in the lower social class. On the other hand, social disadvantages were also reported to be found among children who were between the ages 11-16.The same children were found to have poor health, poor educational progress and poor adjustment. The study by Charton and David (1993) revealed that these children were from single parent or large families, often poorly housed and of low family income. Other family factors that seemed to contribute to learners' disruptive behaviours were family financial status and overcrowded households. In addition, Mairais and Miere (2010) also contended that the lack of parental guidance and dysfunctional families were risks factors. The study further revealed that 10% of parents, who displayed aggressive and disruptive behaviour at home, had children who also showed aggressive and disruptive behaviour. It appeared that if children are exposed to aggressive tendencies displayed by their role models at home, they will carry these experiences with them into the school. Over and above, Mairais and Miere (2010) maintain that the abolishment of corporal punishment in schools had created a gap which needs to be filled. Lack of appropriate disciplinary measures contributes to learners' disruptive behaviour. Ward (2007) and Burton (2008) suggested that parents play an important role in modelling behaviour as well as mediating other factors such as poverty, school truancy, peer pressure, which may increase the risk of school-based violence. According to Ward (2007), this became problematic when parents are not good models and are engaging in

violent and / or criminal activities. The study revealed that 10.5% of young people reported that their parents had engaged in behaviour that could potentially get them into trouble with the law. The national survey reflected that 20% of parents who participated in this study experienced physical abuse in their relationships (Du Plessis, 2008). Burton (2008) raised the concern that South African society is made up of broken homes in which children are only living with one parent or are living with extended families. In the western Cape, it was found that 11.25 percent of black household had single parents and households with low income compared to that of whites to the whites population (SACE, 2011).

3.6 EXISTING PROGRAMME OF MANAGING MISBEHAVIOUR OR BEHAVIOURAL PROBLEMS AMONG LEARNERS

The study rests mainly on the development of the programme of intervention, it is therefore proper for the researcher to present theoretical framework based on the causal factors and the management of problems children manifesting in schools. The focus of the current study was based on problems of conduct, disruptive/behavioural and learning. Reviewing effective therapeutic intervention in dealing with these problems was also crucial.

3.6.1 Behaviour modification strategies

The behaviour modification strategies are used by the majority of psychologist for psychotherapy in addressing emotional and behavioural problems. In that way, the professionals are engaged in a specific and comprehensive use of principles of learning including operant and respondent learning in order to address behaviour needs of varying diverse setting: building coping skills, encouraging achievement of children in school settings, enhancing development of abilities and choices of children and adults with different kinds of disabilities. They believe that since the child is able to learn unacceptable behaviour, the child can also

learn acceptable behaviour. According to Charton and David (1993), behaviour analysis has been proven as an effective strategy for dealing with learners' problems, such as conduct, disruptive and learning difficulties. In South Africa, principles of behaviour modification are also used to deal with learning, aggressive and disruptive behaviour. Marais and Meier (2010) support the idea that disruptive behaviour can be dealt with by educating parents or caregivers to apply appropriate behaviour modification skills with their children. Proper conduct should be consistent between school and home, to ensure that the same level of respect. In other words, parents should be involved in their children's' learning (Marais & Meier (2010). A similar view by Goldstein, Harootunian, and Conoley (1993), in USA, emphasised the importance of home-school collaboration in dealing with learners' aggressive behaviour. Improving many schools and many type of families were found to be effective in dealing with learners' aggression. Further, it was suggested that parents of well-adjusted children should assist in supporting those families who had aggressive children. Therefore, early identification of youth and families at risks was crucial. Over and above that, Goldstein et al. (1993) maintained that parents should be invited in schools to speak to children in their areas of expertise (parental involvement). It was discovered that parents would also gain more skills from other school professionals who were collaborating with schools. According to Goldstein et al. (1993), a successful collaboration included among other things: an understanding among all parties involved, an establishment of the feasible communication system between parents and teachers, and consistent follow through on the part of teachers and parents in terms of their behaviour and any rewards that had been agreed upon should be facilitated (Goldstein et al. 1993). The need for cross-tabulation was emphasised by Ervin (2010). The research by Ervin (2010) raised the importance of cross collaboration whereby unique and different perspectives were brought forward in dealing with learning problems. This meant various perspectives were considered when bringing together

multiple systems and professionals and strengthening relationships to address learners' diverse needs.

3.6.2 Systems approach in dealing with learners school-based problems

In South Africa, it has been observed that there is an increase in the prevalence rate of school-based problems as a result of dysfunctional family types. Burton (2008) contended that learners' problems could be dealt with by applying a holistic approach, since a single approach could not deal with learners' problems in schools. Understanding of a broader context, i.e. the home and the larger community, in which the school was found, was also important. Thus, drawing on tenets of a systems approach in dealing with school-based problems was essential. This implies that, according to Ward (2007), the problems should be tackled based on an understanding of the child's family environment, e.g. immediate family members, family friends, family neighbourhood and extended family members. According to Ward (2007), the systems approach was found to be effective in dealing with the following family conflict and violence: criminality on the part of caregiver, overcrowded families or households, low maternal age and education, violence in the home-intimate partner violence, poor parenting or management practices, harsh and/or unpredictable discipline, poor monitoring and supervision of children activities, permissive parenting style and low level of family bonding.

3.7 SUMMARY

The empirical studies reviewed in this chapter reflected different views on selected family structures and school-based problems. This literature showed research conducted locally and in other countries. It has been observed that there was much more research done on this topic in western countries than in Africa. The majority of studies found a high correlation between selected family

structures and school based problems. Few researchers confirmed contrary results. However, some problems were found to be prominent in a particular family structure and not present in other family structures. For instance, divorce was found to be connected with conduct disorders and juvenile delinquency, whilst single parent families did not show a significant similar pattern. Association between the variables of learners' age, gender and school-based problems were also confirmed by a number of authors but in different contexts. Documented intervention strategies had been adopted in other countries; in South Africa we only have limited strategies that could address schools directly in their ways of dealing with learners' problems. This has warranted the development of a programme of intervention to deal with learning problems across all phases, and relevant to the learners' social context.

A review of previous and relevant empirical studies in this field was discussed in this chapter. An exposition of the empirical research design and procedures in the investigation is dealt with in the following chapter.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 INTRODUCTION

The problem of family transitions in modern societies is an issue of concern worldwide. This has resulted in a rapid increase in the rate of households headed by children, blended/stepparents, single parents, cohabiting parents, which has led to a wide range of academic problems among children. An investigation of such complex conditions has required well-planned procedures and methods. The crucial point is that the nature of a research problem or question determined the study methods. The present investigation purported to study the relationship between selected family structures and school-based problems as manifested in KwaZulu-Natal schools. The focus was on teachers' observation of these problems, with no specific reference to individual cases for clinical interventions. School related problems were the easiest to be identified because they loaned themselves to objective measurements (Sibaya, 1992). Since the researcher sought to investigate the relationship between selected family structures and school based problems, the research design, data collection methods, population and sample, method of scoring and data analysis are described in this chapter. This chapter also describes the rationale behind the methodology used and how the research was conducted.

A reiteration of the aims of this investigation indicates the direction to be followed. The objectives of this study are**:**

4.1.1 To find out the extent to which a relationship exists between the selected family structures and school-based problems.

4.1.2 To determine whether there is any association between school-based problems and the following variables:

- learners' age,
- learners' gender, and
- learners' educational level across different family structures

4.1.3 To establish what intervention strategies educators recommend for the development of a programme for intervention.

The following research hypotheses were formulated to fulfil the aims of the investigation:

- There will be a relationship between family structures and problems manifested by learners.
- There will an association between school-based problems and the following variables: learners' age, learners' gender and learners' educational level across different family structures.

4.2 RESEARCH METHODOLOGY

The research paradigm in academic research study aimed at providing an important structure to the study and also helped to determine questions to be asked and also the methodology to be used. The current study intended to investigate the relationship between family structures and school-based problems. The study falls within the positivism and anti-positivism research paradigms. An approach adopted by the researcher is both qualitative and quantitative. Positivism research paradigm is concerned with scientific theory and applies scientific methodology in understanding and researching social educational or psychological phenomena(Kumar, 2014). The main focus of the study is on understanding and influence of learning, adjustment and behaviour problems experience by learners in schools. The researcher is convinced about the chosen paradigm because it is an approach for educational inquiry.

According to Cohen, et al., (2002), positivist is based on a science of human social life that would pave the way for substantial social and political progress, by undermining beliefs and practices that were based solely on superstition or tradition, and replacing them wherever possible with ones founded on scientific evidence. It suggests suggested quantitative approach and relied on statistical analysis or objective measurements (Cohen et al., 2012). The study landed on the positivist's research paradigm because most of learning, adjustment or behavioural problems in psychology were investigated through testing and measurement and also sought to determine causal or statistical relationships among variables. In addition, the research hypotheses were formulated and tested by the use of statistical techniques or tests, for example, log linear analysis and chi-squire tests. However, a small portion of data obtained from one-open ended questionnaire, so as to establish educators' recommendation towards the development of the model of intervention, was also used to collect data. As a result, an interpretivist or anti-positivist approach was also employed. This epistemologically reflected the belief that there was an external, objective reality and what was seen and experienced was stable across contexts and people (Black, 2006). It was more qualitative in nature and enabled the researcher to acquire in-depth understanding about the subjects' understudy (Smith, 2013). Data obtained by this approach were analysed by using thematic analysis and also assigning percentages and frequencies. The data was grouped into common themes and this technique. Information obtained was therefore interpreted to develop the model of intervention.

4.2.1 Research design

According to Kumar (2014), research design was a plan or structure or strategy of an investigation, in order to obtain answers to research questions and it included all the outline of what the researcher would do from formulation of the research hypothesis to the final step of data analysis. The cross-sectional study

employed non- experiment research of the descriptive type. This design was considered most suitable for determining educators' views on school-based problems while in their natural setting (school) without the manipulation of variables; this was also known as a field study. According to Biyela (2012), field study was a scientific enquiry aimed at discovering the association between sociological, psychological and educational variables. The main goal of the study was to gain insight or understanding of teachers' observation of learners in the classroom. It was also used to determine whether those problems were influenced by learners' family background or family type.

There was abundant research evidence (Hetherington, Brigde, & Insabella, 2000; Wise, 2003; Amato, 2007) in support of the utilisation of this research design on family structures.

4.2.2 Sampling design and sampling procedure

4.2.2.1 Sampling frames

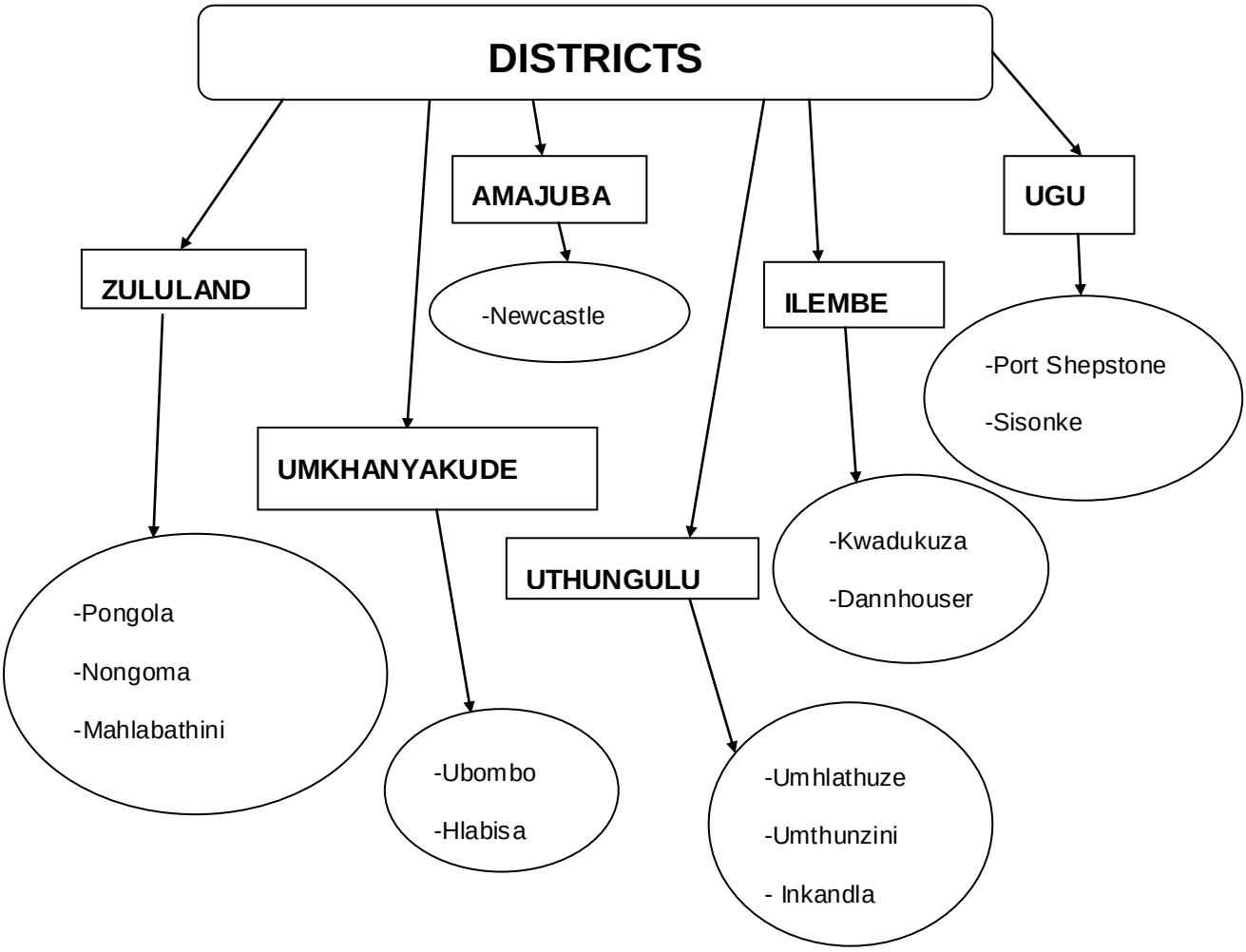

Figure 1: KZN districts and circuits for the final study

Figure 1 illustrates the KZN districts and circuits where the study was conducted. KwaZulu-Natal consisted of 10 districts with 42 circuits (KZN operation plan, 2011-2012). Those districts and circuits in South Africa have been divided in accordance to metropolitan municipalities on the map. Within each circuit, there are primary, secondary and high schools. These schools have been staffed by both female and male teachers.

A complete list of all educators in KwaZulu-Natal province was readily available. The schools and educators were scattered throughout the entire province. The nature of elements or units in one circuit to another showed variation. This sampling frame led to a consideration of a cluster sampling design. The circuits from clusters and a sample of these clusters could be drawn. Information could then be obtained from educators in a cluster and generalisations made to other clusters. Each cluster was heterogeneous because it contained different types of educators and schools. The clusters, however, were homogenous in a sense that they were similar to each other.

Previous studies (Flosi, 1999); Hetherington et al., 2000) have used purposive, stratified and accidental sampling methods in their research of family structures. Cluster sampling was used to select participants in this study. The rationale for selection of this sampling was based on the fact that the researcher confined this fieldwork study to the foundation, intermediate, senior and FET (Further Education and Training) phases of KwaZulu-Natal province (KZN). The selection of educators from different school levels was informed by previous studies (Hetherington & Kelly, 2002; Hughes, 2005; Coontz, 2007) as they reported that young children reacted differently and become more emotionally affected than adolescents if their families transformed. The researcher wanted to ensure that the selected schools had learners within the ages of 5 to 18 years and were predominately Africans. These learners were also from different family structures. This selection was also based on a review of the literature which revealed that children from single parent, divorced and child headed families were more vulnerable to school-related problems than children from other family structures (Flosi, 1999; Coontz, 2007; Ellis & Adams, 2009). This technique involved the classification of respondents according to the geographical area such as districts, circuits and type of school (primary school, secondary and high school), and the elements within each districts which were selected. The units of analysis in this

study were educators and learners. Unit of analysis in social sciences referred to individuals, groups and social organisations (Shaughnessy & Zechmeister, 1997; Neuman, 2003; Lamnek, 2005; Stryndom, Fouche, & Delport, 2005; Cohen, Manion & Morrison, 2007; DeVos, Stryndom, Fouche, & Delport, 2011). The total number of respondents who participated in the present study was 170 educators drawn from different KZN schools. The number of educators from each school was not equal because it was determined by the availability of participants who agreed to be part of the study. One hundred and seventy (170) learners were identified by 170 educators, since they were the ones who were observing them through classroom contact, by using learners' profile and the type of family structure where the learner belongs was indicated on the SBS profile**.** Learners between ages 5-19 qualified to be part of this study because they reflected the levels and developmental stages at which family structures affect their academic performance. A number of other researchers supported this idea that young children were more vulnerable to family transition than adolescents would be (Schnieder et al., 2005; Francesco, Jerkins & Siedler , 2005; Fieldman, 2008; the Sandcastles Divorce therapy program, 2009; Amato, 2009; Tillman, 2009). The purpose of the research was to compare the results of the study to different age and academic levels and different family structures.

Schools were randomly selected from each district (clusters) in KwaZulu-Natal province. A table of random digits was used for this selection design and schools were divided into various types and categories. According to Kumar (2011) random sampling was a method of choosing a sample in such a way that each element stood an equal chance of being included in a sample. The sample (165) was categorised into variables of age, gender and educational level. The age variable ranged from 5-19; gender was classified into male and female. Another variable of educational level was the division into Grade R-3; Grade 4-6, Grade 7-9 and grade 10-12. The last variable of family structure was categorised into

nuclear family, extended, grandparent, polygamy, divorced or single parent, blended and child headed families. The SBS manual detailed directions on administration, scoring and interpretation of this scale.

4.2.2.2 Multi-stage area or cluster sampling

Stage one

Six districts were selected out of twelve districts in KZN randomly. According to Kumar (2014), random sampling was a method of choosing a sample in such a way that each element stood an equal chance of being included in a sample and eliminated the biases sample representatives. The list of all districts was obtained from KZN operation plan (2012). The researcher used the table of random digits to select districts in the sample. Within each districts there were different circuits. This could be viewed as the primary sampling unit or cluster. This idea was based on the principle of heterogeneity. Within each circuit there were schools and learners varying in age, gender, educational levels and other personal characteristics. Each district or circuit was similar in all respects to other circuits. By choosing one of them, the researcher should have randomly captured all the features from KwaZulu-Natal schools.

Instead of one, 15 circuits were selected. Three of the 15 circuits were used for a pilot study (Umhlathuze, Mahlabathini and Eshowe circuit). Twelve circuits were used for the final study sample, namely, Pongola, Nongoma, Bhekuzulu, Newcastle, Vryheid, Ubombo, Umthunzini, KwaDukuza, Port Shepstone, Hlabisa, Nkandla and Dannhouser.

Stage two

An alphabetical list of schools was accessible and the probability sampling procedure was applied, i.e. a table of random procedures was utilised as indicated in the previous stage. Consequently, for the pilot study, two primary schools from Umhlathuze, two secondary schools from Mahlabathini and two

high schools from Eshowe formed part of the sample. For the final study, two schools were selected from other circuits (12). Within each circuit, the selection of primary, secondary and high schools was based on the use of a table of random numbers, as described in previous section of random selection procedures. The number of circuits in each district varied and the number of teachers varied from one school to another. Therefore, the final study involved 24 schools. Schools were randomly selected within each cluster or circuits. On average, this yielded a sample of about 165 educators and learners. Initially, there were 170 educators drawn from the population, but since 5 of the SBS profile were spoiled and discarded, the final study sample was eventually 165.

Stage three

The final stage in the sampling design was the selection of educators from the schools. From each selected school, the principal afforded the researcher the opportunity to address educators and those who were willing to assist would be part of the sample. This meant that from each selected school, a different number of educators would be subjects for the field study.

4.2.3 Research instrument

For the purpose of this study, data were collected through an open-ended questionnaire and the “Student Behaviour Survey” (SBS). SBS was administered to educators, in particular, for aim number one and two. With regard to the first aim, educators completed SBS to provide a comprehensive evaluation of learner adjustment in school. Thus the tool permitted the researcher to collect data about a wide range of problems experienced by school going children from different family structures. Each educator was required to identify a learner with school-based problems in the classroom and rate them accordingly. They (educators) were also requested to tick from the options provided for the type of family structures (nuclear, divorced, singled and other specify) to which the child

belonged. Educators indicated the learners' family structure on the SBS profile. For the second aim, the researcher used children's biographical data obtained from educators through Student Behavioural Survey (SBS) learner's profile. The rationale behind this was to determine whether an association exists between variables such as learners' age, gender, educational level and school-based problems across different family structures. In other words, SBS was used to ascertain whether learners' problems were influenced by variables such as learners' age, gender and educational level.

With regard to the third aim, an open-ended questionnaire was administered by the researcher in order to establish what educators could recommend as intervention strategies to deal with learners' problems towards the development of an intervention model. Previous researchers (Quarmby, Dagkas, & Bridge, 2010) also used a questionnaire in their research of family structures and learners' performance. This questionnaire (**ANNEXURE F**) was developed by the researcher to explore and gain contextual and in-depth understanding of how these problems experienced by learners can be addressed (DeVos, Stryndom, Fouche, & Delport, 2011). In other words, one open-ended questionnaire was intended to collect information from educators with regard to the intervention strategies they recommended in assisting these learners. This questionnaire was designed and the researcher adopted domains from SBS. This tool was administered to educators in combination with an open-ended questionnaire to permit educators to recommend strategies that could be used to develop a model of intervention. Educators rated overt behaviour of an individual learner, rather than making inferences about personality traits. This minimised subjective judgment and increased the instrument's sensitivity. An open ended questionnaire consisted of fifteen (15) open ended questions (see **ANNEXURE F**). Educators' responses varied; some responses were detailed, whereas others were scanty. Educators were requested to indicate how they would deal with

behavioural problems in areas such as academic resources or communication problems, academic performance, academic habits, conduct problems, verbal aggression, physical aggression, health concerns, social skills, disruptive behaviour and behavioural problems.

4.2.3.1 Description of the Student Behavioural Survey (SBS)

The Student Behavioural Survey (SBS) is a standardised psychological device used to assess the three domains of Academic Resources, Adjustment Problems, and Disruptive Behaviour. This tool was adopted and adjusted by the researcher to meet the purpose of the study. The SBS incorporated estimates of student achievement, academic and social skills, and parent cooperation, and also provided observations of a wide variety of other school specific behaviours. It normally takes just 15 minutes to be completed by the teacher. In this study, educators from different schools took approximately 35-40 minutes. The differences with regard to time taken to complete the scale, it is because SBS is an American scale designed for English speaking educators who are familiar with various concepts used. Unlike South African educators who were not fluent to read the scale. SBS scales comprised three sections, namely, Academic resources, Adjustment Problems, and Disruptive Behaviour. These three domains consisted of 102 items describing fourteen behavioural factors or clusters. Each factor was measured by between five and sixteen items.

4.2.3.2 Factors Measured by the SBS

First domain: Academic Resources

The first section involves the **Academic Resources** domain which measured Academic Performance (8items), Academic Habits (13 items), Social Skills (8 items), and Parent Participation (6 items). The teachers' rating of the student came from these four. These scales were all positive accounts of the child's

potential strengths and were scored so that all high scores indicated positive qualities and low scores indicated negative qualities.

Factor 1: Academic performance (AP) 1, 2, 3, 4, 5, 6, 7, 8 = 8 items

The eight items comprising this factor assessed the extent to which a child performed classroom activities. Overall, it covered areas such as reading comprehension, reading skills, and spelling, communication by writing, speech articulation and mathematics. The educator rated a child on these areas. These were positively worded items. The maximum score was 40. The average was 20; any score below 20 symbolised the presence of academic problems.

Factor 2: Academic Habits (AH) 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21 = 13 items

This factor measured the extent to which the child could complete classroom assignments, could clearly expressed thoughts and ideas, demonstrated a logical and organised approach to learning, was eager to learn new material, was motivated, followed the teachers' direction, maintained alert and focused attention on class presentations, performed consistently, persisted even when activity was difficult, remembered teacher's instructions, stayed seated, sat still when necessary, waited for his or her turn, and worked independently without disturbing others. Through these observations, educators may judge whether a child had the potential to improve their school performance. A score of 41 or less suggested difficulties, which interfered with success in school. The normality range was between the scores of 42-84.

Factor 3: Social Skills (SS) 22, 23,24,25,26,27,28,29 = 8 items

These items measured the extent to which the child demonstrated good manners, helped others, was liked by other learners, listened when other learners spoke, maintained eye contact when speaking, participated in class activities, took success and failure in his or her stride, and worked cooperatively with other learners. In short, the items measured the child's ability to interact with the teacher and his or her peers. A low score invariably signaled social impairment. A high score symbolised well developed social skills. The high score was 32 and the cut off point was 16. A score of 15 or below suggested the child's problem with interpersonal relations.

Factor 4: Parent Participation (PP) 30, 31, 32, 33, 34, 35 = 6 items

This factor tapped into parents' involvement in the child school work. The educators were the ones in a position to evaluate the relationship between a learner's parents and the school. This could be measured through parents' ability to monitor or facilitate the completion of their child's homework, cooperate with the school in an effort to improve class behaviour and achievements, attend school meetings to meet school educators when asked, attend other school events, and attend discussions of their child's school achievements. Children who obtained a low score (less than 12) in this factor had less potential to achieve. It also symbolised a lack of parental support and guidance of the child's scholastic work. These items were also positively worded, which implied that a high score of 12 or more symbolised parental support and guidance of the child's academic work. The high score ranged from 12-24.

Second domain: Adjustment Problems

The larger second section, Adjustment Problems, addressed the areas in which the child's potential problems were recorded. It consisted of ratings on Health

Concerns (6 items), Emotional Distress 15 items), Unusual Behaviour (7 items), Social Problems (12 items), Verbal Aggression (7 items), Physical Aggression (10 items), and Behaviour Problems (15items). Consistent with the names assigned to this section and with component scales, scores in this area documented weaknesses so that scores at the higher levels reflected negative qualities or behaviour problems.

Factor 5: Health Concerns (HC) 36, 37, 38, 39, 40, 41 = 6 items

The seven items which comprised this factor measured the extent to which the child appeared as tired, exhausted or sleepy, talked about being sick (complaining of headaches and stomach aches), visited the clinic/school nurse, or often absented himself or herself from school due to poor health. The total score was 24. Normality was from 12 and above, and any score less than 12 symbolised the presence of health problems.

Factor 6: Emotional Distress (ED)

42,43,44,45,46,47,38,49,50,51,52,53,54,55,56 = 15 items

This factor assessed the extent to which a child displayed her or his feelings in school or the classroom. It covered areas such as being afraid of little things, appearing moody or too serious, becoming upset by constructive criticism or for little or no reasons, always blaming himself/herself for the faults of others, crying or appearing tearful, not seeming to have fun, expecting to fail or do poorly, exhibiting mood changes without reasons, being overcritical of himself herself, being pessimistic about the future, spoke about hurting or killing himself or herself, worrying about little things and about what others thought. The high score was 30-60. The cut-off point was 30. Every score below 30 was a signal of normality, while a score above 30 was an indication of emotional problems.

Factor 7: Unusual Behaviour (UB) item-57, 58, 59, 60, 61, 62, 63 = 7 items

This factor measured the child's impulsive, poor social and inappropriate behaviour in the classroom. Periods of self-preoccupation and disorientation were noted. It encompassed the extent to which the child behaved strangely and peculiarly, was confused by what other people said, daydreamed or seems preoccupied, did not trust other people, said strange or bizarre things, seemed lost or disoriented, talked or laughed to himself/herself. The combined item score would have to exceed 14 to necessitate the teacher describing the behaviours as abnormal.

Factor 8: Social Problems (SP) item 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75 = 12 items

This dimension indicated the extent to which the child angered other students, was uncomfortable when talking to others, avoided social interaction in class, was criticised by other students, was engaged in solitary activities, was ignored/rejected by other students, interrupted when others were speaking, was overly dependent on other students, preferred the company of adults over peers, was shy/uncomfortable with adults, was teased by other students, or was unaware of the feelings of others. This factor confirmed limited social skills which may have been suggested by insensitivity to the feelings of others; interrupting when others are speaking and engaging in solitary activities. A deficiency in social skills may also be suggested by spending more time with adults rather than peers or conversely, by observed discomfort with adults. The total score was48 and the cut-off point was 24.Any score below 24 signalled the absence of social problems; on the contrary any score above 24 indicated the presence of social problems.

Factor 9: Verbal Aggression (VA) item-76, 77, 78, 79, 80, 81, 82 = 7 items

These items measured the extent to which a child argued and wanted the last word, complained about the requests of adults, insulted other students, swore at school personnel, threatened or taunted other students, or threatened school personnel. The total score was 28. The cut-off point was 14. High score (14 and above) connoted discipline problems at school, limited frustration tolerance and poorly modulated anger. All scores below 14 indicated normality.

Factor10: Physical Aggression (PA) item-83, 84, 85, 86, 87= 5 items

These items tapped into a child's attempts to seriously hurt another child, destroy property when angry, hit or push other students, start fights with other students, and strike or push school personnel. The cut-off point was 10. Any score from 10 and above signified serious deviancy, disobedience and poor judgement. That meant the child was experiencing serious disruption of the relationship between the selves and the total academic system.

Factor 11: Behavioural Problems (BP) item-88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99,100,101,102= 15 items

The fifteen items comprising this factor measured the extent to which the child associated with students in trouble, blamed others for their own problems, disobeyed class or school rules, disrupted the class by misbehaving, was impulsive, or acted without thinking, used alcohol or drugs, lied to school personnel, misbehaved unless closely supervised, was overactive; or constantly on the go, was preoccupied with sex, was sent to the office because of misbehaviour, skipped classes, stole from others, usually disobeyed classroom or school rules and required close supervision. A score of 30 or more suggested underachieving in school and experiencing difficulties in completing homework.

Third Domain: Disruptive Behaviour

Finally, the third domain was a major section which provided scales that eliminated three areas of organised clinical concern, but the researcher did not use these factors in the final responses for data analysis of the study. Since this scale was not used for diagnosis purposes but only for research, it provided the researcher with useful information that was integrated with the interview. The three major problems addressed were school based reflections of the DSM1V (Disruptive Behaviour) categories of Attention-Deficit Hyperactivity (16 items), combined type, Oppositional Defiant (16 items), and Conduct Problems/disorder (16 items). These scores, like those in section two of the test, reflected negative qualities, so that a high score denoted increasingly problematic behaviour and high scores indicated the absence of psychopathology.

The following were dimensions of this domain:

Factor 12: Attention Deficits/Hyperactivity 10, 12, 14, 15, 17, 18, 19, 20, 21, 25, 59, 70, 92, 95, 96, 102 = 16 items

Sixteen items in this factor assessed the extent to which a child could complete class assignments (AH), demonstrated a logical and organised approach to learning (AH), followed the teacher's direction (AH), maintained alert and focused attention to class presentations (AH), persisted even when activity was difficulty (AH), remembered the teacher's direction (AH), stayed seated; sat still when necessary (AH), waited for his/her turn (AH), worked independently without disturbing others (AH), listened when other students spoke(SS), daydreamed or seem preoccupied (US), interrupted when others were speaking (SP), were impulsive; acted without thinking (BP), misbehaved unless closely supervised, were overactive and constantly moving, and talked excessively. A high score symbolised poor scholastic achievement and a need for close supervision by both parents and teachers.

Factor 13: Oppositional Defiant (OPD) 22, 28, 29, 43, 45, 46, 51, 64, 75, 76, 77, 78, 80, 89, 90, 91 = 16 items

Children who obtained a high score on this factor were defiant to their teachers and parents. They rarely showed polite behaviour/good manners (SS), took successes and failures in their stride (SS), worked cooperatively with others (SS), and appeared moody or too serious (ED). Sometimes these children became upset by constructive criticism (ED),became upset for little or no reason (ED) , exhibited mood changes without reason (ED), angered other students (SP), were unaware of the feelings of others (SP), argued and wanted the last word (VA), complained about the requests of adults (VA), insulted other students (VA), teased or taunted other students(VA), blamed others for their own problems (BP), disobeyed class or school rules (BP) and disrupted class by misbehaving (BP). The highest score was 64 and the cut-off point was 32 and above. Any score from 32 and above symbolised abnormality.

Factor 14: Conduct Problems (CNP) = 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 93, 95, 97, 98, 99 = 16 items

These items tapped the child's antisocial or unacceptable behaviour at school, that is, the extent to which the child swore at school personnel, threatened other students, threatened school personnel, attempted to seriously hurt another child, destroyed property when angry, pushed other students, started fights with other students, struck or pushed school personnel, associated with students in trouble, used alcohol or drugs, lied to school personnel, was preoccupied with sex, was sent to the office because of misbehaviour, skipped classes, stole from others, or was suspended from school for misbehaviour. A high score indicated a serious disruption of the relationship between the child and the academic setting. In these children, scholastic progress may not be occurring (Sibaya, 1992).

4.2.3.3 Validity and reliability of the research instrument

Validity of the research instrument

Validity was a necessary process that the instrument had to undergo to test its correctness. SBS was an appropriate instrument for aims 1 and 2. The SBS used in the present study was valid in terms of its content, construct and criterion (Kumar, 2014). This research instrument was validated by the scale developers, since this was a standardised tool. The validation process on the establishment of SBS involved twenty two elementary, middle and high schools. The sample consisted of 2,612 students from kindergarten (Grade R) to the 12th grade educators. There were 11 educators from the USA. Data were collected in urban, suburban, and rural areas, and included a spectrum of socioeconomic status (SES) conditions, poor through blue collar and middle class, to upper SES areas

The regular Education Sample of the SBS scale reflected that the higher the mean score, and the smaller the standard deviation, the greater the importance placed on that activity by the respondents (SBS Manual).

With the current study, both SBS and an open-ended questionnaire items were formulated in English because the researcher believed that all educators from different cultural diversity could understand English as the medium of instruction. Nine questions in the interview schedule were constructed by the researcher. Originally, these items measured areas such as academic performance, academic habits, social skills, parent participation, health concerns, emotional distress, unusual behaviour, social problems, verbal aggression, and physical aggression and behaviour problems. For the purpose of this study, nine questions were constructed so that the educators could recommend strategies to deal with these problem areas. According to McMillan and Schumacher (2010), face validity judged that the item measured appeared to be relevant, whilst

content validity evidence established the relationship. Welman, Kruger, and Mitchell (2005) attested that content validity entailed a careful examination of the scale items and checking through the use of experts in the field, concerned whether the items covered adjustment scale, and whether they were sufficiently clear and relevant to measure the content being tested.

Reliability of the research instrument

Reliability meant the ability of the research instrument to yield, constant, accurate and stable results with subsequent tests (McMillan & Schumacher, 2010). The reliability of this tool was tested by Lachar, Wingenfeld, Kline, and Gruber (2000). The reliability of this tool reflected reliability consistency with the test items and the purpose of the measuring instrument. It was found to correlate with Conner's' Teacher Rating Scale and teachers' report.

Cohen et al (2007) provided the guidelines for the alpha reliability coefficients:

Table 4: Alpha reliability guidelines

Coefficient Range	Description
>0.90	Very highly reliable
0.80-0.90	Highly reliable
0.70 -0.79	Reliable
0.60 -069	Marginal/ minimally reliable
<0.60	Unacceptable low reliability

For all subscales, the reliability coefficient ranged from 0.86 to 0.95, according to the SBS manual. This showed very high internal consistency and reliability.

4.2.3.4 Adaptation of SBS to South African conditions

SBS was validated by test developers (Lachar, Wingenfeld, Kline, and Gruber) in multiphase stages, with the first one lasting from 1994 to 1999. It included the collection of collateral measures based on parent, student self and teachers reports, and clinicians' ratings for diagnosis purposes. It was developed to be used by parents, guardians and educators. Educators and guardians should be familiar with the learner or the child and their families. These were usually the students' guardians, who also saw the child at least in one content area. Educators rated behaviours of learners from heterogeneous family background and ethnic groups. These educators' conditions were similar to those of South African educators in terms of race, SES, cultural diversity, grade levels taught and the duration of observation and the nature of problems being observed.

The SBS rating scale had both educational and clinical utility. The selection of this rating scale for use in this study was based on the instrument's attributes to collect adjustment, academic and behavioural problems manifested in a school setting. It was the researcher's contention that this scale could be used with a significant measure of confidence. There was abundant research evidence in support of its utility, validity and reliability (Gruber, Gallen, Kline, & Huzinec, 1999; Pisecco, Lachar, 1999; Lachar et al., 2000; Williams, 2008; Dominic, 2010) in the USA. According to the present researcher's knowledge, the scale had been used by registered Educational Psychologists for clinical purposes in this country as a psychological and behavioural scale (HPCSA, 2014 - list of classified psychological test). This instrument did not measure the clinical syndrome commonly found among psychiatric units or similar situation. In other words, the scale consisted of items that were readable, understandable and meaningful to educators who had no background knowledge of psychological concepts and terminology.

In this study, educators were therefore informants, the reason being that educators were in a unique position to observe and report on learners' classroom behaviour since they spent more time with these learners in schools than parents did. It was therefore clear that educators were eligible informants in this study. The educators were requested to indicate the family structure to which a respective child belonged. The SBS profile did not survey the family structure where a child belonged. Nonetheless, the educators would be required to indicate on each SBS profile the type of family structure where the child belonged. Educators used learners' admission books to access information on the child's family structure. Most educators were familiar with troublesome learners in their classroom since they had been with them for a period of 10 months. They did not have a problem in indicating learners' family background.

The Republic of South Africa population was related to the American standardisation sample in this manner:

- The study sample (both learners and educators) were also from primary, secondary and high school. This implied that children being evaluated were from Grade R-12 with their respective educators.
- Educators had to rate learners' problems or behaviour as being observed in the classroom situation.
- Educators rated behaviours of children who were from heterogeneous family backgrounds and ethnic groups.
- These educators were from different KZN districts. Data were collected in urban, suburban, and rural areas, and included a spectrum of socioeconomic status (SES) conditions, poor through blue collar and middle class to upper SES areas.
- Educators should observe learners for at least six months or more.

4.2.3.5 Modification of SBS to accommodate the study aims

The scale SBS was modified to accommodate the study aims. Basically, this study aimed at determining the relationship between selected family structures and school-based problems. The first page of the scale reflected learners' details provided by educators, thus enabling the researcher to gather personal details of each respective learner. Normally, the SBS profile consisted of 10 variables, i.e. student ID, age, gender, current grade, date of birth, ethnicity, school, name, today's date, number of months students have been observed, and the rater's ID/role. For the purpose of the current study, the researcher added the variable of family structure to the profile. This enabled the researcher to obtain information in relation to learners' different family background and school-based problems, specifically for aim 1.

Section A to C covered all problems that might have been experienced by learners from different schools and family structures. The researcher also gained information about variables such as learners' age, gender and educational level across different family structures. The researcher also aimed to determine whether an association existed between school-based problems and learners characteristics such as age, gender and educational level across different family structures. The SBS profile contained all these variables, however, the following variables were deemed not to be essential for this study: ethnicity, school name, today's date, number of months students were observed and rater's ID/role. Respondents were therefore requested to ignore these variables.

The SBS "Auto score form" had three categories which consisted of 11 scales with 102 items. Some of these items were changed to suit the purpose of the study. For example, item 41 (of health concern) was modified from "visits the school nurse" to "visits the clinic". This item was modified because there were no

school nurses in South African schools; instead a sick learner should rather visit the clinic or may be given first aid assistance or attended by mobile clinic nurses. Factor 6 of SBS had an item: “parent’s cooperation in child’s school work” with which South African educators were not familiar. Instead, the researcher had used “parent involvement”.

4.2.4 Pilot study

The pilot study comprised of educators from six schools. There were fifty educators who completed the SBS scale. Educators who participated in the pilot run were excluded from the final study. Schools were geographically widely dispersed, and it was impossible for the researcher to visit more than one school per day. Upon arrival at each school, the researcher issued a letter, which was obtained from the KZN Department of Education, to each principal. The purpose of the study was explained by the researcher to all participants. The procedures used for the administration of the scale in the final study were also applicable in the pilot run.

4.2.4.1 Procedures for empirical study and ethical considerations

The study was conducted in the form of a field study. The permission to conduct research in schools was obtained from the regional Director (Department of Education) (**ANNEXURE A AND B**).The certificate for ethical clearance was obtained from the University of Zululand ethics committee (**ANNEXURE C**).The researcher went to the selected schools with a letter to ask for permission, and that permission was obtained from the school management team. The researcher visited each school personally to conduct semi-structured interviews with educators. The Student Behaviour Survey was administered to educators in order for them to rate learners in each of eleven categories of adaptive

behaviours. The principal in each school appointed a person who assisted the researcher to identify educators from different educational levels and to collect the research tool (SBS) from educators after they completed it respectively. Only 165 African learners were evaluated. With regard to administration of SBS to the South African population in the study, it was only educators who evaluated the learners across different learning phases, not the children's parents. The educators should have had to be familiar with learners and had knowledge of their family structure.

Educators were all informed about the purpose of the study as were the informants (debriefing). Teachers signed informed consent and were all assured of confidentiality of information provided, and limitations were also outlined to them. Anonymity was also guaranteed to all respondents involved. That is, they were reassured that all information they provided would be treated as confidential and their personal details including school names would not be publicised. They were also advised not to write actual learners' names on the SBS scale upon the assurance of anonymity, instead they were asked to write numbers. These ethical principles were also applied to the all participants on the final study.

The duration of the study was two months, due to the proximity of schools, since the researcher had to travel from one school to another explaining the purpose of the study and clarifying the SBS inventory. This research consumed a lot of time, since the researcher had to travel from one school to the next interviewing educators about intervention strategies they recommended. The researcher spent two days in each school. The participants were also requested to think about any learner in his or her class and requested to rate that learner accordingly and take their time. Although SBS was a 15 minutes scale, the researcher did not time the educators to suit the purpose of the study. After rating each learner, some educators were also requested to respond to 15 open-ended

questions during face-to-face interaction with the researcher. The researcher indicated to them that should they need clarity pertaining to the rating scale they were not allowed to discuss it with other educators but they should indicate by raising their hand. They were to feel free because they were no wrong and right answers but only a rating of the learners' behaviours.

4.2.4.2 Administration of the SBS in a pilot run

Table 4.2 illustrates the distribution of participants in the pilot study sample in relation to their respective variables. The respondents' ages ranged from 4-18 years. There were more males than females. There were no learners from child-headed and polygamous families.

Table 5: Distribution of participants in the pilot study (n = 50)

CRITERIA	**LEVELS**			
Gender	**Male**		**Female**	
	22		**28**	
	44%		**56%**	
Age in years	**5-8**		**9-13**	**14-18**
	9		**27**	**14**
	18%		**54%**	**28%**
Educational level/ Grade	**Grade R-3**	**Grade 4-6**	**Grade7-9**	**Grade10-12**
	16	14	17	3
	32%	28%	34%	6%
Family structure	**Nuclear**	**Extended**	**Single parent**	**Other**
	14	1	23	13
	28%	2%	46%	28%

4.2.4.3 Scoring procedures and analysis of data

The manual for SBS was used for scoring. In other words, scoring was done by using scoring procedures as stipulated in the manual. Data and raw scores were obtained by summation of individual item total scores comprising of three categories and nine factors, e.g.:

- Category 1: items 1 through 35 yield a total score on Academic Resources
- Category 2: items 36 through 56 yield a total score on Adjustment Problems
- Category3: items 57 through 102 yield a total score on Disruptive Behaviour.

A table was constructed to illustrate mean scores obtained for the total group (sample) on the individual items in each of the nine factors. The mean scores were **obtained for each category** (sample) on the individual items in each of three sets of variables. For the final study, both chi-square and Log-Linear analysis were used to analyse data. These techniques would be discussed in detail in the next chapter.

The scoring of the scale (SBS) was done by the computerised programme called Statistical Programme for Social Sciences (SPSS). Inaccurately computed SBS profile forms were detected by the SPSS programme during data cleaning and those spoiled forms were discarded by the researcher. The remaining 50 accurately completed forms were used in the analysis of the pilot run.

4.2.4.4 Description of SBS subscales in the pilot run and interpretation of responses to SBS pathology versus non pathology

The 102 items for SBS were negatively and positively worded. Items 1-35 were positively worded which means high scores indicated the absence of problems in

those domains they measured. Then items 36-102 were negatively worded which implied that high scores indicated abnormalities. SBS had102 items which were grouped into 11 subscales after factor analysis. Educators were requested to rate learners' behaviour in all eleven domains on values 1, 2, 3, 4 or 1, 2, 3, 4, 5 (1-8). From items 1-8, the values represented the following: deficient was 1, below average was 2, average was 3, and above average was 4 and superior was 5. Items 9-102 values represented the following: 1 = never, 2 = seldom, 3 = sometimes and 4 = usually. The raw score for each item was obtained by summing the rating numbers that have been circled. The total score was then recorded in the shaded name next to the name of the scale. All scores recorded were coded into the computerised programme called Statistical Programme for Social Sciences (SPSS). Then the chi-square was computed for measuring the extent to which a relationship existed between the selected family structures and school-based problems and to test the null hypothesis. Biographical data/variables such as gender, age and educational level were first analysed by using frequencies. For the associations between the variables of gender, age, educational level, and school based problems across different family structures, the log-linear analysis test was considered suitable. The degrees of freedom that complied with all tests that were used varied from one to three. An alpha level of 0.05 was found to be relevant for all the data analysed.

Data obtained from semi-structured interviews were analysed by means of thematic analysis, which meant data conveying similar meanings were classified into themes pertaining to intervention strategies recommended by educators (the qualitative paradigm).

4.2.4.5 Psychometric of properties of the modified SBS in the pilot study

Piloting a standardised scale (SBS) was done to determine the appropriateness of the research instrument for a South African population. It was also done to establish validity and reliability when used with the South African population.

4.2.4.6 Validation of research instrument in the pilot run

To determine whether a set of items was homogenous, factor analytic methods were used. This was an essential step, since the scale was selected on the basis of face validity and some items may not have been valid for the sample norm group for which it was adopted. By carefully choosing items with particular factor loading patterns, an advance form of content validity was established. In addition, this form of analysis yielded the internal consistency of the scale. The scale could then be regarded as a valid and reliable instrument after running a factor analysis for items.

4.2.4.7 The results of the pilot study

ANNEXURE G for factor loading comprised of the correlation coefficients between factors and items. These coefficients represented factor loadings of the items on the factor, i.e. the degree to which an item was linked to a certain factor. In the table, the first column contained item numbers. The second column contained loadings between factor 1 and items in turn. The third column contained loadings between factor 2 and items in turn. The fourth column contained loadings between factor 3 and items in turn. The fifth column contained loadings between factor 4 and items in turn. The sixth column contained loadings between factor 5 and items in turn. The seventh column contained loadings between factor 6 and items in turn. The eighth column contained loadings between factor 7 and items in turn. The ninth column contained loadings between

factor 8 and items in turn. The tenth column contained loadings between factor 9 and items in turn. The eleventh column contained loadings between factor 0 and items in turn. Each entry in the last column was an estimated commonality of an item.

ANNEXURE D illustrated that items 43, 45, 46, 51, 54, 60, 62, 63, 64, 70, 74, 76, 77, 78, 79, 80, 81, 84, 85, 86, 88, 89, 90, 91, 92, 94, 95, 96, 98, 101 and 102 had relatively the highest loadings on the first factor and relatively had lower loadings on the second to tenth factors. These items were considered homogenous and the factor one which they measured was labeled **conduct problems**. Factor one consisted of items from 4 different factors of the original SBS scale. Most of the items of disruptive behaviour (conduct, oppositional defiant and ADHD) were included in this factor. This implied that educators in South Africa viewed learners with disruptive behaviours as conduct problems. All items had a common content. Items numbers 1, 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 21, 23, 26, 27, 28, 29, 30, 31, 32, 33, 34 and 35 had relatively the highest loading on the second factor and had relatively lower loading first, third to tenth factors. Therefore, the second factor could be labeled as **academic habits**. That factor comprised of28 items extracted from four factors of SBS, namely, academic performance, academic habits, social skills and parent participation. Items 37, 38, 39, 40, 41, 47, 48, 49, 56, 82 and 87 had relatively the highest loadings on the third factor and had relatively lower loadings on the first, second, fourth to tenth factors. The third factor could be labeled as **health concerns or childhood anxiety**. Those items originated from four SBS domains or factors, i.e. health concern, emotional distress, verbal aggression and physical aggression. The fourth factor had items with relatively lower loadings in all factors. That factor was collapsed because all items were below the cutoff point of 0.30. However, items with factor loadings .30 and above in that factor were discarded if those items had highest factor loadings in other factors. Factor five consisted of 5 items (42,

57, 58, 59 and 61) which had relatively the highest loading on the fifth factor. These items were considered homogenous and the factor five which they measured was labeled **unusual behaviour**. Items 20, 22, 24 and 25 had relatively the highest loadings on the sixth factor and had relatively lower loadings on the first, second, third, fourth, sixth to tenth factors. These items were considered homogenous and the factor sixth which they measured was labeled **interpersonal relations**. That factor was measured by 4 out of 8 items of social skills. Item numbers 5, 6, 19, 49, 71 and 73 had relatively higher loadings on the seventh factor and had relatively lower loadings on other factors. The seventh factor could be labeled as **social withdrawal.** Items 44, 55, 65, 66 and 75 had relatively the highest loadings on the eighth factor and had relatively lower loadings on all other factors. The eight factors could be labeled as **emotional distress**. The following items of 53, 68, and 83 had relatively the highest loadings on the ninth factor and had relatively lower loadings on the rest of factors. The ninth factor could be labeled as **physical aggression.** Factor 10 was measured by only one item (36-appears tired, exhausted and sleepy). The last factor (11) also lapsed because all items falling within it had relatively lower loading on all factors.

The method of using factor analysis was best described by Allen and Yen (1979). This was considered more suitable for determining whether a set of items was homogenous or clustered around one factor (Allen & Yen, 1979).Through the use of factor analysis, 102 items had clustered nine factors.

Having worked out the factor analysis, the next step was to determine the significance of the (loading) correlation coefficient of each item.

Establishing the cutoff point for interpretation of a correlation coefficient was crucial. If the absolute value for the correlation coefficient was .30 or more, it was significant at the conventional levels of significance (Tabachnick & Fidell, 1983); (Tabachnick & Fidell, 1996). Generally, loadings in excess of .30 were eligible for interpretation; whereas lower ones were not, because a factor loading of .30 indicated at least a 9% overlap between a variable and a factor. The greater the overlap between a variable and a factor, the more that variable was a pure measure of the factor's significance (Thabachnich & Fidell, 1983; Thabachnich & Fidell, 1989). These authors (Thabachnich & Fidell, 1983) suggested the following model of interpretation**:**

- That loading in excess of .71 (50 % variance is considered excellent).
- That loading in excess of .63 (40 % variance is considered very good).
- That loading in excess of .55 (30 % variance is considered good).
- That loading in excess of .45 (20 % variance is considered fair).
- That loading in excess of .32 (50 % variance is considered poor).

Originally, there were eleven factors which went through the pilot run, but only 9 factors were extracted. Using .30 as a cut-off point, no item was discarded on the basis of the cut-off point, but item 36 was discarded because it had no items with the highest loading on factor 11. With regard to factor 10, only one item (36) exploded. The rule of thumb based on research evidence (Sibaya, 1992; Costello & Osborne, 2006) stated that no factors with fewer than three items had the best fit to the data. Factor 10 was discarded because it did not comply with the rules for constructing a questionnaire. In other words, both factors were discarded.

4.2.4.8 Internal consistency

An internal consistency method of item analysis was used in a test run to check the validity and the reliability of SBS in the South African study population. Internal consistency had to do with stability among items. If the items were linked and related to one another, this would prove that there was internal consistency among them (Neuman, 2003). The internal consistency index, among items in the pilot study, was very high. It was therefore concluded that the items of the SBS were also found to be reliable for a South African population.

Table 6: Reliability of the modified SBS

Mean	variance	SD	No of Items	C/ Alpha
232.58	1391.704	37.306	102	.937

Table 6 illustrates the mean and the standard deviation for the pilot group on all items. It also reflects that the mean was higher than the standard deviation. The reliability coefficiency of items in the piloted SBS scale exceeded .71, which was considered as excellent.

4.3 SUMMARY

This chapter focused on the research procedures, methods and techniques used in the study. The methods that were used in this study were tested and used by other researchers and they were believed to be appropriate for the yielding best

results. The study sample, presentation and analysis of data will be presented in the next chapter (chapter 5).

CHAPTER FIVE

PRESENTATION AND ANALYSIS OF DATA

5.1 INTRODUCTION

This chapter contains the presentation, analysis and interpretation of data. The hypotheses formulated were tested in this chapter. The section on the discussion of results is reserved for the next chapter.

5.2 FINAL STUDY SAMPLE

The subjects for the final study sample were drawn from six districts, namely, Ugu, Uthungulu, Zululand, Illembe, Simdlangetsha, UMkhanyakude and Amajuba.

CRITERIA	**LEVELS**			
Gender	**Male**		**Female**	
	100 64.7%		65 35.3%	
Age in years	**5-8**	**9-12**	**13-16**	**17-20**
	52	32	41	40
	28.3%	17.4%	22.3%	21.7%
Educational level/ Grade	**Grade R-3**	**Grade 4-6**	**Grade7-9**	**Grade10-12**
	69 37.5%	37 20.1%	44 26.9%	15 8.2%
Family structure	**Nuclear**	**Extended**	**Single parent**	**Other**
	34 20.6%	34 20.6%	58 35.2%	39 23.6%

Table 7: Distribution of subjects for the final study (n = 165)

Table 8 reflected distribution of subjects in a final study. Learners' biographical data were distributed according to learners' characteristics such as age, gender, educational level and family structure. The majority of learners came from single parent families. Learners' age ranged from 5 to 19 years. There were more males than females. The majority of leaners were in the foundation phase; grade R-3, in particular.

5.3 DATA ANALYSIS AND RESULTS OF THE FINAL STUDY

This section involved the testing of the null hypotheses; the data were presented in the tabular form. There were two hypotheses to be tested. The presentation of data was preceded by the **reiteration** of each hypothesis. The third research question was not subjected to hypothesis testing, therefore data for this question would be analysed by means of thematic analyses. The scoring procedure conducted for the pilot study was also applied in the final study.

This study was conducted in order to answer the following research questions:

- To what extent does a relationship exist between selected family structures and school-based problems?
- Is there any association between school-based problems and the variables of learners' age; gender; educational level across different family structures?
- What intervention strategies do teachers recommend in order to develop an intervention model?

There were different statistical techniques used in research psychology. Therefore, the present study used regression analysis. This was referred to as statistical process for estimation the value of the relationship between variables.

According to Field (2009) regression analysis was a statistical process for estimating the relationships among variables. It included many techniques for modelling and analysing several variables, when the focus was on the relationship between a dependent variable and one or more independent variables (or 'predictors'). It included the log-linear analysis for modelling and analysis of more than two variable (Viljoen & Van der Merwe, 2000). The present study focused on assessing the relationship between school-based problems and different family structure. This enabled the researcher to estimate the conditional expectation of the variables. That was the average value of different family structures and school-based problems which were fixed.

In order to solve the research questions 5.3.1.1 and 5.3.1.2, two different statistical tests would be applied to test the null hypotheses, namely, Pearson Chi-Square and Log-linear analysis.

5.3.1 Reiteration of hypotheses

5.3.1.1 Testing of hypothesis one

Reiteration of hypothesis number one

A relationship existed between selected family structures and problems manifested by learners in schools.

In order to determine the extent to which the relationship existed between selected family structure school-based problems, a Chi-Square test had been utilised.

This technique, namely, Chi-Square, was chosen on the basis of its advantages as nonparametric for categorical data. The test enabled the researcher to determine the strength of the relationship between selected family structures and

school-based problems. The following chi-square assumptions were considered prior to test application (McCabe, 1999, p. 734).

- Each observation or frequency was independent of all the others, that is, the counts should be independent of each other.
- No more than 20% of the expected counts were less than 5and all individual expected counts were one or greater.
- The data must be *counts* for the categories of a categorical variable
- Chi-square was suitable for discrete data and could test the strength of association dealing with frequencies.

The SBS rating scale was administered to 165 educators. Each educator was requested to identify a learner in the classroom. The educators eventually selected 165 learners and rated them accordingly. A total score for each learner was obtained by adding up all individual item scores. Initially, the SBS profile form had 102 items with 11 factors. After the pilot run, the researcher ultimately extracted and retained 9 factors. A general mean score was obtained by summing the total score for the respondents and dividing the sum by the number of learners. Interpretation of scores in each factor differed. In other factors, the highest score symbolised the presence of the learning problem, whereas with other factors the highest score signified the absence of the problem. A computerised programme known as SPSS was used to compute frequencies and statistical tests. Inaccurate, completed, SBS profile forms were discarded.

Table 8: The relationship between family structures and Conduct Problems - CP (n=165)

Family Structure	Conduct	
	Normal	Abnormal
Nuclear family	11	23
Extended	13	21
Single-parent	18	41
Other	11	27
χ^2= 0.830	at df=3	p>.05

Table 9 illustrated that the outcome of the analysis was χ^2= 0.830 at 0.5 (df=3). The critical tabled value of 7.815 was greater than the calculated value (0.842).The hypothesis that there was a relationship between family structure and conduct problems had not been confirmed. The results were statistically insignificant and it was concluded that family structure was related to factor 1. The results concluded that family structure was not related to conduct problems such as threatening other learners, destroying of property when angry, tormenting other learners and starting other fight with other learners. Any impulsive control -disruptive and aggressive behaviours - may have been due to chance factors. Therefore, family structure could not account for conduct disorder among school going age children.

Table 9: The relationship between family structures and Academic Habits – AH (n=165)

Family Structure	Academic habits	
	Normal	Abnormal
Nuclear family	25	9
Extended	13	21
Single-parent	42	17
Other	17	21
χ^2=15.815	at df=3	p >.05

The calculated value of χ^2=15.818 was greater than the tabled critical value at the level of significance which was 0.5 (7.815) at df=3. The results were significant, therefore rejected the null hypothesis (H0) and upheld the alternative hypothesis (H1) that family structure was associated with learners' academic habits. The research hypothesis had been confirmed. The results affirmed that learners from extended (40.3%) and child headed, divorce, grand parenting families (55.3%) were found to have more academic problems than those who were from nuclear (32.1%) and single parents (28.8%).

Table 10: The relationship between family structures and Health Concerns - HC (n=165)

	Health concern	
Family Structure	**Normal**	**Abnormal**
Nuclear family	16	18
Extended	20	14
Single Parent	29	27
Other	21	17
χ^2=1.320	at df=3	p >.05

Table 11 showed that the calculated value of χ^2=1.320was not statistically significant against the critical value of 7.815 at (df=3) α=.05. The H0 was therefore upheld. I concluded that there was no connection between family structure and factor 3 (learners' health status). That meant that learners' state of health was independent of the type of families to which these learners belong. The learners' health could be unstable irrespective of their family structures.

Table 11: The relationship between family structures and Social Interaction - SI (n=165)

	Social Interaction	
Family Structure	**Normal**	**Abnormal**
Nuclear family	21	13
Extended	21	13
Single Parent	35	24
Other	20	18
χ^2= 0.850	at df=3	p >.05

The outcome of the analysis indicated that the Chi-square (χ^2) value of 0.850was obtained against the tabled critical value of 7.815 at df =3. The calculated value was less than the critical tabled value. The hypothesis that there was no relationship between family structure and factor 4 (learners' social interaction) problems was tenable. The alternative hypothesis was refutable and the research hypothesis had not been confirmed. I concluded that learners' social interaction problems were not linked to any type of family.

Table 12: The relationship between family structures and Unusual Behaviour - UB (n=165)

	Unusual Behaviour	
Family Structure	**Normal**	**Abnormal**
Nuclear family	16	18
Extended	13	21
Single Parent	23	36
Other	13	25
χ^2= 0.732	at df=3	p >.05

Table 13 illustrated a calculated value of χ^2=0.732 obtained at df=3. The tabled critical value was 7.815, which exceeded the calculated value. Therefore, the results were not significant. The research hypothesis had not been confirmed. The analysis revealed that there was no significant relationship between family structures and factor 5 (unusual behaviour). I therefore concluded that learners' family structure was not influential to learners' strange behaviour or unusual behaviour. Therefore learners may have manifested unusual behaviour regardless of their type of families.

Table 13: The relationship between family structures and Interpersonal Relations- IR (n=165)

	Interpersonal relations	
Family Structure	**Normal**	**Abnormal**
Nuclear family	27	7
Extended	19	15
Single Parent	53	6
Other	32	6
χ^2= 15.955	at df=3	p >.05

Table 14 shows the types of families from where learners came. Aχ^2=15.955atdf=3 exceeded the critical tabled value of 7.815. The results were therefore statistically significant. H0was rejected and H1 was acceptable. Our research hypothesis had been confirmed. These results imply that there was an association between family structure and learners' interpersonal relation problems. It was therefore deduced that learners from different family structures differed in their relations to others at school.

Table 14: The relationship between family structures and Social Withdrawal - SW (n=165)

	Social Withdrawal	
Family Structure	**Normal**	**Abnormal**
Nuclear family	24	10
Extended	29	5
Single Parent	50	9
Other	34	5
χ^2= 5.102	at df=3	p >.05

According to Table 15, the calculated value of 5.102was obtained at an alpha level of .05. The critical tabled value of 7.815 at df=3 was greater than the calculated value. Therefore, the results were not significant and I have upheld H0.The research hypothesis that “family structure is related to social withdrawal” had not been confirmed. I have therefore concluded that learners’ lack of interaction skillsor reluctance to involve themselves in social relationships, especially with their peer group, was not influenced by the type of families to which these learners belonged. This implied that any lack of social interaction skills among learners was independent of the learners’ family background or family structure.

Table 15: The relationship between family structures and Emotional Distress - ED (n=165)

Emotional distress		
Family Structure	**Normal**	**Abnormal**
Nuclear family	17	17
Extended	15	19
Single Parent	20	39
Other	7	31
χ^2= 9.097	at df=3	p >.05

A Chi-square value of 9.097 was obtained at a level of significant of .05. The results were statistically significant because the tabled critical value of 7.815 was lesser than the calculated value (df=3). I therefore rejected the H0 and H1 as acceptable. The research hypothesis had been confirmed and it was surmised that family structure had an influence on learners' emotional problems.

Table 16: The relationship between family structures and Physical Aggression - PA (n=165)

	Physical Aggression	
Family Structure	**Normal**	**Abnormal**
Nuclear family	16	18
Extended	12	22
Single Parent	24	35
Other	10	28
χ^2= 3.675	at df=3	p >.05

At df=3 and α=p >.05, the calculated value ofχ^2= 3.675 was less than the tabled critical value (7.815). It obtained highly insignificant results. The hypothesis that there was a relationship between family structure and learners' (factor 9) physical aggression had not been confirmed. I have therefore concluded that the family structure was not a direct cause of learners' physical aggression.

Table 17: Composite table of the relationship between family structure and 9 factors

ASSOCIATION	χ^2 VALUES	P.	S/SN	RELATIONSHIP EXPRESSED AS A VALUE OF ALPHA
FS XCD	0.830	0.842	NS	HIGH
FS X AH	15.818	0.001	S	LOW
FS XHC	1.320	0.724	NS	HIGH
FS X SI	0.850	0.837	NS	HIGH
FS X UB	1.288	0.732	NS	HIGH
FS X IR	15.955	0.001	S	LOW
FS X SW	5.102	0.164	NS	LOW
FS X ED	9.097	0.028	S	LOW
FS X PA	3.375	0.299	NS	LOW

Table 18 illustrated different levels of person Chi-Square or Alpha on family structures and nine factors, namely, conduct disorder (CD), academic habits(AH), health concerns (HC), social interaction (SI), unusual behaviour (UB), interpersonal relations (IR), social withdrawal (SW), emotional distress (EM) and (PA) physical aggression. The results showed high and low relation descriptors. A higher Alpha was a more stringent level of significance than a low Alpha.

5.3.1.2 Testing of hypothesis number two

Reiteration of hypothesis number two

There was an association between school-based problems and the learners' age, gender, educational level across different family structures

LOG-LINEAR ANALYSIS

In order to test for the association between respondents' biographical data, such as learners' age, gender, educational level and school-based problems across, a log-linear analysis had been conducted. As the chi-square assumption, which said the count were independent of each other, prevented me from testing the relationship between two independent nominal categorical variables. The log-linear analysis enabled me to test for association among many variables simultaneously, instead of running many two by two contingency tables and the log-linear accommodated all variables at their levels simultaneously. Thus, Log linear analysis could be regarded as an extension of the chi-square test (Field, 2011; Howitt & Gramer, 2008).

In this form of analysis, I emphasised the term "model", which meant it was used to describe data obtained through empirical investigation. Another term frequently used in this section was "goodness-of fit". This term referred to the extent to which the observed frequencies were modelled (predicted) by means of Log-linear analysis, and was very much like the three-way ANOVA. ANOVA dealt with scores, while the former dealt with frequencies. Log linear analysis was appropriate for hypothesis number two because data conformed to the assumption (Tabachnick & Fidell, 1996). The assumptions have been presented in **APPENDIX F**.

In this section, various tables presented the results of Log linear analysis on learner's age and 9 factors across different family structures. These tables also presentedthe K-way order effectand partial associations. This was done to test hypothesis number two which said there was an association between school-based problems and the variables of learners' age, gender and grade across different family structure. Therefore, there was redundancy in the way the data were presented. The next two tables have shown the results for factor 1.

Table 18: FACTOR 1 Relationship (partial association) between learners' age, Conduct Disorder (CD) and family structure

Effect	Df	Partial Chi-Square	Sig.	Number of Iterations
Age*F1b	3	108.925	.000	2
Age*FS	9	7.164	.620	2
F1b*FS	3	2.640	.450	2
Age	3	4.875	.181	2
F1b	1	21.571	.000	2
FS	3	9.706	.021	2

Key: FS= Family Structure; F1b=Conduct Disorder

Table 19 revealed that the interactions between age and conduct were significant, but age and family structure were insignificant. However, one-way effects (i.e. the main effects of age, conduct and family structure) were all significant. I could not remove them because it would have seriously affected the model.

My research hypothesis was that the variable of learner's age was associated with conduct disorder across different family structures. The relationship between learners' age and conduct disorder had been confirmed but family structure was not found to be associated with these two variables. From **APPENDIX Z8** and Table 19, it can be confirmed that there was an association between the variable of age and conduct disorder. I therefore conclude that there was a relationship between factor 1 and learners' age. It would be interesting to know the extent of the interaction between those two variables is. Table 20 illustrated an answer to this question.

Table 19: K-way and higher order effects on learner's age, Conduct Disorder (CD) and family structure

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	31	165.175	.000	147.048	.000	0
	2	24	129.023	.000	112.248	.000	2
	3	9	13.941	.124	12.071	.209	7
K-way Effects[b]	1	7	36.152	.000	34.800	.000	0
	2	15	115.082	.000	100.175	.000	0
	3	9	13.941	.124	12.071	.209	0

I. The first row (k=1) indicated to me that when I removed the one-way effects (age and conduct disorder) and the higher order effects (number of interactions), it would significantly affect the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicated to me whether removing the two-way interactions (age and conduct disorder) and higher –order effect (age and family structure) would affect the model. The results indicated that removing these interactions had no detrimental effect on the model.

III. The final row (k=3) tested whether removing the three-way effects (age, conduct disorder and family structure) and higher-order-effects would significantly affect the fit of the model. This was not significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way effects) had a significant detrimental on the model. The answer was yes. Removing the main effects of age, conduct disorder and family structure from the model; it would have significantly affected the fit of the model. These variables were significant predictors of data.

II. The second row (k-2) tested whether removing the two-way interactions would affect the model.

III. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than 0.05.Thisindicatedthat removal of the said components would not have affected how well the model fitted the data.

The results of this analysis were non-significant, indicating that the log-linear model was a good fit of the data.

The results indicated a high association between learners 'age and factor 1. Factor 2 was presented in the next two tables (the table of step summary, partial association, K-way order and High order effect tables).

Table 20: FACTOR 2: Relationship (partial association between learners' age, Academic Habit (AH) and family structure)

Effect	Df	Partial Chi-Square	Sig.	Number of Iterations
Age*F2b	3	5.388	.146	2
Age*FS	9	2.640	.977	2
F2b*FS	3	13.269	.004	2
Age	3	4.875	.181	2
F2b	1	5.124	.024	2
FS	3	9.706	.021	2

Key: FS= Family Structure; F2b=Academic Habit

Table 21 revealed that the interactions between age and academic habit, and age and family structure were all insignificant. However, one-way effects (i.e. the main effects of age, academic habits and family structure) were all significant. I could not remove them because it would have seriously affected the model.

The research hypothesis that the variable of learners' age was associated with academic habits across different family structures was tested. The connection between learners' academic habit and family structure had been confirmed. The results also showed that 44.1% of learners from extended families, followed by 20.6% from nuclear families, were found to have performed badly at school, compared to those from divorced, child headed (15.8%) and single parents (10.1%). What is the extent of interaction between these two variables? Table 22 illustrated the answer to this question.

Table 21: K-Way and higher order effects on learners' age, Academic Habit-(AH) and family structure

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	31	53.323	.008	57.448	.003	0
	2	24	33.619	.092	38.018	.035	2
	3	9	6.922	.645	6.493	.690	3
K-way Effects[b]	1	7	19.705	.006	19.430	.007	0
	2	15	26.697	.031	31.525	.007	0
	3	9	6.922	.645	6.493	.690	0

I. The first row (k=1) indicated that when the one-way effects were removed (age and AH and the higher order effects (number of interactions), it would significantly affect the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicated whether removing the two-way interactions (age and Academic Habit) and higher –order effect (age and Academic Habit) would affect the model. The results indicated that removing these interactions had no detrimental effect on the model.

III. The final row (k=3) was testing whether removing the three-way effects (age, academic habits and family structure) and higher-order-effects would significantly affect the fit of the model. This also not significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way effects) had a significant detrimental on the model. The answer was yes - if the main effects of age, Academic Habits and family structure were

removed from the model, it would have significantly affected the fit of the model. These variables were significant predictors of data.

II. The second row (k-2) tested whether removing the two-way interactions would affect the model.

III. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than 0.05. This indicated that the removal of the said components would not affect how well the model fitted the data.

The results of this analysis were non-significant, indicating that the log-linear model was a good fit of the data. With regard to the research hypothesis, the results were highly significant, which meant that factor2 (AH) was linked to the variable of learners' family structures. The next two tables displayed results for factor 3.

Table 22: FACTOR 3: Relationship (partial association) between learners' age, Health Concern (HC) and family structure

Effect	Df	Partial Chi-Square	Sig.	Number of Iterations
Age*F3b	3	36.847	.000	2
Age*FS	9	6.552	.684	2
F3b*FS	3	2.536	.469	2
Age	3	4.875	.181	2
F3b	1	.297	.586	2
FS	3	9.706	.021	2

Key: FS= Family Structure; F3b=Health Concern

Table 23 revealed that the interaction between age and health concerns was significant, whereas age and family structure were both insignificant. However, one-way effects (i.e. the main effects of age and family structure) were all significant. They could not be removed because it would have seriously affected the model.

The research hypothesis was that the variables of age and health concerns across different family structures were associated. The connection between learners' age and health concerns were confirmed. From **APPENDIX Z10** and Table 23, I confirmed that there was an association between the variables of age and health concern or problems. What was the extent of interaction between these two variables? Table 24 illustrated the answer to this question.

Table 23: K-Way and higher order effects on learners' age and Health Concern (HC) and family structures

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	31	77.524	.000	85.764	.000	0
	2	24	62.646	.000	53.529	.000	2
	3	9	19.135	.024	16.588	.056	4
K-way Effects[b]	1	7	14.878	.038	32.234	.000	0
	2	15	43.511	.000	36.941	.001	0

I. The first row (k=1) indicated that when the one-way effects (age and HC) and the higher order effects (number of interactions) were removed, it would

significantly affect the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicated whether removing the two-way interactions (age and HC) and higher–order effect (age and HC) would affect the model. The results indicated that removing these interactions had no detrimental effect on the model.

III. The final row (k=3) was tested whether removing the three-way effects (age, health problems and family structure) and higher-order-effects would significantly affect the fit of the model. This was also significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way effects) had a significant detrimental effect on the model. The answer was yes. If I removed the main effects of age, HC and family structure from the model, it would have significantly affected the fit of the model. These variables were significant predictors of data.

II. The second row (k-2) tested whether removing the two-way interactions would affect the model.

III. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than 0.05. This indicated that removal of the said components would not affect how well the model fitted the data.

The results of this analysis were non-significant, indicating that the log-linear model was a good fit of the data. On the other hand, the hypothesis tested had been found to be highly significant in relation to learners' age and state of health. It could be concluded that factor 3 was found to be dependent on learners' age but not family structure. Factor 4 was presented in Tables 25 to 26.

Table 24: FACTOR 4: Relationship (partial association) between learners' age, Social Interaction (SI) and family structure

Effect	Df	Partial Chi-Square	Sig.	Number of Iterations
Age*F4b	3	55.745	.000	2
Age*FS	9	5.245	.812	2
F4b*FS	3	.749	.862	2
Age	3	4.875	.181	2
F4b	1	5.124	.024	2
FS	3	9.706	.021	2

Key: FS= Family Structure; F4b=Social Interaction

Table 25 revealed that the interactions between age and social interaction was significant, whereas those between age and family structures were insignificant. However, one-way effects (i.e. the main effects of social interaction and family structure) were all significant. I could not remove them because it would have seriously affected the model.

My research hypothesis was that the variables of learners' age, social interaction and family structure were associated. The connection between learner's age and social interaction had been confirmed. From **APPENDIX Z11** and Table 25, I confirmed that there was an association between the variable of age and social interaction. What was the extent interaction between these two variables? Table 26 illustrated the answer to this question.

Table 25: K-Way and higher order effects on learners' age and Social Interaction (SI) and family structure

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	31	103.999	.000	100.503	.000	0
	2	24	84.294	.000	72.516	.000	2
	3	9	22.365	.008	20.432	.015	4
K-way Effects[b]	1	7	19.705	.006	27.987	.000	0
	2	15	61.929	.000	52.084	.000	0
	3	9	22.365	.008	20.432	.015	0

I. The first row (k=1) indicated that when I removed the one-way effects (age and social interaction and the higher order effects (number of interactions) it would significantly affect the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicated whether removing the two-way interactions (age and SI) and higher–order effect (age and SI) would affect the model. The results indicated that removing these interactions had no detrimental effect on the model.

III. The final row (k=3) tested whether removing the three-way effects (age, social interaction and family structure) and higher-order-effects would have significantly affected the fit of the model. This was also significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way effects) had a significant detrimental effect on the model. The answer was yes. If the main effects of age, social interaction and family structure from the model were removed, it would significantly affect the fit of the model. These variables were significant predictors of data.

II. The second row (k-2) tested whether removing the two-way interactions would affect the model.

III. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than 0.05. This indicated that removal of the said components would not affect how well the model fitted the data.

The results of this analysis were non-significant, indicating that the log-linear model was a good fit of the data. However, the results of the hypothesis on factor 4 and learners' age was highly significant. The next two tables illustrated the results concerning factor 5.

Table 26: Relationship (partial association) between learners' age, Unusual Behaviour (UB) and family structure

Effect	Df	Partial Chi-Square	Sig.	Number of Iterations
Age*F5b	3	45.279	.000	2
Age*FS	9	4.760	.855	2
F5b*FS	3	.700	.873	2
Age	3	4.875	.181	2
F5b	1	7.481	.006	2
FS	3	9.706	.021	2

Key: FS= Family Structure; F5b=Unusual behaviour

Table 27 revealed that the interaction between age and unusual behaviour was significant; age and family structure were insignificant. However, one-way effects (i.e. unusual behaviour and family structure) were all significant. I could not remove them because it would have seriously affected the model.

My research hypothesis was about whether the variables of age, unusual behaviour and family structure were related. The connection between learners' age and unusual behaviour had been confirmed. From **APPENDIX Z12** to Table 27, I concluded that there was an association between the variable of age and Unusual Behaviour, but the relationship between family structure and age had not been confirmed. What was the extent of the interaction between these two variables? Table 28 illustrated the answer to this question.

Table 27: K-Way and higher order effects on learners' age, Unusual Behaviour (UB) and family structure

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	31	101.054	.000	102.830	.000	0
	2	24	78.992	.000	73.604	.000	2
	3	9	27.092	.001	24.774	.003	3
K-way Effects[b]	1	7	22.062	.002	29.227	.000	0
	2	15	51.900	.000	48.829	.000	0
	3	9	27.092	.001	24.774	.003	0

I. The first row (k=1) indicated to me that when I removed the one-way effects (age and unusual Behaviour and the higher order effects (number of interactions), it would significantly affect the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicated to me whether removing the two-way interactions (age and unusual behaviour) and higher-order effect (age and unusual behaviour) would affect the model. The results indicated that removing those interactions had no detrimental effect on the model.

III. The final row (k=3) tested whether removing the three-way effects (age, unusual behaviour problems and family structure) and higher-order-effects would have significantly affected the fit of the model. This was also significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way unusual behaviour. If I removed the main effects of age, unusual behaviour and family structure from the model, it would have significantly affected the fit of the model. These variables were significant predictors of data.

II. The second row (k-2) tested whether removing the two-way interactions would affect the model.

III. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than 0.05. This indicated that removal of the said components would not affect how well the model fitted the data.

The results of this analysis were non-significant, indicating that the log-line was highly significant, meaning that the variables of learners' unusual behaviour and age were highly associated. Tables 29-31 illustrated the results for factor 6.

Table 28: Table 5.22 FACTOR 6: Relationship (partial association) between learners' age, Interpersonal Relations (IR) and family structure

Effect	Df	Partial Chi-Square	Sig.	Number of Iterations
Age*F6b	3	9.884	.020	2
Age*FS	9	3.989	.912	2
F6b*FS	3	13.334	.004	2
Age	3	4.875	.181	2
F6b	1	60.871	.000	2
FS	3	9.706	.021	2

Key: FS= Family Structure; F5b=Unusual behaviour

Table 29 revealed that the interactions between age and interpersonal relations and family structure were all significant. However, one-way effects (i.e. the main effects of interpersonal relations and family structure) were also significant. I could not remove them because it would have seriously affected the model.

My research hypothesis was that the variables of age and interpersonal relations across different family structure were associated. The connection between learner's age and unusual behaviour across different family structures had been confirmed. The results showed that there was an association between these three variables and learners' age, and their family structures were influential with regard to interpersonal relations. The results also showed that learners from extended families (7.8%), followed by polygamous (4.8%), then 3% from nuclear families, showed more interpersonal problems than those who were from single parent, divorce, child headed and grand parenting families. From **APPENDIX Z13** and Table 29, I confirmed that there was an association between the variable of age and interpersonal relations and also for the variables of

interpersonal relations and family structure. What was the extent of the interaction between these variables? Table 30 illustrated the answer to this question.

Table 29: Way and higher order effects on learners' age, Interpersonal Relations (IR) and family structure

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	31	111.061	.000	116.794	.000	0
	2	24	35.609	.060	40.419	.019	2
	3	9	5.700	.770	5.275	.810	4
K-way Effects[b]	1	7	75.452	.000	76.375	.000	0
	2	15	29.909	.012	35.144	.002	0
	3	9	5.700	.770	5.275	.810	0

I. The first row (k=1) indicated to me that when I removed the one-way effects (age and interpersonal relations), and the higher order effects (number of interactions), it would significantly affect the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicated to me whether removing the two-way interactions (age and interpersonal relations) and higher-order effects (age and interpersonal relations), would affect the model. The results indicated that removing these interactions had no detrimental effect on the model.

III. The final row (k=3) tested whether removing the three-way effects (age, interpersonal relations and family structure) and higher-order effects would significantly affect the fit of the model. This was also significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way effects) had a significant detrimental effect on the model. The answer was yes. If I removed the main effects of age, interpersonal relations and family structure from the model, it would have significantly affected the fit of the model. These variables were significant predictors of data.

II. The second row (k-2) tested whether removing the two-way interactions would affect the model.

III. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than the 0.05. This indicated that removal of the said components would not affect how well the model fitted the data.

The results of this analysis were non-significant, indicating that the log-linear model was a good fit of the data. In connection with the research hypothesis, the results were significant. The implication was that learners' social interaction was associated with their age and family structures. The next two tables presented the results for factor 7.

Table 30: FACTOR 7: Relationship (partial association) between learners' age, Social Withdrawal (SW) and family structure

Effect	Df	Partial Chi-Square	Sig.	Number of Iterations
Age*F7b	3	9.259	.026	2
Age*FS	9	4.552	.871	2
F7b*FS	3	3.935	.269	2
Age	3	4.875	.181	2
F7b	1	78.455	.000	2
FS	3	9.706	.021	2

Key: FS= Family Structure; F5b=Social Withdrawal

Table 31 revealed that the interaction between age and social withdrawal were significant, whereas between age and family structure were all insignificant. However, one-way effects (i.e. the main effects of social withdrawal and family structure) were all significant. I could not remove them because it would have seriously affected the model.

My research hypothesis was that factor 7 (Social Withdrawal) was associated with the variables of learners' age across different family structures. The connection between learners' age and social withdrawal had been confirmed. However, statistically insignificant results were found between Social Withdrawal family structure. From **APPENDIX Z 24** and Table 31, I confirmed that there was an association between the variable of age and Social Withdrawal. What was the extent interaction between these three variables? Table 32 illustrated the answer to this question.

Table 31: K-Way and higher order effects on age, Social Withdrawal (SW) and family structure

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	31	122.155	.000	113.303	.000	0
	2	24	29.119	.216	27.999	.260	2
	3	9	9.796	.367	8.766	.459	3
K-way Effects[b]	1	7	93.036	.000	85.304	.000	0
	2	15	19.323	.199	19.232	.203	0
	3	9	9.796	.367	8.766	.459	0

I. The first row (k=1) indicated that when I remove the one-way effects (age and social withdrawal) and the higher order effects (number of interactions), it would significantly affect the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicated whether removing the two-way interactions (age and social withdrawal) and higher-order effect (age and social withdrawal) would affect the model. The results indicated that removing these interactions had no detrimental effect on the model.

III. The final row (k=3) tested whether removing the three-way effects (age, social withdrawal problems and family structure) and higher-order-effects would significantly affect the fit of the model. This was also not significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way effects) had a significant detrimental effect on the model. The answer was yes. If I removed the main effects of age, social withdrawal and family structure from the model, it would have significantly affected the fit of the model. These variables were significant predictors of data.

II. The second row (k-2) tested whether removing the two-way interactions would affect the model.

III. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than 0.05. This indicated that removal of the said components would not have affected how well the model fitted the data.

The results of this analysis were non-significant, indicating that the log-linear model was a good fit of the data. The research hypothesis had been confirmed. It was concluded that learners' social interaction was based on learners' age. The results on factor 8 were presented in Tables 33 to 34**.**

Table 32: FACTOR 8: Relationship (partial association) between the variable age, Emotional Distress (ED) and family structure

Effect	Df	Partial Chi-Square	Sig.	Number of Iterations
Age*F8b	3	17.932	.000	2
Age*FS	9	4.930	.840	2
F8b*FS	3	9.088	.028	2
Age	3	4.875	.181	2
F8b	1	13.575	.000	2
FS	3	9.706	.021	2

Key: FS=Family structure; F8b= Emotional distress

Table 33 showed that the interaction between age and emotional distress was significant, while the interaction between Emotional Distress and family structure was not significant. The one-way effects (i.e. the main effects of emotional distress and family structure) were all significant. I could not remove them because it would have seriously affected the model.

My research hypothesis was that the variables of age and emotional distresses across different family structure were associated. The connection between learners' age and Emotional Distress across different family structures had been confirmed. From **APPENDIX Z15** and Table 33, I confirmed that there was an association between the variable of age and Emotional Distress across different family structures. How much was the extent of the interaction among those three variables. Table 34 illustrated the answer to that question.

Table 33: K-Way and higher order effects on learners' age, Emotional Distress (ED) and family structure

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	31	73.196	.000	76.842	.000	0
	2	24	45.040	.006	43.041	.010	2
	3	9	12.269	.199	11.527	.241	3
K-way Effects[b]	1	7	28.156	.000	33.801	.000	0
	2	15	32.770	.005	31.514	.007	0
	3	9	12.269	.199	11.527	.241	0

I. The first row (k=1) indicated that when I removed the one-way effects (age and emotional distress), and the higher order effects (number of interactions), it would significantly affect the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicated to me whether removing the two-way interactions (age and emotional distress and higher-order effect (age and emotional distress would affect the model. The results indicated that removing these interactions had no detrimental effect on the model.

III. The final row (k=3) tested whether removing the three-way effects (age, emotional distress problems and family structure) and higher-order-effects would significantly affect the fit of the model. This was also not significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way effects) had a significant detrimental effect on the model. The answer was yes. If I removed the main effects of age, emotional distress and family structure from the model, it would have significantly affected the fit of the model. These variables were significant predictors of data.

II. The second row (k-2) tested whether removing the two-way interactions would affect the model.

III. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than 0.05. This indicated that removal of the said components would not have affected how well the model fitted the data.

The results of the analysis were non-significant, indicating that the log-linear model was a good fit of the data. On the other hand, the results on research hypothesis were highly significant. The next two tables presented the results for Factor 9.

Table 34: Relationship (partial association) between learners' age, Physical Aggression (PA) and family structure

Effect	Df	Partial Chi-Square	Sig.	Number of Iterations
Age*F9b	3	24.220	.000	2
Age*FS	9	4.775	.854	2
F9b*FS	3	3.182	.364	2
Age	3	4.875	.181	2
F9b	1	10.295	.001	2
FS	3	9.706	.021	2

Key: FS= Family Structure; F9b=Physical Aggression

Table 35 reflected that the interaction between age and physical aggression was significant, whereas between Physical Aggression and family structure was all insignificant. However, one-way effects (i.e. the main effects of Physical Aggression and age) were all significant. I could not remove them because it would have seriously affected the model.

The research hypothesis was that the variables of age, physical aggression was associated with family structure. The connection between learner's age and physical aggression structures had been confirmed. However, family structure was not related to age and family structure. From **APPENDIX Z16** and Table 35, I confirmed that there was an association between the variable of age, physical aggression. What was the extent interaction between these two variables? Table 36 illustrated the answer to this question.

Table 35: K-Way and higher order effects on learner's age, Physical Aggression (PA), family structure

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	31	77.078	.000	72.964	.000	0
	2	24	52.202	.001	46.111	.004	2
	3	9	18.893	.026	16.343	.060	3
K-way Effects[b]	1	7	24.876	.001	26.853	.000	0
	2	15	33.309	.004	29.768	.013	0
	3	9	18.893	.026	16.343	.060	0

I. The first row (k=1) indicated that when I removed the one-way effects (age and Physical aggression) and the higher order effects (number of interactions) would significantly affect the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicated whether removing the two-way interactions (age and physical aggression and higher-order effect (age and physical aggression) it would affect the model. The results indicated that removing these interactions had no detrimental effect on the model.

III. The final row (k=3) was testing whether removing the three-way effects (age, physical aggression and family structure) and higher-order effects would have significantly affected the fit of the model. This was also significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way effects) had a significant detrimental effect on the model. The answer was yes. If I removed the main effects of age, Physical Aggression and family structure from the model, it would significantly affect the fit of the model. These variables were significant predictors of data.

II. The second row (k-2) tested whether removing the two-way interactions would affect the model.

III. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than 0.05. This indicated that removal of the said components would not affect how well the model fitted the data.

The results of this analysis were non-significant, indicating that the log-linear model was a good fit of the data, whereas the results of the calculated chi-square value were significant. Since the hypothesis had been confirmed, I surmised that there was an association among learners' physical aggression, age and family structure.

Table 36: A summary of the Goodness-of-fits tests on all 9 factors

ABREV	FACTORS*	STATISTICAL TESTS	CHI-SQUARE	DF	SIG.
		Likelihood Ratio	**20.967**	**21**	**.461**
CP	1	Pearson	20.046	21	.465
AH	2	Likelihood Ratio	9.562	18	.945
		Pearson	8.981	18	.960
HC	3	Likelihood Ratio	.000	0	.000
		Pearson	.000	0	.000
SI	4	Likelihood Ratio	.000	0	.000
		Pearson	.000	0	.000
UB	5	Likelihood Ratio	.000	0	.000
		Pearson	.000	0	.000
IR	6	Likelihood Ratio	9.689	18	.942
		Pearson	9.249	18	.954
SW	7	Likelihood Ratio	19.072	21	.581
		Pearson	17.437	21	.684
ED	8	Likelihood Ratio	17.199	18	.509
		Pearson	16.229	18	.577
PA	9	Likelihood Ratio	.000	0	.000
		Pearson	.000	0	.000

*=Key: F1= Conduct Problems; F2= Academic habits; F3= Health Concern; F4= Social Interaction; F5= Unusual Behaviour; F6= Interpersonal relations; F7= Social Withdrawal; F8= Emotional Distress, F9= Physical Aggression

The two statistics used to test the goodness-of-fit of the final model were the Likelihood ratio and Pearson chi-square. The likelihood was the test more commonly used because it had the advantage of being linear. In this context, these two statistics tests were used. The relationship between the observed and expected frequencies (Table 37) in the first set of factors, namely 1, 2, 6, 7, & 8 are not significant, whilst in the second set of factors 3, 4, 5 & 9 were significant. If the model of analysis was a goodness-fit of the data, then the observed and the expected frequencies should have been very similar in i.e. not significant. Table 37 revealed that there were insignificant results for the first set of factors.

At each step, the effect with the largest significance level for the Likelihood Ratio Change was deleted, provided the significance level was larger than .050.Statistics were displayed for the best model at each step after step 0 in 9 factors. For 'Deleted Effect', this was the change in the Chi-Square after the effect was deleted from the model

FREQUENCY DISTRIBUTION IN THE UNSATURATED MODEL

The frequency distribution in the unsaturated model on age and factors 1-9 across different family structures were presented as residuals (this was the difference between the observed and the expected frequencies) in **APPENDICES F-O**.

There was an association between the learners' gender and school-based problems across different family structure.

The hypothesis that learners' gender was associated with family structure and school-based problems had been tested by using log-linear analysis. Factors 1-9

and learners' age across different family structure were presented in Tables 38-56. There was therefore a redundancy in the way these tables were presented.

The next two tables illustrated the results of Factor 1 and variables of learners' grades and family structure.

Table 37: Relationship (partial association) between learners' gender, Conduct Disorder (CD) and family structure

Effect	Df	Partial Chi-Square	Sig.	Number of Iterations
Gender*F1b	1	2.998	.083	2
Gender*FS	2	3.624	.305	2
F1b*FS	3	.790	.852	2
Gender	1	7.481	.006	2
F1b	2	21.571	.000	2
FS	3	9.706	.021	2

Key: FS = Family Structure; F1b= Conduct disorder

Table 38 revealed that the interaction between gender and conduct, and conduct disorder and family structure were all insignificant. However, one-way effects (i.e. the main effects of gender, conduct and family structure) were all significant. I could not remove them because it would have seriously affected the model.

My research hypothesis was that is the variables of gender, conduct were associated with family structure. The connection between learners gender and conduct disorder across different family structures had not been confirmed. This implied that learners may have conducted problems irrespective of their family

structures. From **APPENDIX Z16** and Table 5.32, I disputed that there was an association between the variable of gender, conduct disorder and family structure. What was the extent repelling between these three variables? Table 5.32 displayed the answer to this question.

Table 38: K-Way and higher order effects on learners' gender and CP

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	15	48.328	.000	59.097	.000	0
	2	10	9.570	.479	9.311	.503	2
	3	3	2.105	.551	2.108	.550	3
K-way Effects[b]	1	5	38.758	.000	49.786	.000	0
	2	7	7.465	.382	7.203	.408	0
	3	3	2.105	.551	2.108	.550	0

I. The first row (k=1) indicated to me that when I removed the one-way effects (gender and conduct) and the higher order effects (number of interactions), it would significantly affect the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicated to me whether removing the two-way interactions (gender and conduct) and higher-order effect (gender and conduct) would affect the model. The results indicated that removing these interactions had no detrimental effect on the model.

III. The final row (k=3) tested whether removing the three-way effects (gender, conduct disorder and family structure) and higher-order effects would significantly affect the fit of the model. This was also not significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way effects) had a significant detrimental effect on the model. The answer was yes. If I removed the main effects of gender, conduct and family structure from the model, it would significantly affect the fit of the model. These variables were significant predictors of data.
II. The second row (k-2) tested whether removing the two-way interactions would affect the model.
III. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than 0.05. This indicated that removal of the said components would not affect how well the model fitted the data.

The results of this analysis were non-significant, indicating that the log-linear model was a good fit of the data.

The results of the hypothesis in factor 1 revealed that there was no association among the variables of conduct problems and learners' gender across different family structures. The results for factor 2 were presented in the next two tables.

Table 39: Relationship (partial association) between gender, Academic Habit (AH) and family structure

Effect	Df	Partial Chi-Square	Sig.	Number of Iterations
Gender*F2b	1	.254	.614	2
Gender*FS	3	2.827	.419	2
F2b*FS	3	15.146	.002	2
Gender	1	7.481	.006	2
F2b	1	5.124	.024	2
FS	3	9.706	.021	2

Key: FS = Family Structure; F2b= Academic Habit

Table 40 revealed that the interaction between gender and academic habits were all insignificant, whereas academic habits and family structure were significant. However one-way effects (i.e. the main effects of gender, AH and family structure) were all insignificant. I could not remove them because it would have seriously affected the model.

My research hypothesis was that the variables of gender and academic habit were associated with family structure. The connection between learners gender, academic habit across different family structures had been confirmed. This meant learners from different family structures reacted differently on academic problems, whereas there were no difference on male and female learners in reaction to academic problems. **APPENDIX Z19** and Table 40 confirmed that there was an association between the variable of academic habit and family

structure. What was the extent interaction between these two variables? The answer to this question was presented in Table 41.

Table 40: K-Way and higher order effects on learners' gender, Academic Habits (AH) and family structure

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	15	48.283	.000	59.873	.000	0
	2	10	25.973	.004	25.355	.005	2
	3	3	6.099	.107	6.150	.105	3
K-way Effects[b]	1	5	22.311	.000	34.518	.000	0
	2	7	19.874	.006	19.205	.008	0
	3	3	6.099	.107	6.150	.105	0

I. The first row (k=1) indicated to me that when I removed the one-way effects (gender and AH) and the higher order effects (number of interactions) would significantly affect the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicated to me whether removing the two-way interactions (gender and AH) and higher-order effect gender and AH) it would affect the model. The results indicated that removing these interactions had no detrimental effect on the model.

III. The final row (k=3) was testing whether removing the three-way effects (gender, AH and family structure) and higher-order-effects would significantly affect the fit of the model. This was also not significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way effects) had a significant detrimental effect on the model. The answer was yes. If I removed the main effects of gender, AH and family structure from the model, it would have significantly affected the fit of the model. These variables were significant predictors of data.

II. The second row (k-2) tested whether removing the two-way interactions would affect the model.

III. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than 0.05. This indicated that removal of the said components would not have affected how well the model fitted the data.

The results of this analysis were non-significant, indicating that the log-linear model was a good fit of the data.

To conclude, the results indicated strong association betweenFactor2and the variables of family structure. The results forFactor3 were shown in the next three tables.

Table 41: FACTOR 3: Relationship (partial association) between gender, Health concern (HC) and family structure

Effect	Df	Partial Chi-Square	Sig.	Number of Iterations
Gender*F3b	1	6.126	.013	2
Gender*FS	3	2.994	.393	2
F3b*FS	3	.667	.881	2
Gender	1	7.481	.006	2
F3b	1	.297	.586	2
FS	3	9.706	.021	2

Key: FS = Family Structure; F3b= Health concern

Table 42 revealed that the interaction between gender and HC was significant whilst gender and family structure were all insignificant. However one-way effects (i.e. the main effects of gender and FS) were all significant. I could not remove them because it would have seriously affected the model.

My research hypothesis was that the variables of gender, health concern were associated with family structure. The connection between learners' gender and health concern had been confirmed. From **APPENDIX Z19** and Table 42, I confirmed that there was an association between the variable of gender and health concern. What was the extent interaction between these two variables? Table 43 illustrated the answer to this question.

Table 42: K-Way and higher order effects on learners' gender, Health Concern (HC) and family structure

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	15	29.410	.014	29.812	.013	0
	2	10	11.925	.290	12.677	.242	2
	3	3	.826	.843	.818	.845	3
K-way Effects[b]	1	5	17.484	.004	17.135	.004	0
	2	7	11.100	.134	11.859	.105	0
	3	3	.826	.843	.818	.845	0

I. The first row (k=1) indicated to me that when I removed the one-way effects of gender and HC) and the higher order effects (number of interactions) it would significantly affect the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicated to me whether removing the two-way interactions (gender and HC) and higher-order effect (gender and HC) would affect the model. The results indicated that removing these interactions had no detrimental effect on the model.

III. The final row (k=3) tested whether removing the three-way effects (gender and HC and family structure) and higher-order effects would significantly affect the fit of the model. This was also not significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way effects) had a significant detrimental effect on the model. The answer was yes. If I removed the main effects of gender and HC and family structure from the model, it would significantly have affected the fit of the model. These variables were significant predictors of data.

II. The second row (k-2) tested whether removing the two-way interactions would have affected the model.

III. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than 0.05. This indicated that removal of the said components would not have affected how well the model fitted the data.

The result of this analysis was very non-significant, indicating that the log-linear model was a good fit of the data. I could conclude that the results on factor 3 were highly significant. This indicated that there was a strong association among the variables of health concern and learners' gender. The results for factor 4 were shown in the next two tables.

Table 43: FACTOR 4: Relationship (partial association) between gender, Social Interaction (SI) and family structure

Effect	Df	Partial Chi-Square	Sig.	Number of Iterations
Gender*F4b	1	3.943	.047	2
Gender*FS	3	4.039	.257	2
F4b*FS	3	1.234	.745	2
Gender	1	7.481	.006	2
F4b	1	5.124	.024	2
FS	3	9.706	.021	2

Key: FS = Family Structure; F4b= Social Interaction

Table 44 revealed that the interaction between gender and SI was significant, while gender and family structure were insignificant. However one-way effects (i.e. the main effects of gender, SI and family structure) were all significant. I could not remove them because it would have seriously affected the model.

The research hypothesis was that the variables of gender and SI were associated with family structure. The connection between learners' gender and social interaction had been confirmed. From **APPENDIX Z 20** and Tables 44, I confirmed that there was an association between the variable of gender and SI. It was therefore evident that there was no difference in the way learners from different families interacted. What was the extent interaction between these two variables? Table 45 illustrated the answer to this question.

Table 44: K-Way and higher order effects on learners' gender, Social Withdrawal (SW) and family structure)

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	15	33.567	.004	34.273	.003	0
	2		11.256	.338	10.676	.383	2
	3	3	2.818	.421	2.853	.415	3
K-way Effects[b]	1	5	22.311	.000	23.597	.000	0
	2	7	8.438	.296	7.823	.348	0
	3	3	2.818	.421	2.853	.415	0

I. The first row (k=1) indicated to me that when I removed the one-way effects (gender and SI) and the higher order effects (number of interactions) would significantly affect the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicates to me whether removing the two-way interaction would affect the model. The results indicated that removing these interactions had no detrimental effect on the model.

III. The final row (k=3) was testing whether removing the three-way effects (gender, SI and family structure) and higher-order-effects would significantly affect the fit of the model. This was also not significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way effects) had a significant detrimental effect on the model. The answer was

yes. If I removed the main effects of gender, social interaction and family structure from the model, it would have significantly affected the fit of the model. These variables were significant predictors of data.

II. The second row (k-2) tested whether removing the two-way interactions would affect the model.

III. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than 0.05. This indicated that removal of the said components would not affect how well the model fitted the data.

The results of this analysis were non-significant, indicating that the log-linear model was a good fit of the data. The research hypothesis had been confirmed and the results were highly significant. The next two tables presented the results for factor 5.

Table 45: FACTOR 5: Relationship (partial association) between gender, Unusual Behaviour (UB) and family structure

Effect	Df	Partial Chi-Square	Sig.	Number of Iterations
Gender*F5b	1	2.558	.110	2
Gender*FS	3	4.164	.244	2
F5b*FS	3	1.794	.616	2
Gender	1	7.481	.006	2
F5b	1	7.481	.006	2
FS	3	9.706	.021	2

Key: FS = Family Structure; F5b= Unusual Behaviour

Table 46 revealed that the interaction between gender and UB, and gender and family structure were all insignificant. However, one-way effects (i.e. the main effects of gender, UB and FS) were all significant. I could not remove them because it would have seriously affected the model.

The research hypothesis was that the variables of gender and UB across different family structures are associated. The connection between learners' gender and UB across different family structures had not been confirmed. From **APPENDIX Z22 and APPENDIX 46**, I confirmed that there was no association between the variable of gender, UB and family structure. This entailed that learners may have manifested unusual behaviour irrespective of their age and family structure. How much was the extent of the disconnection among these three variables? Table 47 illustrated the answer to this question.

Table 46: K-Way and higher order effects on learners' gender, Unusual Behaviour (UB) and family structure

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	15	37.776	.001	43.194	.000	0
	2	10	13.108	.218	12.937	.227	2
	3	3	5.620	.132	5.610	.132	3
K-way Effects[b]	1	5	24.668	.000	30.256	.000	0
	2	7	7.488	.380	7.328	.396	0
	3	3	5.620	.132	5.610	.132	0

I. The first row (k=1) indicated that when I removed the one-way effects (gender and UB) and the higher order effects (number of interactions) will significantly affect the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicated whether removing the two-way interactions (gender and UB) and higher-order effect (gender and UB) it would affect the model. The results indicated that removing these interactions had no detrimental effect on the model.

III. The final row (k=3) tested whether removing the three-way effects (gender, UB and family structure) and higher-order-effects would significantly affect the fit of the model. This was also not significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way effects) had a significant detrimental effect on the model. The answer was yes. If I removed the main effects of gender, UB and family structure from the model, it would significantly affect the fit of the model. These variables were significant predictors of data.
II. The second row (k-2) tested whether removing the two-way interactions would affect the model.
III. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than 0.05. This indicated that removal of the said components would not affect how well the model fitted the data.

The result of this analysis was non-significant, indicating that the log-linear model was a good fit of the data. The research hypothesis had not been confirmed and the results were insignificant. It was therefore concluded that unusual behaviour (factor 5) was found not to be associated with learners' age across different family structures. Tables 48-49 illustrated the results for factor 6.

Table 47: FACTOR 6: Relationship (partial association) between gender, Interpersonal Relations (IR) and family structure

Effect	Df	Partial Chi-Square	Sig.	Number of Iterations
Gender*F6b	1	.211	.646	2
Gender*FS	3	3.837	.280	2
F6b*FS	3	14.872	.002	2
Gender	1	7.481	.006	2
F6b	1	60.871	.000	2
FS	3	9.706	.021	2

Key: FS = Family Structure; F6b= Interpersonal relations

Table 48 revealed that the interaction between gender and Interpersonal relations was not significant, whereas interpersonal relations and family structure were significant. However, one-way effects (i.e. the main effects of gender, interpersonal relations and family structure) were all significant. I could not remove them because it would have seriously affected the model.

The research hypothesis was that the variables of gender, interpersonal relations were associated with family structure. The connection between learners' interpersonal relations and family structures had been confirmed. From **APPENDIX Z23** and Table 48 I confirmed that there was an association between the variable of interpersonal relations and family structure. What was the extent interaction between these two variables? Table 49 attempted to find an answer to that question.

Table 48: K-Way and higher order effects on gender, Interpersonal Relations and family structure

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	15	98.632	.000	109.909	.000	0
	2	10	20.574	.024	21.836	.016	2
	3	3	2.028	.567	2.017	.569	3
K-way Effects[b]	1	5	78.058	.000	88.073	.000	0
	2	7	18.546	.010	19.819	.006	0
	3	3	2.028	.567	2.017	.569	0

I. The first row (k=1) indicated that when I removed the one-way effects (gender and IR) and the higher order effects (number of interactions) will significantly affect the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicated whether removing the two-way interactions (gender and IR) and higher-order effect (gender and IR) would affect the model. The results indicated that removing these interactions had no detrimental effect on the model.

III. The final row (k=3) tested whether removing the three-way effects (gender, IR and family structure) and higher-order-effects would significantly affects the fit of the model. This was also not significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way effects) had a significant detrimental effect on the model. The answer was yes. If I removed the main effects of gender, IR and family structure from

the model, it would have significantly affected the fit of the model. These variables were significant predictors of data.

II. The second row (k-2) tested whether removing the two-way interactions would have affected the model.

III. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than 0.05. This indicated that removal of the said components would not have affected how well the model fitted the data.

The result of this analysis was non-significant, indicating that the log-linear model was a good fit of the data and were found to be significant. However, the results on research hypothesis tested on factor6were highly significant. The next two tables presented the results for Factor 7.

Table 49: FACTOR 7: Relationship (partial association) between learners' gender, Social Withdrawal (SW) and family structure

Effect	Df	Partial Chi-Square	Sig.	Number of Iterations
Gender*F7b	1	.495	.482	2
Gender*FS	3	3.977	.264	2
F7b*FS	3	5.050	.168	2
Gender	1	7.481	.006	2
F7b	1	78.455	.000	2
FS	3	9.706	.021	2

Key: FS= Family Structure; F7b= Social Withdrawal

Table 50 revealed that the interaction between gender and SW, and gender and family structure were all insignificant. However one-way effects (i.e. the main effects of gender, SW and family structure) were all significant. I could not remove them because it would have seriously affected the model.

My research hypothesis was that was the variables of gender and social withdrawal were associated with family structure. The connection between learners' gender and social withdrawal across different family structures had not been confirmed. From **APPENDIX Z24** and Table 50, I disputed that there was an association between the variable of gender, social withdrawal and family structure. I could conclude that there was no relationship between social withdrawal and learners' gender across different family structure. What was the extent interaction between those three variables? Table 51 attempted to find an answer to that question.

Table 50: K-Way and higher order effects on learners' gender, Social Withdrawal (SW) and family structure

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	15	111.397	.000	111.655	.000	0
	2	10	15.755	.107	16.815	.079	2
	3	3	6.886	.076	6.229	.101	3
K-way Effects[b]	1	5	95.642	.000	94.840	.000	0
	2	7	8.869	.262	10.586	.158	0
	3	3	6.886	.076	6.229	.101	0

I. The first row (k=1) indicated that when I removed the one-way effects (gender and SW) and the higher order effects (number of interactions) will significantly affected the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicated whether removing the two-way interactions (gender and SW) and higher-order effect (gender and SW) it will affected the model. The results indicated that removing these interactions had no detrimental effect on the model.

III. The final row (k=3) was testing whether removing the three-way effects (gender and SW and family structure) and higher-order-effects would significantly affect the fit of the model. This was also not significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way effects) had a significant detrimental effect on the model. The answer was yes. If I removed the main effects of gender, SW and family structure from the model, it would have significantly affected the fit of the model. These variables were significant predictors of data.

II. The second row (k-2) tested whether removing the two-way interactions would affect the model.

III. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than 0.05. This indicated that removal of the said components would not have affected how well the model fitted the data.

The results of this analysis were non-significant, indicating that the log-linear model was a good fit of the data. On the other hand, the results on the research hypothesis in factor 7 were significant. The next two tables presented the results of factor 8.

Table 51: FACTOR 8: Relationship (partial association) between learners' gender, Emotional Distress (ED) and family structure

Effect	Df	Partial Chi-Square	Sig.	Number of Iterations
Gender*F8b	1	1.476	.224	2
Gender*FS	3	4.290	.232	2
F8b*FS	3	10.138	.017	2
Gender	1	7.481	.006	2
F8b	1	13.575	.000	2
FS	3	9.706	.021	2

Key: FS= Family Structure; F8b= Emotional Distress

Table 52 revealed that the interaction between gender and emotional distress was not significant, whereas emotional distress and family structure were all significant. However, one-way effects (i.e. the effects of gender, Emotional Distress and family structure) were all significant. I could not remove them because it would have seriously affected the model.

The research hypothesis was that the variables of learners' gender emotional distress were associated with family structure. The connection between learners' emotional distress and different family structures had been confirmed. From **APPENDIX Z25** and Table 52, I confirmed that there was an association between the variable of emotional distress and family structure. I concluded that there was an association between learners' emotional problems and family structures, however, gender was not found to be related. What was the extent of the interaction between these two variables? The answer for this question was presented in Table 53 question.

Table 52: K-Way and higher order effects on learners' gender, Emotional Distress (ED) and family structure

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	15	49.925	.000	53.473	.000	0
	2	10	19.163	.038	20.736	.023	2
	3	3	4.539	.209	4.504	.212	3
K-way Effects[b]	1	5	30.762	.000	32.736	.000	0
	2	7	14.624	.041	16.233	.023	0
	3	3	4.539	.209	4.504	.212	0

I. The first row (k=1) indicated that when I removed the one-way effects (gender and ED) and the higher order effects (number of interactions) would significantly affect the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicated whether removing the two-way interactions (gender and ED)) and higher-order effect (gender and ED) would affect the model.

III. The results indicated that removing these interactions had no detrimental effect on the model. The final row (k=3) tested whether removing the three-way effects gender, ED and family structure) and higher-order-effects would significantly affect the fit of the model. This was also not significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way effects) had a significant detrimental effect on the model. The answer was yes. If I removed the main effects of gender, ED and family structure from the model, it would significantly affect the fit of the model. These variables were significant predictors of data.

II. The second row (k-2) tested whether removing the two-way interactions would affect the model.

III. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than 0.05. This indicated that removal of the said components would not affect how well the model fitted the data.

The results of this analysis were non-significant, indicating that the log-linear model was a good fit of the data. Whereas the chi-square results were highly significant which meant research hypothesis in factor 8 had been confirmed. Tables 54 to 55 presented the results for factor 9.

Table 53: FACTOR 9: Relationship (partial association) between learners' gender, Physical Aggression (PA) and family structure

Effect	Df	Partial Chi-Square	Sig.	Number of Iterations
Gender*F9b	1	1.287	.257	2
Gender*FS	3	4.222	.238	2
F9b*FS	3	4.320	.229	2
Gender	1	7.481	.006	2
F9b	1	10.295	.001	2
FS	3	9.706	.021	2

Table 54 revealed that the interaction between gender and PA and gender, and gender and family structure were all insignificant. However, one-way effects (i.e. the main effects of gender, PA and family structure) were all significant. I could not remove them because it would have seriously affected the model.

The research hypothesis was that the variables of learners' gender and PA across different family structures were associated. The connection between learners' gender and PA across different family structure had not been confirmed. These results meant learners in schools could be aggressive irrespective of their gender and family structure. From **APPENDIX Z26** to Table 54 I disputed that there was an association between the variable of gender, physical aggression and family structure. What was the extent interaction between these three variables? Table 55 illustrated the answer to this question.

Table 54: K-Way and higher order effects on learners' gender, Physical Aggression (PA) and family structure)

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	15	36.872	.001	40.091	.000	0
	2	10	9.389	.496	9.074	.525	2
	3	3	.704	.872	.704	.872	3
K-way Effects[b]	1	5	27.482	.000	31.017	.000	0
	2	7	8.685	.276	8.371	.301	0
	3	3	.704	.872	.704	.872	0

I. The first row (k=1) indicated that when I removed the one-way effects (gender and PA) and the higher order effects (number of interactions) would significantly affect the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicated whether removing the two-way interactions (gender and PA) and higher-order effect (gender and PA) would affect the model. The results indicated that removing these interactions had no detrimental effect on the model.

III. The final row (k=3) tested whether removing the three-way effects (gender, PA and family structure) and higher-order-effects would significantly affect the fit of the model. This was also not significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way effects) had a significant detrimental effect on the model. The answer was yes. If I removed the main effects of gender, PA and family structure from the model, it would have significantly affected the fit of the model. These variables were significant predictors of data.
II. The second row (k-2) tested whether removing the two-way interactions would affect the model.
III. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than 0.05. This indicated that removal of the said components would not affect how well the model fitted the data.

The results of this analysis were non-significant, indicating that the log-linear model was a good fit of the data. The results on factor 9 were found to be highly significant, which meant there was a strong relationship between the variables of learners' grade and family structure.

Table 55 illustrated the likelihood ratio and chi-squire results in 9 factors

Table 55: A summary of Goodness-of-Fit Tests in grade and 9 factors

F	Factor	statistical test	Chi-Square	Df	Sig.
CP		Likelihood Ratio	9.570	10	.479
	1	Pearson	9.311	10	.503
AH	2	Likelihood Ratio	10.004	7	.188
		Pearson	9.890	7	.195
HC	3	Likelihood Ratio	5.143	9	.822
		Pearson	5.178	9	.819
SI	4	Likelihood Ratio	11.256	10	.338
		Pearson	10.676	10	.383
UB	5	Likelihood Ratio	13.108	10	.218
		Pearson	12.937	10	.227
IR	6	Likelihood Ratio	5.889	7	.553
		Pearson	5.640	7	.582
SW	7	Likelihood Ratio	15.755	10	.107
		Pearson	16.815	10	.079
ED	8	Likelihood Ratio	9.665	7	.208
		Pearson	9.635	7	.210
PA	9	Likelihood Ratio	9.389	10	.496
		Pearson	9.074	10	.525

*= Keys: F1= Conduct Problems; F2= Academic habits; F3= Health Concern; F4=Social Interaction; F5= Unusual Behaviour; F6= Interpersonal relations; F7= Social, Withdrawal F8= Emotional Distress, F9= Physical Aggression

The two statistics used to test the goodness-of-fit of the final model were the Likeness ratio and Pearson chi-square. The likelihood was the test more commonly used because it had the advantage of being linear. In this context, these two statistics tests were used. The relationship between the observed and expected frequencies (Table 56) was not significant. If the model of analysis was a goodness-fit of the data, then the observed and the expected frequencies should have been very similar, i.e. not significant. Table 56 revealed that there were insignificant results for the first set of factors and significant results for the second set. However, chi-square results for the hypothesis testing revealed that the results on all 9 factors were significant.

FREQUENCY DISTRIBUTION IN THE UNSATURATED MODEL

The frequency distribution in the unsaturated model on gender and factors 1-9 across different family structures were presented as residuals (this was the difference between the observed and the expected frequencies) in **APPENDICES O-W**.

There was an association between the school-based problems and the learners' educational level across different family structures

Hypothesis 2c was also tested by using Log-linear analysis. A number of various tables were generated in 9 factors and that somehow caused a redundancy in the way these tables were presented.

The following two tables illustrated the results in factor 1.

Table 56: FACTOR 1: Relationship (partial association) between learners' grade, Conduct Problems (CP) and family structure

Effect	Df	Partial Chi-Square	Sig.	Number of Iterations
Grade*F1b	3	7.672	.050	2
Grade*FS	9	31.027	.000	2
F1b*FS	3	.117	.990	2
Grade	3	38.280	.000	2
F1b	1	21.571	.000	2
FS	3	9.706	.021	2

Keys: FS = Family Structure; F1b= Conduct Problems; Grade=Educational Level

Table 57 revealed that the interaction between grade and conduct problems was significant, whereas between grade and family structure was not significant. However, one-way effects (i.e. the main effects of grade, conduct and family structure) were all significant. I could not remove them because it would seriously affect the model.

The research hypothesis was that, were the variables of grade, conduct problems across different family structures associated. The connection between learners' grade and conduct disorder had been confirmed. From **APPENDIX Z27** and Table 57, the results confirmed that there was an association between the variable of grade and conduct disorder, whereas family structure was not related.

How much was the extent interaction among these two variables? Table 58 illustrated the answer to this question.

Table 57: K-Way and higher order effects on grade, conduct problems (CP) and family structure

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	31	126.151	.000	118.733	.000	0
	2	24	56.593	.000	51.513	.001	2
	3	9	16.378	.050	13.794	.130	2
K-way Effects[b]	1	7	69.557	.000	67.221	.000	0
	2	15	40.215	.000	37.718	.001	0
	3	9	16.378	.059	13.794	.130	0

I. The first row (k=1) indicated that when I removed the one-way effects (grade and conduct) and the higher order effects (number of interactions) would significantly affect the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicated whether removing the two-way interactions (grade and conduct) and higher-order effect (grade and conduct) it would affect the model. The results indicated that removing these interactions had no detrimental effect on the model.

III. The final row (k=3) was testing whether removing the three-way effects (grade, conduct disorder and family structure) and higher-order-effects would significantly affect the fit of the model. This was also significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way effects) had a significant detrimental effect on the model. The answer was yes. If I removed the main effects of grade conduct and family structure from the model, it would have significantly affected the fit of the model. These variables were significant predictors of data.

II. The second row (k-2) tested whether removing the two-way interactions would affect the model.

III. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than 0.05. This indicated that removal of the said components would not affect how well the model fitted the data.

The results of this analysis were non-significant, indicating that the log-linear model was a good fit of the data. Over and above, a chi-square result for hypothesis testing in factor 1 was very significant, which meant there was an interaction among the variables of learners' grade and conduct problems. The next two tables presented the results in factor 2.

Table 58: FACTOR 2: Relationship (partial association) between learners' grade, Academic Habit (AH) and family structure

Effect	Df	Partial Chi-Square	Sig.	Number of Iterations
Grade*F2b	3	3.360	.339	2
Grade*FS	9	28.294	.001	2
F2b*FS	3	12.537	.006	2
Grade	3	38.280	.000	2
F2b	1	5.124	.024	2
FS	3	9.706	.021	2

Keys: FS = Family Structure; F2b= Academic Habit

Table 59 revealed that the interaction between grades and AH was not significant while AH and family structure were significant. However, one-way effects (i.e. the main effects of grade, AH and family structure) were all significant. We could not remove them because it would have seriously affected the model.

The research hypothesis was that were the variables of grade and Academic Habit across different family structures associated. The connection between learners' Academic Habit and family structures had been confirmed. From **APPENDIX Z28** and Table 59, I confirmed that there was an association between the variable of academic habit and family structure. However, grade was not linked to learners' academic problems. How much was the extent interaction among these two variables occurred? Table 60 illustrated the answer to this question.

Table 59: K-Way and higher order effects on grade, Academic Habit (AH) and family structure

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	31	110.872	.000	123.388	.000	0
	2	24	57.763	.000	56.098	.000	2
	3	9	6.707	.668	5.886	.751	3
K-way Effects[b]	1	7	53.110	.000	67.290	.000	0
	2	15	51.056	.000	50.211	.000	0
	3	9	6.707	.668	5.886	.751	0

I. The first row (k=1) indicated that when I removed the one-way effects (grade and AH) and the higher-order effects (number of interactions) would significantly affect the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicated whether removing the two-way interactions (grade and AH) and higher-order effect grade and AH) it would affect the model. The results indicated that removing these interactions had no detrimental effect on the model.

III. The final row (k=3) was testing whether removing the three-way effects (grade, AH and family structure) and higher-order-effects would significantly affects the fit of the model. This was also not significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way effects) had a significant detrimental effect on the model. The answer was yes. If I removed the main effects of grade, AH and family structure from the model, it would significantly affect the fit of the model. These variables were significant predictors of data.
    I. The second row (k-2) tested whether removing the two-way interactions would affect the model.
    II. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than 0.05. This indicated that removal of the said components would not affect how well the model fitted the data.

The results of this analysis were non-significant, indicating that the log-linear model was a good fit of the data. On the other hand, the hypothesis tested was very significant. Tables 61 to 62 illustrated results for factor 3.

Table 60: FACTOR 3: Relationship (partial association) between learners' grade, Health Concern (HC) and family structure

Effect	Df	Partial Chi-Square	Sig.	Number of Iterations
Grade*F3b	3	4.142	.247	2
Grade*FS	9	31.059	.000	2
F3b*Grade	3	.656	.883	2
Grade	3	38.280	.000	2
F3b	1	.297	.586	2
FS	3	9.706	.021	2

Keys: FS = Family Structure; F3b= Health concern

Table 61 revealed that the interaction between grade and HC, and grade and family structure were all insignificant. However, one-way effects (i.e. the main effects of grade, health concern and family structure) were all significant. We could not remove them because it would have seriously affected the model.

The research hypothesis was that, were the variables of grade and HC across different family structures associated. The connection between learners' grade and HC across different family structures had not been confirmed. From **APPENDIX Z29** and Table 61 I confirmed that there was no association between the variable of grade, HC and family structure. The results of the analysis meant learners state of health were not dependent on their grade and family structure. What was the extent interaction between these three variables? Table 62 illustrated the answer to this question.

Table 61: K-Way and higher order effects on grade, Health Concern (HC) and family structure

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	31	103.150	.000	96.624	.000	0
	2	24	54.867	.000	48.940	.002	2
	3	9	17.675	.039	15.450	.079	3
K-way Effects[b]	1	7	48.283	.000	47.685	.000	0
	2	15	37.192	.001	33.489	.004	0
	3	9	17.675	.039	15.450	.079	0

I. The first row (k=1) indicated that when I removed the one-way effects (grade and HC) and the higher order effects (number of interactions) would significantly affect the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicated whether removing the two-way interactions (grade and HC) and higher-order effect (grade and HC) it would affect the model. The results indicated that removing these interactions had no detrimental effect on the model.

III. The final row (k=3) was testing whether removing the three-way effects grade, HC and family structure) and higher-order-effects would significantly affect the fit of the model. This was also significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way effects) has a significant detrimental on the model. The answer was yes. If I removed the main effects of grade, HC and family structure from the model, it would significantly affect the fit of the model. These variables were significant predictors of data.

II. The second row (k-2) tested whether removing the two-way interactions would affect the model.

III. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than 0.05. This indicated that removal of the said components would not affect how well the model fitted the data.

The results of this analysis were non-significant, indicating that the log-linear model was a good fit of the data. However, the results obtained from log-linear analysis refuted the research hypothesis. Generally, the results indicated that learners' grade and family structure were not influential on factor4.

Table 62: FACTOR 4: Relationship (partial association) between learners' grade, Social Interaction (SI) and family structures

Effect	Df	Partial Chi-Square	Sig.	Number of Iterations
Grade*F4b	3	10.996	.012	2
Grade*FS	9	31.088	.000	2
F4b*FS	3	.207	.976	2
Grade	3	38.280	.000	2
F4b	1	5.124	.024	2
FS	3	9.706	.021	2

Keys: FS = Family Structure; F4b= Social Interaction

Table 63 revealed that the interaction between grade and Social Interaction was significant, whereas grade and family structure were insignificant. However, one-way effects (i.e. the main effects of grade, SI and family structure) were all significant. I could not remove them because it would have seriously affected the model.

The research hypothesis was that were the variables of grade and SI across different family structures associated. The connection between learners' grade and SI had been confirmed. From **APPENDIX Z30** and Table 63, I confirmed that there was an association between the variable grade and Social Interaction. The results also indicated that family structure was not related to learners' social interaction. How much was the extent interaction among these three variables. Table 64 illustrated the answer to this question.

Table 63: K-Way and higher order effects on learners' grade, Social Interaction (SI) and family structure

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	31	102.493	.000	114.467	.000	0
	2	24	49.384	.002	47.951	.003	2
	3	9	5.816	.758	5.440	.794	4
K-way Effects[b]	1	7	53.110	.000	66.516	.000	0
	2	15	43.567	.000	42.511	.000	0
	3	9	5.816	.758	5.440	.794	0

I. The first row (k=1) indicated that when I removed the one-way effects (grade and SI,) and the higher order effects (number of interactions) would significantly affect the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicated whether removing the two-way interactions (age and conduct) and higher-order effect (grade and SI,) it would affect the model. The results indicated that removing those interactions had no detrimental effect on the model.

III. The final row (k=3) was testing whether removing the three-way effects (grade, SI and family structure) and higher-order-effects would significantly affected the fit of the model. This was also not significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way effects) had a significant detrimental effect on the model. The answer was yes. If I removed the main effects of grade, SI and family structure from the model, it would have significantly affected the fit of the model. These variables were significant predictors of data.

II. The second row (k-2) tested whether removing the two-way interactions would affect the model. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than 0.05.

III. This indicated that removal of the said components would not affect how well the model fitted the data.

The results of this analysis were non-significant, indicating that the log-linear model was a good fit of the data. However, the results of the formulated research hypothesis indicated that factor 4 was connected to learners' grade. The next two tables presented the results in factor 5.

Table 64: FACTOR 5: Relationship (partial association) between gender, Unusual Behaviour (UB) and family structure

Effect	Df	Partial Chi-Square	Sig.	Number of Iterations
*F5b	3	8.829	.032	2
*FS	9	31.864	.000	2
F5b*FS	3	1.418	.701	2
Grade	3	38.280	.000	2
F5b	1	7.481	.006	2
FS	3	9.706	.021	2

Keys: FS = Family Structure; F5b= unusual behaviour

Table 65 revealed that the interaction between grade and unusual behaviour, grade and family structure was insignificant. However one-way effects (i.e. the ain effects of grade, UB and family structure were all significant. I could not remove them because it would have seriously affected the model.

The research hypothesis was that were the variables of grade, unusual behaviour and family structure associated. The connection between learners grade and conduct disorder had been confirmed. From **APPENDIX Z31** to Table 65, I confirmed that there was an association between the variable of grade and unusual behaviour. These results meant that learners from different grades behaved differently. What was the extent interaction between these two variables? Table 66 illustrated the answer to this question.

Table 65: K-Way and higher order effects on grade, Unusual Behaviour-UB and family structure

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	31	111.898	.000	102.055	.000	0
	2	24	56.431	.000	49.243	.002	2
	3	9	14.596	.103	11.442	.247	4
K-way Effects[b]	1	7	55.467	.000	52.812	.000	0
	2	15	41.835	.000	37.801	.001	0
	3	9	14.596	.103	11.442	.247	0

I. The first row (k=1) indicated that when I removed the one-way effects (grade and UB) and the higher order effects (number of interactions) would significantly affect the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicated whether removing the two-way interactions (grade and UB) and higher-order effect (grade and UB) it would affect the model. The results indicated that removing these interactions had no detrimental effect on the model.

III. The final row (k=3) tested whether removing the three-way effects (grade and UB) and family structure) and higher-order-effects would significantly affect the fit of the model. This was also not significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way effects) had a significant detrimental effect on the model. The answer was yes. If I removed the main effects of grade, UB and family structure from the model, it would have significantly affected the fit of the model. These variables were significant predictors of data.

II. The second row (k-2) tested whether removing the two-way interactions would affect the model.

III. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than 0.05. This indicated that removal of the said components would not affect how well the model fitted the data.

The results of this analysis were non-significant, indicating that the log-linear model was a good fit of the data. Above that, the research hypothesis was attainable. There was a link between Factor 5 and the variables of learner age and family structures. Tables 67-68 presented the results for factor 6.

Table 66: FACTOR 6: Relationship (partial association) between learners' grade, Interpersonal Relations (IR) and family structure

Effect	Df	Partial Chi-Square	Sig.	Number of Iterations
Grade*F6b	3	.416	.937	2
Grade*FS	9	30.398	.000	2
F6b*FS	3	13.356	.004	2
Grade	3	38.280	.000	2
F6b	1	60.871	.000	2
FS	3	9.706	.021	2

Keys: FS = Family Structure; F6b= Interpersonal relations

Table 67 revealed that the interaction between grade and IR was insignificant though grade and family structure was significant. However, one-way effects (i.e. the main effects of grade, IR and family structure) were all significant. I could not remove them because it would have seriously affected the model.

The research hypothesis was that, were the variables of grade and IR across different family structures associated. The connection between learners' family structure and IR had been confirmed. From **APPENDIX Z31 to** 67, I confirmed that there was an association between the variable of grade and family structure. These results meant learners' interaction to each was dependent on their family structure not grade. What was the extent interaction between these two variables? Table 68 illustrated the answer to this question.

Table 67: K-Way and higher order effects on learners' grade, Interpersonal Relations and family structures

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	31	165.293	.000	195.145	.000	0
	2	24	56.436	.000	58.475	.000	2
	3	9	9.609	.383	7.823	.552	3
K-way Effects[b]	1	7	108.857	.000	136.670	.000	0
	2	15	46.827	.000	50.653	.000	0
	3	9	9.609	.383	7.823	.552	0

I. The first row (k=1) indicated that when I removed the one-way effects (grade and IR) and the higher order effects (number of interactions) would significantly affect the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicated whether removing the two-way interactions (grade and IR) and higher-order effect (grade and IR) it would affect the model. The results indicate that removing these interactions had no detrimental effect on the model.

III. The final row (k=3) was testing whether removing the three-way effects (grade, IR and family structure) and higher-order-effects would have significantly affected the fit of the model. This was also not significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way effects) had a significant detrimental on the model. The answer was yes. If I removed the main effects of grade, IR and family structure from the model, it would have significantly affected the fit of the model. These variables were significant predictors of data.

II. The second row (k-2) tested whether removing the two-way interactions would affect the model.

III. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than 0.05. This indicated that removal of the said components would not affect how well the model fitted the data.

The results of this analysis were non-significant, indicating that the log-linear model was a good fit of the data. The results in factor 6 show that the research hypothesis was accepted with regard to learners; grade and learners social interaction. I could therefore conclude that factor 6 was indeed associated with learners 'grade. The next two tables presented the results in factor 7.

Table 68: FACTOR 7: Relationship (partial association) between learners' grade, Social Withdrawal (SW) and family structure

Effect	Df	Partial Chi-Square	Sig.	Number of Iterations
Grade*F7b	3	4.182	.243	2
Grade*FS	9	31.874	.000	2
F7b*FS	3	4.871	.181	2
Grade	3	38.280	.000	2
F7b	1	78.455	.000	2
FS	3	9.706	.021	2

Keys: FS = Family Structure; F7b= Social withdrawal

Table 69 revealed that the interaction between learners' grade and SW, and gender and family structure was insignificant. However, one-way effects (i.e. the main effects of grade, SW and family) were all significant. I could not remove them because it would have seriously affected the model.

The research hypothesis was that the variables of grade and SW across different family structures were associated. The connection between learners' grades and SW across different family structures had not been confirmed. From **APPENDIX Z32** to Table 69, I opposed that there was an association between the variable of grade, SW problems and family structure. The results meant learners from different family structures and grades were not different in the way they interacted socially. What was the extent interaction among these three variables? Table 70 illustrated the answer to this question.

Table 69: K-Way and higher order effects on grade, Social Withdrawal (SW) and family structure

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	31	172.427	.000	185.448	.000	0
	2	24	45.986	.004	39.999	.021	2
	3	9	5.354	.802	3.556	.938	3
K-way Effects[b]	1	7	126.441	.000	145.449	.000	0
	2	15	40.632	.000	36.443	.002	0
	3	9	5.354	.802	3.556	.938	0

I. The first row (k=1) indicated that when I removed the one-way effects (grade and SW) and the higher order effects (number of interactions) would have significantly affected the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicated whether removing the two-way interactions (grade and SW) and higher-order effect (grade and SW and family structure) would affect the model. The results indicated that removing these interactions had no detrimental effect on the model.

III. The final row (k=3) tested whether removing the three-way effects (grade, SW and family structure) and higher-order-effects would significantly affect the fit of the model. This was also not significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way effects) had a significant detrimental effect on the model. The answer was yes. If I removed the main effects of grade, SW and family structure from the model, it would have significantly affected the fit of the model. These variables were significant predictors of data.
II. The second row (k-2) tested whether removing the two-way interactions would affect the model.
III. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than 0.05. This indicated that removal of the said components would not affect how well the model fitted the data.

The results of this analysis were non-significant, indicating that the log-linear model was a good fit of the data. However, the results of the formulated hypothesis were insignificant, which means the hypothesis was refuted. Generally, I could ascertain that learners from different grades and family structures were not different in terms of social withdrawal tendencies. Tables 71 to 72 presented the results in factor 8.

Table 70: FACTOR 8: Relationship (partial association) between gender, Emotional Distress (ED) and family structure

Effect	Df	Partial Chi-Square	Sig.	Number of Iterations
Grade*F8b	3	12.194	.007	2
Grade*FS	9	28.342	.001	2
F8b*FS	3	6.114	.106	2
Grade	3	38.280	.000	2
F8b	1	13.575	.000	2
FS	3	9.706	.021	2

Keys: FS = Family Structure; F8b= Emotional Distress

Table 71 revealed that the interaction between gender and ED was significant, but ED and family structure were insignificant. However, one-way effects (i.e. the main effects of gender, ED and family structure) were all significant. I could not remove them because it would have seriously affected the model.

The research hypothesis was that the variables of gender and ED were associated with family structure. The connection between learners' grade and ED had been confirmed. From **APPENDIX Z34** and Table 71, I confirmed that there was an association between the variable of grade and ED. The results of this analysis affirmed that learners' grade was indeed influential to learners' emotional stability but not to family structure. What was the extent interaction between these two variables? Table 72 illustrated the answer to this question.

Table 71: K-Way and higher order effects on learners' grade, Emotional Distress (ED) and family structure

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	31	125.357	.000	115.242	.000	0
	2	24	63.796	.000	56.388	.000	2
	3	9	10.377	.321	9.636	.381	3
K-way Effects[b]	1	7	61.561	.000	58.855	.000	0
	2	15	53.419	.000	46.751	.000	0
	3	9	10.377	.321	9.636	.381	0

I. The first row (k=1) indicated that when I removed the one-way effects (grade and ED) and the higher order effects (number of interactions) would have significantly affected the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicated whether removing the two-way interactions (grade and ED) and higher-order effect (grade and ED) it would affect the model. The results indicated that removing these interactions had no detrimental effect on the model.

III. The final row (k=3) was testing whether removing the three-way effects (grade, ED and family structure) and higher-order-effects would significantly affected the fit of the model. This was also not significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way effects) had a significant detrimental effect on the model. The answer was yes. If I removed the main effects of grade, Emotional Distress and family structure from the model, it would have significantly affected the fit of the model. These variables were significant predictors of data.

II. The second row (k-2) tested whether removing the two-way interactions would affect the model.

III. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than 0.05. This indicated that removal of the said components would not affect how well the model fitted the data.

The results of this analysis were non-significant, indicating that the log-linear model was a good fit of the data. Hence, the results on hypothesis testing were significant. The next two tables present the results in factor 9.

Table 72: FACTOR 9: Relationship (partial association) between gender, Physical Aggression (PA) and family structure

Effect	df	Partial Chi-Square	Sig.	Number of Iterations
Grade*F9b	3	14.656	.002	2
Grade*FS	9	34.673	.000	2
F9b*Grade	3	6.694	.082	2
Grade	3	38.280	.000	2
F9b	1	10.295	.001	2
FS	3	9.706	.021	2

Keys: FS = Family Structure; F9b= Physical Aggression

Table 73 revealed that the interaction between grade and physical aggression was significant whilst physical aggression and family structure and family structure were insignificant. However, one-way effects (i.e. the main effects of grade, PA and family structure) were all significant. I could not remove them because it would have seriously affected the model.

The research hypothesis was that the variables of grade and physical aggression across different family structures were associated. The connection between learners age and conduct disorder had been confirmed. From **APPENDIX Z34** and Table 73, I confirmed that there was an association between the variable of grade and physical aggression. The results reflected that learners' grades were influential to learners' aggressive behaviour. What was the extent interaction between these two variables? Table 74 illustrated the answer to this question.

Table 73: K-Way and higher order effects on learners' grade, Physical Aggression (PA) and family structure

	K	Df	Likelihood Ratio		Pearson		Number of Iterations
			Chi-Square	Sig.	Chi-Square	Sig.	
K-way and Higher Order Effects[a]	1	31	122.483	.000	120.285	.000	0
	2	24	64.201	.000	58.332	.000	2
	3	9	14.071	.120	12.272	.198	4
K-way Effects[b]	1	7	58.281	.000	61.953	.000	0
	2	15	50.130	.000	46.060	.000	0
	3	9	14.071	.120	12.272	.198	0

I. The first row (k=1) indicated that when I removed the one-way effects (grade and PA) and the higher order effects (number of interactions) would significantly affect the fit of the model (p=0.000). This effect was highly significant.

II. The next row (k=2) indicated whether removing the two-way interactions (grade and PA) and higher-order effect (grade and PA) it would affect the model. The results indicated that removing these interactions had no detrimental effect on the model.

III. The final row (k=3) tested whether removing the three-way effects (grade, PA and family structure) and higher-order-effects would have significantly affected the fit of the model. This was also not significant.

Considering k-way effects:

I. The first row (k=1) tested whether removing the main effects (one-way effects) had a significant detrimental effect on the model. The answer was yes. If I removed the main effects of grade and PA and family structure from the model, it would have significantly affected the fit of the model. These variables were significant predictors of data.
II. The second row (k-2) tested whether removing the two-way interactions would affect the model.
III. The third row (k=3) tested the significance of the three-way interactions. The probability value for K=2 and K-3 were greater than 0.05. This indicated that removal of the said components would not affect how well the model fitted the data.

The result of this analysis was non-significant, indicating that the log-linear model was a good fit of the data.

The composite table showed the results of log-linear analysis on school-based problems, learners' age, gender and family structure.

Table 74: A summary of Goodness-of-Fit tests in 9 factors

ABREV	Factors*		Chi-Square	Df	Sig.
	1	Likelihood Ratio	16.495	12	.170
CP		Pearson	13.995	12	.301
	2	Likelihood Ratio	10.067	12	.610
AH		Pearson	9.467	12	.663
	3	Likelihood Ratio	.000	0	.
HC		Pearson	.000	0	.
SI	4	Likelihood Ratio	6.023	12	.915
		Pearson	5.582	12	.936
UB	5	Likelihood Ratio	16.014	12	.191
		Pearson	12.515	12	.405
IR	6	Likelihood Ratio	10.024	12	.614
		Pearson	8.753	12	.724
SW	7	Likelihood Ratio	14.259	15	.506
		Pearson	12.033	15	.677
ED	8	Likelihood Ratio	16.491	12	.170
		Pearson	15.010	12	.241
PA	9	Likelihood Ratio	20.765	12	.054
		Pearson	18.210	12	.109

*= Keys: F1= Conduct Problems; F2= Academic habits; F3= Health Concern; F4= Social Interaction; F5= Unusual Behaviour; F6= Interpersonal relations; F7= Social Withdrawal F8= Emotional Distress, F9= Physical Aggression

Table 74 illustrated the two statistics used to test the goodness-of-fit of the final model. These statistics were the likeness ratio of chi-square and Pearson chi-square. The likelihood was the test more commonly that used because it had the advantage of being linear. In that context, these two statistics tested the relationship between the observed and expected frequencies (frequency tables) those were not significant. If the model of analysis modelled a goodness-fit of the data, then the observed and the expected frequencies should have been very similar, i.e. not significant. The analysis of table three revealed that there were insignificant results.

Frequency distribution in the unsaturated model

The frequency distribution in the unsaturated model on educational level and factors 1-9 across different family structures were presented as residuals (this was the difference between the observed and the expected frequencies) in **APPENDIX Z6**.

Table 75: Composite table on the results of log-linear analysis on school-based problems, learners' age, gender and family structure

F	PROBLEMS	χ^2	SIG	PROBLEMS	χ^2	SIG	EXT	PROBLEMS	χ^2	SIG
1	CD X AGE	.000	S	CD X GENDER	.083	N	HIGH	CD X GRADE	.050	S
	CD X FS	.450	N	CD X FS	.825	N		CD X FS	.990	N
2	AH X AGE	.146	N	AH X GENDER	.614	N	LOW	AH X GRADE	.339	N
	AH X FS	.004	S	AH X FS	.002	S		AH X FS	.006	S
3	HC X AGE	.000	N	HC X GENDER	.013	S	HIGH	HC X GRADE	.247	N
	HC X FS	.469	S	HC X FS	.881	N		HC X FS	.883	N
4	SI X AGE	.000	N	SI X GENDER	.047	S	HIGH	SI X GRADE	.012	S
	SI X FS	.862	S	SI X FS	.745	N		SI X FS	.976	N
5	UB X AGE	.000	N	UB X GENDER	.110	N	HIGH	UB X GRADE	.032	S
	UB X FS	.873	S	UB X FS	.616	N		UB X FS	.701	N

6	IR X AGE	.020	S	IR X GENDER	.646	N	LOW	IR X GRADE	.937	N
	IR X FS	.004	S	IR X FS	.002	S		IR X FS	004	S
7	SW XAGE	.026	S	SW X GENDER	.482	N	LOW	SW X GRADE	.243	N
	SW X FS	.269	N	SW X FS	.168	N		SW X GRADE	.181	N
8	ED X AGE	.000	S	ED X GENDER	.224	N	LOW	ED X GRADE	.007	S
	ED X FS	.028	S	ED X FS	.017	S		ED X FS	.106	N
9	PA X FS	.000	S	PA X GENDER	.257	N	LOW	PA X GRADE	.002	S
	PAXFS	.364	N	PA XFS	.259	N		PAXFS	.082	N

Findings with regard to aim number three:

To establish what educators could recommend as intervention strategies to assist learners with school-based problems.

Educators' recommendations on nine factors

Semi-structured interviews were conducted in order to establish what educators could recommend as intervention strategies to assist African (Aim number three) learners with various problems in schools. Data were analysed both quantitatively and qualitatively. Frequencies and percentages were worked out and were made of an interpretative approach. Educators who constituted the study sample were 165; with regard to an open-ended question, some educators left the questionnaire blank and all spoiled questionnaires were discarded. In other words, there were those who did not respond to the open-ended questions. One hundred out of the original 165 educators eventually responded on an open-ended questionnaire. In order to ascertain educators' recommendations, common themes were identified, as David and Sutton (2004) suggested. Therefore, data obtained through an open-ended questionnaire were grouped into themes. This technique, referred to as thematic analysis, allowed the researcher to solicit different suggestions from educators from six districts of KwaZulu-Natal.

Tables 74 to 81 gave details of educators' recommendations on various problems that could be manifested by learners in the classroom at school. More than 60% of respondents (100/165) made multiple recommendations on strategies directed at helping the child with conduct problems, academic or learning problems and adjustment problems. Conduct problems consisted of behavioural problems, such as Conduct Disorders (CD), Attention Deficit Hyperactivity-Impulsivity Disorder (ADHD) and Oppositional Deviant Disorder (ODD). On the other hand, academic or learning problems referred to writing, spelling, reading, numeracy or

mathematics, comprehension, speech and language problems. Lastly, adjustment problems included Social Skills (SS), Unusual Behaviour (UB), Health Problems (HP), Emotional Distress (ED) and Physical Aggression (PA). Eight recommendations were made with regard to conduct problems, 38 recommendations in connection with academic or learning problems, and 68 recommendations were based on adjustment problems. The analysis of these tables reflected a general impression of desire for more psychological services and varied procedures for rendering psychological services, restructuring of teaching, learning and assessment methods, techniques and also the need to increase teaching and learning support material in schools.

Table 76: Educators' recommendations for helping learners with conduct problems (N=165)

Recommendations	F	%**	Rank Order
Refer a child to specialists such as psychologists, pastors, counsellors and social workers to address learners about problems and to determine proper placement in reformatory or rehabilitation centres	**98**	**59.4**	**1**
Involve and advise parents to set rules and boundaries at home, interview them as well to identify the source of their children's problems	74	44.8	**2**
Apply disciplinary measures, specifically, school rules, instil moral, values and attitudes in the child with a problem; reinstate corporal punishment	59	35.8	**3**
Change the seating arrangement, let the child occupy the front seats	47	28.4	**4**
Teach a child interpersonal skills and respect	44	26.7	**5**
Encourage the child to be responsible and take up a leadership role in the classroom, e.g. disseminating classroom rules every morning and compiling a report on daily activities.	25	15.1	**6**
Extend the opportunity for extra work for example, puzzles completion in order to preoccupy the child	19	11.5	**7**
Help the child to understand that the consequences of the problem is very crucial	19	11.5	**8**
Work collaboratively with the child in such areas to set goals, how to achieve them and give him or her special	17	10.3	**8**

individualised attention			
Developing the child's communication skills and by discouraging using vulgar language through teacher-learner communication and lessons on verbal communication	10	**6.1**	**9**

*= a respondent could make more than one recommendation

**= frequency

***= percentage

Table 77: Teachers' recommendations for helping a child with academic / learning problems (N=165)

Recommendations	F	%**	Rank Order
Refer a child to speech and occupational therapists, optometrist and ideologist, find out about sensory defects and refer a child to a psychologist for placement	77	46.7	1
Change the child's attitude towards learning, show the child respect, love and sense of humour, recognise a learner and call him/ her by name	70	42.4	2
Educator must give a learner extra homework or classwork activities in order to practise reading, hand writing, spelling and speech articulation or exercise and listening to the news, also encourage the child to listen to the news then do evaluation and give feedback	69	41.8	3
Design activities that will develop the child's listening skills. This can develop reading skills as well, start with simple text and move to the complex one and use understandable words i.e. break down words and spell it to a child: Break down tasks into small pieces and present one item at a time so that the learner will be able to express thoughts.	60	36.4	4
Reinforce knowledge of phonological structures like vowels, letters, sound, word recognition,	54	32.7	5

pronunciation, reading, word attack, summarising and reading books/ stories to improve spelling and use words to construct sentences			
Individualised instructional strategies or special attention	46	28.9	6
Give a learner fine motor skills activities such as colouring, drawing	45	27.3	7
Involving or informing parents about the child's problem, find more information about the child's problems to assist the child with home works e.g. calculation, spelling and writing			
Highlight unfamiliar words in the text, define and clarify complex tasks to increase learners vocabulary and comprehension	39	23.6	8
Do informal and formal assessment with the learner at school to identify the root of the problem	35	21.2	9
Expose a learner to basic number skills i.e. tracing , modelling, toy counting, practising bonds, tables reciting and basic operation , colour blocks, material sorting and calculations	35	21.2	9

Remind a child about ground rules, instructions and emphasise the importance of meeting the deadline	35	21.2	9
Change the child's seating position, encourage a learner to pay attention in class teach the child to learn how to manage time Eliminate detractions in class so that a child will be able to participate	31	18.8	11
Apply behaviour modification strategies i.e. consistent acceptable performance should be rewarded	25	15.1	12
Extend opportunity for extra work, expose a child to read various kinds of books/ stories in library and reading more materials by viewing, scanning, reciting, rehearsing and read aloud and silently	21	12.7	13
Expose a learner to tutorials group practice and extracurricular activities, for instance using counters with wall charts and other real objects to improve the child's numerical skills	20	12.1	14
Engage a child in various extramural activities such as soccer, music and dancing or drama and encourage class participation and boost her self esteem	19	11.5	15
Offer a child a lot of work and puzzles completion and encourage him / her to listen to the radio, news, songs, English stories			

Provide a learner with series of events to arrange, more practice, emotional support, interesting topics and monitor progress	18	10.9	16
Educators must be patient with the child and give him or her extra reading	17	10.3	17
Train a child to read, introduce words and give several examples	17	10.3	17
Use Kumon computerised programme to practise and improve numerical and reading skills daily and use concrete media to master the value of numbers	15	9.1	18
Teach correct pencil grip and hand positioning, sitting posture, and sitting upright with the back against the chair, upper back and shoulders slightly forward.	15	9.1	18
The educator must make use of peer tutoring and assessment	15	9.1	18
Give a learner more opportunities, practising, narrating, initiating oral activities, reading, speaking and spelling , researching, presenting and writing, check learner's activities daily, read as an individual of as a group, reading and then monitored reading	15	9.1	18

Use colourful books, pictures, magazines, cutting and pasting them on the chart board with others and also Use letter cards and notes taking to improve language comprehension; shared writing, reading and encourage a learner to use a dictionary	14	8.1	23
Instil the love and appreciation of books and encourage the child to share opinions, enjoy being able to read	14	8.1	24
Build relationship with a learner and create opportunity to express his or her thought and ideas	12	7.3	25
Introduce hands on and challenging tasks / activities that can stimulate higher order thinking and enhance learners' creativity, critical thinking and problem solving skills by giving him/ her puzzles	11	6.7	26
Use probing and funnelling to encourage learners to express thoughts	9	5.5	27
Inculcate in learners opportunity to manipulate concrete objects, namely, reciting of poems,	9	5.5	28

dramatisations, rhymes manipulation of concrete objects including free play, games toys, use concrete media and to master the significance of numbers			
Give the learner opportunities to initiate his or her own learning and encourage the learner to work independently; arouse learners interests to attract learners' concentration or attention by presenting interesting topics; encourage a learner to communicate and share his problems with other peers	8	4.8	29
Motivate and encourage learners to participate in group activities, class presentations and discussions	7	4.2	30
Draw a straight line, introduce new words with pictures to be matched for picture presentation	5	3	31
Assign learners to be free to play in class for instance, using class roles, collecting and distributing as well as reading text books, group leader, and make announcements	5	3	31

□ □ = a respondent could make more than one recommendation

**= respondents' frequency

***= respondents' percentage

Table 78: Teachers' recommendations for helping a child with adjustment problems: health problems (N=165)

Recommendations	F	%**	Rank Order
Refer the child to the health clinic and to medical practitioner for further examination and treatment, work collaboratively with parents, school support team and other mental health professionals towards the resolution of the problem.	78	47.3	1
Help and guide parents to understand and manage the learners' health-related problem at home	54	32.7	2
Involve parents in determining and identifying the cause of the problem , involve parents too	49	29.6	3
Encourage the child to exercise regularly and visits the clinic for check-ups	32	19.4	4
Offer catch up extra classes to a child who has been absent because of illness or any other understandable reasons	24	154.5	5

Convene parent-educator meeting to discuss the child's health and do strategic planning	16	9.7	6
Educators must call up the mobile clinic to the school and preferably having first aids kits in school, depending where the child's is situated, whether in rural or urban areas	11	6.6	7
Conduct an investigation about the sickness or health concern and provide remediation where necessary	9	5.5	8
Interview a learner about his or her sleeping habits, diet habits as well as practising exercise habits and bedtime routine and encourage home visits for the unfortunate learner and use that information to solve the problem on the nature of the child	8	4.8	9

□ = a respondent could make more than one recommendation

**= frequency

***= percentage

Table 79: Teachers' recommendations for helping a child with adjustment problems: unusual behaviour (N=165)

Recommendations	F	%**	Rank Order
Advise parents to seek professional help from psychologists, social workers, psychiatrists and other specialists and work collaboratively with them	81	49.1	1
Do research / assessment (interview both parent and a learner) to identify the cause of the problem	72	43.6	2
Show a child unconditional love, acceptance and understanding	55	33.3	3
Strengthen educator-learner relationship (discuss the problem with a learner to find out more)	49	29.7	4
Apply behaviour modification intervention strategies by reinforcing acceptable behaviours and punishing inappropriate or unacceptable behaviour in class	35	21.2	5
Expose the learner to activities that can enhance the spirit of humane (Ubuntu)	21	12.7	6

to manage the condition and motivate a learner to behave appropriately			
Educator –parent meetings	17	10.3	7
Assist and guide parents to understand and manage the problem at home	16	9.7	8
Work collaboratively with a learner and other parents towards resolution of the child's problem	12	7.2	9
Teach the child the importance of listening to others, develop positive mind set to his or her peers	12	7.2	9
Use peer modelling and role-playing to encourage acceptable behaviour	9	5.5	10
Employ the services of teacher support team at school	4	2.4	10

□ = a respondent could make more than one recommendation

= frequency *= percentage

Table 80: Teachers' recommendations for helping a child with social interactions, social withdrawal and social problems-ADJUSTMENT PROBLEMS (N=165)

Recommendations	F	%	Rank Order
Assign different roles and responsibilities in class	65	39.3	1
Create a conducive, relaxed and accepting, non-judgmental atmosphere	54	32.7	2
Apply behaviour modification intervention strategies by reinforcing acceptable behaviours and punishing unacceptable behaviours,	49	29.7	3
Introduce games (indoors and outdoors activities), sports and health wellness, ring activities, use buddy system to build the child's self-esteem, confidence, positive acceptance of self, recognise and accept the child	47	28.5	4
Encourage the learner to spend more time and work collaboratively with his or her classmates than with adults	37	22.4	5

Teach the child to share resources with others	29	17.6	6
Refer a learner to social workers / psychologists	26	15.8	7
Motivate children to participate in different classroom activities such listen, share ideas and rotate roles with other learners in class	25	15.1	8
Teach a learner to accept, love and respect others	24	14.5	9
Do peer assessment and timeously give feedback	22	13.3	10
Give a learner research project and other extra socialisation activities to do outside the school	17	10.3	11

Educator-learner relationship, guidance, support, special attention	13	7.8	12
Use cooperative learning strategies i.e. student teacher interaction, group work, peer tutoring, presentation	12	7.2	13
Interview learners and parents about socialisation problems and give them homework to do at home	4	2.4	14

□ = a respondent could make more than one recommendation

**= frequency

***= percentage

Table 81: Teachers' recommendations for helping a child with emotional distress problems (N=165)

Recommendations	F	%**	Rank Order
Strengthen educator-learner relationship to encourage the learner to share his or her feelings and story freely, accepting him or her as being non-judgmental as well as appreciative and supportive to the learner; show unconditional love to boost the child's self-esteem	75	45.5	1
Refer a learner to mental health professionals i.e. psychologists/ social workers /other specialists for severe cases.	68	41.2	2
Give a learner research projects and other extra socialisation activities to do even outside the school environment	43	26.1	3
Encourage a learner to participate in extramural activities such as exercises, motivational talks, etc.			
Research more about learner's background and discuss the problem with the learner and involving parents	42	25.5	4

Link learning concepts and tasks with real life situations	26	15.6	5
Introduce relevant morals and life skills lessons to calm down the child's emotions	19	11.5	6
Apply principles of behaviour modification intervention strategies by reinforcing acceptable behaviours and discouraging unacceptable behaviours, and apply emotional management strategies	19	11.5	7
Do a compulsory daily routine health check	11	6.7	8
Do peer assessment and feedback thereof	9	5.5	9

□ = a respondent could make more than one recommendation

**= frequency

***= percentage

Table 82: Teachers' recommendations for helping a child with Physical aggression (N=165)

Recommendations	F	%**	Rank Order
Advise parents to seek professional help from psychologists, social workers and other specialists	82	49.7	1
Apply behaviour modification intervention strategies by reinforcing acceptable behaviours and discouraging unacceptable behaviours.	74	44.8	2
Build trust and create a strong relationship with the learner and be accepting, non-judgmental to a learner and do pastoral care, inculcate to the learner to respect opinions of others.	71	43.0	3
Do informal assessment to identify the main cause of the problem.	66	40	4
Identify the cause of the problem and learners' background by doing informal assessment and involving parents.	51	30.9	5
Change positions in class from time to time (take the front seat) and refer a child to a special class in	42	25.5	6

case problems are detected.

Be diplomatic and have a good manner of approach so as to create and earn trust from the child	35	39.3	7
Give a learner individualised attention	33	20	8
Reciting and rehearsing rules and report to others	33	20	9
Work collaboratively with a learner together with members of School Disciplinary Team (SDT)	32	19.4	9
Introduce morals and life skills lessons to shape the child's behaviour and emphasise values	24	14.5	10
Remind the learner about the school and class rules, regulations and policies, advise a learner to adhere to those rules.	19	11.5	11
Appreciate, support, show unconditional love to the child and build the spirit of humane (Ubuntu) Inform school management and SGB	16	9.7	12

For serious and severe cases take legal route	16	9.7	13
Assist the parents to understand and manage the child's problem at home	13	7.8	13
Discuss the problem with a learner to find out more	12	7.2	14
Change learners attitude towards socialisation and learning	7	4.2	15
Motivate a learner to initiate group interaction and responsibilities	6	3.6	16
Increase the child's vocabulary by encouraging the learner to read various stories, listen to the news in order to develop his or her listening and problem solving skills.	5	3	17
Boost learners self-confidence and esteem by encouraging the child to read different stories	5	3	18
Discuss the matter with the school management team and parents	5	3	18

*= a respondent could make more than one recommendation

**= frequency

***= percentage

An examination of tables revealed common themes and a slight relationship in the order of recommendations. These recommendations were ranked in their order of importance, starting with the ones which had the highest percentage. Noted on the relationship amongst recommendations were the following: referral to experts or specialists in dealing with problems of conduct, academic or learning problems and adjustment problems were all ranked as number one; behaviour modification strategies received rank number two as strategies that could deal with conduct, adjustment and learning problems; strengthening educator-learner relationship and parental involvement were ranked as 3 in handling learners with adjustment problems; informal assessment and engaging learners in extracurricular activities were both ranked as number 5, directed to problems of conduct and adjustment; changing seating positions, increase learners vocabulary, engaging learners to research project, assigning different roles were also ranked 5 for adjustment and learning problems. Reinforcing school rules, policies in dealing with learners' adjustment and conduct problems also received rank number 5.

It was quite interesting to note that referrals to specialists or experts were ranked as position one (1) in the order of importance, for all types of problems namely conduct, academic or learning problems, health problems, social problems, emotional distress and physical aggression. Educators seemed to prioritise the services of other specialists or professionals in dealing with various problems experienced by learners in schools. Since referrals to other specialists were classified as the most important recommendation, one would expect to see educators being part of the team. They seemed to rely more on other professionals than on themselves, whereas, those learners spent almost 70% of their time with educators than anyone else. It was surmised that teachers seemed not to understand the principles of inclusion because most of them were not well equipped. Behaviour modification strategies (BMS) were viewed as more

relevant to problems of conduct, adjustment and learning, but not for health problems. Of course educators did understand that BMS could not be applied to a sick learner. The rankings were as follows: conduct problems 3, academic problems 1, unusual behaviour 5, social skills 3, emotional distress 8 and physical aggression 2. Teachers seemed to be uncertain of how they could deal with learners' health problems.

Teachers recommended parental involvement as rank number two. That kind of collaboration between teachers and parents was considered to be more desirable for problems connected to conduct (ranked 2), academic problems (ranked 1), health problems (ranked 3), unusual behaviour (ranked 6) and physical aggression (ranked 5), social skills (ranked 14), unusual behaviour (ranked 9) and emotional distress (ranked 5). This showed that educators were aware of the fact that they could not deal with learners' problems in isolation from their parents. Parental involvement was ranked number one for academic problems, showing that educators perceived parents as playing a vital role in educating a child with diverse needs, but with conduct problems in particular.

It appeared that strengthening the educator-learner relationship, encouraging the learner to share the problem with the teacher, being accepting, and non-judgmental of a learner and creating conducive/ relaxed environment and showing unconditional love were received rank number 3 by educators. That strategy was directed to problems of unusual behaviour (ranked 3 and 9), academic problems ranked 2, social skills ranked 2 and 3, emotional distress (2). Educators believed that both academic and adjustment problems could be handled by creating rapport with a respective learner, as behavioural theory emphasised. Teachers appeared to be very clear that failing to create a

conducive environment for teaching and learning to take place, would render teaching meaningless. It was concluded that educators were knowledgeable about social learning theories, which emphasised that unacceptable or problematic behaviour was learnt from the learner's environment.

Parental empowerment and guidance was considered to be connected with adjustment problems. This was ranked number two in health concerns, 8 in unusual behaviour and 12 in physical aggression. This seemed to suggest that educators were of the opinion that parental involvement was crucial in managing the learners' behaviour at school and home. Ranking parental guidance as number 2 for health problems signified an urgent need for parental training through workshops. This suggested that there was a crying out for psycho-educational support that could empower parents on how they could get first aid assistance for their children at home with health problems in case services of medical practitioners and clinics were not easily accessible, more especially in rural areas. For instance, parents should know how to assist a child to take medication timeously and regularly. Parents should also understand that children might react to medication and how that might lead to other health problems. They should also understand that diverse management was crucial, which meant that they must accommodate learners with diversity needs such as HIV infections, absenteeism due to health problems such as headache and stomach-ache.

Enforcing school policies, acts and rules was found to be more relevant to problems of conduct (5) and physical aggression (3).Teachers believed that this could be done through teaching learners' morals and values that could reshape their character and personality. This recommendation reflected limited knowledge that educators had about psychological interventions or services that could deal

with conduct and physical aggression problems. One would argue that parents did set rules and regulations at home, but parents seemed to be lacking knowledge on parenting styles. Informal assessment received rank number four for problems directed to unusual behaviour (2), emotional distress (4) academic problems (10 and 35), and physical aggression (3) health problems (19). This gave the impression that educators did not understand the importance of conducting informal assessment to deal with learners' social skills.

Giving learners activities that could stimulate problem solving skills like puzzle completions was perceived as relevant in dealing with problems related to conduct and was ranked number 7. Academic problems were ranked number 19. Such activities could be more relevant to improve learners' numerical and problem solving skills. This showed a lack of understanding of the rendering of psychological services. Educators perceived Individualised instructional strategies as appropriate in dealing with learning and academic problems (ranked number seven), conduct problems was ranked number 8 and physical aggression ranked 10. Giving learners individualised special attention may have assisted educators to get relevant and first-hand information about the problem and also created rapport with an individual learner. The researcher was of the opinion that this recommendation may have been applicable to all learners' related problems in schools.

Changing seating position was ranked as number 14 to academic problems and ranked number 17 in conduct problems, for an example ADHD. Teachers demonstrated understanding on how to deal with a child who could not sit still and lacked concentration in the classroom. Educators were of the view that learners with learning and adjustment problems could be managed by applying a

variety of instructional strategies to attend to their diverse needs. Increasing learners' vocabulary by exposing them to reading books and telling stories was viewed as useful in dealing with problems of learning (9) and unusual behaviour (15). Giving learners a research project was most desirable for problems related to unusual behaviour (4) and emotional distress (2). Assigning different roles to a learner was found to be more suitable in dealing with problems of social skills (ranked as number one) and conduct problems (number seven).

Another common theme that emerged in connection with conduct problems was to make a child understand that each behaviour had its consequence so that a learner would be able to distinguish between acceptable and unacceptable behaviour. This was because learners of this millennium sometimes misinterpreted teachers when they applied disciplinary measures as being abusive.

Other important themes on academic problems were variations of teaching and learning methods in assisting learners with spelling, writing, numeracy, comprehension, speech and reading (ranked as number 4). Redesigning the curriculum also involved changing learners' attitudes towards learning. Provision of sufficient teaching and learning support materials (TLSM's) was also recommended (ranked 16). Educators believed that it was their role to improvise, but the researcher suggested that the government should also assist by supplying them with necessary and sufficient teaching and learning resources. With regard to health problems, it was evident that there was too little that teachers thought they could do. Instead, they felt that they needed the assistance of mental health professionals. Moreover, it was noted that remedial education could assist learners with fine motor coordination problems which normally

affected learners' writing, reading, and spelling, etc. (learning problems) Another recommendation directed at unusual behaviour was working in collaboration with the learner and other teachers (9). It appeared that teachers understood the special role they were able to play with other teachers as members of an interdisciplinary team in the education arena.

5.4 SUMMARY

Chapter five was concerned with the presentation and interpretation of results. The discussion of findings, implications and limitations will be presented in the next chapter (chapter six).

The analysis of the results in this chapter (chapter five), was done through two statistical techniques (chi-square and log linear). Chi-square was used to determine the relationship between selected family structures and school-based problems whereas log-linear was utilised to find out an interaction between the variables of school-based problems, learners' characteristics and family structure. The hypotheses formulated in this study were reiterated and some factors were confirmed.

In conclusion, teachers from different schools who participated in this study recommended different strategies that could help improve the plight of learners with school-based problems.

CHAPTER SIX

DISCUSSION OF FINDINGS, IMPLICATIONS AND LIMITATIONS

6.1 SUMMARY

An attempt is made to answer the research questions in the previous chapter. The objectives of the study were to find out the extent to which relationships exist between the selected family structures and school-based problems; to determine whether there is any association between school-based problems and variables such as age, gender and educational level; and to establish what intervention strategies educators recommend for the development of intervention model. This chapter therefore, discusses results of the analysis which was conducted in the previous chapter. The results of statistical analysis have been scrutinised for meaning in relations to the aims of the study and the significance of the findings. The chapter examines the aims of the study in relation to hypotheses and findings. This discussion throws light on the achievement of the aims of the study. It is on the basis of this discussion, that recommendations are fashioned into a model.

6.1.1 Research questions

This study was intended to answer the following research questions:

a) To what extent does a relationship exist between selected family structures and school-based problems?
b) Is there any association between school-based problems and the following variables:
    - learners' age;

- learners' gender;
- Learners' educational level across different family structures?

c) What intervention strategies do teachers recommend in order to develop an intervention model?

6.1.2 Research hypotheses

The research hypotheses were formulated as follows:

a) There is a relationship between family structures and problems manifested by learners.
b) There is an association between school-based problems and the following variables:
   - learners' age,
   - learners' gender,
   - learners' educational level

6.1.3 Research methodology

The research methodology in this study involved research design, sampling methods, methods of data collection and analysis.

6.1.3.1 Research paradigm

The present study employed field study or descriptive research design. This design was considered most suitable for determining educators' views on school-based problems in their natural setting (school) without the manipulation of variables. This design provided answers to research questions.

6.1.3.2 Sampling design

The researcher obtained detailed information from the viewpoint of the educators. Clustering sampling of participants was done in this study as a selection procedure. Six districts were drawn from 12 districts in KwaZulu-Natal province using a table of random digits/numbers. Previous authors have detailed this sampling procedure (Lamnek, 2005; Stryndom, Fouche, & Delport, 2005; Neuman, 2000; Shaughnessy & Zechmeister, 1997; Cohen, Manion, & Morrison, 2007). Within each selected district, there were circuits, and primary, secondary and high schools. The list of all districts with circuits and schools was obtained from the KZN operation plan (2012). The researcher used the table of random digits. These schools are manned by both female and male teachers. The number of teachers could vary from one school to another. The study sample consisted of 165 educators.

6.1.3.3 Methods of data collection

The methods of data collection in this study were the "Student Behaviour Survey" (SBS) and a questionnaire. The SBS was administered to educators to rate learners' problematic behaviour in the classroom, for objectives number one and two. The questionnaire was administered in order to establish educators' recommendations (for objective three).

6.1.3.4 Method of data analysis

Non-parametric techniques were used to test the research hypotheses. SBS manual was also used for scoring purposes. On the basis of assumptions underpinning the use, the Chi-square and Log-Linear were considered as suitable to analyse data. A computer package known as the Statistical Packages

for Social Sciences (SPSS) was utilised. The open-ended questionnaire was analysed by means of thematic analysis (the qualitative paradigm).

6.2. DISCUSSION OF FINDINGS

6.2.1 Findings with regard to objective number one

The first objective of the present study was to determine the extent to which relationships exist between the selected family structures and school based problems.

The findings of the present study show the relationships between learners' family structures and school-based problems such as academic habits, interpersonal relations and emotional distress. However, there is no relationship obtained between learners' family and the following school-based problems: conduct disorder, health concerns, social interaction, unusual behaviour, social withdrawal and physical aggression.

The findings of the present study also reveal that there is a relationship between family structure and academic problems. This implies that learners from the following family structures: polygamous, divorced, blended, extended, child-headed and grandparents have more academic problems, such as speech articulation, spelling and writing than those from nuclear and single parent families. Such findings affirm that family break down or instability account for learners' learning obstacles or barriers due to the fact that they lack support by a significant adult. It appears that some family structures need to be strengthened. These findings support Amato's findings (1991) which indicated that children from divorced families had extreme difficulty in schools. Amato's update (1993)

also indicated that children from divorced families were underperforming more than those who are from other families. Cavanagh et al. (2006) also argued that family structure was linked with learners' academic achievements. The results of the present study also attest to Van Breda's (2010) study which held that children from child-headed households were associated with problems such as dropping out from school, not completing education, dearth of opportunities to undertake vocational training due to lack of funds for school fees and to buy uniforms and stationery and also overcoming stigmatisation. These findings also support previous researchers' (Elbedour & Onwuegbuzie, 2003; Akomolafein & Olorunfemi-olabusi, 2011) assertion that children from polygamous families had high rates of absenteeism and lower level of school performance than those from nuclear families. These findings are in line with a study conducted in Nigeria by Awuno (2013), which found a significant impact of family structure on the academic performance of university students from nuclear and single parent families. The findings reveal highly significant differences between the academic performance of students from single-parent family and those from nuclear family structures. The findings are also in conflict with Schimmele, Hou and Ouellel, (2009*)* who discovered that learners from extended and nuclear families perform worse in schools than those from divorced, child-headed and single parent families.

The findings of the current study also reveal that the type of family structure has an influence on learners' interpersonal relations. These findings also indicate that learners from extended families show more interpersonal relations problems than those from single parent, nuclear and other families (grand parent, child-headed, divorced and stepparent families). This means that, of course, family structure does influence the way these learners interact with their peers and significant others. According to the attachment theory by Bowlby and Ainsworth (1991), the

child's interpersonal relations depend on the influence from both parents. According to this theory, learners' interpersonal relations might be affected if they are many members within a family, or if one parent is absent. The present study reflects different findings since one would expect that learners from nuclear and extended families might experience lesser interpersonal relation problems than learners from single parent and other families.

The findings of the study indicate that there is a relationship between learners' family structures and emotional distress. The study also reveals that learners from single parent, child-headed, grand parenting, divorced, polygamous and stepparent families are more emotionally volatile than learners from nuclear and extended families. These findings are in line with Amato's findings (2005) which reveal that children who grew up in nuclear families were less likely to experience emotional problems during their childhood and adolescent years than those from divorced and stepparents families. Edward and Daire (1981) also indicated that school performance of school-age children raised by their grandparents was significantly affected than those from extended and nuclear families.

The study indicates that there is no relationship between learners' type of family structures and problems such as conduct disorder, health concern, social interaction, unusual behaviour, social withdrawal and physical aggression. Such findings imply that any learner may have problems of conduct, health, social interaction, unusual behaviour, withdrawal and aggression irrespective of the type of family structure and learners' age.

6.2.2 Findings with regard to the second objective

The research objective was to find out whether school-based problems were associated with learners' characteristics such as age, gender and educational level or grade across different family structures. Findings on learners' age and nine conditions intended to answer hypothesis number 2a. This hypothesis was found tenable on five conditions and refutable on only four conditions.

The findings indicate that there is an association between learners' presented problems of conduct and learners' age. About 69.2% of learners with conduct problems are between the ages of 6-9 while 44% of these learners are adolescents. These findings are in line to that of Maris and Meier (2010) who reported that conduct problems were associated with learners who were in foundation phase.

The findings show that there is an association between interpersonal relations and learners' age across different family structures. This means that adolescent learners (12-19 years) experience more communication, assertiveness and decision making problems than younger learners (5-11 years). This finding supports existing literature on adolescent behaviour and age.

The findings show that there is an association between social withdrawal and the variable of learners' age. These results implicate that learners' age is accountable to the condition of social withdrawal. The study further reveals that learners between the ages of 5-8 and 17-20 years are more socially withdrawn than learners who are between 9-16 years. The results suggest that learners during early childhood and adolescent stage are more socially withdrawn than

learners in late childhood stage. Normally, the more supportive the family structure, the less social problems learners might experience, and vice versa.

There is an association between emotional distress and learners' age. It is evident in this study that adolescent learners manifest more emotional distress than younger leaners. The findings support existing literature by Ellis and Adams (2009), which shows that adolescents were more immature than young children.

The present study indicates an association between physical aggression and learners' age. It is therefore evident that learners' age is accountable for learners' aggressive behaviour. The findings further reveal that learners from 5-8 years and 17-20 are more socially withdrawn than 9-16 years learners. This idea is also supported by Wallenstein (2000) who stated that learners who were in the age of 6-8 years could show up in the form of acting out behaviours and physical complaints.

In relation to health concern and learners' age, the findings indicate that there is no association. The findings of the study also reveal that learners from ages of 9 -19 years and 5-8 years show no differences in their state of health. These findings mean that any learner may be sick irrespective of the age. Therefore, young and old learners are all at risk of infectious diseases and other health problems such as stomach aches and headaches.

The present study reveals that there is no relationship between social interaction and learners' age. This means that learners may interact with their peers differently irrespective of their age. Though there is no association obtained, the

findings generally show that adolescent (12-19 years) social interaction problems exceed those of young learners (5-11 years). These findings further show that as learners' age increases social interaction problems also increase.

The present study also shows that there is no association between unusual behaviour and learners' age. This implies that learners manifest strange behaviours irrespective of their age. In other words, learners' age does not have an impact on unusual behaviour such as temper tantrums, resistance to change, mood swings and exhibition of sadness.

Hypothesis number 2b was tested and is found tenable in some instances and only in two conditions or school-based problems. With regard to this hypothesis, the variable of gender alone produces significant results for health concerns and social interaction. However an association is not acceptable on six conditions (conduct problems, academic habits, unusual behaviour, interpersonal relations, social withdrawal, emotional distress and physical aggression).

The findings of this study reveal that there is an association between health concern and learners' gender. This implies that girl learners have more health problems than boys. About 34% of female learners were found to have health problems such as complaints of stomach and headache compared to seventeen percent of male learners. This means male and female learners' state of health varies or differs.

The findings of the study reveal an association between social interaction and learners' gender. This means that female learners socialise better than males.

25% of male learners have social interaction problems compared to 9% of female learners. It appears in this study that female learners tend to talk more than male learners. These findings oppose Hamidah (2009) who discovered that there was no significant association between learners' gender and social interaction in the classroom. Socially, male and female learners interact in the same way.

The findings of this study show that conduct problems and learners' gender are not associated. Gender has no influence on learners' manifestation of conduct problems. Any relationship with regard to this problem and learners' gender may be due to chance factors. Generally, there are about 27% of male learners with conduct problems against 23% of female learners. These findings support Amato and Keith's study (2005) which revealed that male and female learners were not differ in their manifestation of conduct behaviours in schools. These findings are contrary to those of Schneider (2005), who discovered that male and female children manifested conduct problems differently.

There is no association between academic problems and learners' gender. This implies that learners may experience learning problems differently irrespective of their gender. These findings are in conflict with Schneider (2005) who reported a high incidence of school difficulties for boys than girls. In addition, Soomro and Clabour (2012) found a correlation between poor academic achievements which was higher in boys than in girls.

The present study reveals that learners' gender is influential on unusual behaviour. General observation reveals that female learners tend to be afraid of little things, confused about what other people say and pessimistic about the future than male learners. This denotes that learners relate to or behave

differently with their peers with respect to gender. These findings imply that male and female learners do not differ with respect to unusual behaviour. These findings are similar to that of Ward (2007) that male and female learners behaved differently with regard to strange behaviour. More boys than girls were found to be associated with girls.

The findings reveal that social withdrawal, emotional distress and physical aggression are not associated with learner's gender and family structure. With regard social withdrawal I may infer from this that any female or male learner may be socially withdrawn irrespectively. The findings of the current also reveal that learners can be emotionally violated irrespective of whether they are males or females. In relation to physical aggression, the findings suggest that learners' aggressive behaviour is independent of their gender. Any association found might be due to the fact that media have a great influence on learners' aggressive behaviour. These findings are in contrary to that of Burton (2008) who holds that boys are associated with physical aggression and school-based violence.

Hypothesis number 2c was found tenable in five instances and only in five conditions, the results were found acceptable.

There is an association between problems of conduct and learners' grade. The study indicates that the problems of conduct are more in intermediate, senior and FET phases than in foundation. A study by Kingbeil (2000) lent support to the observation that children from higher grades were more likely to have conduct problems than children from lower grades.

According to the present study, there is an association between social interaction and learners' grade. This denotes that learners in foundation phase seem to display 19more social interaction problems than learners in senior and intermediate phase. This also means that young learners tend to talk more than matured learners. These findings support the study by Schneider (2005) which revealed that learners from higher grades were found to have fewer social problems than those from lower grades.

Unusual behaviour (child specific behaviour or personality) and the variable of learners' grade or educational level are both associated or linked. The findings mean that younger learners in foundation and intermediate phases manifest more unusual behaviour than those in foundation phase. This maybe because learners in foundation and intermediate phase sometimes were unable to control their behaviours in class. These findings are contrary to that of Levinson (2014) who revealed that unusual behavioural changes were more common in high schools than in pre-schools and primary schools.

There is an association between emotional distress and learners' educational level. This implies that learners from different grade levels differ in a way they manifest emotional distress. Learners from senior and FET phases tend to be more emotionally disrupted than those from foundation and intermediate phases. Bowen perceived family structure as influential to children's emotional problems, and not educational level.

The findings of this study also indicate that there is an association between physical aggression and learners' grade. For example, the findings of this study also indicate that learners in senior and FET phases are more physically

aggressive than learners in foundation and intermediate phase. On the contrary, Marais and Meier (2010) contended that violence and physical or verbal aggression were found to be common among foundation phase learners. This means learners' from different grades were disruptive and violent.

There is no association found between the variable of grade and learners' academic habits. This means that learners may have academic problems irrespective of their level of education. These findings are conflicting with Akomolafe and Olorunfemi-olabisi (2011) findings that family structure had more influence on academic performance of secondary school learners than primary school learners.

The findings of the present study also show that there is no relationship between health concern and learners' educational level across different family structure. There is also no association between the variable of grade and interpersonal relations. These findings mean learners from different grades do not differ in the way they interact or communicate. Any association may be due to chance factors. The present study also indicated that there is no association between social withdrawal and learners' grade across different family structures. This implies that learners may be socially withdrawn irrespective of their grade.

6.2.3 Findings in connection with the third objective: Educators' recommendations

An attempt has been made in this study to obtain educators' recommendations on appropriate methods or intervention for a learner with school-based problems of conduct, academic and adjustment (health, social skills, unusual behaviour, emotional distress and physical aggression). To draw out educators' views interviews were conducted. Educators were requested to make recommendations for intervention strategies on school-based problems that learners experience at school. These recommendations were grouped into various categories and in accordance with each of the school-based problems mentioned earlier on. The frequency of an idea in each category of the problems was noted. The ideas were ranked and statements with highest the percentage received rank order number one (tables 74-82)

It is noted that for academic, conduct and adjustment problems, the ordinal strengths of educators' recommendations became apparent. The study reveals that learners from KwaZulu-Natal schools experience various problems due to the influence of their family background or family structures. The study reveals that the majority of learners with problems are from broken, dysfunctional or unstable families. For instance, if the child stays with the grandmother or the elder child, or the mother is working or both parents are working, the teacher should suggest someone else who is very close to the family, who can assist the child with homework.

It has emerged that educators rely on psychological services in dealing with learners diverse problems in schools. They recommended the use of different specialists or professionals (multidisciplinary approach) to dealing with learners'

problems. This shows that some educators do have insight about the principles of inclusive education, in particular, Special Needs Education. Seemingly, a single approach cannot be used to resolve all the problems experienced by learners in schools. This is contrary to what Nel et al. (2012) discovered. Educators assume that developing communication skills through love and appreciation may assist learners with social problems. Teachers should have empathetic understanding of the child's problems. Educators are raising very important psychological concerns, still, training of educators is essential for effective implementation of such concerns. Kirk, Gallagher, Coleman, and Anastasiow (2009), in the United States of America, presented similar findings.

In conclusion, these recommendations are suggestive of the fact that teachers should be supported so that they would be able to create learning environment such that each and every learner's diverse needs are catered for. However, teacher-learner ratio needs to be taken into consideration. This is suggestive of remedial education and extra classes within the school so as to deal with learning problems. According to Erick Erikson's theory, if the child experiences learning difficulties, the child's self-esteem would be lowered. The researcher has observed that the problems of academic or learning negatively affect learners' behaviour or adjustment. Thus, almost recommendations in these two categories (learning and adjustment problems) are similar. This is because when the children have learning problems in the classroom, they would manifest some behaviour or adjustment problems. Educators recommend that using different specialists towards resolution of school-based problems such as conduct, academic and adjustment problems is crucial in order to approach the problem from different perspectives and to utilise different expertise. It is a common belief that when people work as equal partners towards common goals, this will ultimately lead to a great achievement. Teachers need to be encouraged through

workshops about the fact that they can play an important role in handling learners' problems or diverse needs. They also need training on how to work with other professionals. Teachers should also be trained and encouraged to treat learners individually. This means, they must understand that learners have diverse needs and come from different socio-economic backgrounds. It means the Department of Education should consider that learners have diverse needs when they develop the curriculum. For instance, Life Orientation should be a compulsory subject not an additional one.

The teachers' role is to identify the problems first and then refer the learner to the next level after they have done something. They can work to gather and to assist; and if they fail, they must refer the child to the School Management Team (SMT). Teachers should be encouraged to work with the SMT.

Psycho-educational approaches are recommended to improve the required skills of both educators and parent on how they can manage learners with conduct, adjustment, and other learning barriers both at school and home. It is compelling that educational psychologist must empower parents and teachers to handle learners with different problems and other diseases that can cause barriers to the learners' learning and success as suggested by Pillay (2014). Application of behaviour modification strategy, parental involvement and referral to specialists is recommended for almost all school-based problems for KwaZulu-Natal African learners (above 69% of educators).

6.2.3.1 Educators' recommendations on adjustment problems

Many educators (60.5%) believe that involving parents in their children's learning is crucial. However, they think that parents will be automatically involved in their children's learning. Hence, teachers should play an important role in encouraging parents (Nel et al., 2012). Parental involvement starts with the school, and parents should be supported in order for them to be fully involved in their children's learning. Teachers should work *in loco parentis*; they should first establish the relationship with the troublesome learner and find out the reasons for unacceptable behaviour or poor performance. In other words, they should become part and parcel of the child's problem. For instance, if a child has a problem at school, educators should contact the parents. Teachers should act as go betweens, and find a way to bridge the gap between the parent and the child in order to neutralise the situation.

With regard to health problems, the majority of educators (55%) believe that learners' with health problems should be referred to the clinic or hospital, medical practitioners or doctors, and work in collaboration with parents. In addition, these educators suggested that each school should have first aid kits or mobile clinics in order to deal with learners who are experiencing stomach ache, headaches, and injuries during school hours. Teachers seem to know what they can do when a learner is sick. They should be supported so as to execute their ideas or recommendations.

6.2.3.2 Educators' recommendations on academic problems

For learning and adjustment purposes, the findings reveal that varying of teaching and learning methods is crucial. This should be done in order to ensure that every learner's diverse needs are accommodated. This can be achieved by

introducing intervention strategies that can enhance, promote and stimulate learners' growth and development. They hold the view that this restructuring or redesigning of the curriculum will enable them to deal with learners' reading skills, reading comprehension, spelling, speech articulation, communication by writing, clearly expressing thoughts and ideas, completing class activities, complete homework, eagerness to learn new material, concentrating, demonstrate logic and organised reasoning, following and remembering the teacher's instruction, working as a team, and working independently without disturbing others. I surmise that, although teachers would like to change or revise the curriculum, this is beyond their scope. Instead, educators should be supported to understand a learner as a unique individual in order to remediate academic problems. Educators should give a learner individual attention and use support groups to assist learners with problems (Week & Arradu, 2013).

6.2.3.3 Educators' recommendations' on conduct problems

Many educators (61%) believe that parents and educators are responsible for inculcating the rules, acts and policies in the learners, and reminding them to adhere to those policies so that learners' behaviour (conduct problems and physical aggression) will be acceptable at school and at home. Other educators (59%) are of the view that application of disciplinary measures, revisiting school policy, school rules and regulations, stating and setting boundaries to a learner with conduct and aggression problems is also crucial. For instance, 35.8% of educators believe that corporal punishment should be reinstated. In addition, about 35.8% of educators further state that there is a need to instil morals, values and a positive attitude in such learners. This should be done after diagnosis or assessment or needs analysis because the majority of parents do set rules and regulations at home. This shows that educators feel a need to work hand in hand with parents and appropriate professionals. They feel that there must be a closer

relationship between teachers and parents. Teachers should be assisted or supported in counselling learners with problems. Teachers and parents should work collaboratively. Therefore, teachers need support in counselling.

With regard to unusual behaviour, teachers are of the opinion that other than in addition to advising parents to seek the services of professional assistance of specialists, conducting informal assessment is very crucial. Teachers need more information and support on child and classroom management. Apart from referrals, behaviour modification strategies, strengthening teacher-learner relationships and creating a conducive environment for learning to take place, which seem to be strategies that educators recommended for school-based problems as manifested by KZN learners, teachers also suggest that the School Governing Body should be informed about a troublesome learner. About 33% of educators hold the opinion that educators should show a learner unconditional love, and that building a spirit of '*Ubuntu'* (humanity) would decrease the problem. Respondents (28%) expressed the view that educators should work collaboratively with the school and district support team in assisting a learner with adjustment problems. These educators also advised that such learners should be given individual attention. Some educators (24%) said they would take the legal route for severe and serious cases of physical aggression. Teachers should be supported to work in collaboration with the school support team.

A small number of educators (19%) were of the opinion that educators should have an approachable manner, treat a child with respect so as to win the child's attention, and provide parental guidance and support on how to manage their child's condition at home, thus enabling the child to deal with any problem. Other educators believe that introducing bible lessons and life-skill lessons can mould the child's personality. These educators believe that this would inculcate morals

and values in the learner. The educators seem to be raising very important psychological concerns so that when they are trained they could apply them better.

Educators also recommend that discussing the matter with the school management team (SMT) and also involving parents may assist. Teachers seem to be aware that they should work in collaboration with the SMT and parents. The researcher has observed that some STM are not functional in some schools. Therefore the DoT and educational psychologist will play an important role in strengthening the SMT by supporting them in schools.

Educators also continually stated that a learner should be encouraged to engage in extra mural activities. This means that school environment should be conducive to emotional stability. Teachers seem to understand the role they can play. They should be supported in order to implement their ideas.

Teachers seem not to be sure of the role they can play as members of the school support team in dealing with learners with diverse needs. A few educators advised that the services of the multidisciplinary team should be employed. However, the function of the multidisciplinary team in South Africa seems to be idealistic, not practical. Therefore, the researcher recommends the revising of the School Support Team which will be more functional and will be monitored by educational psychologists.

6.3 LIMITATIONS

The study aims formulated at the beginning were achieved. However, the study sample was drawn only in KZN province. This seems to be a study limitation since learners from other provinces may experience different problems because the environment and factors are also not the same. The study also investigated only African learners. One could argue that involving different races would have enriched the study and the intervention models. Educators were required to rate any troublesome learner in their classroom without specifying the "family structure". As a result, some family structures and learners' characteristics did not meet the assumption of statistical techniques used and this eventually forced the researcher to merge other family structures. The research instruments used in the present study limit the study to obtain in-depth information from the participant. The use of focus-group interviews would have enriched that study. I could also argue that the present study should have landed on the interpretivist research paradigm, rather than positivist. These seem to be the generic limitations of psychological research. The study would have enriched the study if semi-structured or focused group interviews were used in qualitative methods of data collection.

6.4 AVENUES FOR FUTURE RESEARCH

The present study on the relationship between family structure and school-based problems produced the following avenues for future researchers:

a) The present study has shown that teachers' recommendations were drawn from KZN province; it would be proper to undertake the study in other provinces to determine other educators' recommendations regarding school-based problems.

b) The study reveals that learners' family structures have an impact on school-based problems such as academic habits, interpersonal relations and emotional distress. Therefore, a school-based programme needs to be introduced in order to strengthen parent-educator relationship.
c) There is a need to conduct a study to investigate the impact of homosexuality and child headed-families on learners' academic performance, since these family structures have recently emerged after democracy in South Africa.
d) There is a need to conduct workshops that will empower both parents and educators on how to handle learners' or children' problems. This workshop should be conducted within and outside the school environment.
e) There is a need to introduce a community-based programme that will encourage parents to fully participate in their children's learning.
f) There is a need for the revision and redesigning of the school curriculum, teaching and learning methods and the provision of sufficient of teaching and learning support material in schools so as to cater for learners' learning barriers.
g) There is a need to develop a vibrant school support team within the school, other than outside of the school environment at the regional level.

CHAPTER SEVEN

IMPLICATIONS OF THE STUDY, RECOMMENDATIONS AND IDEAS TOWARDS THE DEVELOPMENT OF AN INTERVENTION MODEL

7.1 INTRODUCTION

Chapter seven is intended to consolidate the research report. This study was conducted to investigate the relationships between selected family structures and school-based problems. The present study's focus is primarily on factors that can influence school-based problems in KwaZulu-Natal schools and educators' recommendations for intervention.

7.2 EDUCATIONAL IMPLICATIONS OF THE FINDINGS OF THE STUDY

The study reveals that family structure is a contributor to learners' problems such as academic habits, interpersonal relations and emotional distress. Since the study sample is predominately black learners, such findings imply that educators, mental health professionals and the Department of Education should work collaboratively to address learners' problems in schools and African families by empowering parents on how to build and strengthen healthy families. Educational psychologists, in particular, should work hand in hand with other specialists, educators and parents, and also with the department of education to minimise these family problems that have a negative influence on learners. Educational psychologists will bridge the gap between theory and practice and also assist educators to understand that they can play an important role in mediating between parents and their children in order to neutralise these

influences. Educators should then assist in monitoring and evaluating the situation so that a child can work independently.

Learners' age was found to be influential on the following school-based problems: conduct problems, interpersonal relations, social withdrawal, emotional distress and physical aggression. The study revealed that all these problems are typical in adolescents. These findings imply that educators, from intermediate to FET phases, and parents should understand the transitional stages that adolescents go through, and give them the required support so that they can overcome the challenges of this stage of their development. This can be done if educators are taught about the developmental stages. These stages are very critical. According to Erikson's theory (1950), children who are encouraged and commended by parents and teachers develop a feeling of competence and belief in their skills. Those who receive little or no encouragement from parents, teachers, or peers will doubt their abilities to be successful. During adolescence, children explore their independence and develop a sense of self through teachers' and parental support. Parenting and classroom management styles play a vital role (Ficco, 1997). This implies that educators and parents must be sensitive and supportive to the needs of adolescent learners or and children in order to minimise the occurrence of adolescent problems. Educators and parents should be exposed to training in children's developmental stages (individual learner and group development).

Gender was found to have an impact on learners' health and social interactions. The findings imply that educators must take learners' gender into consideration when they deal with health and social interaction problems. Educators should be assisted with information on gender differences.

Leaners' educational level or grade does have an influence on school-based problems, such as conduct, social interaction, unusual behaviour, emotional distress and physical aggression. The findings of this study reflect that learners from different grades manifest these problems differently. It is therefore clear that learners' educational level should be taken seriously when handling leaners with such problems. The knowledge of stages of development is also crucial.

Factors such as gender and age appear to be influential on social interaction. This implies that when educators assist learners with socialisation problems, they should take gender and age into consideration. In addition, emotional distress interacted with more than one factors (learners' age and grades). Such interaction is understandable, since when learners' progress to the next grade, their ages also increase. When educators assist learners with emotional problems, they should take both grade and age into consideration. Furthermore, learners' physical aggressiveness is also related to grade and gender.

7.3 RECOMMENDATIONS

It is true that the present study met its objectives; several limitations exist as stated in paragraph 6.4. These recommendations are meant to address areas where the study may have fallen short.

i. The study investigated the relationship between selected family structures and a wide of range school-based problems in KwaZulu-Natal schools (foundation, intermediate, senior and FET phases) using the Student Behaviour Survey (SBS) scale. It would therefore be proper to investigate these problems in other provinces. Other problems such as autism, anxiety, neuroses, psychopathic tendencies and Down Syndrome should also be investigated.

ii. There is also a need for a study on the influence of child headed families on learners' academic performance and how such an environment affects educator-learner relationships. Identifying a child as a problem influences an educators' manner of approach to the child. The educators' reaction to the learners' needs is crucial. This means educators should adjust to learner's needs rather than the learner adjust to the needs of the educator.

iii. With regards to academic problems, the South African Department of Education (DoE) should declare more Full Service Schools, and conduct more in-service training sessions in schools on Inclusive Education. There is a need to revisit the functions of the School-Based Support Team. Such structures (SST) in schools need to be refined and restructured.

iv. Sufficient provision of teaching and learning support materials in schools and resources is also necessary to address academic problems.

v. The study involved only black (African) learners. There is a need to investigate these problems among other racial groups in South Africa.

7.4 IDEAS TOWARDS THE DEVELOPMENT OF INTERVENTION MODEL

7.4.1 Management of school-Based Problems

On the basis of previous findings and discussions, it is imperative to make suggestions for a programme of intervention to decrease the number of school-based problems among South African learners.

It is obvious from the responses of educators that assistance from different professionals, in particular, educational psychologists, is desperately needed. According to Sibaya (1992), the best psychotherapy that educators can give to learners is "success" in his or her educational endeavours. Psychology must play

a role with regard to learning, adjustments and conduct or behavioural problems. The psychologists must work hand in hand with the School Management Team (SMT), educators and parents. This structure will reinforce the idea that teachers are well equipped in developmental stages, socialisation education, gender differences, grade differences, techniques and methods of teaching in understanding the learners. Based on the findings of this study, it has emerged that school activities will be organised around collaboration, consultation, cohesion and cooperative education. The school environment will be conducive to learners' emotional stability. These findings concur with that of (Arnold, Goldstein, and Conoley (1994)) who suggested a holistic approach in managing student aggression.

Research is the key to improve national policies and principles which can determine learning progress and development. In addition to research, the role of the educational psychologist is still in its inception in African education in South Africa (Sibaya, 1992; Pillay, 2014).

The existing structure consists of members of an interdisciplinary team, namely, psychologists, speech therapists, occupational therapists, and physiotherapists, etc. The limitation of the existing model is that members of interdisciplinary team or specialists at the regional or districts level are non-existent in South Africa. This structure (MDT) is idealistic, not practical, and retards the provision of psychological services or support services to learners in schools. The structure of the existing SST consists of the principal, educators and "the learner support mentors". The educators and learner-support mentors identify learners with problems or learning barriers and refer them to the next level (Districts Support Team) through the principal. At the district level, district inspectors only receive reports from learner support mentors for record keeping. There is no provision of

the necessary support (Ervin et al., 2010). The identification is done at a school level and learners are referred to psychologists and other specialists in their consultation rooms. The problem with the existing structure is that learners do not get assistance as soon as possible. Instead, learners are kept on the waiting lists for a long time before they can get assistance.

The Department of Education has initiated the declaration of some schools to be inclusive, nevertheless, there is still a shortage of Full Service Schools (FSS), whilst numbers of special schools are still insufficient in the country. The psychological training programme is structured in such way that intern psychology students are now placed in schools for practical experience. In that way, learners in urban areas can benefit from the arrangement. However, such privileges are absolutely lacking in disadvantaged and especially rural communities. Another concern is that the available support services in other schools operate with learner-support mentors, who can liaise with psychologists, but such support services are still limited and these support mentors are not well equipped. Though mentors identify learners with problems in schools, educational psychologists are only available for consultations in urban areas and can only benefit those learners whose parents can afford to pay for psychological services. The identified learners have to wait for two to three months before they can get the necessary assistance (Ervin et al., (2010). There is a need for each school to have an active School-Based Support Team. These considerations are relevant to the findings of the present study. The manifestation of school-based problems such as of conduct, adjustment and learning in South African schools increase day-by-day. In the light of all these shortcomings of the existing model, it is imperative to introduce a programme of intervention that can assist educators to manage learners' problems in schools. The proposed programme

also aimed at empowering educators in handling learners with various problems within the school.

7.4.2 School-Based Support Team

A major focus of this study is on three clusters of problems. The first cluster comprises adjustment problems; the second cluster constitutes learning or academic problems, and the third one centres on conduct problems. This shows that learners in KwaZulu-Natal schools manifest diverse problems. There is therefore a need for a model of intervention or a revised School Support Team which operates in a way similar to the idealistic MDT at regional level.

Several recommendations are made by educators, with regard to identification of, support services for, and interventions or management of learners' school-based problems. Sibaya (1992) noted that educators endorsed as highly desirable the functions of psychologists. This means the provision of relevant support services is essential.

Many recommendations are made by educators as they are listed in the upper ranks in chapter five. This implies an extensive training and collaboration, monitoring and evaluation within the school. The nature of these recommendations means a different setting for rendering psychological help to learners in the schools. This could be a setting for coordinating contributions from different stakeholders, including educators, parents, learners and psychologists and other specialists. School-based Support Team (SST) or Institutionalized Support Structure (ISS) is introduced as a model of intervention on problems learners experience in South African schools.

7.5 THE CURRENT SUPPORT STRUCTURE IN TRADITIONAL BLACK SCHOOLS.

This study proposes a model for intervention in the school-based support team, best on the primary task of helping children overcome learning, behaviour and adjustment problems, and helping the school to accomplish its educational mission.

The proposed structure consists of four bodies, namely, the educators, members of the School Support Team (SST) or School Management Team (SMT), other specialists, and DoE. The SMT includes the principal, deputy principal and Heads of Departments (HOD's), or any combination of these three (3). The functions of each body are furnished and they vary from one body to another body. For instance, the SMT is responsible for taking decisions on the placement of those learners with severe problems in schools. They will also be responsible for seeing to it that sufficient resources are provided to the school. This allows the smooth delivery of psychological services within the school and the collaboration between educators and other professional as to handle learners' problems. The SGB is a statutory body that is responsible for monitoring and overseeing the overall academic interest of the school. This body will facilitate the creation and sustenance of conditions conducive for effective teaching and learning. In that way, learners with diverse needs will be catered for. This is basically a policy-making body, therefore, the SMT will work hand in hand with the SGB. Educators will not be the only people who are charged with the responsibility of educating a child in a particular grade or subject. Teachers are also responsible for handling learners with problems by encouraging and motivating them. In this case, they can positively mould a child towards a position of responsibility and independence. They are not only concerned with skills development, but also have to lay the foundation for the learners' character

development. Educators will need to work in collaboration with the members of interdisciplinary team or other specialists and the SST or SMT in assisting learners with problems. They are also responsible for encouraging collaboration between parents and the school. With regard to the new proposed structure, members of the SST will comprise of the principal and two educators with a special interest in special education and many years of teaching experience. The role of this structure is to convene meetings and make sure that inclusive education principles are applied within the school and to provide assistance to learners with learning, conduct and adjustment problems. Educational Psychologists are the ones who will work with the schools.

The educators will identify and refer learners to the SST within the school for remediation and intervention. An individual educator will intervene accordingly. Placement for those learners who need intensive supervision or with severe problems will be referred to appropriate specialists after working through the intervention model within the school. Educators and parents will work together to assist the learner, but if they fail to solve the learner's problem, parents can sign the consent form if the learner is still under fourteen years of age. Both educators and parents will receive training on referral to other specialists and work with them. Basically, educational psychologists will fulfil their role of monitoring and evaluating the child. They will be responsible for ensuring that strategies to deal with learner's problems are executed properly, and that conditions are conducive for that. According to inclusive education policy, placement should be done within the school. Each school should have inclusive sites such as inclusive class, special class, remedial centre and resources centres (White paper 6, 2001). However, this is still not feasible in South Africa due to the lack of resources and infrastructure within the schools.

Identification takes its point of departure from the fact that behaviour in the classroom is a function of both intrapersonal and school environmental factors. Identification and referral of a learner to the SST will be done by educators and the SMT. This method or approach will be more convenient and accessible to all learners regardless of their socio-economic status. After identification, the educators will work as a team to support the child. In that way, they will understand their role in assisting the child. Teachers will report the problem to the SMT and work collaboratively with other professionals.

7.5.1 The proposed intervention model

It has emerged from this study that factors such as learners' family structure, age, gender and educational level have a great impact on learners' problems of learning, conduct and adjustment. The inclusion of an educational psychologist as a member of the SST enables professionals to coordinate their efforts on an ongoing basis. This structure promotes ways of focusing on the interaction of pupils with critical aspects of their different school environments, and other contexts, as suggested by Bronfeinbrunner (1951), i.e. microsystem, mesosystem, exosystem and microsystem. This is also known as the systemic approach. This approach permits educational psychologists to investigate various aspects of the child's life. This means the intervention or treatment is not confined to only one aspect of the child. The approach emphasises the principle that prevention is better than cure. The revised SST uses an approach that enables schools to render a diversity of services and to improve the quality of the school and family life. The team would provide for a comprehensive psychological services' delivery in traditionally black schools in South African.

The following programme of intervention has been developed:

i. The necessity for a remedial teacher

The study shows the importance of putting more emphasis on the "'3Rs". It is true that teachers have problems addressing different learning problems learners experience in the classroom because they are not well equipped. There is a need for a remedial teacher within each school who will assist learners with academic problems and do remedial assessment. This can reduce academic problems among learners and will benefit all learners within the school.

ii. Compensatory education

Compensatory education entails supplementary services designed to assist learners at risk of learning or who have cognitive problems and low academic achievements. This kind of education allows educators to choose an appropriate instructional method to compensate for the lack of information, skills, or ability in learners. This can be accomplished by using alternate modalities, or supplemented by additional teaching and learning support materials. This will compel educators to improvise and the Department of Education to provide necessary TLSM's.

iii. Home- school liaison

Educators should be encouraged to work in collaboration with the adults in the child's home. There is a need for collaboration between educators and parents. Parents should be an integral part of their children's learning. Teachers, on the other hand, should find a way to fill the gap between learners and subject matter (Goldstein, 1993; Marais & Meier, 2010).

iv. Cooperative learning

The findings of the study reveal that family structure contributes to learners' interpersonal relation problems. There is a need to place

emphasis on “socialisation education”, both at home and school. Educators will be encouraged to motivate leaners to be engaged in extramural activities, encouraging learners to love, respect and support one another and to listen to other people’s ideas. Teachers will be encouraged to give learners different responsibilities and work with social workers, family doctors and families. Teachers will create the opportunity so that learners will be able to solve problems freely. Parents will be guided to manage learners’ interpersonal problems at home. The educators will assist parents to work with social workers. Teachers will be trained to provide life-skills programmes to learners.

v. Creating a conducive school environment

The study reveals that the school environment needs to be conducive for learners’ emotional stability. Educators will be encouraged to create a conducive school environment. This will enable learners to open up about their problems, feelings and worries to their teachers and parents. Teachers will be trained on referrals and work in collaboration with social workers, counsellors and pastors. Educational psychologists will provide such training. In this way, referrals to consultation rooms or hospitals will be limited. This will assist in addressing learners’ emotional distress.

vi. Provision of training on psycho-educational guidance

The study indicates that age contributes to learners’ conduct problems. Therefore, identification of misbehaviour should be emphasised in order for educators to solve conduct problems and age. There will be provision of on-going training to both parents and educators about leaners’ developmental stages and misbehaviour. This will assist educators to motivate learners to understand that there are consequences of their behaviour. Teachers will also receive training on behaviour modification strategies. An educational psychologist will provide the training.

vii. Varying of age-group and grade

The study also shows that age-group and grade should vary concurrently for learners' interpersonal relations. There is a need and it is essential that the DoE will instruct school principals to apply the policy of condoning or promoting learners who are over age for grades, to regulate class placement by age and exercise automatic promotion for average groups (Carton and David, 1993).

viii. Reiteration of the influence of developmental stages

The study reveals that reiteration of the influence of developmental stages on the learner is crucial when dealing with learners' conduct problems. There will be parent and teacher training about transitional stages and their effect on leaners (Carton and David, 1993).

ix. Reorganisation of school activities

There is a need to structure school activities around collaboration, consultation and cooperative education. Educators will encourage learners to work collaboratively with their classmates.

x. Physical aggression varies with age

The study reveals that physical aggression varies with age. There is a need for educators to work collaboratively with a learner, together with members of the school disciplinary team (STD). Educational psychologists will provide theoretical training on developmental ages to teachers.

xi. Grade difference

The present study also shows that grade differences should assist teachers to improve learners' social interaction skills. There is a need to introduce a life skills programme that will enable educators to build relationships and learn communication and problem-solving skills. Learners should be motivated to initiate group interaction and take responsibility. Learners will be motivated to participate in different

activities. Educators should also link learning concepts with real-life situations.

xii. Gender differences and learners' health problems

The study also reveals that gender differences should guide teachers in assisting learners with health problems. Parents and teachers will be encouraged to send learners to clinics when they are sick, and teachers will encourage parents to send their children to clinics or medical practitioners for check-ups if they are not feeling well. Parents will be taught about compliance with instructions for taking or administering medication and taking it timeously. Teachers will guide parents on how to manage health-related problems at home.

xiii. Convene parents-educators conferences

Parents-educators conferences will be convened to discuss the child's health and do strategic planning on how to deal with learners' health-related issues. Educators will be encouraged to call up mobile clinics to schools. All schools will have first aid kits, depending where the school is situated (in rural or urban area).

xiv. Gender differences and learners' social interaction

The study also shows that gender differences should guide teachers in their interaction with learners. Teachers will be encouraged to engage learners in group activities or team work, role-plays, assign different roles and encourage learners to engage in different roles.

xv. Developmental anomalies vary with educational level

The study also reveals that developmental anomalies vary with educational level or phase. To deal with learners' child specific or personal problems, teachers will be encouraged to give learners enough support, and show learners unconditional love and guidance and expose them to activities that can enhance the spirit of *Ubuntu* (humanity). Educators will also encourage learners to behave appropriately. Those

children with severe, unusual behaviour will be referred to the educational psychologist.

xvi. Family structure and learners' academic problems

The study shows that learners from extended and nuclear families perform worse in schools than learners from other family structures (single, divorce, child-headed, grandparent and polygamous). There is a need to encourage both parents from the nuclear family to work hand in hand with a member from the extended family or a relative so as to assist the child with academic work or homework if they themselves are at work. The members of the SST and DoE will work collaboratively to empower parents. Extended families were also found to have an influence on with learners' academic problems. There is a need to teach parents who stay with extended family members to eliminate destructions and conflict that might affect the child's academic performance due to a number of people living under one roof. Such opportunities should be utilised to support a learner when there is a crisis.

xvii. Family structure and learners' interpersonal relations

The study indicates thatthere is an interaction between family structure and learners' interpersonal relations. Learners from single, divorced, grand parenting, polygamous and child-headed families have more interpersonal relationship problems than learners form nuclear and extended families. There is a need to develop and introduce a life skills programme in order teach single parent, divorced parent, grandparent, polygamous and child-headed families how to relate and communicate with one another. This enables parents to understand that they should model acceptable behaviour to children rather than unacceptable behaviour. This will be coupled with training on behaviour modification strategies.

xviii. Family structure and learners' emotional problems

The study indicates that learners from grandparent, single parent, divorced parent and stepparent families are more emotionally volatile than learners from nuclear and polygamous families. There is a need to deal with broken families. Families should be taught how to deal with learners' emotional problems and their own problems. Family therapy should be provided to assist in discouraging families from imparting their emotional problems to their children and also to be sensitive to the children's needs. The SST and the districts' inspectors should facilitate the collaboration between families and social workers. Teachers and families need to be trained on how they can work with social workers.

7.6 CONCLUSION

Chapter seven was concerned with the implications of the study, recommendations, ideas for the development of a model of intervention, and attempted to create a model for psychological services in traditionally black African schools. Factors contributing to school-based problems of learning, adjustment and conduct prevailing in KwaZulu-Natal primary, secondary and high schools in South Africa were clearly identified. This holds true particularly for predominantly black learners in South Africa. Educational psychologists and other mental health professions should help educators to implement the proposed programme structure and also play their part in eradicating and minimising various problems faced by learners in South African schools.

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9. ANNEXURES

ANNEXURE A: Application letter for permission to conduct the study

University of Zululand

P/Bag x1001 (Internal Box 315)

Kwa-Dlangezwa

3886

The District manager

_____

_____

_____

Dear Sir/Madam

REQUEST FOR PERMISSION TO DO RESEARCH

I am currently engaged in a research project investigating the relationship between the selected family structures and school-based problems as the requirement in the fulfilment of DE.d (Educational Psychology) degree in the Department of Educational Psychology and Special Education.

My basic concern is to examine the relationship between selected family structures and school-based problems in primary, secondary and high schools of different districts in KwaZulu-Natal province. This research will add to the existing body of knowledge on family structures and school-Based problems.

I would be grateful if this request will be considered and your assistance in this regard will be highly appreciated.

Thanking you in advance.

Yours sincerely

_____

S.P. ZULU

UNIVERSITY OF ZULULAND STUDENT

SUPERVISED BY: Prof. P.T. SIBAYA (Educational Psychologist)

ANNEXURE B: Application letter for permission to conduct the study to the Department of Education

The Director (SibusisoAlwar)

Reseach Unit

KwaZulu-Natal Department of Education

Dear Madam

REQUEST FOR PERMISSION TO DO RESEARCH

I am currently engaged in a research project investigating the relationship between selected family structures and school-based problems as the requirement in the fulfilment of DE.d (Educational Psychology) degree in the Department of Educational Psychology and Special Education.

My basic concern is to examine the relationship between selected family structures and school-based problems in primary, secondary and high schools of Umhlathuze, Umkhanyakude, Zululand, Amajuba and Port Shepstone districts in KwaZulu-Natal province. This research will add to the existing body of knowledge on family structures and school-Based problems.

I would be grateful if this request could be considered and your assistance in this regard will be highly appreciated.

Thanking you in advance.

Yours sincerely

_____

S.P. ZULU

UNIVERSITY OF ZULULAND STUDENT

SUPERVISED BY: Prof. P.T. SIBAYA (Educational Psychologist)

ANNEXURE C: Permission to conduct the study in KZN schools

education

Department:
Education
PROVINCE OF KWAZULU-NATAL

Enquiries: Nomangisi Ngubane | Tel: 033 392 1004 | Ref.:2/4/8/210

Ms SP Zulu
University of Zululand
Private Bag X1001
Kwa-Dlangezwe
3886

Dear Ms Zulu

PERMISSION TO CONDUCT RESEARCH IN THE KZN DoE INSTITUTIONS

Your application to conduct research entitled: **"Relationship between selected family structures and school-based problems"**, in the KwaZulu-Natal Department of Education Institutions has been approved. The conditions of the approval are as follows:

1. The researcher will make all the arrangements concerning the research and interviews.
2. The researcher must ensure that Educator and learning programmes are not interrupted.
3. Interviews are not conducted during the time of writing examinations in schools.
4. Learners, Educators, Schools and Institutions are not identifiable in any way from the results of the research.
5. A copy of this letter is submitted to District Managers, Principals and Heads of Institutions where the intended research and interviews are to be conducted.
6. The period of investigation is limited to the period from 01 July 2014 to 30 June 2015.
7. Your research and interviews will be limited to the schools you have proposed and approved by the Head of Department. Please note that Principals, Educators, Departmental Officials and Learners are under no obligation to participate or assist you in your investigation.
8. Should you wish to extend the period of your survey at the school(s), please contact Mr. Alwar at the contact numbers below.
9. Upon completion of the research, a brief summary of the findings, recommendations or a full report / dissertation / thesis must be submitted to the research office of the Department. Please address it to The Director-Resources Planning, Private Bag X9137, Pietermaritzburg, 3200.
10. Please note that your research and interviews will be limited to schools and institutions in KwaZulu-Natal Department of Education. See Attached list

Nkosinathi S.P. Sishi, PhD
Head of Department: Education
Date: 31 July 2014

ANNEXURE D: Consent form for educators

I _____ agree to participate in the research project investigating the relationship between the selected family structures and school-based problems.

I understand the aims and the study objectives, the risks involved, benefits, and inconveniences that this research projects entails.

- I understand that I am not obliged to participate in this study, that I am free to not to answer certain questions, and that I have a right to withdraw from the study at any time.
- I understand how confidentiality will be maintained during this research project
- I also understand that the interviews will be audio-taped and that because of the nature of the project I herewith waive my right to confidentiality and anonymity.
- I understand the anticipated uses of data, especially with respect to publication, communication and dissemination of results.

I have carefully studied the above and understand my participation in this agreement; I freely consent and voluntarily agree to participate in this study.

I also understand that the basic concern of this study is to examine the relationship between selected family structures and school-based problems in primary, secondary and high schools of different districts in KwaZulu-Natal

province. This research will add to the existing body of knowledge on family structures and school-Based problems.

Date_____ Signature _____

ANNEXURE E: Ethical clearance certificate

UNIVERSITY RESEARCH ETHICS COMMITTEE
(Reg No: UZREC 171110-30)

UNIVERSITY OF ZULULAND
Website: http://www.unizulu.ac.za

Private Bag X1001
KwaDlangezwa 3886

Tel: 035 902 6887
Fax: 035 902 6222
Email: ManqeleS@unizulu.ac.za

ETHICAL CLEARANCE CERTIFICATE

Certificate Number	**UZREC 171110-030 PGD 2013/43**								
Project Title	**Relationship between selected family structures and school based problems**								
Principal Researcher/ Investigator	SP Zulu								
Supervisor and Co-supervisor	Prof. PT Sibaya								
Department	Educational Psychology								
Nature of Project	Honours/4th Year		Master's		Doctoral	x	Departmental		

The University of Zululand's Research Ethics Committee (UZREC) hereby gives ethical approval in respect of the undertakings contained in the above-mentioned project proposal and the documents listed on page 2 of this Certificate. Special conditions, if any, are also listed on page 2.

The Researcher may therefore commence with the research as from the date of this Certificate, using the reference number indicated above, but may not conduct any data collection using research instruments that are yet to be approved.

Please note that the UZREC must be informed immediately of

- Any material change in the conditions or undertakings mentioned in the documents that were presented to the UZREC
- Any material breaches of ethical undertakings or events that impact upon the ethical conduct of the research

The Principal Researcher must report to the UZREC in the prescribe format, where applicable, annually and at the end of the project, in respect of ethical compliance.

The table below indicates which documents the UZREC considered in granting this Certificate and which documents, if any, still require ethical clearance. (Please note that this is not a closed list and should new instruments be developed, these may also require approval.)

Documents	Considered	To be submitted	Not required
Faculty Research Ethics Committee recommendation	X		
Animal Research Ethics Committee recommendation			X
Health Research Ethics Committee recommendation			X
Ethical clearance application form	X		
Project registration proposal	X		
Informed consent from participants	X		
Informed consent from parent/guardian			X
Permission for access to sites/information/participants	X		
Permission to use documents/copyright clearance			X
Data collection/survey instrument/questionnaire	X		
Data collection instrument in appropriate language		Only if necessary	
Other data collection instruments		Only if used	

Special conditions: Documents marked "To be submitted" must be presented for ethical clearance before any data collection can commence.

The UZREC retains the right to

- Withdraw or amend this Certificate if
    - Any unethical principles or practices are revealed or suspected
    - Relevant information has been withheld or misrepresented
    - Regulatory changes of whatsoever nature so require
    - The conditions contained in this Certificate have not been adhered to
- Request access to any information or data at any time during the course or after completion of the project

The UZREC wishes the researcher well in conducting the research.

CHAIRPERSON
UNIVERSITY OF ZULULAND RESEARCH
ETHICS COMMITTEE (UZREC)
REG NO: UZREC 171110-30

11 -11- 2013

RESEARCH & INNOVATION OFFICE

Professor Rob Midgley
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ANNEXURE F: Educators' interview schedule

The relationship between selected family structures and school-based problems.

1. Child's age_____
2. Child's gender_____
3. Child's educational level_____

4. In which of the following family structures does this child come from?

	Single parent family	
	Divorced family	
	Nuclear family	
	Other: specify	

5. What would you recommend to assist the learner who has a deficit on reading; reading comprehension; spelling; numerical skills; hand writing and speech?

_____
_____
_____
_____

6. What would you recommend to assist a learner who cannot: clearly express thoughts and ideas; complete class and homework assignments; demonstrate a logical and organised approach to learning; eager to learn new material; follow the teacher's instructions; maintain alert; pay attention in class presentations; performance consistent with ability; remember the teacher's directions; sit still when necessary; wait for his or / her turn; and work independently without disturbing others

_____
_____
_____

7. How would you assist a child who is unable to: help other learners; work cooperatively with other learners; maintain eye contact when speaking; listen when other learners speak and participate in class activity; rejected by other learners, avoid social interaction; shy; interrupts when others are speaking?

_____
_____
_____

8. Which intervention strategies would you recommend for a leaner who is always tired, exhausted and sleepy, complaints of headaches and stomach-aches, visit the school nurse, talk about being sick all the time and school absences due to poor health.

_____
_____
_____

9. What do you do if a child is afraid of little things; appears moody or too serious; appear sad or unhappy, becomes upset by constructive criticism; be upset for little or for no apparent reason; blame himself or herself for the problems of others; appears tearful, worries about what others think; expect to fail or do poorly in school does not seems to have fun; always negative and worries about what others think?

_____
_____
_____

10. How do you assist a child whose behaviour is strange and peculiar; confused by what others say; does not trust other people; say strange things; talk or laugh to himself or herself?

_____
_____
_____

11. How would you handle a learner who insults other learners; threatens other learners; threatens school personnel; tease other learners; starts fight with other learners; destroys property when angry; and attempts to seriously hurt another learner?

_____
_____
_____

12. What do you do to assist a learner who associates with learners who are often in trouble; blames others for his / her problems; disrupts class by misbehaving; disobeys class or school rules; impulsive or act without thinking; uses alcohol or drugs; lies to school teachers; skip classes; preoccupied because of sex; steals from other; suspended from school due to misbehaviour; talks excessively?

_____
_____
_____

13. How do you deal with a learner whose behaviour is strange and peculiar; confused by what other people say; does not trust other people; says strange things; and swears at school personnel?

_____
_____
_____

14. What is the child's domestic background like?

_____
_____
_____

15. Please furnish any additional information that may not be covered by the questions above

_____
_____
_____

Adopted from Student uBS (2004)

Thank you for your cooperation.

ANNEXURE G: Rotates factor loading

Items	1	2	3	4	5	6	7	8	9	10	11	Communalities
76	.849	.143	-.004	.172	.107	.013	-.089	.034	-.048	-.055	-.192	**.834**
91	.847	-.065	.052	.103	-.034	-.184	.028	.044	-.089	.026	.058	**.785**
78	.832	-.083	-.001	-.023	.075	.157	-.138	.104	.055	-.095	-.186	**.806**
77	.819	.126	.055	-.065	.100	.048	-.046	.009	-.149	-.114	-.279	**.822**
96	.806	-.194	.056	.268	-.065	-.211	-.022	-.059	.005	.136	.004	**.834**
80	.798	-.084	-.048	.165	.270	-.046	-.037	.027	.250	.044	-.113	**.826**
89	.763	-.034	.212	.033	.113	-.020	.179	-.038	-.031	-.013	.278	**.828**
95	.738	-.111	.063	-.065	-.024	-.091	.038	.040	-.225	.224	.266	**.755**
92	.718	-.049	.256	.077	.165	-.271	.054	-.045	.091	-.044	.162	**.749**
81	.718	-.215	.233	.210	.233	-.065	.007	.030	.040	-.198	-.083	**.732**
102	.715	-.039	.065	.330	-.130	-.169	-.101	.062	.017	.179	.043	**.766**
94	.698	-.126	-.026	.411	-.029	-.148	-.025	.048	.123	.072	.024	**.720**
51	.689	-.017	.230	.149	.041	-.067	-.207	.411	.108	-.120	.054	**.719**
86	.685	-.115	.124	.244	.207	-.141	.012	.046	.345	-.004	-.005	**.798**
98	.672	-.138	.197	.275	.164	-.119	.148	.037	.292	.226	-.041	**.742**
45	.644	.163	.097	-.067	.329	-.229	-.031	.112	.288	-.170	-.028	**.742**
90	.633	.037	.049	.161	-.127	-.010	.216	.142	.155	.217	.351	**.760**
43	.625	.027	.066	.021	.449	-.206	-.054	.240	.284	.003	-.106	**.792**
88	.617	-.086	.079	.045	.073	.109	.109	.096	.082	.044	.409	**.708**
85	.615	-.274	.234	.182	.336	-.343	.109	-.143	.245	.126	.007	**.611**
79	.606	-.304	.439	-.026	.207	.195	.152	.018	-.113	-.108	.017	**.880**
64	.595	-.311	-.039	.326	.225	-.189	-.041	.234	.197	.163	.081	**.782**
54	.577	-.173	.397	.214	.161	.165	.192	.163	.021	-.008	.016	**.774**
70	.570	.079	-.158	-.051	.464	-.149	-.197	.077	.103	-.160	.329	**.684**
62	.549	-.076	.335	-.006	.400	.080	.284	.129	.215	.176	-.018	**786.**
101	.522	-.161	.250	.498	-.087	-.190	-.094	.135	.132	.090	-.247	**.761**
46	.512	-.006	.254	-.097	.080	-.302	-.225	.391	.282	-.040	.052	**.766**
60	.495	-.277	.085	.158	.276	-.013	.079	.184	.219	.123	.421	**.721**
63	.473	-.247	.347	.018	.431	-.025	.148	-.184	-.191	.037	.130	**.711**
84	.466	-.196	.341	.304	.149	-.177	.107	.026	.362	.127	.215	**.702**
74	.407	-.256	-.066	.296	.171	-.249	-.116	.245	-.192	-.377	.046	**.723**
33	.027	.864	**.079**	-.073	.008	-.018	.019	-.045	-.243	-.089	.179	**.669**
35	-.143	.844	**.132**	-.071	-.144	-.029	.067	-.031	-.051	-.155	-.099	**.860**
10	-.140	.843	**-.043**	-.064	.042	.051	-.251	.129	-.062	-.043	.048	**.818**
34	.159	.839	**.042**	.015	.018	.008	.063	-.049	-.268	-.017	.033	**.828**
12	-.227	.831	**-.061**	-.153	-.036	.121	-.124	.073	.168	-.024	-.120	**.810**
16	-.050	.794	**-.019**	-.172	.036	.134	.094	-.154	.109	-.136	-.084	**.828**
11	-.189	.777	**-.190**	-.121	-.035	.096	.084	.120	.145	-.031	-.123	**.743**
13	-.143	.766	**.115**	.088	-.060	.113	-.193	.046	.058	.038	-.234	**.760**
01	.128	.765	**-.050**	-.109	-.038	.029	-.129	-.121	-.061	.324	-.182	**.791**
03	-.020	.755	**.036**	-.055	-.122	.028	-.230	.097	-.105	.294	.058	**.753**
31	-.158	.752	**.002**	.228	-.066	-.096	.165	.086	-.265	-.147	-.148	**.804**
32	.135	.743	**.036**	-.021	-.144	-.008	.455	-.185	-.064	-.026	.080	**.845**
02	.025	.742	**-.010**	-.074	-.074	-.078	-.394	.063	.186	.167	-.046	**.792**
15	-.273	.717	**-.053**	-.275	-.016	.352	-.076	-.134	.109	-.045	-.126	**.846**
08	.020	.706	**.024**	-.080	.008	-.112	-.274	.092	-.098	.285	.106	**.704**
30	.090	.705	**-.141**	.080	-.038	.087	.172	-.148	-.241	.138	.299	**.758**
23	-.252	.694	**.098**	.121	.019	.343	-.120	-.064	-.067	-.166	-.053	**.740**
17	-.048	.673	.163	-.130	-.140	.281	.003	-.265	.034	-.123	-.202	**.725**
18	-.026	.660	-.023	-.179	.124	.362	-.118	-.394	.016	-.092	-.086	**.804**
04	-.080	.653	-.041	.078	-.044	.123	-.495	.105	.054	.256	.014	**.782**
14	-.203	.642	-.008	-.047	.003	.395	-.265	-.344	.174	-.075	-.022	**.837**
27	-.161	.636	-.201	.008	.036	.304	-.367	-.224	-.073	-.194	.109	**.805**
09	-.058	.597	-.051	-.167	-.077	-.034	-.404	-.256	-.006	.277	.040	**.705**
29	-.316	.558	-.003	-.104	-.167	.502	-.229	-.008	.114	-.146	-.029	**.789**

21	-.242	**.555**	.033	-.068	.060	.519	.105	-.235	-.010	.040	.097	**.723**
07	.052	**.536**	.083	-.287	-.102	.188	-.282	-.029	-.060	.341	.210	**.669**
28	-.087	**.530**	-.158	.056	-.168	.467	.038	-.069	-.191	.395	.184	**.795**
26	-.104	**.482**	.035	-.122	-.075	.460	-.224	-.161	-.284	-.136	.253	**.716**
41	-.121	.131	**.769**	.104	.026	-.201	.090	-.120	.107	.045	.009	**.711**
48	.303	.021	**.754**	.019	.084	-.016	.083	.204	.043	.074	.155	**.748**
47	.159	-.099	**.686**	-.088	.142	.020	-.062	.144	.056	-.153	.216	**.631**
38	-.090	.154	**.651**	.214	-.018	-.033	-.127	-.092	-.005	.082	-.338	**.649**
40	.434	.126	**.634**	.036	-.028	.024	-.030	-.003	-.231	.398	-.033	**.822**
37	.376	.274	**.616**	.062	.115	-.110	-.035	.014	.050	-.018	-.351	**.752**
87	.218	-.235	**.610**	.410	.134	-.081	.154	.005	.196	-.053	.155	**.758**
56	.171	.072	**.603**	.179	.294	.044	-.009	.428	-.104	-.010	-.042	**.715**
82	.369	-.273	**.549**	.270	.182	-.093	.120	.068	.271	.028	.139	**.739**
39	.110	.109	**.547**	.353	-.068	.357	-.248	.129	.005	.185	-.250	**.755**
93	.203	-.055	.207	**.774**	.169	-.044	-.024	.197	-.099	.038	.073	**.773**
67	.372	-.049	.004	**.677**	.271	.027	.003	.216	.073	-.016	-.009	**.725**
72	.445	-.083	.263	**.656**	.048	-.002	.151	.097	.120	-.145	.177	**.806**
97	.275	-.115	.496	**.594**	-.049	-.013	.219	.091	.005	.118	-.007	**.760**
100	.373	-.197	.096	**.586**	.441	.146	.126	-.051	-.028	-.016	-.283	**.847**
99	.376	-.301	.375	**.545**	.048	-.151	.058	-.051	.034	.158	-.194	**.764**
69	.339	-.361	.055	**.498**	.050	.079	-.078	-.010	.333	-.090	.451	**.834**
50	.301	-.266	.204	**.362**	.316	-.206	.022	-.147	.087	.105	.102	**.527**
58	.265	-.046	.069	.197	**.803**	-.150	.006	.190	.112	-.007	-.099	**.842**
61	.386	-.218	.177	.135	**.715**	-.085	-.046	.110	-.040	-.144	.139	**.820**
57	.571	-.127	.071	.058	**.623**	-.054	.010	.151	-.093	-.118	.121	**.801**
42	.007	.057	.452	.142	**.622**	-.013	-.033	.217	.149	.031	-.061	**.690**
59	.458	-.055	.072	.044	**.506**	-.133	.336	.024	.120	.254	.114	**.700**
52	.032	.052	.357	.130	**.422**	-.195	.099	.081	.266	-.397	-.009	**610**
25	-.252	.452	.021	.081	-.292	**.649**	.013	-.012	.070	-.050	-.064	**.794**
20	-.245	.448	-.128	-.218	.070	**.605**	-.050	-.009	-.093	.278	.268	**.856**
24	-.348	.413	-.193	-.155	-.326	**.604**	.055	.091	-.085	-.052	-.033	**.847**
22	-.455	.368	-.313	.143	-.196	**.485**	.066	-.061	-.108	-.033	-.132	**.773**
71	-.013	-.248	-.035	-.042	.127	-.055	**.718**	.003	.232	.047	.053	**.658**
05	.052	.461	-.143	-.190	-.079	.116	**-.631**	.026	.257	.020	.036	**.759**
73	.028	-.219	.003	.180	-.088	-.017	**.624**	.469	.000	.170	.029	**.728**
06	-.065	.525	-.115	-.089	.264	-.171	**-.594**	.065	.134	.235	-.090	**.839**
19	-.399	.326	-.066	-.163	-.056	.366	**.549**	-.036	.035	.188	-.124	**.788**
49	-.030	-.299	.080	-.013	.094	-.345	**.416**	.261	.202	.166	.177	**.565**
65	-.004	-.113	.261	.309	.240	-.117	.302	**.659**	-.024	.043	-.013	**.776**
66	.268	-.220	.133	.196	.129	-.023	-.089	**.630**	.045	-.268	.115	**.685**
75	.560	-.056	-.094	.128	.267	-.021	-.055	**.621**	.075	.048	.009	**.811**
55	.340	.039	.398	.007	.349	.168	.098	**.500**	.010	-.001	-.176	**.716**
44	.432	-.193	.118	-.283	.247	-.242	.197	**.446**	.066	-.143	.071	**.705**
53	.098	-.044	.142	-.026	.028	-.077	-.057	.015	**.756**	-.239	-.082	**.678**
68	.244	-.084	-.006	.057	.064	-.001	.118	-.009	**.725**	.058	.113	**.630**
83	.445	-.151	.155	.231	.348	.084	.032	.102	**.518**	.137	.115	**.739**
36	.162	.003	.237	.178	.033	-.100	.105	-.038	-.052	.686	-.004	**.611**

BOLD TYPE INDICATES ITEM HIGHEST LOADING ON FACTORS

10. APPENDICES

APPENDIX A: Frequency distribution model on learners' age, conduct disorder- CD & family structure-FS (n=165)

Age	Conduct	FS	Observed		Expected		Residuals	Std. Residuals
			Count	%	Count	%		
5-8 years	Normal	Nuclear family	11.000	6.7%	6.500	3.9%	4.500	1.765
		Extended	9.000	5.5%	6.500	3.9%	2.500	.981
		Singled	15.000	9.1%	6.500	3.9%	8.500	3.334
		Other	7.000	4.2%	6.500	3.9%	.500	.196
	Abnormal	Nuclear family	1.000	0.6%	6.500	3.9%	-5.500	-2.157
		Extended	2.000	1.2%	6.500	3.9%	-4.500	-1.765
		Singled	3.000	1.8%	6.500	3.9%	-3.500	-1.373
		Other	4.000	2.4%	6.500	3.9%	-2.500	-.981
9-12 year	Normal	Nuclear family	.000	0.0%	4.000	2.4%	-4.000	-2.000
		Extended	3.000	1.8%	4.000	2.4%	-1.000	-.500
		Singled	3.000	1.8%	4.000	2.4%	-1.000	-.500
		Other	4.000	2.4%	4.000	2.4%	.000	.000
	Abnormal	Nuclear family	8.000	4.8%	4.000	2.4%	4.000	2.000
		Extended	2.000	1.2%	4.000	2.4%	-2.000	-1.000
		Singled	9.000	5.5%	4.000	2.4%	5.000	2.500
		Other	3.000	1.8%	4.000	2.4%	-1.000	-.500

13-16 years	Normal	Nuclear family	.000	0.0%	5.125	3.1%	-5.125	-2.264
		Extended	1.000	0.6%	5.125	3.1%	-4.125	-1.822
		Singled	.000	0.0%	5.125	3.1%	-5.125	-2.264
		Other	.000	0.0%	5.125	3.1%	-5.125	-2.264
	Abnormal	Nuclear family	8.000	4.8%	5.125	3.1%	2.875	1.270
		Extended	6.000	3.6%	5.125	3.1%	.875	.387
		Singled	18.000	10.9%	5.125	3.1%	12.875	5.687
		Other	8.000	4.8%	5.125	3.1%	2.875	1.270
17-20 years	Normal	Nuclear family	.000	0.0%	5.000	3.0%	-5.000	-2.236
		Extended	.000	0.0%	5.000	3.0%	-5.000	-2.236
		Singled	.000	0.0%	5.000	3.0%	-5.000	-2.236
		Other	.000	0.0%	5.000	3.0%	-5.000	-2.236
	Abnormal	Nuclear family	6.000	3.6%	5.000	3.0%	1.000	.447
		Extended	11.000	6.7%	5.000	3.0%	6.000	2.683
		Singled	11.000	6.7%	5.000	3.0%	6.000	2.683
		Other	12.000	7.3%	5.000	3.0%	7.000	3.130

APPENDIX B: Frequency distribution model on learners' age, academic habits-AH and family structure-FS (n=165)

Age	Academic Hab	Family structure	Observed		Expected		Residuals	Std. Residuals
			Count	%	Count	%		
5-8 years	Normal	Nuclear family	9.000	5.5%	4.997	3.0%	4.003	1.791
		Extended	6.000	3.6%	4.997	3.0%	1.003	.449
		Singled	12.000	7.3%	8.671	5.3%	3.329	1.130
		Other	5.000	3.0%	5.585	3.4%	-.585	-.247
	Abnormal	Nuclear family	3.000	1.8%	3.503	2.1%	-.503	-.269
		Extended	5.000	3.0%	3.503	2.1%	1.497	.800
		Singled	6.000	3.6%	6.079	3.7%	-.079	-.032
		Other	6.000	3.6%	3.915	2.4%	2.085	1.054
9-12 years	Normal	Nuclear family	6.000	3.6%	4.997	3.0%	1.003	.449
		Extended	3.000	1.8%	4.997	3.0%	-1.997	-.893
		Singled	9.000	5.5%	8.671	5.3%	.329	.112
		Other	4.000	2.4%	5.585	3.4%	-1.585	-.671
	Abnormal	Nuclear family	2.000	1.2%	3.503	2.1%	-1.503	-.803
		Extended	2.000	1.2%	3.503	2.1%	-1.503	-.803
		Singled	3.000	1.8%	6.079	3.7%	-3.079	-1.249

		Other	3.000	1.8%	3.915	2.4%	-.915	-.463
13-16 years	Normal	Nuclear family	5.000	3.0%	4.997	3.0%	.003	.001
		Extended	3.000	1.8%	4.997	3.0%	-1.997	-.893
		Singled	14.000	8.5%	8.671	5.3%	5.329	1.810
		Other	5.000	3.0%	5.585	3.4%	-.585	-.247
	Abnormal	Nuclear family	3.000	1.8%	3.503	2.1%	-.503	-.269
		Extended	4.000	2.4%	3.503	2.1%	.497	.266
		Singled	4.000	2.4%	6.079	3.7%	-2.079	-.843
		Other	3.000	1.8%	3.915	2.4%	-.915	-.463
17-20 years	Normal	Nuclear family	5.000	3.0%	4.997	3.0%	.003	.001
		Extended	1.000	0.6%	4.997	3.0%	-3.997	-1.788
		Singled	7.000	4.2%	8.671	5.3%	-1.671	-.568
		Other	3.000	1.8%	5.585	3.4%	-2.585	-1.094
	Abnormal	Nuclear family	1.000	0.6%	3.503	2.1%	-2.503	-1.337
		Extended	10.000	6.1%	3.503	2.1%	6.497	3.471
		Singled	4.000	2.4%	6.079	3.7%	-2.079	-.843
		Other	9.000	5.5%	3.915	2.4%	5.085	2.570

APPENDIX C: Frequency distribution model on learners' age, health concerns and family structure (n=165)

Age	Health problems b	Family structure	Observed		Expected		Residuals	Std. Residuals
			Count	%	Count	%		
5-8 years	Normal	Nuclear family	8.000	4.8%	6.500	3.9%	1.500	.588
		Extended	8.000	4.8%	6.500	3.9%	1.500	.588
		Singled	18.000	10.9%	6.500	3.9%	11.500	4.511
		Other	10.000	6.1%	6.500	3.9%	3.500	1.373
	Abnormal	Nuclear family	4.000	2.4%	6.500	3.9%	-2.500	-.981
		Extended	3.000	1.8%	6.500	3.9%	-3.500	-1.373
		Singled	.000	0.0%	6.500	3.9%	-6.500	-2.550
		Other	1.000	0.6%	6.500	3.9%	-5.500	-2.157
9-12 year	Normal	Nuclear family	3.000	1.8%	4.000	2.4%	-1.000	-.500
		Extended	3.000	1.8%	4.000	2.4%	-1.000	-.500
		Singled	4.000	2.4%	4.000	2.4%	.000	.000
		Other	4.000	2.4%	4.000	2.4%	.000	.000
	Abnormal	Nuclear family	5.000	3.0%	4.000	2.4%	1.000	.500
		Extended	2.000	1.2%	4.000	2.4%	-2.000	-1.000
		Singled	8.000	4.8%	4.000	2.4%	4.000	2.000
		Other	3.000	1.8%	4.000	2.4%	-1.000	-.500

13-16 years	Normal	Nuclear family	3.000	1.8%	5.125	3.1%	-2.125	-.939
		Extended	6.000	3.6%	5.125	3.1%	.875	.387
		Singled	4.000	2.4%	5.125	3.1%	-1.125	-.497
		Other	2.000	1.2%	5.125	3.1%	-3.125	-1.380
	Abnormal	Nuclear family	5.000	3.0%	5.125	3.1%	-.125	-.055
		Extended	1.000	0.6%	5.125	3.1%	-4.125	-1.822
		Singled	14.000	8.5%	5.125	3.1%	8.875	3.920
		Other	6.000	3.6%	5.125	3.1%	.875	.387
17-20 years	Normal	Nuclear family	2.000	1.2%	5.000	3.0%	-3.000	-1.342
		Extended	3.000	1.8%	5.000	3.0%	-2.000	-.894
		Singled	3.000	1.8%	5.000	3.0%	-2.000	-.894
		Other	5.000	3.0%	5.000	3.0%	.000	.000
	Abnormal	Nuclear family	4.000	2.4%	5.000	3.0%	-1.000	-.447
		Extended	8.000	4.8%	5.000	3.0%	3.000	1.342
		Singled	8.000	4.8%	5.000	3.0%	3.000	1.342
		Other	7.000	4.2%	5.000	3.0%	2.000	.894

APPENDIX D: Frequency distribution model on learners' age and social interaction-SI and family structure (n=165)

Age	Social interaction b	Family structure	Observed		Expected		Residuals	Std. Residuals
			Count	%	Count	%		
5-8 years	Normal	Nuclear family	11.000	6.7%	6.500	3.9%	4.500	1.765
		Extended	10.000	6.1%	6.500	3.9%	3.500	1.373
		Singled	17.000	10.3%	6.500	3.9%	10.500	4.118
		Other	11.000	6.7%	6.500	3.9%	4.500	1.765
	Abnormal	Nuclear family	1.000	0.6%	6.500	3.9%	-5.500	-2.157
		Extended	1.000	0.6%	6.500	3.9%	-5.500	-2.157
		Singled	1.000	0.6%	6.500	3.9%	-5.500	-2.157
		Other	.000	0.0%	6.500	3.9%	-6.500	-2.550
9-12 year	Normal	Nuclear family	2.000	1.2%	4.000	2.4%	-2.000	-1.000
		Extended	5.000	3.0%	4.000	2.4%	1.000	.500
		Singled	7.000	4.2%	4.000	2.4%	3.000	1.500
		Other	5.000	3.0%	4.000	2.4%	1.000	.500
	Abnormal	Nuclear family	6.000	3.6%	4.000	2.4%	2.000	1.000
		Extended	.000	0.0%	4.000	2.4%	-4.000	-2.000
		Singled	5.000	3.0%	4.000	2.4%	1.000	.500
		Other	2.000	1.2%	4.000	2.4%	-2.000	-1.000
13-16	Normal	Nuclear family	4.000	2.4%	5.125	3.1%	-1.125	-.497

years		Extended	4.000	2.4%	5.125	3.1%	-1.125	-.497
		Singled	10.000	6.1%	5.125	3.1%	4.875	2.153
		Other	1.000	0.6%	5.125	3.1%	-4.125	-1.822
	Abnormal	Nuclear family	4.000	2.4%	5.125	3.1%	-1.125	-.497
		Extended	3.000	1.8%	5.125	3.1%	-2.125	-.939
		Singled	8.000	4.8%	5.125	3.1%	2.875	1.270
		Other	7.000	4.2%	5.125	3.1%	1.875	.828
17-20 years	Normal	Nuclear family	4.000	2.4%	5.000	3.0%	-1.000	-.447
		Extended	2.000	1.2%	5.000	3.0%	-3.000	-1.342
		Singled	1.000	0.6%	5.000	3.0%	-4.000	-1.789
		Other	3.000	1.8%	5.000	3.0%	-2.000	-.894
	Abnormal	Nuclear family	2.000	1.2%	5.000	3.0%	-3.000	-1.342
		Extended	9.000	5.5%	5.000	3.0%	4.000	1.789
		Singled	10.000	6.1%	5.000	3.0%	5.000	2.236
		Other	9.000	5.5%	5.000	3.0%	4.000	1.789

APPENDIX E: Frequency distribution model on learners' age, unusual behaviour-UB and family structure (n=165)

Age	Unusual Behaviour	Family structure	Observed		Expected		Residuals	Std. Residuals
			Count	%	Count	%		
5-8 years	Normal	Nuclear family	9.000	5.5%	6.500	3.9%	2.500	.981
		Extended	7.000	4.2%	6.500	3.9%	.500	.196
		Singled	15.000	9.1%	6.500	3.9%	8.500	3.334
		Other	8.000	4.8%	6.500	3.9%	1.500	.588
	Abnormal	Nuclear family	3.000	1.8%	6.500	3.9%	-3.500	-1.373
		Extended	4.000	2.4%	6.500	3.9%	-2.500	-.981
		Singled	3.000	1.8%	6.500	3.9%	-3.500	-1.373
		Other	3.000	1.8%	6.500	3.9%	-3.500	-1.373
9-12 year	Normal	Nuclear family	1.000	0.6%	4.000	2.4%	-3.000	-1.500
		Extended	4.000	2.4%	4.000	2.4%	.000	.000
		Singled	3.000	1.8%	4.000	2.4%	-1.000	-.500
		Other	4.000	2.4%	4.000	2.4%	.000	.000
	Abnormal	Nuclear family	7.000	4.2%	4.000	2.4%	3.000	1.500
		Extended	1.000	0.6%	4.000	2.4%	-3.000	-1.500
		Singled	9.000	5.5%	4.000	2.4%	5.000	2.500
		Other	3.000	1.8%	4.000	2.4%	-1.000	-.500

13-16 years	Normal	Nuclear family	2.000	1.2%	5.125	3.1%	-3.125	-1.380
		Extended	2.000	1.2%	5.125	3.1%	-3.125	-1.380
		Singled	2.000	1.2%	5.125	3.1%	-3.125	-1.380
		Other	1.000	0.6%	5.125	3.1%	-4.125	-1.822
	Abnormal	Nuclear family	6.000	3.6%	5.125	3.1%	.875	.387
		Extended	5.000	3.0%	5.125	3.1%	-.125	-.055
		Singled	16.000	9.7%	5.125	3.1%	10.875	4.804
		Other	7.000	4.2%	5.125	3.1%	1.875	.828
17-20 years	Normal	Nuclear family	4.000	2.4%	5.000	3.0%	-1.000	-.447
		Extended	.000	0.0%	5.000	3.0%	-5.000	-2.236
		Singled	3.000	1.8%	5.000	3.0%	-2.000	-.894
		Other	.000	0.0%	5.000	3.0%	-5.000	-2.236
	Abnormal	Nuclear family	2.000	1.2%	5.000	3.0%	-3.000	-1.342
		Extended	11.000	6.7%	5.000	3.0%	6.000	2.683
		Singled	8.000	4.8%	5.000	3.0%	3.000	1.342
		Other	12.000	7.3%	5.000	3.0%	7.000	3.130

APPENDIX F: Frequency distribution model on learners' age, interpersonal relations-IR and family structure-FS (n=165)

Age	Interpersonal relations b	Family structure	Observed		Expected		Residuals	Std. Residuals
			Count	%	Count	%		
5-8 years	Normal	Nuclear family	11.000	6.7%	6.500	3.9%	4.500	1.765
		Extended	6.000	3.6%	6.500	3.9%	-.500	-.196
		Singled	17.000	10.3%	6.500	3.9%	10.500	4.118
		Other	10.000	6.1%	6.500	3.9%	3.500	1.373
	Abnormal	Nuclear family	1.000	0.6%	6.500	3.9%	-5.500	-2.157
		Extended	5.000	3.0%	6.500	3.9%	-1.500	-.588
		Singled	1.000	0.6%	6.500	3.9%	-5.500	-2.157
		Other	1.000	0.6%	6.500	3.9%	-5.500	-2.157
9-12 year	Normal	Nuclear family	7.000	4.2%	4.000	2.4%	3.000	1.500
		Extended	4.000	2.4%	4.000	2.4%	.000	.000
		Singled	10.000	6.1%	4.000	2.4%	6.000	3.000
		Other	6.000	3.6%	4.000	2.4%	2.000	1.000
	Abnormal	Nuclear family	1.000	0.6%	4.000	2.4%	-3.000	-1.500
		Extended	1.000	0.6%	4.000	2.4%	-3.000	-1.500
		Singled	2.000	1.2%	4.000	2.4%	-2.000	-1.000
		Other	1.000	0.6%	4.000	2.4%	-3.000	-1.500

13-16 years	Normal	Nuclear family	6.000	3.6%	5.125	3.1%	.875	.387
		Extended	5.000	3.0%	5.125	3.1%	-.125	-.055
		Singled	17.000	10.3%	5.125	3.1%	11.875	5.245
		Other	8.000	4.8%	5.125	3.1%	2.875	1.270
	Abnormal	Nuclear family	2.000	1.2%	5.125	3.1%	-3.125	-1.380
		Extended	2.000	1.2%	5.125	3.1%	-3.125	-1.380
		Singled	1.000	0.6%	5.125	3.1%	-4.125	-1.822
		Other	.000	0.0%	5.125	3.1%	-5.125	-2.264
17-20 years	Normal	Nuclear family	3.000	1.8%	5.000	3.0%	-2.000	-.894
		Extended	4.000	2.4%	5.000	3.0%	-1.000	-.447
		Singled	9.000	5.5%	5.000	3.0%	4.000	1.789
		Other	8.000	4.8%	5.000	3.0%	3.000	1.342
	Abnormal	Nuclear family	3.000	1.8%	5.000	3.0%	-2.000	-.894
		Extended	7.000	4.2%	5.000	3.0%	2.000	.894
		Singled	2.000	1.2%	5.000	3.0%	-3.000	-1.342
		Other	4.000	2.4%	5.000	3.0%	-1.000	-.447

APPENDIX G: Frequency distribution model on learners' age, social withdrawal-SW and family structure-FS (n=165)

Age	Social withdrawal	Family structure	Observed		Expected		Residuals	Std. Residuals
			Count	%	Count	%		
5-8 years	Normal	Nuclear family	6.000	3.6%	6.500	3.9%	-.500	-.196
		Extended	10.000	6.1%	6.500	3.9%	3.500	1.373
		Singled	13.000	7.9%	6.500	3.9%	6.500	2.550
		Other	8.000	4.8%	6.500	3.9%	1.500	.588
	Abnormal	Nuclear family	6.000	3.6%	6.500	3.9%	-.500	-.196
		Extended	1.000	0.6%	6.500	3.9%	-5.500	-2.157
		Singled	5.000	3.0%	6.500	3.9%	-1.500	-.588
		Other	3.000	1.8%	6.500	3.9%	-3.500	-1.373
9-12 year	Normal	Nuclear family	7.000	4.2%	4.000	2.4%	3.000	1.500
		Extended	3.000	1.8%	4.000	2.4%	-1.000	-.500
		Singled	10.000	6.1%	4.000	2.4%	6.000	3.000
		Other	7.000	4.2%	4.000	2.4%	3.000	1.500
	Abnormal	Nuclear family	1.000	0.6%	4.000	2.4%	-3.000	-1.500
		Extended	2.000	1.2%	4.000	2.4%	-2.000	-1.000
		Singled	2.000	1.2%	4.000	2.4%	-2.000	-1.000
		Other	.000	0.0%	4.000	2.4%	-4.000	-2.000

13-16 years	Normal	Nuclear family	6.000	3.6%	5.125	3.1%	.875	.387
		Extended	6.000	3.6%	5.125	3.1%	.875	.387
		Singled	16.000	9.7%	5.125	3.1%	10.875	4.804
		Other	7.000	4.2%	5.125	3.1%	1.875	.828
	Abnormal	Nuclear family	2.000	1.2%	5.125	3.1%	-3.125	-1.380
		Extended	1.000	0.6%	5.125	3.1%	-4.125	-1.822
		Singled	2.000	1.2%	5.125	3.1%	-3.125	-1.380
		Other	1.000	0.6%	5.125	3.1%	-4.125	-1.822
17-20 years	Normal	Nuclear family	5.000	3.0%	5.000	3.0%	.000	.000
		Extended	10.000	6.1%	5.000	3.0%	5.000	2.236
		Singled	11.000	6.7%	5.000	3.0%	6.000	2.683
		Other	12.000	7.3%	5.000	3.0%	7.000	3.130
	Abnormal	Nuclear family	1.000	0.6%	5.000	3.0%	-4.000	-1.789
		Extended	1.000	0.6%	5.000	3.0%	-4.000	-1.789
		Singled	.000	0.0%	5.000	3.0%	-5.000	-2.236
		Other	.000	0.0%	5.000	3.0%	-5.000	-2.236

APPENDIX H: Frequency distribution model on learners' age, emotional distress-ED and family structure-FS (n=165)

Age	Emotional distress b	Family structure	Observed		Expected		Residuals	Std. Residuals
			Count	%	Count	%		
5-8 years	Normal	Nuclear family	8.000	4.8%	6.500	3.9%	1.500	.588
		Extended	6.000	3.6%	6.500	3.9%	-.500	-.196
		Singled	12.000	7.3%	6.500	3.9%	5.500	2.157
		Other	4.000	2.4%	6.500	3.9%	-2.500	-.981
	Abnormal	Nuclear family	4.000	2.4%	6.500	3.9%	-2.500	-.981
		Extended	5.000	3.0%	6.500	3.9%	-1.500	-.588
		Singled	6.000	3.6%	6.500	3.9%	-.500	-.196
		Other	7.000	4.2%	6.500	3.9%	.500	.196
9-12 year	Normal	Nuclear family	3.000	1.8%	4.000	2.4%	-1.000	-.500
		Extended	2.000	1.2%	4.000	2.4%	-2.000	-1.000
		Singled	4.000	2.4%	4.000	2.4%	.000	.000
		Other	2.000	1.2%	4.000	2.4%	-2.000	-1.000
	Abnormal	Nuclear family	5.000	3.0%	4.000	2.4%	1.000	.500
		Extended	3.000	1.8%	4.000	2.4%	-1.000	-.500
		Singled	8.000	4.8%	4.000	2.4%	4.000	2.000
		Other	5.000	3.0%	4.000	2.4%	1.000	.500
13-16	Normal	Nuclear family	3.000	1.8%	5.125	3.1%	-2.125	-.939

years		Extended	5.000	3.0%	5.125	3.1%	-.125	-.055
		Singled	2.000	1.2%	5.125	3.1%	-3.125	-1.380
		Other	1.000	0.6%	5.125	3.1%	-4.125	-1.822
	Abnormal	Nuclear family	5.000	3.0%	5.125	3.1%	-.125	-.055
		Extended	2.000	1.2%	5.125	3.1%	-3.125	-1.380
		Singled	16.000	9.7%	5.125	3.1%	10.875	4.804
		Other	7.000	4.2%	5.125	3.1%	1.875	.828
17-20 yrs	Normal	Nuclear family	3.000	1.8%	5.000	3.0%	-2.000	-.894
		Extended	2.000	1.2%	5.000	3.0%	-3.000	-1.342
		Singled	2.000	1.2%	5.000	3.0%	-3.000	-1.342
		Other	.000	0.0%	5.000	3.0%	-5.000	-2.236
	Abnormal	Nuclear family	3.000	1.8%	5.000	3.0%	-2.000	-.894
		Extended	9.000	5.5%	5.000	3.0%	4.000	1.789
		Singled	9.000	5.5%	5.000	3.0%	4.000	1.789
		Other	12.000	7.3%	5.000	3.0%	7.000	3.130

APPENDIX I: Frequency distribution in model on learners' age, physical aggression –PA and family structure-FS (n=165)

Age	Physical aggression	Family structure	Observed		Expected		Residuals	Std. Residuals
			Count	%	Count	%		
5-8 years	Normal	Nuclear family	8.000	4.8%	6.500	3.9%	1.500	.588
		Extended	5.000	3.0%	6.500	3.9%	-1.500	-.588
		Singled	13.000	7.9%	6.500	3.9%	6.500	2.550
		Other	6.000	3.6%	6.500	3.9%	-.500	-.196
	Abnormal	Nuclear family	4.000	2.4%	6.500	3.9%	-2.500	-.981
		Extended	6.000	3.6%	6.500	3.9%	-.500	-.196
		Singled	5.000	3.0%	6.500	3.9%	-1.500	-.588
		Other	5.000	3.0%	6.500	3.9%	-1.500	-.588
9-12 year	Normal	Nuclear family	3.000	1.8%	4.000	2.4%	-1.000	-.500
		Extended	5.000	3.0%	4.000	2.4%	1.000	.500
		Singled	4.000	2.4%	4.000	2.4%	.000	.000
		Other	2.000	1.2%	4.000	2.4%	-2.000	-1.000
	Abnormal	Nuclear family	5.000	3.0%	4.000	2.4%	1.000	.500
		Extended	.000	0.0%	4.000	2.4%	-4.000	-2.000
		Singled	8.000	4.8%	4.000	2.4%	4.000	2.000

		Other	5.000	3.0%	4.000	2.4%	1.000	.500
13-16 years	Normal	Nuclear family	4.000	2.4%	5.125	3.1%	-1.125	-.497
		Extended	.000	0.0%	5.125	3.1%	-5.125	-2.264
		Singled	3.000	1.8%	5.125	3.1%	-2.125	-.939
		Other	1.000	0.6%	5.125	3.1%	-4.125	-1.822
	Abnormal	Nuclear family	4.000	2.4%	5.125	3.1%	-1.125	-.497
		Extended	7.000	4.2%	5.125	3.1%	1.875	.828
		Singled	15.000	9.1%	5.125	3.1%	9.875	4.362
		Other	7.000	4.2%	5.125	3.1%	1.875	.828
17-20 years	Normal	Nuclear family	1.000	0.6%	5.000	3.0%	-4.000	-1.789
		Extended	2.000	1.2%	5.000	3.0%	-3.000	-1.342
		Singled	4.000	2.4%	5.000	3.0%	-1.000	-.447
		Other	1.000	0.6%	5.000	3.0%	-4.000	-1.789
	Abnormal	Nuclear family	5.000	3.0%	5.000	3.0%	.000	.000
		Extended	9.000	5.5%	5.000	3.0%	4.000	1.789
		Singled	7.000	4.2%	5.000	3.0%	2.000	.894
		Other	11.000	6.7%	5.000	3.0%	6.000	2.683

APPENDIX J: Frequency distribution model on learners gender, conduct problems-CP and family structure-FS (n=165)

Gender	Conduct problems	Family structure	Observed		Expected		Residuals	Std. Residuals
			Count	%	Count	%		
Male	Normal	Nuclear family	7.000	4.2%	6.619	4.0%	.381	.148
		Extended	7.000	4.2%	6.619	4.0%	.381	.148
		Singled	8.000	4.8%	11.486	7.0%	-3.486	-1.029
		Other	5	3.0%	7.398	4.5%	-2.398	-.882
	Abnormal	Nuclear family	17	10.3%	13.987	8.5%	3.013	.806
		Extended	11.	6.7%	13.987	8.5%	-2.987	-.799
		Singled	30.	18.2%	24.272	14.7%	5.728	1.163
		Other	15.00	9.1%	15.633	9.5%	-.633	-.160
Female	Normal	Nuclear family	4.000	2.4%	4.302	2.6%	-.302	-.146
		Extended	6.000	3.6%	4.302	2.6%	1.698	.818
		Singled	10.00	6.1%	7.466	4.5%	2.534	.927
		Other	6.000	3.6%	4.808	2.9%	1.192	.543
	Abnormal	Nuclear family	6.000	3.6%	9.092	5.5%	-3.092	-1.025
		Extended	10.00	6.1%	9.092	5.5%	.908	.301
		Singled	11.	6.7%	15.777	9.6%	-4.777	-1.203
		Other	12.	7.3%	10.161	6.2%	1.839	.577

APPENDIX K: Frequency distribution model on learners' gender, academic habits-AH and family structure-FS (n=165)

Gender	Academic Habits	Family structure	Observed		Expected		Residuals	Std. Residuals
			Count[a]	%	Count	%		
Male	Normal	Nuclear family	19.500	11.8%	19.500	11.8%	.000	.000
		Extended	6.500	3.9%	6.500	3.9%	.000	.000
		Singled	30.500	18.5%	30.500	18.5%	.000	.000
		Other	7.500	4.5%	7.500	4.5%	.000	.000
	Abnormal	Nuclear family	5.500	3.3%	5.500	3.3%	.000	.000
		Extended	12.500	7.6%	12.500	7.6%	.000	.000
		Singled	8.500	5.2%	8.500	5.2%	.000	.000
		Other	13.500	8.2%	13.500	8.2%	.000	.000
Female	Normal	Nuclear family	6.500	3.9%	6.500	3.9%	.000	.000
		Extended	7.500	4.5%	7.500	4.5%	.000	.000
		Singled	12.500	7.6%	12.500	7.6%	.000	.000
		Other	10.500	6.4%	10.500	6.4%	.000	.000
	Abnormal	Nuclear family	4.500	2.7%	4.500	2.7%	.000	.000
		Extended	9.500	5.8%	9.500	5.8%	.000	.000
		Singled	9.500	5.8%	9.500	5.8%	.000	.000
		Other	8.500	5.2%	8.500	5.2%	.000	.000

APPENDIX L: Frequency distribution model on learners' gender, health concern-HC and family structure-FS (n=165)

Gender	Health problems	Family structure	Observed		Expected		Residual	Std. Residuals
			Count	%	Count	%		
Male	Normal	Nuclear family	10.000	6.1%	10.303	6.2%	-.303	-.094
		Extended	8.000	4.8%	10.303	6.2%	-2.303	-.717
		Singled	17.000	10.3%	17.879	10.8%	-.879	-.208
		Other	9.000	5.5%	11.515	7.0%	-2.515	-.741
	Abnormal	Nuclear family	14.000	8.5%	10.303	6.2%	3.697	1.152
		Extended	10.000	6.1%	10.303	6.2%	-.303	-.094
		Singled	21.000	12.7%	17.879	10.8%	3.121	.738
		Other	11.000	6.7%	11.515	7.0%	-.515	-.152
Female	Normal	Nuclear family	6.000	3.6%	6.697	4.1%	-.697	-.269
		Extended	12.000	7.3%	6.697	4.1%	5.303	2.049
		Singled	12.000	7.3%	11.621	7.0%	.379	.111
		Other	12.000	7.3%	7.485	4.5%	4.515	1.650
	Abnormal	Nuclear family	4.000	2.4%	6.697	4.1%	-2.697	-1.042
		Extended	4.000	2.4%	6.697	4.1%	-2.697	-1.042
		Singled	9.000	5.5%	11.621	7.0%	-2.621	-.769
		Other	6.000	3.6%	7.485	4.5%	-1.485	-.543

APPENDIX M: Frequency distribution model on learners' gender, social interaction-SI and family structure-FS (n=165)

Gender	FS	Interpersonal relations b	Observed		Expected		Residuals	Std. Residuals
			Count[a]	%	Count	%		
Male	Nuclear family	Normal	18.500	11.2%	18.500	11.2%	.000	.000
		Abnormal	6.500	3.9%	6.500	3.9%	.000	.000
	Extended	Normal	10.500	6.4%	10.500	6.4%	.000	.000
		Abnormal	8.500	5.2%	8.500	5.2%	.000	.000
	Singled	Normal	35.500	21.5%	35.500	21.5%	.000	.000
		Abnormal	3.500	2.1%	3.500	2.1%	.000	.000
	Other	Normal	16.500	10.0%	16.500	10.0%	.000	.000
		Abnormal	4.500	2.7%	4.500	2.7%	.000	.000
Female	Nuclear family	Normal	9.500	5.8%	9.500	5.8%	.000	.000
		Abnormal	1.500	0.9%	1.500	0.9%	.000	.000
	Extended	Normal	9.500	5.8%	9.500	5.8%	.000	.000
		Abnormal	7.500	4.5%	7.500	4.5%	.000	.000
	Singled	Normal	18.500	11.2%	18.500	11.2%	.000	.000
		Abnormal	3.500	2.1%	3.500	2.1%	.000	.000
	Other	Normal	16.500	10.0%	16.500	10.0%	.000	.000
		Abnormal	2.500	1.5%	2.500	1.5%	.000	.000

a. For saturated models, .500 has been added to all observed cells.

APPENDIX N: Frequency distribution model learners gender, unusual behaviour –UB and family structure-FS (n=165)

Gender	Family structure	Unusual Behaviour b	Observed		Expected		Residuals	Std. Residuals
			Count	%	Count	%		
Male	Nuclear family	Normal	13.000	7.9%	8.118	4.9%	4.882	1.714
		Abnormal	11.000	6.7%	12.489	7.6%	-1.489	-.421
	Extended	Normal	6.000	3.6%	8.118	4.9%	-2.118	-.743
		Abnormal	12.000	7.3%	12.489	7.6%	-.489	-.138
	Singled	Normal	11.000	6.7%	14.086	8.5%	-3.086	-.822
		Abnormal	27.000	16.4%	21.671	13.1%	5.329	1.145
	Other	Normal	5.000	3.0%	9.073	5.5%	-4.073	-1.352
		Abnormal	15.000	9.1%	13.958	8.5%	1.042	.279
Female	Nuclear family	Normal	3.000	1.8%	5.276	3.2%	-2.276	-.991
		Abnormal	7.000	4.2%	8.118	4.9%	-1.118	-.392
	Extended	Normal	7.000	4.2%	5.276	3.2%	1.724	.750
		Abnormal	9.000	5.5%	8.118	4.9%	.882	.310
	Singled	Normal	12.000	7.3%	9.156	5.5%	2.844	.940
		Abnormal	9.000	5.5%	14.086	8.5%	-5.086	-1.355
	Other	Normal	8.000	4.8%	5.897	3.6%	2.103	.866
		Abnormal	10.000	6.1%	9.073	5.5%	.927	.308

APPENDIX O: Frequency distribution model on learners' gender interpersonal relations-IR and family structure-FS (n=165)

Cell Counts and Residuals

Gender	Family structure	Interpersonal relations b	Observed		Expected		Residuals	Std. Residuals
			Count	%	Count	%		
Male	Nuclear family	Normal	18.000	10.9%	16.364	9.9%	1.636	.405
		Abnormal	6.000	3.6%	4.242	2.6%	1.758	.853
	Extended	Normal	10.000	6.1%	11.515	7.0%	-1.515	-.446
		Abnormal	8.000	4.8%	9.091	5.5%	-1.091	-.362
	Singled	Normal	35.000	21.2%	32.121	19.5%	2.879	.508
		Abnormal	3.000	1.8%	3.636	2.2%	-.636	-.334
	Other	Normal	16.000	9.7%	19.394	11.8%	-3.394	-.771
		Abnormal	4.000	2.4%	3.636	2.2%	.364	.191
Female	Nuclear family	Normal	9.000	5.5%	10.636	6.4%	-1.636	-.502
		Abnormal	1.000	0.6%	2.758	1.7%	-1.758	-1.058
	Extended	Normal	9.000	5.5%	7.485	4.5%	1.515	.554
		Abnormal	7.000	4.2%	5.909	3.6%	1.091	.449
	Singled	Normal	18.000	10.9%	20.879	12.7%	-2.879	-.630
		Abnormal	3.000	1.8%	2.364	1.4%	.636	.414
	Other	Normal	16.000	9.7%	12.606	7.6%	3.394	.956
		Abnormal	2.000	1.2%	2.364	1.4%	-.364	-.237

APPENDIX P: Frequency distribution model on learners' gender, social withdrawal-SW and family structure-FS (n=165)

Cell Counts and Residuals

Gender	Family structure	Social withdrawal	Observed		Expected		Residuals	Std. Residuals
			Count	%	Count	%		
Male	Nuclear family	Normal	15.000	9.1%	17.109	10.4%	-2.109	-.510
		Abnormal	9.000	5.5%	3.497	2.1%	5.503	2.943
	Extended	Normal	17.000	10.3%	17.109	10.4%	-.109	-.026
		Abnormal	1.000	0.6%	3.497	2.1%	-2.497	-1.335
	Singled	Normal	33.000	20.0%	29.690	18.0%	3.310	.608
		Abnormal	5.000	3.0%	6.068	3.7%	-1.068	-.434
	Other	Normal	19.000	11.5%	19.122	11.6%	-.122	-.028
		Abnormal	1.000	0.6%	3.908	2.4%	-2.908	-1.471
Female	Nuclear family	Normal	9.000	5.5%	11.121	6.7%	-2.121	-.636
		Abnormal	1.000	0.6%	2.273	1.4%	-1.273	-.844
	Extended	Normal	12.000	7.3%	11.121	6.7%	.879	.264
		Abnormal	4.000	2.4%	2.273	1.4%	1.727	1.146
	Singled	Normal	17.000	10.3%	19.298	11.7%	-2.298	-.523
		Abnormal	4.000	2.4%	3.944	2.4%	.056	.028
	Other	Normal	15.000	9.1%	12.429	7.5%	2.571	.729
		Abnormal	3.000	1.8%	2.540	1.5%	.460	.288

APPENDIX Q: Frequency distribution model on learners' gender, emotional distress-EM and family structure-FS (n=165)

Gender	Family structure	Emotional distress b	Observed		Expected		Residuals	Std. Residuals
			Count	%	Count	%		
Male	Nuclear family	Normal	13.000	7.9%	10.303	6.2%	2.697	.840
		Abnormal	11.000	6.7%	10.303	6.2%	.697	.217
	Extended	Normal	5.000	3.0%	9.091	5.5%	-4.091	-1.357
		Abnormal	13.000	7.9%	11.515	7.0%	1.485	.438
	Singled	Normal	11.000	6.7%	12.121	7.3%	-1.121	-.322
		Abnormal	27.000	16.4%	23.636	14.3%	3.364	.692
	Other	Normal	4.000	2.4%	4.242	2.6%	-.242	-.118
		Abnormal	16.000	9.7%	18.788	11.4%	-2.788	-.643
Female	Nuclear family	Normal	4.000	2.4%	6.697	4.1%	-2.697	-1.042
		Abnormal	6.000	3.6%	6.697	4.1%	-.697	-.269
	Extended	Normal	10.000	6.1%	5.909	3.6%	4.091	1.683
		Abnormal	6.000	3.6%	7.485	4.5%	-1.485	-.543
	Singled	Normal	9.000	5.5%	7.879	4.8%	1.121	.399
		Abnormal	12.000	7.3%	15.364	9.3%	-3.364	-.858
	Other	Normal	3.000	1.8%	2.758	1.7%	.242	.146
		Abnormal	15.000	9.1%	12.212	7.4%	2.788	.798

APPENDIX R: Frequency distribution model on learners' gender, physical aggression-PA and family structure-FS (n=165)

Gender	Family structure	Physical aggression b	Observed		Expected		Residuals	Std. Residuals
			Count	%	Count	%		
Male	Nuclear family	Normal	11.000	6.7%	7.743	4.7%	3.257	1.171
		Abnormal	13.000	7.9%	12.863	7.8%	.137	.038
	Extended	Normal	6.000	3.6%	7.743	4.7%	-1.743	-.626
		Abnormal	12.000	7.3%	12.863	7.8%	-.863	-.241
	Singled	Normal	13.000	7.9%	13.436	8.1%	-.436	-.119
		Abnormal	25.000	15.2%	22.321	13.5%	2.679	.567
	Other	Normal	5.000	3.0%	8.654	5.2%	-3.654	-1.242
		Abnormal	15.000	9.1%	14.376	8.7%	.624	.164
Female	Nuclear family	Normal	5.000	3.0%	5.033	3.1%	-.033	-.015
		Abnormal	5.000	3.0%	8.361	5.1%	-3.361	-1.162
	Extended	Normal	6.000	3.6%	5.033	3.1%	.967	.431
		Abnormal	10.000	6.1%	8.361	5.1%	1.639	.567
	Singled	Normal	11.000	6.7%	8.734	5.3%	2.266	.767
		Abnormal	10.000	6.1%	14.509	8.8%	-4.509	-1.184
	Other	Normal	5.000	3.0%	5.625	3.4%	-.625	-.264
		Abnormal	13.000	7.9%	9.345	5.7%	3.655	1.196

APPENDIX S: Frequency distribution model on learners' educational level, conduct problems-CP and family structure-FS (n=165)

Grade/ ED	Conduct problems	Family structure	Observed		Expected		Residuals	Std. Residuals
			Count	%	Count	%		
R-3	Normal	Nuclear family	5.000	3.0%	4.567	2.8%	.433	.203
		Extended	12.000	7.3%	4.567	2.8%	7.433	3.478
		Singled	10.000	6.1%	7.925	4.8%	2.075	.737
		Other	3.000	1.8%	5.104	3.1%	-2.104	-.931
	Abnormal	Nuclear family	10.000	6.1%	9.651	5.8%	.349	.112
		Extended	8.000	4.8%	9.651	5.8%	-1.651	-.531
		Singled	16.000	9.7%	16.748	10.2%	-.748	-.183
		Other	5.000	3.0%	10.787	6.5%	-5.787	-1.762
4-6	Normal	Nuclear family	3.000	1.8%	2.449	1.5%	.551	.352
		Extended	.000	0.0%	2.449	1.5%	-2.449	-1.565
		Singled	4.000	2.4%	4.250	2.6%	-.250	-.121
		Other	.000	0.0%	2.737	1.7%	-2.737	-1.654
	Abnormal	Nuclear family	8.000	4.8%	5.175	3.1%	2.825	1.242
		Extended	1.000	0.6%	5.175	3.1%	-4.175	-1.835
		Singled	15.000	9.1%	8.981	5.4%	6.019	2.009
		Other	6.000	3.6%	5.784	3.5%	.216	.090
7-9	Normal	Nuclear family	3.000	1.8%	2.912	1.8%	.088	.051

		Extended	1.000	0.6%	2.912	1.8%	-1.912	-1.121
		Singled	4.000	2.4%	5.054	3.1%	-1.054	-.469
		Other	5.000	3.0%	3.255	2.0%	1.745	.967
	Abnormal	Nuclear family	3.000	1.8%	6.154	3.7%	-3.154	-1.272
		Extended	8.000	4.8%	6.154	3.7%	1.846	.744
		Singled	7.000	4.2%	10.680	6.5%	-3.680	-1.126
		Other	13.000	7.9%	6.878	4.2%	6.122	2.334
10-12	Normal	Nuclear family	.000	0.0%	.993	0.6%	-.993	-.996
		Extended	.000	0.0%	.993	0.6%	-.993	-.996
		Singled	.000	0.0%	1.723	1.0%	-1.723	-1.313
		Other	3.000	1.8%	1.110	0.7%	1.890	1.795
	Abnormal	Nuclear family	2.000	1.2%	2.098	1.3%	-.098	-.068
		Extended	4.000	2.4%	2.098	1.3%	1.902	1.313
		Singled	3.000	1.8%	3.641	2.2%	-.641	-.336
		Other	3.000	1.8%	2.345	1.4%	.655	.428

APPENDIX T: Frequency distribution model on learners' educational level academic habits-AH and family structure-FS (n=165)

Grade ED	Family structure	Academic Habits	Observed		Expected		Residuals	Std. Residuals
			Count	%	Count	%		
R-3	Nuclear family	Normal	10.000	6.1%	11.029	6.7%	-1.029	-.310
		Abnormal	5.000	3.0%	3.971	2.4%	1.029	.517
	Extended	Normal	9.000	5.5%	7.647	4.6%	1.353	.489
		Abnormal	11.000	6.7%	12.353	7.5%	-1.353	-.385
	Singled	Normal	21.000	12.7%	18.508	11.2%	2.492	.579
		Abnormal	5.000	3.0%	7.492	4.5%	-2.492	-.910
	Other	Normal	3.000	1.8%	3.579	2.2%	-.579	-.306
		Abnormal	5.000	3.0%	4.421	2.7%	.579	.275
4-6	Nuclear family	Normal	9.000	5.5%	8.088	4.9%	.912	.321
		Abnormal	2.000	1.2%	2.912	1.8%	-.912	-.534
	Extended	Normal	.000	0.0%	.382	0.2%	-.382	-.618
		Abnormal	1.000	0.6%	.618	0.4%	.382	.487
	Singled	Normal	14.000	8.5%	13.525	8.2%	.475	.129
		Abnormal	5.000	3.0%	5.475	3.3%	-.475	-.203
	Other	Normal	3.000	1.8%	2.684	1.6%	.316	.193
		Abnormal	3.000	1.8%	3.316	2.0%	-.316	-.173
7-9	Nuclear	Normal	4.000	2.4%	4.412	2.7%	-.412	-.196

	family	Abnormal	2.000	1.2%	1.588	1.0%	.412	.327
	Extended	Normal	3.000	1.8%	3.441	2.1%	-.441	-.238
		Abnormal	6.000	3.6%	5.559	3.4%	.441	.187
	Singled	Normal	5.000	3.0%	7.831	4.7%	-2.831	-1.012
		Abnormal	6.000	3.6%	3.169	1.9%	2.831	1.590
	Other	Normal	7.000	4.2%	8.053	4.9%	-1.053	-.371
		Abnormal	11.000	6.7%	9.947	6.0%	1.053	.334
10-12	Nuclear family	Normal	2.000	1.2%	1.471	0.9%	.529	.437
		Abnormal	.000	0.0%	.529	0.3%	-.529	-.728
	Extended	Normal	1.000	0.6%	1.529	0.9%	-.529	-.428
		Abnormal	3.000	1.8%	2.471	1.5%	.529	.337
	Singled	Normal	2.000	1.2%	2.136	1.3%	-.136	-.093
		Abnormal	1.000	0.6%	.864	0.5%	.136	.146
	Other	Normal	4.000	2.4%	2.684	1.6%	1.316	.803
		Abnormal	2.000	1.2%	3.316	2.0%	-1.316	-.723

APPENDIX U: Frequency distribution model on learners' educational level health concern-HC and family structure-FS (n=165)

Grade ED	Health problems	Family structure	Observed		Expected		Residuals	Std. Residuals
			Count	%	Count	%		
R-3	Normal	Nuclear family	6.000	3.6%	7.411	4.5%	-1.411	-.518
		Extended	14.000	8.5%	7.411	4.5%	6.589	2.421
		Singled	15.000	9.1%	12.860	7.8%	2.140	.597
		Other	6.000	3.6%	8.283	5.0%	-2.283	-.793
	Abnormal	Nuclear family	9.000	5.5%	6.807	4.1%	2.193	.840
		Extended	6.000	3.6%	6.807	4.1%	-.807	-.309
		Singled	11.000	6.7%	11.813	7.2%	-.813	-.237
		Other	2.000	1.2%	7.608	4.6%	-5.608	-2.033
4-6	Normal	Nuclear family	4.000	2.4%	3.974	2.4%	.026	.013
		Extended	1.000	0.6%	3.974	2.4%	-2.974	-1.492
		Singled	8.000	4.8%	6.896	4.2%	1.104	.420
		Other	1.000	0.6%	4.441	2.7%	-3.441	-1.633
	Abnormal	Nuclear family	7.000	4.2%	3.650	2.2%	3.350	1.753
		Extended	.000	0.0%	3.650	2.2%	-3.650	-1.911
		Singled	11.000	6.7%	6.335	3.8%	4.665	1.854

		Other	5.000	3.0%	4.080	2.5%	.920	.456
7-9	Normal	Nuclear family	5.000	3.0%	4.726	2.9%	.274	.126
		Extended	4.000	2.4%	4.726	2.9%	-.726	-.334
		Singled	6.000	3.6%	8.200	5.0%	-2.200	-.768
		Other	9.000	5.5%	5.282	3.2%	3.718	1.618
	Abnormal	Nuclear family	1.000	0.6%	4.341	2.6%	-3.341	-1.604
		Extended	5.000	3.0%	4.341	2.6%	.659	.316
		Singled	5.000	3.0%	7.533	4.6%	-2.533	-.923
		Other	9.000	5.5%	4.852	2.9%	4.148	1.883
10-12	Normal	Nuclear family	1.000	0.6%	1.611	1.0%	-.611	-.481
		Extended	1.000	0.6%	1.611	1.0%	-.611	-.481
		Singled	.000	0.0%	2.796	1.7%	-2.796	-1.672
		Other	5.000	3.0%	1.801	1.1%	3.199	2.384
	Abnormal	Nuclear family	1.000	0.6%	1.480	0.9%	-.480	-.394
		Extended	3.000	1.8%	1.480	0.9%	1.520	1.250
		Singled	3.000	1.8%	2.568	1.6%	.432	.270
		Other	1.000	0.6%	1.654	1.0%	-.654	-.509

APPENDIX V: Frequency distribution model on learners' educational level, social interaction-SI and family structure-FS (n=165)

Grade ED	Family structure	Social interaction	Observed		Expected		Residuals	Std. Residuals
			Count	%	Count	%		
R-3	Nuclear family	Normal	10.000	6.1%	11.087	6.7%	-1.087	-.326
		Abnormal	5.000	3.0%	3.913	2.4%	1.087	.549
	Extended	Normal	15.000	9.1%	14.783	9.0%	.217	.057
		Abnormal	5.000	3.0%	5.217	3.2%	-.217	-.095
	Singled	Normal	20.000	12.1%	19.217	11.6%	.783	.179
		Abnormal	6.000	3.6%	6.783	4.1%	-.783	-.301
	Other	Normal	6.000	3.6%	5.913	3.6%	.087	.036
		Abnormal	2.000	1.2%	2.087	1.3%	-.087	-.060
4-6	Nuclear family	Normal	6.000	3.6%	5.054	3.1%	.946	.421
		Abnormal	5.000	3.0%	5.946	3.6%	-.946	-.388
	Extended	Normal	1.000	0.6%	.459	0.3%	.541	.797
		Abnormal	.000	0.0%	.541	0.3%	-.541	-.735
	Singled	Normal	8.000	4.8%	8.730	5.3%	-.730	-.247
		Abnormal	11.000	6.7%	10.270	6.2%	.730	.228
	Other	Normal	2.000	1.2%	2.757	1.7%	-.757	-.456
		Abnormal	4.000	2.4%	3.243	2.0%	.757	.420
7-9	Nuclear	Normal	4.000	2.4%	3.000	1.8%	1.000	.577

	family	Abnormal	2.000	1.2%	3.000	1.8%	-1.000	-.577
	Extended	Normal	4.000	2.4%	4.500	2.7%	-.500	-.236
		Abnormal	5.000	3.0%	4.500	2.7%	.500	.236
	Singled	Normal	6.000	3.6%	5.500	3.3%	.500	.213
		Abnormal	5.000	3.0%	5.500	3.3%	-.500	-.213
	Other	Normal	8.000	4.8%	9.000	5.5%	-1.000	-.333
		Abnormal	10.000	6.1%	9.000	5.5%	1.000	.333
10-12	Nuclear family	Normal	1.000	0.6%	.933	0.6%	.067	.069
		Abnormal	1.000	0.6%	1.067	0.6%	-.067	-.065
	Extended	Normal	1.000	0.6%	1.867	1.1%	-.867	-.634
		Abnormal	3.000	1.8%	2.133	1.3%	.867	.593
	Singled	Normal	1.000	0.6%	1.400	0.8%	-.400	-.338
		Abnormal	2.000	1.2%	1.600	1.0%	.400	.316
	Other	Normal	4.000	2.4%	2.800	1.7%	1.200	.717
		Abnormal	2.000	1.2%	3.200	1.9%	-1.200	-.671

APPENDIX W: Frequency distribution model on learners' educational level, unusual behaviour-UB and family structure-FS (n=165)

Grade ED	Family structure	Unusual Behaviour b	Observed		Expected		Residuals	Std. Residuals
			Count	%	Count	%		
R-3	Nuclear family	Normal	9.000	5.5%	7.826	4.7%	1.174	.420
		Abnormal	6.000	3.6%	7.174	4.3%	-1.174	-.438
	Extended	Normal	12.000	7.3%	10.435	6.3%	1.565	.485
		Abnormal	8.000	4.8%	9.565	5.8%	-1.565	-.506
	Singled	Normal	11.000	6.7%	13.565	8.2%	-2.565	-.696
		Abnormal	15.000	9.1%	12.435	7.5%	2.565	.727
	Other	Normal	4.000	2.4%	4.174	2.5%	-.174	-.085
		Abnormal	4.000	2.4%	3.826	2.3%	.174	.089
4-6	Nuclear family	Normal	4.000	2.4%	2.973	1.8%	1.027	.596
		Abnormal	7.000	4.2%	8.027	4.9%	-1.027	-.362
	Extended	Normal	.000	0.0%	.270	0.2%	-.270	-.520
		Abnormal	1.000	0.6%	.730	0.4%	.270	.316
	Singled	Normal	6.000	3.6%	5.135	3.1%	.865	.382
		Abnormal	13.000	7.9%	13.865	8.4%	-.865	-.232
	Other	Normal	.000	0.0%	1.622	1.0%	-1.622	-1.273
		Abnormal	6.000	3.6%	4.378	2.7%	1.622	.775
7-9	Nuclear	Normal	3.000	1.8%	2.045	1.2%	.955	.667

	family	Abnormal	3.000	1.8%	3.955	2.4%	-.955	-.480
	Extended	Normal	1.000	0.6%	3.068	1.9%	-2.068	-1.181
		Abnormal	8.000	4.8%	5.932	3.6%	2.068	.849
	Singled	Normal	5.000	3.0%	3.750	2.3%	1.250	.645
		Abnormal	6.000	3.6%	7.250	4.4%	-1.250	-.464
	Other	Normal	6.000	3.6%	6.136	3.7%	-.136	-.055
		Abnormal	12.000	7.3%	11.864	7.2%	.136	.040
10-12	Nuclear family	Normal	.000	0.0%	.533	0.3%	-.533	-.730
		Abnormal	2.000	1.2%	1.467	0.9%	.533	.440
	Extended	Normal	.000	0.0%	1.067	0.6%	-1.067	-1.033
		Abnormal	4.000	2.4%	2.933	1.8%	1.067	.623
	Singled	Normal	1.000	0.6%	.800	0.5%	.200	.224
		Abnormal	2.000	1.2%	2.200	1.3%	-.200	-.135
	Other	Normal	3.000	1.8%	1.600	1.0%	1.400	1.107
		Abnormal	3.000	1.8%	4.400	2.7%	-1.400	-.667

APPENDIX X: Frequency distribution model learners' educational level, interpersonal relations-IR and family structure-FS (n=165)

Grade ED	Family structure	Interpersonal relations b	Observed		Expected		Residuals	Std. Residuals
			Count	%	Count	%		
R-3	Nuclear family	Normal	11.000	6.7%	11.912	7.2%	-.912	-.264
		Abnormal	4.000	2.4%	3.088	1.9%	.912	.519
	Extended	Normal	12.000	7.3%	11.176	6.8%	.824	.246
		Abnormal	8.000	4.8%	8.824	5.3%	-.824	-.277
	Singled	Normal	25.000	15.2%	23.356	14.2%	1.644	.340
		Abnormal	1.000	0.6%	2.644	1.6%	-1.644	-1.011
	Other	Normal	6.000	3.6%	6.737	4.1%	-.737	-.284
		Abnormal	2.000	1.2%	1.263	0.8%	.737	.656
4-6	Nuclear family	Normal	9.000	5.5%	8.735	5.3%	.265	.090
		Abnormal	2.000	1.2%	2.265	1.4%	-.265	-.176
	Extended	Normal	1.000	0.6%	.559	0.3%	.441	.590
		Abnormal	.000	0.0%	.441	0.3%	-.441	-.664
	Singled	Normal	17.000	10.3%	17.068	10.3%	-.068	-.016
		Abnormal	2.000	1.2%	1.932	1.2%	.068	.049
	Other	Normal	5.000	3.0%	5.053	3.1%	-.053	-.023
		Abnormal	1.000	0.6%	.947	0.6%	.053	.054
7-9	Nuclear	Normal	5.000	3.0%	4.765	2.9%	.235	.108

	family	Abnormal	1.000	0.6%	1.235	0.7%	-.235	-.212
	Extended	Normal	5.000	3.0%	5.029	3.0%	-.029	-.013
		Abnormal	4.000	2.4%	3.971	2.4%	.029	.015
	Singled	Normal	9.000	5.5%	9.881	6.0%	-.881	-.280
		Abnormal	2.000	1.2%	1.119	0.7%	.881	.833
	Other	Normal	15.000	9.1%	15.158	9.2%	-.158	-.041
		Abnormal	3.000	1.8%	2.842	1.7%	.158	.094
10-12	Nuclear family	Normal	2.000	1.2%	1.588	1.0%	.412	.327
		Abnormal	.000	0.0%	.412	0.2%	-.412	-.642
	Extended	Normal	1.000	0.6%	2.235	1.4%	-1.235	-.826
		Abnormal	3.000	1.8%	1.765	1.1%	1.235	.930
	Singled	Normal	2.000	1.2%	2.695	1.6%	-.695	-.423
		Abnormal	1.000	0.6%	.305	0.2%	.695	1.258
	Other	Normal	6.000	3.6%	5.053	3.1%	.947	.421
		Abnormal	.000	0.0%	.947	0.6%	-.947	-.973

APPENDIX Y: Frequency distribution model learners' educational level, social withdrawal-SW and family structure-FS (n=165)

Grade ED	Family structure	Social withdrawal	Observed		Expected		Residuals	Std. Residuals
			Count	%	Count	%		
R-3	Nuclear family	Normal	10.000	6.1%	12.455	7.5%	-2.455	-.696
		Abnormal	5.000	3.0%	2.545	1.5%	2.455	1.538
	Extended	Normal	16.000	9.7%	16.606	10.1%	-.606	-.149
		Abnormal	4.000	2.4%	3.394	2.1%	.606	.329
	Singled	Normal	20.000	12.1%	21.588	13.1%	-1.588	-.342
		Abnormal	6.000	3.6%	4.412	2.7%	1.588	.756
	Other	Normal	7.000	4.2%	6.642	4.0%	.358	.139
		Abnormal	1.000	0.6%	1.358	0.8%	-.358	-.307
4-6	Nuclear family	Normal	9.000	5.5%	9.133	5.5%	-.133	-.044
		Abnormal	2.000	1.2%	1.867	1.1%	.133	.098
	Extended	Normal	1.000	0.6%	.830	0.5%	.170	.186
		Abnormal	.000	0.0%	.170	0.1%	-.170	-.412
	Singled	Normal	17.000	10.3%	15.776	9.6%	1.224	.308
		Abnormal	2.000	1.2%	3.224	2.0%	-1.224	-.682
	Other	Normal	6.000	3.6%	4.982	3.0%	1.018	.456
		Abnormal	.000	0.0%	1.018	0.6%	-1.018	-1.009
7-9	Nuclear	Normal	4.000	2.4%	4.982	3.0%	-.982	-.440

	family	Abnormal	2.000	1.2%	1.018	0.6%	.982	.973
	Extended	Normal	9.000	5.5%	7.473	4.5%	1.527	.559
		Abnormal	.000	0.0%	1.527	0.9%	-1.527	-1.236
	Singled	Normal	10.000	6.1%	9.133	5.5%	.867	.287
		Abnormal	1.000	0.6%	1.867	1.1%	-.867	-.634
	Other	Normal	16.000	9.7%	14.945	9.1%	1.055	.273
		Abnormal	2.000	1.2%	3.055	1.9%	-1.055	-.603
10-12	Nuclear family	Normal	1.000	0.6%	1.661	1.0%	-.661	-.513
		Abnormal	1.000	0.6%	.339	0.2%	.661	1.134
	Extended	Normal	3.000	1.8%	3.321	2.0%	-.321	-.176
		Abnormal	1.000	0.6%	.679	0.4%	.321	.390
	Singled	Normal	3.000	1.8%	2.491	1.5%	.509	.323
		Abnormal	.000	0.0%	.509	0.3%	-.509	-.714
	Other	Normal	5.000	3.0%	4.982	3.0%	.018	.008
		Abnormal	1.000	0.6%	1.018	0.6%	-.018	-.018

APPENDIX Z: Frequency distribution model learners' educational level, emotional Distress-ED and family structure-FS (n=165)

Grade ED	Family structure	Emotional distress b	Observed		Expected		Residuals	Std. Residuals
			Count	%	Count	%		
R-3	Nuclear family	Normal	8.000	4.8%	7.609	4.6%	.391	.142
		Abnormal	7.000	4.2%	7.391	4.5%	-.391	-.144
	Extended	Normal	11.000	6.7%	10.145	6.1%	.855	.268
		Abnormal	9.000	5.5%	9.855	6.0%	-.855	-.272
	Singled	Normal	13.000	7.9%	13.188	8.0%	-.188	-.052
		Abnormal	13.000	7.9%	12.812	7.8%	.188	.053
	Other	Normal	3.000	1.8%	4.058	2.5%	-1.058	-.525
		Abnormal	5.000	3.0%	3.942	2.4%	1.058	.533
4-6	Nuclear family	Normal	5.000	3.0%	3.270	2.0%	1.730	.957
		Abnormal	6.000	3.6%	7.730	4.7%	-1.730	-.622
	Extended	Normal	1.000	0.6%	.297	0.2%	.703	1.289
		Abnormal	.000	0.0%	.703	0.4%	-.703	-.838
	Singled	Normal	5.000	3.0%	5.649	3.4%	-.649	-.273
		Abnormal	14.000	8.5%	13.351	8.1%	.649	.178
	Other	Normal	.000	0.0%	1.784	1.1%	-1.784	-1.336
		Abnormal	6.000	3.6%	4.216	2.6%	1.784	.869
7-9	Nuclear	Normal	4.000	2.4%	1.636	1.0%	2.364	1.848

	family	Abnormal	2.000	1.2%	4.364	2.6%	-2.364	-1.132
	Extended	Normal	3.000	1.8%	2.455	1.5%	.545	.348
		Abnormal	6.000	3.6%	6.545	4.0%	-.545	-.213
	Singled	Normal	2.000	1.2%	3.000	1.8%	-1.000	-.577
		Abnormal	9.000	5.5%	8.000	4.8%	1.000	.354
	Other	Normal	3.000	1.8%	4.909	3.0%	-1.909	-.862
		Abnormal	15.000	9.1%	13.091	7.9%	1.909	.528
10-12	Nuclear family	Normal	.000	0.0%	.133	0.1%	-.133	-.365
		Abnormal	2.000	1.2%	1.867	1.1%	.133	.098
	Extended	Normal	.000	0.0%	.267	0.2%	-.267	-.516
		Abnormal	4.000	2.4%	3.733	2.3%	.267	.138
	Singled	Normal	.000	0.0%	.200	0.1%	-.200	-.447
		Abnormal	3.000	1.8%	2.800	1.7%	.200	.120
	Other	Normal	1.000	0.6%	.400	0.2%	.600	.949
		Abnormal	5.000	3.0%	5.600	3.4%	-.600	-.254

APPENDIX Z1: Frequency distribution model on learners' educational level, physical aggression-PA and family structure-FS (n=165)

Grade ED	Physical aggression	Family structure	Observed		Expected		Residuals	Std. Residuals
			Count	%	Count	%		
R-3	Normal	Nuclear family	8.000	4.8%	7.174	4.3%	.826	.308
		Extended	9.000	5.5%	9.565	5.8%	-.565	-.183
		Singled	14.000	8.5%	12.435	7.5%	1.565	.444
		Other	2.000	1.2%	3.826	2.3%	-1.826	-.934
	Abnormal	Nuclear family	7.000	4.2%	7.826	4.7%	-.826	-.295
		Extended	11.000	6.7%	10.435	6.3%	.565	.175
		Singled	12.000	7.3%	13.565	8.2%	-1.565	-.425
		Other	6.000	3.6%	4.174	2.5%	1.826	.894
4-6	Normal	Nuclear family	3.000	1.8%	1.784	1.1%	1.216	.911
		Extended	.000	0.0%	.162	0.1%	-.162	-.403
		Singled	3.000	1.8%	3.081	1.9%	-.081	-.046
		Other	.000	0.0%	.973	0.6%	-.973	-.986
	Abnormal	Nuclear family	8.000	4.8%	9.216	5.6%	-1.216	-.401
		Extended	1.000	0.6%	.838	0.5%	.162	.177
		Singled	16.000	9.7%	15.919	9.6%	.081	.020
		Other	6.000	3.6%	5.027	3.0%	.973	.434
7-9	Normal	Nuclear family	4.000	2.4%	2.182	1.3%	1.818	1.231

		Extended	1.000	0.6%	3.273	2.0%	-2.273	-1.256
		Singled	7.000	4.2%	4.000	2.4%	3.000	1.500
		Other	4.000	2.4%	6.545	4.0%	-2.545	-.995
	Abnormal	Nuclear family	2.000	1.2%	3.818	2.3%	-1.818	-.930
		Extended	8.000	4.8%	5.727	3.5%	2.273	.950
		Singled	4.000	2.4%	7.000	4.2%	-3.000	-1.134
		Other	14.000	8.5%	11.455	6.9%	2.545	.752
10-12	Normal	Nuclear family	1.000	0.6%	.933	0.6%	.067	.069
		Extended	2.000	1.2%	1.867	1.1%	.133	.098
		Singled	.000	0.0%	1.400	0.8%	-1.400	-1.183
		Other	4.000	2.4%	2.800	1.7%	1.200	.717
	Abnormal	Nuclear family	1.000	0.6%	1.067	0.6%	-.067	-.065
		Extended	2.000	1.2%	2.133	1.3%	-.133	-.091
		Singled	3.000	1.8%	1.600	1.0%	1.400	1.107
		Other	2.000	1.2%	3.200	1.9%	-1.200	-.671

These residuals are the difference between the observed and expected frequencies. Appendices F-O are generated from the observed and expected frequencies of the step summary tables of each factor. **APPENDIX F** shows that a preponderance of learners fall within the age range of 13 to 16 years and largely from single parent families highly inclined to conduct disorder than their counterparts. **APPENDIX G** indicates a preponderance of learners largely males negatively disposed to academic habits than their counterparts. **APPENDIX H** has a preponderance of learners largely males negatively disposed to health problems than their counterparts. **APPENDIX I** show a preponderance of learners largely from single parent families who could not interact well with others than their counterparts. These children are between the age ranges of 17-20 years. **APPENDIX J** has a preponderance of learners largely males negatively disposed to unusual behaviour than their counterpart. According to **APPENDIX K**, there is a preponderance of learners largely males negatively disposed to interpersonal relations than their counterparts. In **APPENDIX L**, a preponderance of learners from different family structures who can socialise well with their peers. However, there is no age difference found. **APPENDIX M** illustrates a preponderance of learners largely from single parent families remarkably disposed to emotional distress than their counterparts. These learners fall within the age of 13-16 years. **APPENDIX N** has a preponderance of learners largely males negatively disposed to the residual are the difference between the observed and expected frequencies. **APPENDIX O** is generated from the observed and expected frequencies **APPENDIX O** has a preponderance of learners largely males negatively disposed to conduct disorder than their counterparts**. APPENDIX P** has a preponderance of learners largely males negatively disposed to conduct disorder than their counterparts. **APPENDIX Q** has a preponderance of learners largely males negatively disposed to conduct disorder than their counterpart. **APPENDIX R** has a preponderance of learners largely males negatively disposed to conduct disorder than their counterparts.

APPENDIX S has a preponderance of learners largely males negatively disposed to Interpersonal relations than their counterparts. **APPENDIX T** has a preponderance of learners largely males negatively disposed to Interpersonal relations than their counterparts. **APPENDIX V** has a preponderance of learners largely males negatively disposed to conduct disorder than their counterparts **APPENDIX W** has a preponderance of learners largely males negatively disposed to conduct disorder than their counterparts.

APPENDIX Z2: LOG-LINEAR ASSUMPTIONS

- It is a specialised case of generalised log-linear model
- It can be used to determine the association between two or more categorical variables, namely, fitting models to the observed frequencies
- It is more appropriate to evaluate multi way contingency tables involving three or more variable
- It is applicable to response variable i.e. no distinction is made between independent and dependent variable, ten LOGIT or LOGISTIC REGRESSION should be used
- If variable are being investigated are continuous and cannot be broken down into discrete (logit or Logistic regression will be goodness -of -fit
- The choice of model based on a formal comparison of goodness of fit statistic (s)
- Model are related hierarchically, that is models contain higher order and also implicitly lower order term
- The preferred model should also be distribution of data in a variable and sampling distribution / variability
- In order to get the most stringent model we isolate the effects best demonstration of some pattern i.e., non-saturated model, this can be achieved by setting some of the effect parameters zero. Assuming that variables are not related. Hence the name independence model which is analogous to the chi-square analysis testing the hypothesis of independence
- Independent distribution of frequencies across the nth of cells.
- About 20% of cells in the distribution with more than two variables could have frequencies less than five and greater than one.

- To avoid violations of these assumptions, collapse adjacent cells or levels of one variable.
- These manipulations of results and reduction of test power

APPENDIX Z3: The step summary of the likelihood ratio of chi-square (learners' age, conduct disorder (CD) and family structure)

Step[a]			Effects	Chi-Square[c]	Df	Sig.	Number of Iterations
	0 Generating Class[b]		Age*F1b*FS	.000	0	.	
	Deleted Effect	1	Age*F1b*FS,	13.941	9	.124	7
1	Generating Class[b]		Age*F1b, Age*FS, F1b*FS	13.941	9	.124	
	Deleted Effect	1	Age*F1b	108.925	3	.000	2
		2	Age*FS	7.164	9	.620	2
		3	F1b*FS	2.640	3	.450	2
2	Generating Class[b]		Age*F1b,F1b*FS	21.105	18	.274	
	Deleted Effect	1	Age*F1b	107.102	3	.000	2
		2	F1b*FS	.817	3	.846	2
3	Generating Class[b]		Age*F1b, FS	21.921	21	.404	
	Deleted Effect	1	Age*F1b	107.102	3	.000	2
		2	FS	9.706	3	.021	2
4	Generating Class[b]		Age*F1b, FS	21.921	21	.404	

Keys: FS= Family Structure; F1b= Conduct Problems

APPENDIX Z3 illustrates the summary of steps in determining the effects which make the least significant change in the likelihood ratio of chi-square. The best fitting is presented in the last step 4. In our analysis this includes the interaction of age, conduct disorder and family structure. This model has a likelihood ratio of 21.921, in a 21 degrees of freedom and a pr*obability level of 0.404 , in other words, it is not significant which means* that the observed data can be reproduced with these three effects. The steps 1, 2 and 3 show the contribution of each component to the final model. These three entries essentially indicate the change (reduction) in the goodness-of-fit chi-square if each component is taken away. Thus the interaction of age and conduct disorder with a variable of family structure has a likelihood ratio chi-square of change 107.102 which is significant (.000). Family structure interacts with age and conduct problems, producing a value of 9.706 which is very significant at (.021). Obviously, these three effects could not be eliminated from the model because of their significant contribution. These can be regarded as significant main effects.

APPENDIX Z4: Summary of steps on the likelihood ratio of chi- square (learners' age, academic habit (AH) and family structure)

Step			Effects	Chi-Square[c]	Df	Sig.	Number of Iterations
0	Generating Class[b]		Age*F2b*FS	.000	0	.	
	Deleted Effect	1	Age*F2b*FS	6.922	9	.645	4
1	Generating Class[b]		Age*F2b, Age*FS, F2b*FS	6.922	9	.645	
	Deleted Effect	1	Age*F2b	5.388	3	.146	2
		2	Age*FS	2.640	9	.977	2
		3	F2b*FS	13.269	3	.004	2
2	Generating Class[b]		Age*F2b,	9.562	18	.945	
			F2b*FS				
	Deleted Effect	1	Age*F2b	8.087	3	.044	2
		2	F2b*FS	15.969	3	.001	2
3	Generating Class[b]		Age*F2b FS	9.562	18	.945	

Keys: FS= Family Structure; F2b=Academic Habit

APPENDIX Z4 shows a summary of steps in determining the effects which make the least significant change in the likelihood ratio of chi-square. The best fitting is presented in the last step 3. In our analysis this includes the interaction of age, academic habits and family structure. This model has a likelihood ratio of 9.562

and 18 degrees of freedom and a probability level of 0.94. This means, it is not significant and that the observed data can be reproduced with these three effects. The steps before step three show the role of each component to the final model. These three entries essentially indicate the change (reduction) in the goodness-of-fit chi-square if each component is taken away, thus the interaction of age with two variables has a likelihood ratio chi-square of change 15.969 which is very significant (.001). Academic habit interacts with family structure, producing a value of 13.269 which is very significant at (.004). Obviously, these three effects could not be eliminated from the model because of their significant contribution. These can be regarded as significant main effects.

APPENDIX Z5: The step summary of the likelihood ratio of chi-square (learners' age, Health concern (HC) and family structure)

Step[a]			Effects	Chi-Square[c]	Df	Sig.	Number of Iterations
0	Generating Class[b]		Age*F3b*FS	.000	0	.	
	Deleted Effect	1	Age*F3b*FS	19.135	9	.024	4
1	Generating Class[b]		Age*F3b*FS	.000	0	.	

Keys: FS= Family Structure; F3b=Health Concern

APPENDIX Z5 reflects a summary of steps in determining the effects which make the least significant change in the likelihood ratio of chi-square. The best fitting is presented in the first and last step. In our analysis this includes the interaction of age, health concern and family structure. This model has a likelihood ratio of 19.135, 9 degrees of freedom and a probability level of 0.024, in other words, it is significant which means that the observed data could not be reproduced. There no step prior contributed to the final model. Obviously, these three effects could not be eliminated from the model because of their significant contribution. These can be regarded as significant main effects.

APPENDIX Z6: Step summary in the likelihood ratio of chi-square (learners' age, social interaction (SI) and Family structure)

Step[a]			Effects	Chi-Square[c]	Df	Sig.	Number of Iterations
0	Generating Class[b]		Age*F4b*FS	.000	0	.	
	Deleted Effect	1					
	Effect 1		Age*F4b*FS	22.364	9	.008	4
1	Generating Class[b]		Age*F4b*FS	.000	0	.	

Keys: FS= Family Structure; F4b=Social Interaction

APPENDIX Z6 shows a summary of steps in determining the effects which make the least significant change. The best fitting is presented in the first step. In our analysis this includes the interaction of age, social interaction and family structure. This model has a likelihood ratio of 22.364 and 9 degrees of freedom and a probability level of 0.008 in other words; it is significant which means that the observed data could not be reproduced with these three effects. Obviously, these three effects could not be eliminated from the model because of their significant contribution. These can be regarded as significant main effects.

APPENDIX Z7: The step summary in the likelihood ratio of chi-square (learners' age, unusual behaviour (UB) and family structure)

Step[a]			Effects	Chi-Square[c]	Df	Sig.	Number of Iterations
0	Generating Class[b]		Age*F5b*FS	.000	0	.	
	Deleted Effect	1	Age*F5b*FS	27.093	9	.001	3
1	Generating Class[b]		Age*F5b*FS	.000	0	.	

Keys: FS= Family Structure; F5b=Unusual Behaviour

APPENDIX Z7 illustrates a summary of s in determining the effects which make the least significant change. The best fitting is presented in step 1 on the step summary table. In our analysis this includes the interaction of age, unusual behaviour and family structure this model has a likelihood ratio of 27.092, degrees of freedom and a probability level of 0,001 in other words, it is very significant which means that the observed data could not be reproduced further with these three effects. Obviously, these three effects could not be eliminated from the model because of their significant contribution. These can be regarded as significant main effects.

APPENDIX Z8: Summary of steps in the likelihood ratio of chi-square (learners' age, interpersonal relations (IR) and family structure)

Step[a]			Effects	Chi-Square[c]	Df	Sig.	Number of Iterations
0	Generating Class[b]		Age*F6b*FS	.000	0	.	
	Deleted Effect	1	Age*F6b*FS	5.700	9	.770	4
1	Generating Class[b]		Age*F6b, Age*FS F6b*FS	5.700	9	.770	
	Deleted Effect	1	Age*F6b	9.884	3	.020	2
		2	Age*FS	3.989	9	.912	2
		3	F6b*FS	13.334	3	.004	2
2	Generating Class[b]		Age*F6b, F6b*FS	9.689	18	.942	
	Deleted Effect	1	Age*F6b	11.235	3	.011	2
		2	F6b*FS	14.685	3	.002	2
3	Generating Class[b]		Age*F6b, F6b*FS	9.689	18	.942	

Keys: FS= Family Structure; F6b=Interpersonal Relations

APPENDIX Z8 shows a summary of steps in determining the effects which make the least significant change. The best fitting is presented in the last step 3. In our analysis this includes the interaction of age and interpersonal relations and interpersonal relations and family structures. This model has a likelihood ratio of 9.689 and 18 degrees of freedom and a probability level of 0.942. In other words, it is not significant which means that the observed data can be reproduced with

these three effects. The steps 1 and 2 show the contribution of each component to the final model. These three entries essentially indicate the change (reduction) in the goodness-of-fit chi-square if each component is taken away thus the interaction of age with two variables has a likelihood ratio chi-square of change 13.334 which is significant (0.004). This means interpersonal relations **interacts with age and family structure, producing a value of 11.235 which is very** significant at (.011). The interaction of the variable of family structure with age and the child's condition produces a likelihood ratio of chi-square change 14.685 which is significant (.000). Obviously, these three effects could not be eliminated from the model because of their significant contribution. These can be regarded as significant main effects.

APPENDIX Z9: The step summary of the likelihood ratio of chi-square (learners' age, social withdrawal-SW and family structure)

Step[a]			Effects	Chi-Square[c]	Df	Sig.	Number of Iterations
0	Generating Class[b]		Age*F7b*FS	.000	0	.	
	Deleted Effect	1	Age*F7b*FS	9.796	9	.367	3
1	Generating Class[b]		Age*F7b, Age*FS, F7b*FS	9.796	9	.367	
	Deleted Effect	1	Age*F7b	9.259	3	.026	2
		2	Age*FS	4.552	9	.871	2
		3	F7b*FS	3.935	3	.269	2
2	Generating Class[b]		Age*F7b, F7b*FS	14.348	18	.706	
	Deleted Effect	1	Age*F7b	10.048	3	.018	2
		2	F7b*FS	4.724	3	.193	2
3	Generating Class[b]		Age*F7b, FS	19.072	21	.581	
	Deleted Effect	1	Age*F7b	10.048	3	.018	2
		2	FS	9.706	3	.021	2
4	Generating Class[b]		Age*F7b, FS	19.072	21	.581	

Keys: FS= Family Structure; F7b=Social Withdrawal

The best fitting is presented in the last step 4 in the step summary table. In our analysis this includes the variables of age, social withdrawal and family structures. This model has a likelihood ratio of 19.072, 21 degrees of freedom and a probability level of 0.581, in other words, it is not significant which means that the observed data can be reproduced with these three effects. The steps 1, 2 and 3 show the contribution of each component to the final model. These three entries essentially indicate the change (reduction) in the goodness-of-fit chi-square if each component is taken away thus the interaction of age with two variables has a likelihood ratio chi-square of change 10.048 which is significant (.000). Social withdrawal interacts with age and family structure, producing a value of 7.706 which is very significant at (0.021). These can be regarded as significant main effects.

APPENDIX Z10: The step summary of the likelihood ratio of chi-square (learners' age, social withdrawal-SW and family structure)

Step[a]			Effects	Chi-Square[c]	Df	Sig.	Number of Iterations
0	Generating Class[b]		Age*F7b*FS	.000	0	.	
	Deleted Effect	1	Age*F7b*FS	9.796	9	.367	3
1	Generating Class[b]		Age*F7b, Age*FS, F7b*FS	9.796	9	.367	
	Deleted Effect	1	Age*F7b	9.259	3	.026	2
		2	Age*FS	4.552	9	.871	2
		3	F7b*FS	3.935	3	.269	2
2	Generating Class[b]		Age*F7b, F7b*FS	14.348	18	.706	
	Deleted Effect	1	Age*F7b	10.048	3	.018	2
		2	F7b*FS	4.724	3	.193	2
3	Generating Class[b]		Age*F7b, FS	19.072	21	.581	
	Deleted Effect	1	Age*F7b	10.048	3	.018	2
		2	FS	9.706	3	.021	2
4	Generating Class[b]		Age*F7b, FS	19.072	21	.581	

Keys: FS= Family Structure; F7b=Social Withdrawal

The best fitting is presented in the last step 4 in the step summary table. In our analysis this includes the variables of age, social withdrawal and family

structures. This model has a likelihood ratio of 19.072, 21 degrees of freedom and a probability level of 0.581, in other words, it is not significant which means that the observed data can be reproduced with these three effects. The steps 1, 2 and 3 show the contribution of each component to the final model. These three entries essentially indicate the change (reduction) in the goodness-of-fit chi-square if each component is taken away thus the interaction of age with two variables has a likelihood ratio chi-square of change 10.048 which is significant (.000). Social withdrawal interacts with age and family structure, producing a value of 7.706 which is very significant at (0.021). These can be regarded as significant main effects.

APPENDIX Z11: The step summary of the likelihood ratio of chi-square (learners' age, emotional distress (ED) and family structure)

Step[a]			Effects	Chi-Square[c]	Df	Sig.	Number of Iterations
0	Generating Class[b]		Age*F8b*FS	.000	0	.	
	Deleted Effect	1	Age*F8b*FS	12.269	9	.199	4
1	Generating Class[b]		Age*F8b, Age*FS, F8b*FS	12.269	9	.199	
	Deleted Effect	1	Age*F8b	17.932	3	.000	2
		2	Age*FS	4.930	9	.840	2
		3	F8b*FS	9.088	3	.028	2
2	Generating Class[b]		Age*F8b, F8b*FS	17.199	18	.509	
	Deleted Effect	1	Age*F8b	18.343	3	.000	2
		2	F8b*FS	9.498	3	.023	2
3	Generating Class[b]		Age*F8b, F8b*FS	17.199	18	.509	

Keys: FS= Family Structure; F8b=Emotional Distress

APPENDIX Z11 illustrates a summary of steps in determining the effects which make the least significant change. The best fitting is presented in the last step 3. In our analysis this includes the interaction of age, emotional distress and emotional distress, family structure this model has a likelihood ratio of 17.199 and 18 degrees of freedom and a probability level of 0.509. In other words, it is not significant which means that the observed data can be reproduced with these

three effects. The steps 1 and 2 show the contribution of each component to the final model. These three entries essentially indicate the change (reduction) in the goodness-of-fit chi-square if each component is taken away thus the interaction of age with two variables has a likelihood ratio chi-square of change 18.343 which is very significant (.000). Family structure interacts with age and emotional distress, producing a value of 9.498 which is very significant at (0.023). Obviously, these three effects could not be eliminated from the model because of their significant contribution. These can be regarded as significant main effects.

APPENDIX Z12: The step summary of the likelihood ratio of chi- square (learners, physical aggression (PA) and family structure)

Step[a]			Effects	Chi-Square[c]	df	Sig.	Number of Iterations
0	Generating Class[b]		Age*F9b*FS	.000	0	.	
	Deleted Effect	1	Age*F9b*FS	18.894	9	.026	3
1	Generating Class[b]		Age*F9b*FS	.000	0	.	

Keys: FS= Family Structure; F9b= Physical aggression

APPENDIX Z12 shows a summary of steps in determining the effects which make the least significant change. The best fitting is presented in the first and the last step1. In our analysis this includes the interaction of age, physical aggression and family structure this model has a likelihood ratio of 18.893, 9 degrees of freedom and a probability level of 0.026. In other words, it is significant which means that the observed data could not be reproduced with these three effects. Obviously, these three effects could not be eliminated from the model because of their significant contribution. These can be regarded as significant main effects.

APPENDIX Z13: The step summary of the likelihood ratio of chi-square (learners' gender, conduct problems (CP) and family structure

Step[a]			Effects	Chi-Square[c]	Df	Sig.	Number of Iterations
0	Generating Class[b]		Gender*F1b*FS	.000	0	.	
	Deleted Effect	1	Gender*F1b*FS	2.105	3	.551	3
1	Generating Class[b]		Gender*F1b, Gender*FS, F1b*FS	2.105	3	.551	
	Deleted Effect	1	Gender*F1b	2.998	1	.083	2
		2	Gender*FS	3.624	3	.305	2
		3	F1b*FS	.790	3	.852	2
2	Generating Class[b]		Gender*F1b,Gender*FS	2.895	6	.822	
	Deleted Effect	1	Gender*F1b	3.024	1	.082	2
		2	Gender*FS	3.650	3	.302	2
3	Generating Class[b]		Gender*F1b, FS	6.546	9	.684	
	Deleted Effect	1	Gender*F1b	3.024	1	.082	2
		2	FS	9.706	3	.021	2
4	Generating Class[b]		FS, Gender, F1b	9.570	10	.479	
	Deleted Effect	1	FS	9.706	3	.021	2
		2	Gender	7.481	1	.006	2
		3	F1b	21.571	1	.000	2
5	Generating Class[b]		FS* Gender, F1b	9.570	10	.479	

Keys: FS = Family Structure; F1b= Conduct Problems

APPENDIX Z13 shows the step summary in determining the effects which make the change in the likelihood ratio of chi-square. The best fitting is presented in the last step5. In our analysis this includes the interaction of gender, conduct disorder and family structure this model has a likelihood ratio of 9.570 and 10 degrees of freedom at a probability level of ,479, in other words, it is not significant which means that the observed data can be reproduced with these three effects. The steps 1, 2 and 3 show the contribution of each component to the final model. These three entries essentially indicate the change (reduction) in the goodness-of-fit chi-square if each component is taken away thus the interaction of gender with two variables has a likelihood ratio chi-square of change 6.546 which is not significant (.684). Conduct interacts with other variables, producing a value of 21.571 which is very significant at (.000). The interaction of the variable of gender with conduct and family structure produces a likelihood ratio of chi-square change of 9.891, which is significant (.020). Obviously, these three effects could not be eliminated from the model because of their significant contribution. These can be regarded as significant main effects.

APPENDIX Z14: The step summary of the likelihood ratio of chi-square (learners' gender, academic habit (AH) and family structure)

Step[a]			Effects	Chi-Square[c]	df	Sig.	Number of Iterations
0	Generating Class[b]		Gender*F2b*FS	.000	0	.	
	Deleted Effect	1	Gender*F2b*FS	6.099	3	.107	3
1	Generating Class						
			Gender*F2b,gender*FS F2b*FS	6.099	3	.107	
	Deleted Effect	1	Gender*F2b	.254	1	.614	2
		2	Gender*FS	2.827	3	.419	2
		3	F2b*FS	15.146	3	.002	2
2	Generating Class[b]		Gender*FS, F2b*FS	6.353	4	.174	
	Deleted Effect	1	Gender*FS	3.650	3	.302	2
		2	F2b*FS	15.969	3	.001	2
3	Generating Class[b]		F2b*FS, Gender	10.004	7	.188	
	Deleted Effect	1	F2b*FS	15.969	3	.001	2
		2	Gender	7.481	1	.006	2
4	Generating Class[b]		F2b*FS Gender	10.004	7	.188	

Keys: FS = Family Structure; F2b= Academic Habit

The best fitting is presented in the last step 4 in the step summary table. In our analysis this includes the interaction of age, conduct disorder and family structure

this model has a likelihood ratio of 10.004 and 7 degrees of freedom at a probability level of 0,50, in other words, it is not significant which means that the observed data can be reproduced with these three effects. The steps 1.2 and 3 show the contribution of each component to the final model. These three entries essentially indicate the change (reduction) in the goodness-of-fit chi-square if each component is taken away thus the interaction of gender with two variables has a likelihood ratio chi-square of change 15.969 which is significant (.001). Academic habit interacts with gender and family structure, producing a value of .6.099 which is very significant at (0.107). Obviously, these three effects could not be eliminated from the model because of their significant contribution. These can be regarded as significant main effects

APPENDIX Z15: The step summary of the likelihood ratio of chi-square (learners' gender, health concern (HC) and family structure)

Step[a]			Effects	Chi-Square[c]	df	Sig.	Number of Iterations
0	Generating Class[b]		Gender*F3b*FS	.000	0	.	
	Deleted Effect	1	Gender*F3b*FS	.826	3	.843	3
1	Generating Class[b]		Gender*F3b,Gender*FS, F3b*FS	.826	3	.843	
	Deleted Effect	1	Gender*F3b	6.126	1	.013	2
		2	Gender*FS	2.994	3	.393	2
		3	F3b*FS	.667	3	.881	2
2	Generating Class[b]		Gender*F3b,Gender*FS	1.493	6	.960	
	Deleted Effect	1	Gender*F3b	6.782	1	.009	2
		2	Gender*FS	3.650	3	.302	2
3	Generating Class[b]		Gender*F3b,FS	5.143	9	.822	
	Deleted Effect	1	Gender*F3b	6.782	1	.009	2
		2	FS	9.706	3	.021	2
4	Generating Class[b]		Gender*F3b, FS	5.143	9	.822	

Keys: FS = Family Structure; F3b= Health Concern

The best fitting is presented in the last step 4. In our analysis this includes the interaction of gender, HC and family structure this model has a likelihood ratio of 5.143 and 9 degrees of freedom and a probability level .822. In other words, it is not significant which means that the observed data can be reproduced with these three effects. The steps 1, 2 and 3 show the contribution of each component to the final model. These three entries essentially indicate the change (reduction) in the goodness-of-fit chi-square if each component is taken away thus the interaction of gender with two variables has a likelihood ratio chi-square of change 6.782 which is significant (0.009). FS interacts with gender and AH, producing a value of 9.706 which is also very significant at (.021). Obviously, these three effects could not be eliminated from the model because of their significant contribution. These can be regarded as significant main effects

APPENDIX Z16: The step summary of the likelihood ratio of chi-square (learners' gender, social Interaction (SI) and family structure)

Step[a]			Effects	Chi-Square[c]	Df	Sig.	Number of Iterations
0	Generating Class[b]		Gender*F4b*FS	.000	0	.	
	Deleted Effect	1	Gender*F4b*FS	2.818	3	.421	3
1	Generating Class[b]		Gender*F4b, Gender*FS F4b*FS	2.818	3	.421	
	Deleted Effect	1	Gender*F4b	3.943	1	.047	2
		2	Gender*FS	4.039	3	.257	2
		3	F4b*FS	1.234	3	.745	2
2	Generating Class[b]		Gender*F4b, Gender*FS	4.052	6	.670	
	Deleted Effect	1	Gender*F4b	3.554	1	.059	2
		2	Gender*FS	3.650	3	.302	2
3	Generating Class[b]		Gender*F4b, FS	7.702	9	.564	
	Deleted Effect	1	Gender*F4b	3.554	1	.059	2
		2	FS	9.706	3	.021	2
4	Generating Class[b]		FS, Gender, F4b	11.256	10	.338	
	Deleted Effect	1	FS	9.706	3	.021	2
		2	Gender	7.481	1	.006	2
		3	F4b	5.124	1	.024	2
5	Generating Class[b]		FS Gender, F4b	11.256	10	.338	

Keys: FS = Family Structure; F4b= Social Interaction

APPENDIX Z16 shows a summary of steps in determining the effects which make the least significant change. The best fitting is presented in the last step5. In our analysis this includes the interaction of gender, SI and family structure. This model has a likelihood ratio of 11.256 and 10 degrees of freedom and a probability level of 0.338. In other words, it is not significant which means that the observed data can be reproduced with these three effects. The steps 1, 2, 3, and 4 show the contribution of each component to the final model. These three entries essentially indicate the change (reduction) in the goodness-of-fit chi-square if each component is taken away thus the interaction of gender with two variables has a likelihood ratio chi-square of change 11.256 which is 0.338 not significant (.000). SI interacts with gender and family structure, producing a value of 5.124 which is very significant at (0.024). The interaction of the variable of family structure with gender and the child's condition produces a likelihood ratio of chi-square change of 9.8706, which is significant (.020). Obviously, these three effects could not be eliminated from the model because of their significant contribution. These can be regarded as significant main effects

APPENDIX Z17: The summary of steps in the likelihood ratio of chi-square learners' gender, unusual behaviour (UB) and family structure)

Step[a]			Effects	Chi-Square[c]	Df	Sig.	Number of Iterations
0	Generating Class[b]		Gender*F5b*FS	.000	0	.	
	Deleted Effect	1	Gender*F5b*FS	5.620	3	.132	3
1	Generating Class[b]		Gender*F5b, Gender*FS, F5b*FS	5.620	3	.132	
	Deleted Effect	1	Gender*F5b	2.558	1	.110	2
		2	Gender*FS	4.164	3	.244	2
		3	F5b*FS	1.794	3	.616	2
2	Generating Class[b]		Gender*F5b, Gender*FS	7.414	6	.284	
	Deleted Effect	1	Gender*F5b	2.044	1	.153	2
		2	Gender*FS	3.650	3	.302	2
3	Generating Class[b]		Gender*F5b, FS	11.064	9	.271	
	Deleted Effect	1	Gender*F5b	2.044	1	.153	2
		2	FS	9.706	3	.021	2
4	Generating Class[b]		FS Gender, F5b	13.108	10	.218	
	Deleted Effect	1	FS	9.706	3	.021	2
		2	Gender	7.481	1	.006	2
		3	F5b	7.481	1	.006	2
5	Generating Class[b]		FS Gender, F5b	13.108	10	.218	

Keys: FS = Family Structure; F5b= Unusual Behaviour

The best fitting is presented in the last step5 of the step summary that make a least change. In our analysis this includes the interaction of gender, UB and

family structure this model has a likelihood ratio of 13.108 and 10 degrees of freedom and a probability level of .218. In other words, it is not significant which means that the observed data can be reproduced with these three effects. The steps 1, 2, 3 and 4 show the contribution of each component to the final model. These three entries essentially indicate the change (reduction) in the goodness-of-fit chi-square if each component is taken away thus the interaction of family structure with two variables has a likelihood ratio chi-square of change 9.706 which is significant (0.021). Gender interacts with SI and family structure, producing a value of 7.481 which is very significant at (0.006). The interaction of the variable of family structure with SI produces a likelihood ratio of chi-square change of 7.481, which is significant (0.006). Obviously, these three effects could not be eliminated from the model because of their significant contribution. These can be regarded as significant main effects

APPENDIX Z18: The summary of steps in the likelihood ratio of chi-square (learners' gender, interpersonal relations (IR) and family structure)

Step[a]			Effects	Chi-Square[c]	Df	Sig.	Number of Iterations
0	Generating Class[b]		Gender*F6b*FS	.000	0	.	
	Deleted Effect	1	Gender*F6b*FS	2.028	3	.567	3
1	Generating Class[b]		Gender*F6b, Gender*FSF6b*FS	2.028	3	.567	
	Deleted Effect	1	Gender*F6b	.211	1	.646	2
		2	Gender*FS	3.837	3	.280	2
		3	F6b*FS	14.872	3	.002	2
2	Generating Class[b]		Gender*FS, F6b*FS	2.239	4	.692	
	Deleted Effect	1	Gender*FS	3.650	3	.302	2
		2	F6b*FS	14.685	3	.002	2
3	Generating Class[b]		F6b*FS Gender	5.889	7	.553	
	Deleted Effect	1	F6b*FS	14.685	3	.002	2
		2	Gender	7.481	1	.006	2
4	Generating Class[b]		F6b*FS Gender	5.889	7	.553	

Keys: FS = Family Structure; F6b= Interpersonal relations

APPENDIX Z18 indicates that there are 4 steps in determining the effects which make the least significant change. The best fitting is presented in the last step4. In our analysis this includes the interaction of age, IR and family structure this model has a likelihood ratio of 5.889 and 7 degrees of freedom and a probability level of 0.553. In other words, it is not significant which means that the observed data can be reproduced with these three effects. The steps 1, 2 and 3 show the contribution of each component to the final model. These three entries essentially indicate the change (reduction) in the goodness-of-fit chi-square if each component is taken away thus the interaction of SI with two variables has a likelihood ratio chi-square of change 14.685 which is significant (0.002). Gender interacts with SI and family structure, producing a value of 7.481 which is very significant at (0.006). Obviously, these three effects cannot be eliminated from the model because of their significant contribution. These can be regarded as significant main effects

APPENDIX Z19: Summary of steps in the likelihood ratio of chi-square (learners' gender, social withdrawal (SW) and family structure)

Step[a]			Effects	Chi-Square[c]	Df	Sig.	Number of Iterations
0	Generating Class[b]		Gender*F7b*FS	.000	0	.	
	Deleted Effect	1	Gender*F7b*FS	6.886	3	.076	3
1	Generating Class[b]		Gender*F7b, Gender*FSF7b*FS	6.886	3	.076	
	Deleted Effect	1	Gender*F7b	.495	1	.482	2
		2	Gender*FS	3.977	3	.264	2
		3	F7b*FS	5.050	3	.168	2
2	Generating Class[b]		Gender*FS, F7b*FS	7.381	4	.117	
	Deleted Effect	1	Gender*FS	3.650	3	.302	2
		2	F7b*FS	4.724	3	.193	2
3	Generating Class[b]		F7b*FS, Gender	11.031	7	.137	
	Deleted Effect	1	F7b*FSs	4.724	3	.193	2
		2	Gender	7.481	1	.006	2
4	Generating Class[b]		Gender, F7b, FS	15.755	10	.107	
	Deleted Effect	1	Gender	7.481	1	.006	2
		2	F7b	78.455	1	.000	2
		3	FS	9.706	3	.021	2
5	Generating Class[b]		Gender, F7b, FS	15.755	10	.107	

Key: FS= Family Structure; F7b= Social Withdrawal

APPENDIX Z19 reveals 5 steps in determining the effects which make the least significant change. The best fitting is presented in the last step5. In our analysis this includes the interaction of gender, SW and family structure this model has a likelihood ratio of 15.755 and 10 degrees of freedom and a probability level of 0.107. In other words, it is not significant which means that the observed data can be reproduced with these three effects. The steps 1, 2, 3 and 4 show the contribution of each component to the final model. These three entries essentially indicate the change (reduction) in the goodness-of-fit chi-square if each component is taken away thus the interaction of gender with two variables has a likelihood ratio chi-square of change 7.841 which is significant (0.107). Social withdrawal interacts with gender and family structure, producing a value of 78.455 which is very significant at (.000). The interaction of the variable of family structure with gender and the child's condition produces a likelihood ratio of chi-square change of 9.706, which is significant (.021). Obviously, these three effects could not be eliminated from the model because of their significant contribution. These can be regarded as significant main effects.

APPENDIX Z20: Summary of steps in the likelihood ratio of chi-square (learners' gender and emotional distress(ED) and family structure)

Step[a]			Effects	Chi-Square[c]	df	Sig.	Number of Iterations
0	Generating Class[b]		Gender*F8b*FS	.000	0	.	
	Deleted Effect	1	Gender*F8b*FS	4.539	3	.209	3
1	Generating Class[b]		Gender*F8b, Gender*FS F8b*FS	4.539	3	.209	
	Deleted Effect	1	Gender*F8b	1.476	1	.224	2
		2	Gender*FS	4.290	3	.232	2
		3	F8b*FS	10.138	3	.017	2
2	Generating Class[b]		Gender*F8b, F8b*FS	8.828	6	.183	
	Deleted Effect	1	Gender*F8b	.836	1	.360	2
		2	F8b*FS	9.498	3	.023	2
3	Generating Class[b]		F8b*FS, Gender	9.665	7	.208	
	Deleted Effect	1	F8b*FS	9.498	3	.023	2
		2	Gender	7.481	1	.006	2
4	Generating Class[b]		F8b*FS Gender	9.665	7	.208	

Key: FS= Family Structure; F8b= Emotional Distress

In determining the effects which make the least significant change in the likelihood ratio of chi-square, table 5.62 has generated 4 steps. The best fitting is

presented in the last step4. In our analysis this includes the interaction of gender, ED and family structure this model has a likelihood ratio of 9.665 and 7 degrees of freedom and a probability level of 0.208. In other words, it is not significant which means that the observed data can be reproduced with these three effects.

The steps 1, 2 and 3 show the contribution of each component to the final model. These three entries essentially indicate the change (reduction) in the goodness-of-fit chi-square if each component is taken away thus the interaction of ED with two variables has a likelihood ratio chi-square of change 9.498 which is significant (0.023). Gender interacts with ED and family structure, producing a value of 7.481 which is very significant at (0.006). Obviously, these three effects cannot be eliminated from the model because of their significant contribution. These can be regarded as significant main effects.

APPENDIX Z21: Step summary in the likelihood ratio of chi-square (learners' gender, physical aggression (PA) and family structure)

Step[a]			Effects	Chi-Square[c]	Df	Sig.	Number of Iterations
0	Generating Class[b]		Gender*F9b*FS	.000	0	.	
	Deleted Effect	1	Gender*F9b*FS	.704	3	.872	3
1	Generating Class[b]		Gender*F9b, Gender*FSF9b*FS	.704	3	.872	
	Deleted Effect	1	Gender*F9b	1.287	1	.257	2
		2	Gender*FS	4.222	3	.238	2
		3	F9b*FS	4.320	3	.229	2
2	Generating Class[b]		Gender*FS, F9b*FS	1.991	4	.737	
	Deleted Effect	1	Gender*FS	3.650	3	.302	2
		2	F9b*FS	3.748	3	.290	2
3	Generating Class[b]		F9b*FS, Gender	5.641	7	.582	
	Deleted Effect	1	F9b*FS	3.748	3	.290	2
		2	Gender	7.481	1	.006	2
4	Generating Class[b]		Gender, F9b, FS	9.389	10	.496	
	Deleted Effect	1	Gender	7.481	1	.006	2
		2	F9b	10.295	1	.001	2
		3	FS	9.706	3	.021	2
5	Generating Class[b]		Gender, F9b, FS	9.389	10	.496	

Key: FS= Family Structure; F9b= Physical Aggression

In determining the effects which make the least significant change, 5 steps were generated in table 5.65. The best fitting is presented in the last step4. In our analysis this includes the interaction of gender and PA and family structure this model has a likelihood ratio of 9.389 and 10 degrees of freedom and a probability level of 0.496. In other words, it is not significant which means that the observed data can be reproduced with these three effects. The steps 1, 2, 3 and 4 show the contribution of each component to the final model. These three entries essentially indicate the change (reduction) in the goodness-of-fit chi-square if each component is taken away. Thus the interaction of gender with two variables has a likelihood ratio of chi-square of change 7.481 which is significant (0.006). Physical aggression interacts with gender and family structure, producing a value of 10.295 which is very significant at (0.001). The interaction of the variable of family structure with gender and the PA produces a likelihood ratio of chi-square change of 9.706, which is significant (0.021). Obviously, these three effects cannot be eliminated from the model because of their significant contribution. These can be regarded as significant main effects.

APPENDIXZ22: The steps summary in the likelihood ratio of chi-square (learners' grade, conduct problems' (CP) and family structure)

Step[a]			*Effects	Chi-Square[c]	Df	Sig.	Number of Iterations
0	Generating Class[b]		Grade*F1b*FS	.000	0	.	
	Deleted Effect	1	Grade*F1b*FS	16.378	9	.059	2
1	Generating Class[b]		Grade *F1b, Grade*FS F1b*FS	When 16.378	9	.059	
	Deleted Effect	1	Grade*F1b	7.672	3	.053	2
		2	Grade*FS	31.027	9	.000	2
		3	F1b*FS	.117	3	.990	2
2	Generating Class[b]		Grade *F1b, Grade* FS	16.495	12	.170	
	Deleted Effect	1	Grade *F1b	8.372	3	.039	2
		2	Grade *FS	31.727	9	.000	2
3	Generating Class[b]		Grade *F1b, Grade *FS	16.495	12	.170	

*Keys: FS = Family Structure; F1b= Conduct Problems

APPENDIX Z22 indicated 3 steps generated in determining the effect which make the list significant change in the likelihood ratio of Chi-square. The best fitting is presented in the last step4. In our analysis this includes the interaction of grade, CP and family structure this model has a likelihood ratio of 16.495 and 12 degrees of freedom and a probability level of 0.170. In other words, it is not

significant which means that the observed data can be reproduced with these three effects. The steps 1, 2 and 3 show the contribution of each component to the final model. These three entries essentially indicate the change (reduction) in the goodness-of-fit chi-square if each component is taken away thus the interaction of grade/ED interacts with family structure have a likelihood ratio chi-square of change 31.727 which is significant (.000). Obviously, these three effects could not be eliminated from the model because of their significant contribution. These can be regarded as significant main effects

APPENDIX Z23: The step summary in the likelihood ratio of chi-square (learners' grade, academic, habit-AH and Family structure)

Step[a]			Effects	Chi-Square[c]	df	Sig.	No of Iterations
0	Generating Class[b]		Grade*F2b*FS	.000	0	.	
	Deleted Effect	1	Grade*F2b*FS	6.707	9	.668	3
1	Generating Class[b]		Grade*F2b, Grade*FS, F2b*FS	6.707	9	.668	
	Deleted Effect	1	Grade*F2b	3.360	3	.339	2
		2	Grade*FS	28.294	9	.001	2
		3	F2b*FS	12.537	3	.006	2
2	Generating Class[b]		Grade*FSF2b*FS	10.067	12	.610	
	Deleted Effect	1	Grade*FS	31.727	9	.000	2
		2	F2b*FS	15.969	3	.001	2
3	Generating Class[b]		Grade*FS, F2b*FS	10.067	12	.610	

Keys: FS = Family Structure; F2b= Academic Habit

In determining the effects which make the least significant change, APPENDIX **Z23** generated 3 steps. The best fitting is presented in the last step3. In our analysis this includes the interaction of grade or educational level, AH and family structure this model has a likelihood ratio of 10.067 and 12 degrees of freedom and a probability level of 0.610. In other words, it is not significant which means that the observed data can be reproduced with these three effects. The steps

before step three show the contribution of each component to the final model. These three entries essentially indicate the change (reduction) in the goodness-of-fit chi-square if each component is taken away, thus the interaction of grade and family structure has a likelihood ratio chi-square of change 31.727 which is significant (.000). An academic habit interacts with family structure, producing a value of 15.969 which is very significant at (.001). Obviously, these three effects could not be eliminated from the model because of their significant contribution. These can be regarded as significant main effects.

APPENDIX Z24: The step summary in the likelihood ratio of chi-square (learners' grade, health concern (HC) and Family Structure)

Step[a]			Effects	Chi-Square[c]	Df	Sig.	Number of Iterations
0	Generating Class[b]		Grade*F3b*FS	.000	0	.	
	Deleted Effect	1	Grade*F3b*FS	17.675	9	.039	3
1	Generating Class[b]		Grade*F3b*FS	.000	0	.	

APPENDIXZ24 illustrates the step generated in determining the effects which make the change in the likelihood ratio of chi-square. The best fitting is presented in step1. In our analysis this includes the interaction of grade, HC and family structure this model has a likelihood ratio of 17. 675 and 9 degrees of freedom and a probability level of 0.039, in other words, it is not significant which means that the observed data can be reproduced with these three effects. Obviously, these three effects could not be eliminated from the model because of their significant contribution. These can be regarded as significant main effects.

APPENDIX Z25: Step in the likelihood ratio of chi-square (learners' grade, social interaction (SI) and family structure)

Step[a]			Effects	Chi-Square[c]	Df	Sig.	Number of Iterations
0	Generating Class[b]		Grade*F4b*FFS	.000	0	.	
	Deleted Effect	1	Grade*F4b*FS	5.816	9	.758	3
1	Generating Class[b]		Grade*F4b, Grade*FS, F4b*FS	5.816	9	.758	
	Deleted Effect	1	Grade*F4b	10.996	3	.012	2
		2	Grade*FS	31.088	9	.000	2
		3	F4b*FS	.207	3	.976	2
2	Generating Class[b]		Grade*F4b, Grade*FS	6.023	12	.915	
	Deleted Effect	1	Grade*F4b	11.634	3	.009	2
		2	Grade*FS	31.727	9	.000	2
3	Generating Class[b]		Grade*F4b, Grade *FS	6.023	12	.915	

Keys: FS = Family Structure; F4b= Social Interaction

The best fitting is presented in the last step3. In our analysis this includes the interaction of grade, SI and family structure this model has a likelihood ratio of 6.023 and 12 degrees of freedom and a probability level of 0.915, in other words, it is not significant which means that the observed data can be reproduced with these three effects. The steps 1 and 2 show the contribution of each component to the final model. These three entries essentially indicate the

change (reduction) in the goodness-of-fit chi-square if each component is taken away thus the interaction of grade with two variables has a likelihood ratio chi-square of change 11.634 which is significant (0.009). Grade interacts with family structure and SI, producing a value of 31.727 which is very significant at (.000). Obviously, these three effects could not be eliminated from the model because of their significant contribution. These can be regarded as significant main effects.

APPENDIX Z26: Steps summary in the likelihood ratio of chi-square (learners' grade, unusual behaviour (UB) and family structure)

Step[a]			Effects	Chi-Square[c]	Df	Sig.	Number of Iterations
0	Generating Class[b]		GradeF5b*FS	.000	0	.	
	Deleted Effect	1	Grade*F5b*FS	14.596	9	.103	3
1	Generating Class[b]		Grade*F5b, Grade*FS F5b*FS	14.596	9	.103	
	Deleted Effect	1	Grade*F5b	8.829	3	.032	2
		2	Grade*FS	31.864	9	.000	2
		3	F5b*FS	1.418	3	.701	2
2	Generating Class[b]		Grade*F5b, Grade*FS	16.014	12	.191	
	Deleted Effect	1	Grade*F5b	8.691	3	.034	2
		2	Grade*FS	31.727	9	.000	2
3	Generating Class[b]		Grade*F5b, grade*FS	16.014	12	.191	

Keys: FS = Family Structure; F5b= Unusual Behaviour

In determining the effects which make the least significant change in the likelihood ratio of chi-square, only three steps generated. The best fitting is presented in the last step4. In our analysis this includes the interaction of grade, UB and family structure this model has a likelihood ratio of 16.014, and 12 degrees of freedom and a probability level of 0.191. In other words, it is not

significant which means that the observed data can be reproduced with these three effects. The steps 1 and 2 show the contribution of each component to the final model. These three entries essentially indicate the change (reduction) in the goodness-of-fit chi-square if each component is taken away thus the interaction of grade with two variables has a likelihood ratio chi-square of change 8.691 which is significant (.034). Unusual behaviour interacts with grade and family structure, producing a value of 31.727 which is very significant at (.000). Obviously, these three effects could not be eliminated from the model because of their significant contribution. These can be regarded as significant main effects.

APPENDIX Z27: Step summary in the likelihood ratio of chi-square (Learners' grade, Interpersonal Relations (IR) and family structure)

Step[a]			Effects	Chi-Square[c]	Df	Sig.	Number of Iterations
0	Generating Class[b]		grade*F6b*FS	.000	0	.	
	Deleted Effect	1	grade*F6b*FS	9.609	9	.383	3
1	Generating Class[b]		Grade*F6b, Grade*FS, F6b*FS	9.609	9	.383	
	Deleted Effect	1	Grade*F6b	.416	3	.937	2
		2	Grade*FS	30.398	9	.000	2
		3	F6b*FS	13.356	3	.004	2
2	Generating Class[b]		Grade*FS, F6b*FS	10.024	12	.614	
	Deleted Effect	1	Grade*FS	31.727	9	.000	2
		2	F6b*FS	14.685	3	.002	2
3	Generating Class[b]		Grade*FS, F6b*FSs	10.024	12	.614	

Keys: FS = Family Structure; F6b= Social Interaction

The best fitting is presented in the last step3. In our analysis this includes the interaction of grade, IR and family structure this model has a likelihood ratio of 10.024 and 12 degrees of freedom and a probability level of 0.614, in other words, it is not significant which means that the observed data can be reproduced with these three effects. The steps 1 and 2 show the contribution of

each component to the final model. These three entries essentially indicate the change (reduction) in the goodness-of-fit chi-square if each component is taken away thus the interaction of grade with two variables has a likelihood ratio chi-square of change 31.727 which is significant (.000). Interpersonal relations interact with grade and family structure, producing a value of 14.685 which is very significant at (0.002. Obviously, these three effects could not be eliminated from the model because of their significant contribution. These can be regarded as significant main effects.

APPENDIX Z28: Steps summary in the likelihood ratio of chi-square (learners' grade, social withdrawal (SW) and family structure)

Step[a]			Effects	Chi-Square[c]	Df	Sig.	Number of Iterations
0	Generating Class[b]		Grade*F7b*FS	.000	0	.	
	Deleted Effect	1	Gradel*F7b*FS	5.354	9	.802	3
1	Generating Class[b]		Grade*F7b, Grade*FS, F7b*FS	5.354	9	.802	
	Deleted Effect	1	Gradel*F7b	4.182	3	.243	2
		2	Grade*FS	31.874	9	.000	2
		3	F7b*FS	4.871	3	.181	2
2	Generating Class[b]		Grade*FS F7b*FS	9.535	12	.657	
	Deleted Effect	1	grade*FS	31.727	9	.000	2
		2	F7b*FS	4.724	3	.193	2
3	Generating Class[b]		Grade*FS, F7b	14.259	15	.506	
	Deleted Effect	1	Grade*FS	31.727	9	.000	2
		2	F7b	78.455	1	.000	2
4	Generating Class[b]		Grade*FS F7b	14.259	15	.506	

Keys: FS = Family Structure; F7b= Social withdrawal

APPENDIX Z28 illustrates there are 4 steps generated in determining the effects which make the least significant change in the likelihood of Chi-square. The best fitting is presented in the last step4. In our analysis this includes the interaction of grade, social withdrawal and family structure this model has a likelihood ratio of 14.259 and 15 degrees of freedom and a probability level of 0.506 in other words, it is not significant which means that the observed data can be reproduced with these three effects. The steps before step four show the contribution of each component to the final model. These three entries essentially indicate the change (reduction) in the goodness-of-fit chi-square if each component is taken away thus the interaction of grade with two variables has a likelihood ratio chi-square of change 31.727 which is significant (.000). Social withdrawal interacts with age and family structure, producing a value of 78.455 which is very significant at (.000). Obviously, these three effects could not be eliminated from the model because of their significant contribution. These can be regarded as significant main effects.

APPENDIX Z29: Step summary in the likelihood ratio of chi-square (learners' grade, emotional distress (ED) and family structure)

Step[a]			Effects	Chi-Square[c]	Df	Sig.	Number of Iterations
0	Generating Class[b]		Grade *F8b*FS	.000	0	.	
	Deleted Effect	1	Grade *F8b*FS	10.377	9	.321	3
1	Generating Class[b]		Grade*F8b, grade*FS, F8b*FS	10.377	9	.321	
	Deleted Effect	1	Grade*F8b	12.194	3	.007	2
		2	Grade*FS	28.342	9	.001	2
		3	F8b*FS	6.114	3	.106	2
2	Generating Class[b]		Grade*F8b, Grade*FS	16.491	12	.170	
	Deleted Effect	1	Grade*F8b	15.579	3	.001	2
		2	Grade*FS	31.727	9	.000	2
3	Generating Class[b]		Grade*F8b, Grade*FS	16.491	12	.170	

Keys: FS = Family Structure; F8b= Emotional Distress

APPENDIX Z29 indicated that there are 3 steps in determining the least significant change in the likelihood ratio of Chi-square. The best fitting is presented in the last step3. In our analysis this includes the interaction of grade, ED and family structure, this model has a likelihood ratio of 16.491 and 12 degrees of freedom and a probability level of 0.0170, in other words, it is slightly not significant which means that the observed data can be reproduced with these three effects. The steps before step three show the contribution of each component to the final model. These three entries essentially indicate the change (reduction) in the goodness-of-fit chi-square if each component is taken away thus the interaction of grade with two variables has a likelihood ratio chi-square of change 15.579 which is significant (.001). Grade interacts with family structure, producing a value of 31.727 which is very significant at (.000). Obviously, these three effects could not be eliminated from the model because of their significant contribution. These can be regarded as significant main effects