Perceptions Of Siblings Relationships In Middle Childhood And Their Effects Of Adolescent Anxiety And Depression.

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By

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ABSTRACT

Experiencing sibling conflict is a fact of life for most children, and this study investigates which form of sibling conflict is more likely to lead to adjustment difficulties such as anxiety and depression. Questionnaires enquiring about sibling relationships, anxiety and depression were administered to 121 students of Westland High School aged between 13 and 18 years. The correlations and multiple regressions performed indicated that adolescents with a positive sibling relationship have significantly lower levels of depression. In addition, emotional conflict between siblings was found to be a significant predictor of depression, whilst jealousy was found to be a significant predictor of anxiety and social phobia. Implications for intervention regarding disciplining emotional aggression and controlling for jealousy are discussed.

1. INTRODUCTION

Developmental psychology places emphasis on the role the family plays in shaping the way a child matures. It is, however, important to remember that within a family structure, it is very common to have more than two children, resulting in sibling relationships. As children grow up, siblings are usually their primary playmates. A sibling is involved in many of a child's social interactions. Therefore it is plausible that the sibling relationship is going to have a large impact on the way children learn to socialise, learn social skills, and perhaps impact on their overall well-being later on in life. This study examines the effect adolescent perceptions of their sibling conflict have on anxiety and depression levels.

Dunn and Kendrick (1981) observed sibling interactions and found that at 8 months, imitations of the baby by the first-born sibling were common and by 14 months imitations of the first-born by the baby were also frequent. These imitative sequences demonstrated both the attention paid by each child to the other and the power of the older model for the younger. This finding helps to demonstrate that siblings have a powerful connection and influence on each other from a very young age. In addition, the findings of this study made it clear that most first-born children responded promptly to signs that the baby was upset, was in potential danger, or was being 'naughty.' Again, responses varied, but it became apparent that it was a rarity for the first-born to ignore their sibling's actions altogether. Although these findings simply touch on the influences of the

sibling relationship, they do demonstrate the potential such relationships have for influencing children later on in their lives.

Lamb (1982) viewed siblings as agents of socialisation, focused on how sibling conflict is common and how it can be provoked by many different reasons. Lamb proposed that the anticipation of a new baby affects parents and their relationship with the first-born and can set the stage for resentment and rivalry. Lamb also discussed how siblings are regular playmates while growing up but when the first-born goes to school emotional issues arise. Younger children also face issues such as being compared to their elder siblings by teachers, parents and relatives. All these aspects, and more, may contribute together and cause conflict that is so common in all sibling relationships.

Further, Bryant (1982) reported that children's gender, their siblings' gender, relative ages of siblings, age spacing between siblings, family size and SES are all factors that exert both positive and negative influence among siblings. Bryant maintained that "Sibling rivalry stems from frustrated dependency needs, emotional struggles involving issues of sibling anger and identity, and competitive interference with respect to garnering parental and extra-familial recognition and approval" (Bryant, 1982, p.95). On the other hand, psychological closeness, supportive caretaking, direct instruction and facilitative modelling of developmental milestones are thought to be common positive experiences of sibling relationships.

A certain amount of conflict and discord in sibling relationships is normative; prolonged conflict or severe hostility between siblings, however, may have a detrimental impact on children's well being and psychological health. First, children may develop feelings of depressions or anxiety as a direct result of experiencing unfriendliness and conflict in the sibling relationship. Second, as suggested by social learning theory, children may imitate the conflicting behaviour they experience with their siblings in other areas, leading to externalising problems. Patterson's (1984) coercive theory suggests that siblings may teach coercive behaviours to each other, which can set up a negative coercive cycle that is difficult to break and leads to further cruelty. Children who grow up having conflicting relationships with their siblings may also develop difficulties in emotional perspective taking, emotional regulation, or conflict resolution that could contribute to their adjustment problems both in the internalising and externalising realms.

When considering the role of sibling conflict for children's' later adjustment, it is important to remember that sibling relationships do not occur in isolation. Rather they are embedded in a network of interconnected family relationships. Garcia et al. (2000) showed that conflict in sibling relationships was associated with an increase in children's anxiety, depressed mood, and delinquent behaviour over a 2-year period that spanned middle childhood to early adolescence. As predicted by social learning theory, children may learn hostile behaviour in the context of conflict with their siblings that carry over to their behaviour in other situations, leading to externalising behaviour problems. Second, the experience of growing up with sibling conflict may contribute to children developing feelings of depression or anxiety. This may be particularly true if they feel hopelessness

because of feelings that the sibling conflict is their fault, that the conflict will never change, or both.

In this study, I wish to explore adolescents' perceptions of the quality of their childhood interactions with their siblings and the manner in which these perceptions are associated with their current levels of anxiety and depression. I wish to study this topic because adolescent anxiety and depression are two important issues affecting the well being of New Zealand teenagers. With further knowledge about what early childhood factors are associated with the onset of these problems, it may be possible to deal with these issues before they become major difficulties. This is especially true about the issue of sibling conflict, which is so easily ignored because it is so common. Previous research has suggested that regardless of how normative sibling conflicts are, they should not be ignored when attempting to understand and help adolescents with adjustment difficulties (Dunn, 2000; McGuire, McHale, and Updegraff, 1996; Massey, 2001). This might be particularly true in the case of perceptions of a relationship between siblings and the onset of anxiety and depression in adolescence.

I chose to examine anxiety and depression because they are both very relevant issues for adolescents that can often go unnoticed simply because of the belief that there are certain feelings that all teenagers go through and eventually "get over". Although a relative amount of anxiety may be beneficial because it can heighten alertness and prepares the body for action, anxiety can easily become a problem when its symptoms become so overwhelming they interfere with daily living and cause distress. Anxiety

takes on several forms, such as Agoraphobia, Panic Disorders and Post-Traumatic Stress

Disorder. However, it is Social phobia that is most inhibiting for adolescents because if

they cannot socialise with their peers and contribute in classes, they become the focus for

bullying and rejection that may lead to increased anxiety, low-self esteem and mood

disorders. Having periods of low mood is very common in teenagers, and these transient

feelings of sadness or discouragement are perfectly normal when growing up (Galambos,

Leadbeater & Barker, 2004; Gorenstein et al, 2005). Unfortunately, many adolescents fail

to recognise such feelings as being indicative of depression.

Research performed by the New Zealand's Ministry of Health project the *New*

Zealand Youth Suicide Prevention Strategy (Ministry of Health, 2002) show high levels

of youth self-harm and suicide. Those who are affected by anxiety and depression and

who do not seek help sometimes feel they must resort to self-harm and suicide (Blazer et

al, 1994; Gorenstein et al, 2005; Kaslow et al, 1992). In New Zealand, suicide is the

second leading cause of death in the 15-24 year age group, following motor vehicle

crashes (Ministry of Health, 2002). The Injury Prevention Research Unit (IPRU) of the

University of Otago estimated that in 2001 suicide and intentional self-inflicted injury made

up the greatest proportion of all injury-related fatalities (Ministry of Health, 2002). These

statistics are proof that adolescent non-fatal and fatal suicide attempts are a major issue

currently facing New Zealand, and anxiety and depression are sometimes precursor. It is

information such as this that has influenced me to head to the path towards finding ways

to lower these rates, by gaining more knowledge about the reasons behind suicide and

self-harm and learning ways to decrease the number of adolescents suffering.

In the subsequent chapters I will endeavour to thoroughly explain the details of depression and anxiety, so complete understanding of these two disorders can be obtained. Also, with reference to previous research, I will discuss the ways in which sibling relationships can lead to adjustment difficulties in adolescents, followed by the ways in which family factors can influence the type of relationship siblings can have.

2. DEPRESSION

"Depression is a highly treatable problem that often goes undiagnosed or is attributed to the stresses and strains of daily life" (Galambos et al., 2004, p. 16). Depression is often used in common language to describe normal emotional reactions, escalating the problem that depression can be often over looked or ignored. Expressions such as "She has a right to be depressed, look what she has experienced," fail to recognise that people are capable of experiencing major suffering and not develop depression, and also that people can develop depression albeit it appears they have not encountered any major trauma. The purpose of this chapter is to examine the concept of depression, so it can be further understood why it is important to study the disorder in adolescents. In addition, attempts to gain more knowledge on how the large numbers of young people suffering from depression can be reduced are imperative. The importance of detecting depression in adolescents is acknowledged by numerous psychologists and researchers. For example, Gorenstein et al., (2005) stated that "Screening for depression in adolescents is particularly important because it is an under detected and under treated condition" (p. 130). Whilst Toros et al., (2004) declared "Depression is the most common clinical disorder during childhood and adolescence, but the symptoms often present differently to those in adults and may go unrecognized by families and physicians alike" (p. 264). The major cause of depression has yet to be determined, yet there is an abundance of factors that can be related to later depression in adolescence studied and tested by researchers all over the world. Blazer et al., (1994) exclaimed "Depression is considered a major public health problem" (p. 979). Depression can lead to many

difficulties in adulthood, and causes many unpleasant, negative symptoms which can be very hard to deal with, and in some people, unbearable. Unfortunately, Depression in adolescents isn't an easy illness to detect, often being mistaken for normal reactions for a child going through their teenage years. Also, depressive symptoms can materialise slightly differently than those manifesting in an adult who suffers from the same illness. Toros et al. highlighted the importance of early recognition and what is needed to ensure adolescent depression does not become uncontrollable. "Because depression frequently remains unrecognized in many children until prolonged and significant impairment in school and social functioning have become evident, paediatricians are encouraged to become more aware of the signs and symptoms that occur at an early stage, and to take more fully into account the potential benefits of mental health consultation at this stage with the aim of improving patient management and care" (Toros et al., 2004, p. 270).

2.1 Definition

Diagnostic and statistical manual of mental disorders, Forth Edition (DSM-IV, 1994), gave the definition "Major depressive disorder is characterized by one or more major depressive episodes (i.e., at least 2 weeks of depressed mood or loss of interest accompanied by a least four addition symptoms of depression)" (p. 317). It also mentions that the core symptoms of depression are the same for children and adults. However, these symptoms can sometimes appear differently in adolescents compared to adults, or when looking for symptoms, the criteria may be slightly different. For example, the DSM-IV, (1994) writes "In children and adolescents, the mood may be irritable rather than sad" (p. 320) and, when it discussions weight loss or gain, it notes "In children, consider failure to make expected weight gains may be noted (p. 321).

2.2 Symptoms

Sufferers of depression have pervasive feelings of sadness, helplessness, hopelessness and irritability; they can also develop changes in appetite and sleeping patterns, (Costello, 1990). Galambos et al., (2004) described the symptoms to include "fatigue, irritability, inability to make decisions, somatic problems, lack of interest in day-to-day activities, and suicidal thoughts" and noted that such symptoms can impede an adolescents' ability to "engage effectively in stage-salient tasks, thereby potentially leading to negative lifelong consequences for physical and psychological health and wellbeing" (p. 16).

2.2.1 Outcomes

A major observation of Beck's theory of depression holds that depressed individuals see the future in a negative light (Beck & Rush, 1978). Research with adults has shown that depressed individuals anticipate that more negative events and fewer positive events will happen to them in the future compared to non-depressed individuals (MacLeod, et al., 1997). It has been suggested by Kaslow et al., (1992), that similar to adults, children with depression report a significantly less positive vision of their future in relation to non-depressed children.

Gorenstein et al., (2005) discussed how depression can interfere with both school performance and with interpersonal relationships, and how these symptoms may lead to the same consequences that are observed in adults, such as the development of psychiatric disorders and alcohol and drug abuse. They also stated that Major Depressive Disorder is becoming progressively more common in youth. The major consequence is

the effect depression has on an adolescent's social functioning, their academic

achievement, it increases alcohol consumption, and causes a risk of suicide. These

outcomes emphasise the need to address depression in adolescents.

Depression in adolescence has been linked to problems with work, stressful life

events, early pregnancy, smoking and substance abuse (Allen-Meares, et al., 2003). For

example, Escobedo, Reddy & Giovino, (1998) used data from the Teenage Attitudes and

Practices Survey and analyzed the relationship between depressive symptoms and

cigarette smoking among 7,885 adolescents aged 10-18. Their findings illustrated that

subjects with depressive symptoms were more likely than other subjects to start smoking

(Escobedo, et al., 1998). Depressed adolescents are also at risk for anxiety, eating and

conduct disorders as well as academic failure and problems in interpersonal relationships

(Joiner, Coyne & Blalock, 1999).

Kagan, MacLeod & Pote, (2004) cited Piaget's theory which suggested that once

children are 11-12 years old they have reached the stage of formal operation thought. At

this stage it is thought that they are able to apply logic to hypothetical circumstances and

can start to work mentally with possibilities. Kagan, et at., (2004) performed a study on

123 adolescents aged from 11 to 17 years of age from a Scottish school and another in

England. They measured depression using "The Children's Depression Inventory Short

Form" (CDI-S; Kovacs, 1992) and hypothesised that adolescents with depression would

show clear differences from non-depressed adolescents in their accessibility of reasons to

explain the occurrence and non-occurrence of future positive and negative events. Their

hypothesis was proven and results suggested that the processes that underlie pessimism in

depressed and anxious adults also operate in relatively depressed and anxious

adolescents.

2.3 Prevalence

On average, one in four women, and one in 10 men develop depression. It can

occur at any age, and current research suggests that treatable depression is prevalent

among children and adolescents, especially among children whose parents also suffer

from depression, (Lewinsohn, et al., 1993; Sullivan & Engin, 1986; Toros et al., 2004).

Percentages of adults and youth with depression vary between studies, depending on

measures used and the sample observed. Boyd, et al., (2000) found that 14.2% of

adolescents in their Australian youth sample were identified as depressed. Boyd, et al.,

(2000) compared their results to previous studies around the world and found that

prevalence rates varied from 4% to 44%. Lewinsohn, et al., (1993) believe that more than

half of the people who have had one episode of major depression will have another at

some point in their lives. Episodes can be separated by several years whilst some people

have many episodes within a short period of time. Between episodes most people can

function normally, however, 20-35% of depression sufferers experience chronic

depression which prevents them from maintaining their normal life's routine

(Rybakowski, Nawacka & Kiejna, 2004; Spijker, et al., 2004).

Gorenstein et al., (2005) set out to detect the prevalence of depressive

symptomology and its expression in a non-clinical Brazilian adolescent student sample.

The Beck Depression Inventory (BDI) was used to assess the level of depression in these

13 to 17 year olds. The gender differences found were significant, with women having higher scores than men. Nine percent of women had scores meeting the criteria for depression compared to 6.1% of men. Age also had an effect; 13 year olds had significantly lower BDI scores than the 17 year old subgroup. Public schools had significantly higher mean scores than private school students.

Blazer et al., (1994) estimated prevalence for both current (30 day) and lifetime major depression and they used the national comorbidity survey which is a nationwide study of the US population ages 15-54 that was designed to estimate the prevalence, risk factors and consequences of psychiatric morbidity and comorbidity. Five percent of subjects included in the sample were diagnosed as having a current episode of major depression whilst 172 respondents experienced a pure episode of major depression and 222 had comorbid depression. As in other community-based epidemiologic studies, the prevalence of current major depression was higher in females than in males at a ratio of approx 2:1. Blazer et al., (1994) found that overall prevalence for lifetime major depression was 17.1%. Prevalence in age seemed to be relatively constant across age groups, and estimated prevalence of lifetime major depression was approximately twice as great among females as it was among males.

2.3.1 Gender differences

It has been suggested by previous studies that gender differences begin to emerge in early adolescence and continues to increase into late adolescence. Angold & Rutter (1992) found similar rates of depressive disorders and of depressive symptoms in boys and girls before age 11 but by ages 14-16, girls were twice as likely to have symptoms of

depression as boys. A New Zealand study by Hankin, et al., (1998) followed a nationally

representative sample for 10 years using participants aged 11-21. They found that small

gender differences in rates of depressive disorders became evident between ages 13-15,

with the greatest differences emerging between ages 15-18.

Some studies, such as Anderson et al., (1987), Angold, Costello & Worthman

(1998) and Nolen-Hoeksema et al., (1991), found that in preadolescent children,

depression is higher among boys than among girls. Anderson et al. (1987) revealed that

boys had a higher prevalence (2.5%) of Major Depressive Disorder compared with girls

(0.5%). Peterson et al., (1991) reported no differences in depression in children under the

age of 12. However by age 13-14 gender differences began to emerge and by age 17-18

girls had significantly higher rates of depression. Wade et al., (2002) aimed to present a

cross-national examination of the appearance of the gender gap in depression during

adolescence using national longitudinal panel data from Canada, Great Britain and the

USA. It was found that among 12-13 year olds, males had a higher prevalence of Major

Depressive Disorder, but this result was not significant. By ages 14-15 the gender gap in

depression reversed and females had higher rates, but again, the difference was not

significant. When the age gap widened to 16-17 years of age, girls were significantly

higher. This analysis identifies significant differences in depression between males and

females emerging by age 15-16. The data presented in this analysis demonstrated the

strength of this deviation in depression between boys and girls at age 14 across three

different countries across three different measures and across different coding schemes

for depressive sympotomatology scales. The identification and intervention for

depression in early adolescence is an important step in reducing the long-term negative

consequences of a life-course trajectory based on the early onset of depression.

Galambos, Leadbeater & Barker (2004) examined several possible predictors of

depressive symptoms and Major Depressive Episodes that might be more frequent in one

gender than in the other and that have been correlated with depressive symptoms in

previous studies in order to discover why the gender difference exists. These included

Body Mass Index, participation in sports and social support. Overall, Galambos et al.'s

(2004) research failed to find the evidence that these risk factors were related

differentially to depressive symptoms for boys and girls. Whilst gender differences in the

frequency of the risk factors may have occurred, gender did not moderate the relations

between risks and symptoms. Further research to discover the reasons behind gender

differences in adolescent depression is still valid and important.

2.4 Causes/risk factors

The exact mechanism that generates a depressive disorder is unknown and it is

probable that no one cause can give rise to the ailment; therefore scientists continue to

put the pieces of the puzzle together. In 1987 researchers announced that they had located

genetic markers for susceptibility to manic-depressive disorder (bipolar affective

disorder) a sub-type of mood disorder characterized by mood swings between

inappropriate highs and terrible lows (Amadeo et al., 1990). Though they have not found

the specific gene(s) for this illness, the existence of genetic markers brings scientists

much closer to doing so. Moreover, researchers are much closer to understanding the

biochemical reactions controlled by these genes which contribute to manic-depressive

disorder (Amadeo et al., 1990). Additional research data indicates that people suffering

from depression have imbalances of neurotransmitters. Two transmitters implicated in

depression are Serotonin and Norepinephrine. It is believed that a deficiency in Serotonin

may cause the sleep problems, irritability and anxiety associated with depression (Dunner

et al., 2005; Haller-Hester, 2004). Likewise, a decreased amount of Norepinephrine,

which regulates alertness and arousal, may contribute to the fatigue and depressed mood

in the illness (Dunner et al., 2005; Strittmatter et al., 2005). Also, in people without

depression, their levels of cortisol in the bloodstream (a hormone that the body produces

in response to stress, anger or fear) will peak in the morning, then decreases as the day

progresses. However, in people who do suffer from depression, the decrease of cortisol

doesn't occur until later on in the afternoon or evening. Nevertheless, it is difficult to

determine whether it is the unbalances that cause depression or if it is the depression that

gives rise to the imbalances (Neumeister et al., 2005; Tops et al., 2005).

There are a number of risk factors for depression in adolescents. These include

female gender, parental death or divorce, belonging to a larger family, low socio-

economic status, and a history of insecure patterns of attachment. Also, the loss of a

family member of friend through suicide, the presence of psychiatric disorders including

depression among parents and siblings, substance abuse, cigarette smoking, termination

of a romantic relationship, attention deficit, and behavioural or learning disorders.

Additionally, other risk factors include low self-esteem, exposure to abuse, exposure to

neglect, and trauma such as natural disasters (Galambos, et al., 2004; Sagrestano et al.,

2003; Weich, et al., 2002). Toro's et al., (2004) found the following factors had a

statistically significant effect on the onset of depression in adolescents. Staying down a

grade at school, problems with parents, moving to another city, humiliation at school,

ending of a romantic relationship, suicide amongst relatives, problems with friends at

school, receiving punishment at home, father being unemployed, mothers smoking habit,

fathers age and lower grades. It was determined by their research that familial

dysfunction, negative relationships in peers, and lower academic performance were

associated with the onset of depression in adolescents. The most common risk factors

were staying down a grade, problems with parents and humiliation at school (Toros et al.,

2004).

Galambos et al., (2004) cite Statistics Canada, (1999b) which reported there was a

strong association between smoking and depression, however, the casual direction of this

association is not clear. Choi et al., (1997) used longitudinal data to examine whether

adolescent cigarette smoking predicts the development of depressive symptoms. This

study used a self-report measure of 6 depressive symptoms experienced within the past

12 months at follow-up as the outcome of interest. Results showed that 11.5% developed

notable depressive symptoms at follow-up. There were marked gender differences with

15.3% of girls developing notable depressive symptoms compared to 8.1% of boys.

Gender differences in depressive symptoms were consistent across all age groups and

were apparent by the age of 12 yrs. For both genders, smoking status was the most

significant predictor of developing notable depressive symptoms. However, as Galambos

et al., (2004) point out, adolescents who experiment with smoking may be more

vulnerable to continuing if they are also vulnerable to depression and they perceive

beneficial effects of smoking of their affect as part of this initial experimentation phase.

2.5 Overview

Depression is a psychological disorder that manifests in children, adolescents and

adults alike. Having a low mood is very common, especially in teenagers (Gorenstein et

al., 2005). These feelings of sadness or discouragement are perfectly normal when

growing up, however if an adolescent cannot seem to get through these negative moods

after two weeks they maybe suffering from depression. Many fail to recognise the illness

and get the treatment that would alleviate their suffering as symptoms can be mistaken

for the flu, or stress (Galambos et al., 2004). Depression can appear at any age, and when

the illness is mistaken for common teenage sadness, it can go unnoticed or untreated and

the sufferer can get worse. Young people can then believe that people are ignoring them,

when they try to explain their feelings. Consequences result in low self esteem, inability

to feel excited and happy, which can cause problems for relationships. Depression can

also cause the sufferer to have no enthusiasm for their job resulting in getting fired. The

worst consequence of all however is eventual suicide (Costello, 1990).

Research shows depression occurs in about a quarter of adolescents around the

world, and it is evident in more girls than boys by a ratio of 2:1 (Angold & Rutter, 1992).

There is no one cause to depression and many studies have looked at the reasons behind

why people develop depression and have found various answers. A major problem is the

inability to define whether it is certain factors that cause depression, or whether the

depression causes those factors to arise. Due to ethical reasons it is hard to do research on

the causes of depression and it is because of this, and the effects depression has on its victims that depression will continue to be studied for years, decades and centuries to come. In the current study I have chosen to look at sibling relationships that are low in warmth and support, and the different types of sibling conflict as possible contributors to depression.

3. ANXIETY

"Correlates of adult anxiety disorders include impaired social and marital functioning, financial dependency, alcohol and drug abuse, and rates of suicide comparable to those in persons with depression...With a lifetime prevalence of 14.6%...the morbidity and health-care costs associated with these disorders are formidable."

(Manassis & Bradley, (1994), p. 345).

Anxiety is another mental disorder that can develop in adolescents. Often the two illnesses come hand in hand, with one provoking the other. By gaining knowledge and information on aspects of family life that correlate strongly with Anxiety and Depression, for example, high levels of sibling conflict, it is possible to then intervene, lower the levels of sibling conflict, and hopefully lower levels of Anxiety and Depression. Manassis & Bradley stated that "a clear comprehensive model for the development of childhood anxiety disorders is needed to guide interventions with those individuals at greatest risk for these disabling conditions" (1994, p. 345). With the understanding of the different ways and models researchers have developed to attempt to better comprehend the causes behind Anxiety, that Manassis & Bradley (1994) discussed, it is easier to view how early interventions can alleviate the illness. In order to properly appreciate these models, and how intervention can be worthwhile, it is important to understand the meaning of anxiety, and the impact it has on its victims.

3.1 Definition

Anxiety is as much a part of life as eating and sleeping. Under the right circumstances, anxiety is beneficial. It heightens alertness and readies the body for action (Weissman, 2000). Fear and anxiety become a problem when they are so overwhelming

that they interfere with daily living and cause the sufferer distress. "Anxiety" is a word so

commonly used that many people don't understand what it means in mental health care.

Complicating matters is the fact that "anxiety" is used to discuss a group of mental

disorders, such as phobias, panic disorders, post traumatic stress, and obsessions and

compulsions (Vasey & Ollendick, 2000; Weissman, 2000).

3.1.1 Anxiety versus Fear

Anxiety refers to an unpleasant and over-riding mental tension that has no

apparent identifiable cause. Fear on the other hand causes mental tension due to a specific

external reason such as when your car skids out of control on ice. Sweeney & Pine (2004)

discussed the emotional states of fear and anxiety and their pathological manifestations.

They refer to the term fear as a specific emotion elicited by potentially dangerous stimuli.

Fear provides organisms with an internal early warning system that issues a call to action.

Fear warns the organism of perceived impending danger and readies the organism for

potential flight. Sweeney & Pine described anxiety as emotional states that are equivalent

to fear, but differ. For example, they maintain that anxiety refers to fear-like states that

are out of proportion in terms of duration, degree of avoidance, or subjective distress,

relative to the current level of danger provoked by potential fear stimuli (Sweeney &

Pine, 2004).

3.2 Prevalence

The exact percentage of adolescents that suffer from anxiety is impossible to

pinpoint. Boyd, et al., (2000) found that 13.2% of adolescents in their Australian sample

were identified as anxious; however, when looking at previous studies from around the

world Boyd, et al., (2000) saw depression frequencies varying from 4% to 25%.   The

prevalence rates for depression and anxiety in Western nations were quite similar and the

reported rates for Eastern European countries were also similar. However, there appeared

to be a substantial difference between Western countries and Eastern European nations:

Adolescents from countries such as Bulgaria, Poland, and Russia reported the highest

levels of anxiety and depression. In contrast, studies conducted in Asian countries

indicated only slightly higher rates of depression than Western countries and hence could

be considered to be comparable (Boyd, et al., 2000). Carey, Gottesman and Robins

(1980) provided estimated prevalence rates that ranged from 0.6 per 1000 to 39.2 per

1000 whereas Bernstein & Borchardt, (1991) found that three to four percent of children

meet criteria for an anxiety disorder. Based upon the work of Carey et al., (1980) there

appears to be a consistent sex difference in the prevalence of anxiety neuroses also, with

the average prevalence rate for woman being 2.17 times that for men. Percentages and

rates of anxiety differ between studies depending on the measures used and the sample

observed. Anxious children also show higher rates of depression in adolescence than non-

anxious children, often resulting in further impairment persisting into adulthood (Costello

& Angold 1995).

3.3 Causes

No single situation or condition causes anxiety disorders. Rather physical and

environmental triggers may combine to create a particular anxiety disorder.

Psychoanalytic theory suggests that anxiety disorders stem from unconscious conflicts

that arose from discomfort during infancy or childhood (Brakel & Shevrin, 2005;

Hurvich, 2000). For example a person may carry the unconscious conflict of sexual

feelings toward the parent of the opposite sex. By this theory anxiety can be resolved by

identifying and resolving the unconscious conflict (Brakel & Shevrin, 2005; Hurvich, 2000). Learning theory says that anxiety is a learned behaviour that can be unlearned. People who feel uncomfortable in a given situation or near a certain object will begin to avoid it. Such avoidance can limit a patient's ability to live a normal life. Patients learn that their anxiety is reduced by persistently confronting the feared situation or object (Block, 2003; Mineka & Zinbarg, 2006).

3.3.1 Temperament Model

The temperament model focuses on a physiological, perhaps genetic predisposition to inhibited behaviour. It still remains somewhat unknown what autonomic mechanism presides, however, there appears to be a heritable tendency for some children to avoid the unfamiliar (Manassis & Bradley, 1994). Kagan credited this tendency to a low threshold of response to unfamiliarity and challenge in the limbic system (Kagan et al., 1990). A lowered threshold of response to the unknown increases a child's risk of behavioural inhibition. When encountering an new situation, such a child experiences uneasiness due to intense arousal of the sympathetic nervous system resulting in the child withdrawing from the situation in response to the discomfort. If such withdraw from unfamiliar situations continues to occur, it becomes habitual. Kagan et al., (1990) used the phrase "behavioural inhibition" to describe the never ending propensity to avoid novelty. Although the avoidance of novelty results in a decrease in anxiety, it also reduces the number opportunities for the individual to develop effective coping strategies. This in turn, results in further avoidance. Further development of behavioural inhibition can depend on a parent's tolerance or intolerance of their child's avoidant behaviour. The mechanism linking behavioural inhibition with anxiety disorders is not clear. Manassis &

Bradley (1994) discussed that long-lasting avoidance decreases Norepinephrine in the central nervous system, resulting in hypersensitivity of Norepinephrine receptors. This hypersensitivity could result in sudden, intense anxiety when an unfamiliar situation cannot be avoided (Manassis & Bradley, 1994).

3.3.2 Attachment Model

The Attachment theory views the development of anxiety disorders as being a result of an insecure child-caregiver attachment. When a child's primary caregiver responds to their infant's distress insufficiently, the infant's needs are not reliably met, resulting in an insecure attachment. Therefore, the insecure infant develops a tactic based on the expectation that his or her needs will not be reliably met by others, resulting in either extreme self-reliance or constant attention seeking (Manassis & Bradley, 1994). These approaches tend to draw out hostile reactions from others, strengthening the infant's viewpoint. Such misrepresentations may result in the development of a bias when perceiving intimidating situations. This bias influences a state of inner insecurity that can be accompanied by avoidance. Avoidance prevents the development of strategies for coping with anxiety and further impairs the development of social skills (Manassis & Bradley, 1994).

3.3.3 Integrated Model

Manassis & Bradley (1994) devised an integrated model which focuses on an interaction between the Temperament and Attachment models, and includes other influences also. They suggested that it is commonly the interaction between the child's vulnerability and the parental response that creates the degree of difficultly in coping

with arousal. Manassis & Bradley (1994) saw this difficulty coping with arousal as a

preliminary to anxiety disorders developing.

Theoretical models of childhood anxiety have emphasised temperamental

vulnerability, mainly behavioural inhibition and its interaction with various

environmental factors promoting anxiety (for example, overprotective parenting, insecure

attachment, life stress). Although clearly establishing the importance of both nature and

nurture in anxious psychopathology, these models have not adequately explained the

diversity of anxiety disorders presenting in childhood. The fact that some children's

diagnoses change over time, for example the anxiety can progress from presenting highly

comorbid in middle childhood to one predominant disorder in adolescence (Manassis, et

al., 2004).

3.4 Symptoms

Descriptions of anxiety symptoms include shakiness, trembling, muscle aches,

sweating, dizziness, feeling jumpy, tension, fatigue, racing or pounding heart, dry mouth,

numbness and tingling, upset stomach, diarrhoea, high pulse rates, the list is extensive

(Silverman, et al., 2001; Weems & Costa, 2005). In addition, people suffering from

anxiety disorders are often apprehensive and worry that something bad may happen to

them or to the ones they love. They often feel impatient, irritable and easily distracted.

This is common in people who suffer from generalised anxiety (Goldsmith & Lemery,

2000).

3.4.1 Social Phobia

Social phobia is characterized by an excessive fear of being observed by others, or by a persistent fear of humiliation, negative evaluation, or embarrassment in social or performance situations. This results in either avoiding the feared situation or putting up with it, but with intense distress. The difference between being shy and having social phobia is the more pervasive, distressing and disabling feelings involved with social phobia. DSM-IV (1994) characterises social phobia by "clinically significant anxiety provoked by exposure to certain types of social or performance situations, often leading to avoidance behaviour" (p. 393). DSM-IV (1994) notes the differences between adults and children in the criteria for social phobia. "In children, there must be evidence of the capacity for age-appropriate social relationships with familiar people and the anxiety must occur in peer settings, not just in interactions with adults" (p. 416). On page 417 the DSM-IV (1994) also states "In children, the anxiety may be expressed by crying, tantrums, freezing, or shrinking from social situations with unfamiliar people." Further differences mentioned include that in adults a criteria for social phobia is that the person recognises that the fear is excessive or unreasonable. Whereas in children, that feature may be absent. It also states that for individuals under age 18, the duration the symptoms must last at least 6 months.

Social phobia is one of the more common childhood and adolescent psychological disorders, affecting between 1.1 and 3.7% of the general youth population. This disorder is related to significant psychosocial impairment, including poor academic performance (Beidel, 1991) and psychological difficulties such as depression (Inderbitzen- Nolan &

Walters, 2000) and substance use (Wittchen, Stein, & Kessler, 1999). Additionally,

socially phobic adolescents are at risk for significant disruptions in normative social

development due to distress and avoidance of social interactions (Beidel & Turner, 1998).

Such impairment during childhood and adolescence has been associated with poor

interpersonal and psychological functioning in adulthood (Pine et al., 1998). Increasing

evidence suggests that a range of social anxieties are common among adolescents, but are

often unidentified or treated (Wittchen et al., 1999).

In the last decade studies of social anxiety have focused on research of social

anxiety in childhood and adolescence. Results from recent research shows that social

anxiety is related to negative self-perceptions and lower social adaptation. Storch &

Masia-Warner (2004) examined the relationship of overt and relational victimisation to

social anxiety, loneliness, and prosocial behaviours in a sample of female adolescents.

Relational victimisation refers to harm to others through manipulation, purposeful

damage or threats of damage to interpersonal relationships (eg. spreading rumours,

excluding a peer from social interactions. Overt victimisation, in contrast, involves

harming others through physical attacks or threats of such attacks (eg. hitting, pushing,

and yelling). Storch & Masia-Warner (2004) believe that anxiety may be a learned

response to repeated exposure to overt and relational aggression. For example, such

exposure may promote negative self-evaluations and lead to avoidance of social

interactions. A number of studies on elementary school aged children and adolescents

have found a positive relationship between overt and relational victimisation, and fear of

negative evaluation and social avoidance (Grills & Ollendick, 2002). Social avoidance

and negative feedback from others may also limit victimised youths' exposure to positive peer relationships, thus interfering with the development of social skills and self-esteem. As a result, victimised youth may experience elevated levels of loneliness. Storch & Masia-Warner's (2004) demonstrated that relational victimisation was uniquely associated with social anxiety and loneliness even after controlling for prosocial behaviour and overt victimisation. Additionally, they found that overtly and relationally victimised girls experience elevated levels of social anxiety and loneliness. Repeated victimisation may result in cognitive thoughts about negative interactions and avoidance of situations with the potential for victimisation (eg. parties, joining groups). Victimised girls may be denied opportunities for learning and developing prosocial peer relationships because of avoidance and distress. However, it may be that victimised girls exhibit a vulnerability that makes them prone for being a target of aggressors. Storch & Masia-Warner (2004) continue to point out that perhaps socially anxious or lonely girls' view their peer relationships in a negative manner, and thus report higher levels of victimisation.

3.4.2 Agoraphobia

DSM-IV (1994) states "Agoraphobia is anxiety about, or avoidance of, places or situations from which escape might be difficult (or embarrassing) or in which help may not be available in the event of having a panic attack or panic-like symptoms" (p. 429). Agoraphobia is the avoidance of places or situations from when escape would be difficult or in which help may not be available if the person should become incapacitated. Agoraphobic fears commonly involve situations such as being outside the home alone, being in a crowd or standing in a line, being on a bridge, or travelling in a bus, train or

car. These situations are either avoided or endured with marked distress or anxiety about

having a panic attack. The occurrence of severe panic is frightening and so sufferers

learn to try and anticipate situations likely to trigger their panic attacks. For most people

with panic disorder these are situations from which it is difficult to escape easily or in

which help couldn't arrive easily. When individuals start associating panic attacks with

certain situations, they often try to minimise the panic attacks by avoiding the same or

similar situations. DSM-IV (1994) writes "Panic Disorder with Agoraphobia is

characterised by both recurrent unexpected Panic Attacks and Agoraphobia" (p. 393).

The DSM-IV (1994) also states that panic attacks and agoraphobia occur in the context of

several of the anxiety disorders mentioned. For panic attacks, panic disorder with

agoraphobia, panic disorder without agoraphobia and agoraphobia without panic

disorder, the DSM-IV (1994) makes no mention of differences between the criteria for

adults and adolescents or children.

3.4.3 Panic Disorder

People with a panic disorder suffer from sudden, intense and overwhelming terror

for no apparent reason. The fear is accompanied by at least four of the following

symptoms. The most common include sweating, heart palpitations, hot or cold flushes,

trembling, feelings of unreality, choking or smothering sensations, shortness of breath,

chest discomfort, faintness, unsteadiness, tingling, thoughts of losing control, dying or

going crazy. Often people suffering from a panic attack for the first time are convinced

they are having a heart attack. Sufferers can't predict when the attacks will occur,

although certain situations can become associated with them if it was in those situations

where the first attack occurred. DSM-IV (1994) describes a panic attack as "a discrete

period in which there is the sudden onset of intense apprehension, fearfulness, or terror,

often associated with feelings of impending doom. During these attacks, symptoms such

as shortness of breath, palpitations, chest pain or discomfort, choking or smothering

sensations, and fear of "going crazy" or losing control are present" (p. 429). Panic attacks

occur in the context of several of the disorders, and thus is a major aspect of anxiety.

Research on the appearance and characteristics of panic attacks in adolescence is

very limited. Schneider & Henskeik (2003) were interested in whether there is a

difference between sudden panic attacks and situation-related panic attacks with respect

to anxiety sensitivity. Their results found that 55% of the adolescents had already

experienced a panic attack. Adolescents with sudden panic attacks reported cognitions of

forthcoming physical harm more frequently than did adolescents with situation-related

panic attacks. Adolescents with sudden panic attacks or with panic disorders showed the

highest means in anxiety sensitivity and depression. The results indicate the central role

of cognitions which is in agreement with psychological panic disorder models also seen

in adults (Schneider & Hensdiek, 2003).

Although some studies have examined predictors of panic attacks (e.g., Hayward,

et al., 2000), there are no prospective investigations that explain why panic attacks are

followed by psychopathology in some and by a benign course in others. Two longitudinal

studies indicate considerable risk for developing an internalising disorder after

experiencing a panic attack. In a sample of 46 participants with infrequent panic attacks,

Ehlers (1995) reported that 15% had developed panic disorder by the 1-year follow-up

assessment. In addition, Pine, et al., (1998) reported that fearful spells reported during

adolescence were associated with an increased risk for panic disorder, generalised anxiety

disorder, social phobia and major depressive disorder seven years later in young

adulthood. For some, panic attacks can be followed by any number of psychiatric

disorders including, but not limited to, panic disorder and agoraphobia (Wilson &

Hayward, 2005). For example, both the National Comorbidity Survey and the

Epidemiologic Catchment Area (ECA) Study have documented an increased chance for

developing major depression following panic attacks (Andrade, et al., 1996; Kessler et

al., 1998; Roy-Byrne et al., 2000). According to the ECA data, those with DSM-IV panic

attacks experienced a 6.9 times greater relative risk for developing major depression than

those without a history of panic attacks. Data further indicated that the conditional

probability of developing panic disorder was 37% and agoraphobia was 27% for both

genders, and the conditional probability of developing any other mental disorder

following the attack was 63% in males and 40% in females. Langs et al., (2000) found

that cognitive symptoms during an attack, such as fear of dying or going crazy, are

associated with four times the risk for developing agoraphobia. It has become

increasingly clear that panic attacks represent a marker for a range of potential initial

psychopathology, including major depression, bipolar disorder, and anxiety disorders.

Wilson & Hayward's (2005) data indicates that pre-panic vulnerability to anxiety

sensitivity, negative affect, and childhood behavioural inhibition are associated with

severity of a subsequent panic attack defined by number of physical symptoms and

catastrophic cognitions. Their results also provide evidence for a significant relationship

between the severity of a first panic attack and subsequent internalising psychopathology

operationalised as symptoms of agoraphobia and depression.

3.4.4 OCD

DSM-IV (1994) "Obsessive-Compulsive Disorder is characterised by obsessions

(which cause marked anxiety or distress) and/or by compulsions (which serve to

neutralise anxiety)" (p. 429). People with obsessions experience involuntary persistent

thoughts or impulses, which are distasteful to them. The most common obsessions focus

on hurting others or violating socially acceptable behaviour standards. People with

compulsions carry out repeated and ritualistic behaviours in effort to reduce the high

anxiety caused by the obsession. Examples of compulsive rituals include cleaning,

repeating a particular behaviour, checking and hoarding. Obsessive-compulsive disorder

usually begins in childhood or adolescence and affects about 1-2 people in every 100

(Demet, 2005; Pasnau & Bystritsky, 1990).

3.4.5 Posttraumatic Stress Disorder

DSM-IV (1994) "Posttraumatic Stress Disorder is characterised by the re-

experiencing of an extremely traumatic event accompanied by symptoms of increased

arousal and by avoidance of stimuli associated with the trauma" (p. 429). Post Traumatic

Stress Disorder can occur in anyone who has survived a severe and unusual physical or

mental trauma. The severity of the disorder increases if the trauma was unanticipated.

Symptoms usually begin within three months of a trauma, but for some people, they can

occur months or even years after the traumatic event happened. The person can fall into a

dissociated state where they may relive the trauma for a few seconds, or even days. Also,

avoidance and emotional numbness can occur, where the sufferer goes out of their way to

avoid situations which remind them of the event (Breslau et al., 1991; Davidson, 1991;

Falsetti & Resnick, 1997; Pasnau & Bystritsky, 1990).

3.4.6 Generalised Anxiety

DSM-IV (1994) describes Generalised Anxiety Disorder as "characterised by at

least 6 months of persistent feelings of anxiety and worry" (p. 429). The worry is

typically out of proportion to the actual circumstances, it exists through most areas of a

person's day-to-day life and is experienced as difficult to control. Individuals with

Generalised Anxiety Disorder describe always anticipating disaster and they worry and

distress about a variety of areas such as their job performance, health, relationships,

school grades or possible misfortune. Sometimes though, the source of the worry is hard

to pinpoint and simply the thought of getting through the day can provoke anxiety

(Becker et al., 2003; Marks, 1989; Pasnau & Bystritsky, 1990).

3.5 Overview

"With clearer understanding of the etiology of anxiety disorders, such strategies

can be specific, cost-effective, and targeted at those individuals at greatest risk"

(Manassis & Bradley, 1994, p. 345). Anxiety refers to an unpleasant and over-riding

mental tension that has no apparent identifiable cause. Anxiety refers to a group of

disorders such as social phobia, agoraphobia, generalised anxiety disorder,

obsessive/compulsive disorder and post traumatic stress disorder (Vasey & Ollendick,

2000). Similar to depression, there is no one cause for why people develop anxiety

disorders. Social Phobia and Panic Disorder with Agoraphobia are the more common

anxiety disorders among adolescents and can harm their functioning which can affecting

them through to adulthood. Social Phobia inhibits the person from being able to make

pro-social friendships and maintain close relationships, whereas agoraphobia hinders its

victim from being able to take public transport or be in any situation where they

anticipate a panic attack may occur (Schneider & Henskeik, 2003;Wittchen et al., 1999).

People suffering from anxiety are often apprehensive and worry that something bad may

happen to themselves, or to loved ones (Weissman, 2000). Anxiety results in many

negative consequences in adult life, inability to get a job, have a social life, and raise a

family, and therefore, early detection and prevention is sought after. As well as looking at

overall anxiety symptoms in my research, I will also view whether having a positive

sibling relationship has an impact on social phobia and agoraphobia scores. I have chosen

to view only social phobia and agoraphobia as opposed to all the anxiety disorders

because I believe these are the two most common forms of anxiety adolescents suffer

from.

4. SIBLING RELATIONSHIPS AND ADJUSTMENT

Children spend a great deal of time with their siblings. In middle childhood, children have been shown to spend more time with siblings than with parents (McHale & Crouter, 1996). Emphasis has been placed on the extent of similarity across family experiences. The absence of dysfunction in various dimensions of family life is generally linked to positive sibling relationship qualities. Dunn (2000) commented on the way in which sibling relationships provide children with a range of opportunities to learn about themselves and how they present themselves to others. Although little research has focused on the implications of the sibling relationship for adolescent adjustment, there is evidence that the quality of sibling relationships in childhood is related to the adjustment variables of self-esteem, depression and anxiety (McHale & Gamble, 1989; Stocker, 1993). Previous research by Dunn (1995, 1999) provided evidence that children who talk about feelings with their siblings and engage in pretend play with them are likely to have a greater ability to recognize and understand the feelings of others. Dunn, (2000), commented on the potential influence of the sibling relationship on the emotional well-being of individual siblings "emotional intensity, the intimacy of the relationship, the familiarity of children with each other, and the significance of sharing parents mean that the relationship has considerable potential for affecting children's well-being''(p. 244). Warm sibling relationships are likely to be positively associated with the development of social and cognitive skills, emotion regulation and cooperativeness (Dunn, 1992). Massey (2001) believed that sibling relationships can provide love and support or may be conflict ridden and hostile. The quality of sibling relationships may have profound positive or

negative effects on personality and social development (Furman & Lantheir, 1996,

Hartup & van Lieshout 1995). Conger at al., (1997) investigated the relationship between

parents' and siblings' psychological control and adolescent adjustment over a three year

period. They found in early adolescence that participants who reported that their siblings

were controlling tended to have higher levels of depression and externalising behaviours

and lower levels of self-confidence than participants who reported less sibling control.

Stocker (1994) studied links between psychological adjustment and individual

differences in perceptions of relationships with siblings, mothers and friends and found

that the level of sibling conflict was negatively associated with self worth and positively

related to loneliness and depression.

4.1 Types of Sibling Relationships

Some sibling relationships are hostile and aggressive, whereas others are

affectionate, supportive and pleasant. Epkins et al., (1997) found that sibling relationship

satisfaction was negatively related to depression and anxiety whereas sibling hostility

was positively related to depression and anxiety. McGuire et al., (1996) found that four

types of sibling relationships could be defined based on these two dimensions:

harmonious, hostile, affect-intense, and uninvolved. Harmonious sibling relationships

were high in warmth and low in hostility, hostile relationships were high in hostility and

low in warmth, affect-intense relationships were high on both warmth and hostility, and

uninvolved relationships were low on both warmth and hostility. It is very rare for

relationships between siblings to be always cooperative or always antagonistic. Every

sibling relationship will develop its own uniqueness and acquire certain levels of

positivism and negativity depending on individual circumstances. The questions remain,

how much negativity is too much negativity? Also, how much warmth is needed to create

enough resiliencies against adjustment problems?

McGuire, McHale, and Updegraff (1996) showed that many sibling relationships

can be sometimes hostile and sometimes warm; particularly those relationships of young

people in difficult situations such as experiencing the separation or divorce of their

parents. In the McGuire, et al., (1996) study, children reported their levels of satisfaction,

intimacy and rivalry in their sibling relationships and their satisfaction with parent-child

relationships. Results showed that as compared with children in families with sibling

relationships high in hostility and high in warmth, children in sibling relationships high in

hostility yet low in warmth rated their sibling and parent-child relationships more

negatively, and their parents rated their marriages more negatively. Other individual

circumstances which can affect the level of warmth and the level of hostility in sibling

relationships can arise from many different aspects for example, how children perceive

parental treatment and similarity within the siblings. Not only is it important and

interesting to discover the different types of sibling relationships that can exist, it is also

significant to look at the consequences and outcomes these different relationship types

affect the children in terms of wellbeing and adjustment.

4.2 Effects on Adjustment

Further verification that negative sibling relationships are likely to lead to

adjustment problems such as anxiety and depression was found by Massey (2001) whose

results showed that adolescents who have sibling relationships that are high in social

support and low in negativity will be less socially anxious and will have better adjustment

outcomes than adolescents who have sibling relationships that are low in social support

and high in negativity. These results broadened the sibling relationships literature by

revealing that positive sibling relationships, namely those high in social support and low

in negativity are important to late adolescent sociability and healthy psychosocial

functioning. Massey's evidence suggested that perceptions of positive sibling

relationships may provide adolescents with ample levels of support to promote late

adolescent wellbeing and positive feelings of self-worth and social acceptance.

Continuing on, previous research by Epkins, et al., (1997) also illustrated that the

quality of the sibling relationship is related to preadolescent depression and anxiety.

Perceived support in general has been linked to adolescent adjustment, in that adolescents

who perceive more support exhibit fewer internalizing and externalizing problem

behaviours (Barrera, Chassin, & Rogosch, 1993). When adolescents perceive they are

surrounded by a strong social support system, they are less likely to develop difficulties

with depression, anxiety and delinquency. However, what happens when the focus is on

sibling support alone? Massey (2001) found associations between reported social support

from several family relationships and adolescent internalising behaviours and self

concept. Specifically, higher sibling conflict was related to lower self-esteem and higher

externalizing behaviour, whereas higher status/power was related to higher internalizing

behaviour. Even the quality of sibling relationships in the preschool period has been

found to predict early adolescents' internalizing and externalizing behaviours, and these

relations seemed stronger for older adolescents (Dunn et al., 1994).

4.2.1 Support

Results of Noller's (2005) study yielded more confirmation for the importance of supportive sibling relationships for psychosocial adjustment in adolescence, in relation to Massey's (2001) sibling relationship dimensions. Noller (2005) found that adolescents who reported sibling relationships high in social support and low in negativity had lower levels of social anxiety and depression and higher global and social acceptance self-worth than adolescents who reported sibling relationships low in social support and high in negativity. Differences were also found between sibling relationships high in social support and low in negativity and the remaining two sibling categories (high social support/high negativity and low social support/low negativity). Noller (2005) established that older siblings' adjustment was mainly related to their own (unfriendly) behaviour towards their sibling, whereas the adjustment of younger siblings was related to both their own and their siblings' behaviour. A higher initial level of sibling support was related to lower initial levels of internalizing problem behaviours for both older and younger adolescents and for externalizing behaviour of older adolescents, even after controlling for support from the father, mother and friend.

4.2.2 Coercive Background

In a study by Bank, Patterson & Reid (1996), it was revealed that in the context of poor parenting practices, negative sibling interactions in middle childhood predicted poor peer relations, antisocial behaviours, academic difficulties, and a number of arrests during adolescence and also symptoms of psychopathology (anxiety, depression, hostility) during young adulthood. Bank, et al., (1996) wrote that families characterised by high densities of coercive exchanges define a consistent social environment shared by all its

members, parents and siblings alike. They examined the predictive power of the early

sibling/coercive-child relationship on a set of criterion variables for the coercive child,

including later law violations and psychological adjustment in adolescence and young

adulthood. Bank, et al., (1996) indicated negative behaviours in sibling relationships may

predict later social and psychological problems.

Sibling training of coercive behaviours has been linked to negative

communication and maladaptive delinquent behaviour later on in life by Bank et al.,

(1996). They found that children who grow up having conflictual relationships with their

siblings may also develop difficulties in affective perspective taking, emotional

regulation, or conflict resolution that could contribute to their adjustment problems both

in the internalising and externalising realms. Associations between sibling conflict and

children's adjustment problems may be bidirectional. Children with poor adjustment may

lack the social or emotion skills to manage conflict with their siblings and thus may

develop conflictual relationships with them. When considering the role of sibling conflict

for children's later adjustment, it is important to remember that sibling relationships do

not occur in isolations; rather they are embedded in a network of interconnected family

relationships.

4.2.3 Sibling Conflict

Stocker, Burwell and Briggs (2002) found associations between sibling conflict in

middle childhood and psychological adjustment in early adolescence by studying a

sample of 80 boys and 56 girls. Results showed that sibling conflict at time 1 predicted

increases in children's anxiety, depressed mood and delinquent behaviour 2 years later.

Moreover, earlier sibling conflict at time 1 accounted for unique variance in young adolescent's time 2 anxieties, depressed mood and delinquent behaviour above and beyond the variance explained by earlier maternal hostility and marital conflict. Children's adjustment at time 1 did not predict sibling conflict at time 2. These results highlight the unique significance of the earlier sibling relationships for young adolescents' psychological adjustment. As Patterson's 1984 coercive theory suggests, siblings may teach coercive behaviours to each other, this can set up a negative coercive cycle that is difficult to break and leads to further coercion. This study showed that conflict in sibling relationships was associated with increase in children's anxiety, depressed mood and delinquent behaviour over a 2 year period that spanned middle childhood to early adolescence. As predicted by social learning theory, children may learn hostile behaviour in the context of conflict with their siblings that carries over to their behaviour in other situations, leading to externalising behaviour problems. Second, the experience of growing up with a conflictual sibling may contribute to children developing feelings of depression or anxiety. This maybe particularly true if they feel hopelessness because of attributions that the sibling conflict is their fault, that the conflicts will never change, or both. Such internal, stable, and global attributions for negative events may constitute a negative attribution style that has been implicated as a risk factor for depression and other internalising problems. Third, children who experience substantial conflict with their siblings may develop difficulties in certain aspects of social cognition, such as affective perspective taking or emotion regulation, which in turn could contribute to their developing both internalising and externalising problems. It is possible that parent-child conflict or marital distress leads both to sibling

conflict and to adolescent adjustment problems. However, results from the second set of regressions showed that sibling conflict was associated with increases in children's adjustment problems even after controlling for earlier parent-child hostility and marital conflict. Thus, the connection between sibling conflict and children's adjustment was not just a spurious association due to links between conflict in other family relationships and children's adjustment.

4.3 Overview

A certain amount of conflict and discord in sibling relationships is normative; however prolonged conflict or severe hostility between siblings may have a detrimental impact on children's well-being and psychological health. A number of mechanisms may operate to link sibling conflict to children's adjustment difficulties. First children may develop feelings of depression or anxiety as a direct result of experiencing hostility and conflict in the sibling relationship. Second, as suggested by social learning theory, children may imitate the conflicting behaviour they experience with their siblings in other areas, leading to externalising problems. In addition, perceived parental favouritism can influence sibling conflict. I am interested to see whether a sibling who rates highly in the "I am jealous of my sibling" scale will have high levels of anxiety and depression in comparison to the siblings who rate highly in the "my sibling(s) are jealous of me" scale. Assuming a child who perceives themselves as being the unfavoured child will be jealous of their favoured sibling, and a child who perceives themselves as the favoured child, will believe there sibling will be jealous of them.

5. FAMILY FACTORS AND SIBLING RELATIONSHIPS

With some knowledge and understanding of the impact sibling relationships can have on a child's adjustment later on in adolescence, it is now possible to progress towards examining different factors that can influence the type of relationship siblings will have. This information is relevant because if parents are able to know which aspects of their children's lives are more risky than others, they can then take certain precautions and preventions to ensure their children are at the least possible risk of developing anxiety and depression. Some factors, such as age-spacing for example, the parents are somewhat in control and can decide which options (whether to have children close together or to space them further apart) is best for them.

5.1 Gender and Birth Order

O'Brien (1999) states that previous research done on aggression in children's peer relationships demonstrate that there is an obvious relation between gender and aggression. Crick et al., (1999) also studied childhood aggression and gender. It was found that boys use more physical aggression than females, however aggression is more significant in females, and their efforts to harm others is identified as a relational form of aggression. The type of aggression used by females in peer relationships is defined as behaviours that harm others through damage (or threat of damage) to relationships and their group acceptance. Whilst research has shown that there are gender differences in aggressive behaviour towards peers, it is unclear whether these gender differences are also present in sibling relationships. If it can be determined that females are more likely to use relational/emotional aggression towards their siblings, and that

relational/emotional aggression is more likely to lead to depression and anxiety than other forms of aggression and conflict, this may help explain why the rates of depression and anxiety are higher in females than in males.

O'Brien (1999) found a relation between younger sibling's gender and the forms of aggression they used towards their older siblings. Younger sisters were more likely to use relational aggression towards older siblings, whereas younger brothers used higher levels of physical aggression. O'Brien's (1999) study also revealed that compared to younger sisters, younger brothers had greater conflict with their older siblings. The greater amount of conflict and more frequent use of physical aggression for the younger brothers in this study parallels with previous research on sibling relationships. Younger brothers compared to younger sisters direct higher levels of physical aggression and other negative behaviours towards older siblings.

In addition, O'Brien (1999) found an association between younger sibling's gender and the forms of aggression that older siblings used towards them. Older siblings were more likely to use relational aggression towards younger sisters than younger bothers. Older siblings also reported more conflict in relationships with younger sisters compared to relationships with younger brothers. It is possible that older siblings use more relational aggression with younger sisters due to parental sanctions. Parents may perceive older siblings use of physical aggression against younger sisters as more damaging and reprehensible and thus, may punish older siblings more severely. Felson &

Russo (1988) found that parents were more likely to punish the older brother for physically aggressing against younger sisters.

The gender of the older sibling compared to the gender of the younger sibling may play less of a role in the use of relational and physical aggression because of the older sibling's dominant position in the relationship. Having greater physical strength may enable both older brothers and older sisters to be more successful in the use of physical aggression toward their younger and weaker siblings. O'Brien (1999) believes this is the reason why no gender differences in older sibling's use of physical aggression emerged in her study.

Stocker, Lantheir and Furman (1997) revealed that opposite gender siblings reported less conflict than same gender siblings. However, Dunn and Kendrick (1981) report that same-sex sibling pairs had a higher percentage of positive interactions and a lower percentage of negative interactions than mixed sex pairs. Whereas Bryant (1982) states that it has been argued that same-sex siblings, by virtue of their relatively larger common core of shared desires, will exhibit greater sibling rivalry than will opposite-sex siblings. With regards to research by McGuire et al., (1996) concerning the four types of sibling relationships, it appears possible that whilst same-sex siblings may have higher levels of rivalry and conflict, they may also encounter more positive interactions also. McGuire et al., (1996) refers to this type of sibling relationship as "affect-intense."

5.2 Age Spacing and Birth Order

Furman & Buhrmester (1985) found that preadolescent sibling relationships were

higher in warmth when the siblings were close in age and of the same gender than when

the siblings were close in age but the opposite gender. In addition, their results showed

that opposite-gender siblings who were close in age were higher in conflict than opposite

gender siblings who were widely spaced in age. Part of my research will involve looking

at age-spacing and how it can influence the sibling relationship and whether there is any

link between age-spacing, anxiety and depression. If my results show that siblings close

in age and of the same gender have more positive relationships, this may also lead to my

results showing that siblings close in age and of the same gender have lower levels of

anxiety and depression due to positive sibling relationships negatively correlating with

these illnesses.

Abramovitch, Pepler & Corter (1982) found that birth order had a major effect on

the agonism displayed within sibling relationships. Their results found older siblings

initiated 80% of agonistic behaviour and this was true of all sibling groups. However,

older boys were the most agonistic group and older females were the most prosocial.

There were no effects of sex composition of the dyads and no effects of age interval.

Abramovitch, et al., (1982) stated there is increasing speculation that birth-order

differences among children may reflect different experiences with siblings, a view that

supplements the more traditional view that birth-order effects are mediated by different

parental treatment for different birth positions.

Miller and Maruyama (1976) discussed the implications birth order may have for more purely social interactions among siblings. Later born children were found to be more popular among peers than early born children. They believe this stems from differences in the interactions of siblings within the home setting and they suggest that first-borns are relatively free to act subjectively because of their greater power whereas later-born children must develop social skills in order to negotiate with, accommodate and tolerate their older siblings. These skills, in turn, may account for the greater popularity of later-born among their peers. In light of these results, I am interested to see whether younger siblings will report lower levels of social anxiety than older siblings when it comes to socializing outside of the home.

Is birth position in the sibling dyad related to the use of relational and physical aggression in sibling relationships? O'Brien (1999) hypothesized that older siblings use higher levels of physical aggression with their younger siblings and younger siblings use higher levels of relational aggression with their older siblings and reasons this with physical strength, higher-order power tactics and lower-order power tactics such as soliciting help from parents to harm sibling and making fun of a sibling in front of her/his friends. However, results failed to provide support for the proposed association between birth position and the use of relational and physical aggression. Both older siblings and younger siblings in both groups were shown to use similar levels of relational and physical aggression.

5.3 Deidentification

Branje, et al., (2004) commented on how there is little evidence for effects of birth order on adolescents' personal characteristics and behaviour. However, the characteristics you gain from being either the youngest, eldest or middle child, may affect processes involved in sibling relationships. These characteristics may also influence the specific meaning of these sibling relationship processes for individual development. Specifically, the relationship with an older sibling may have different consequences for adolescent development than the relationship with a younger sibling. The position of the child within the family constellation of being the older or younger dyad member may affect identification processes in sibling relationships. For example, siblings higher in the birth order hierarchy have higher status and may therefore serve as role models for later-born children, with younger siblings more likely to model older siblings than the reverse (Brim, 1958). Adolescents tend to perceive older siblings as more domineering and nurturing than younger siblings, and later-born siblings also report greater admiration for and intimacy with older siblings than earlier-born siblings toward younger siblings (Furman & Buhrmester, 1992). Furman and Buhrmester suggested that these differences might reflect the process in which older siblings struggle for separation and individuation from the family while younger siblings identify with the greater autonomy of older siblings in trying to acquire the same status. Children may also define their identity and their uniqueness in their family, a process that has been described as differentiation or deidentification. Sibling deidentification has been proposed as a process whereby siblings try to distinguish themselves from their brothers and sisters and develop different qualities and interests in an effort to avoid direct competition for resources and establish their own role and identity within the family (Sulloway, 1996). Deidentification

processes are hypothesized to be stronger when siblings are more similar (e.g., in age, sex). For example, Feinberg and Hetherington (2000) found deidentification to be more powerful when the age difference between adolescent siblings was smaller. Also, deidentification was found to be higher for same-sex than opposite-sex siblings among first- and second-born sibling pairs (Schachter, et al., 1978).

Bryant (1982) believes that sibling rivalry is basis for most of the negative aspects of sibling relationships. She states that sibling rivalry stems from frustrated dependency needs, emotional struggles involving issues of sibling anger and identity, and competitive interference with respect to acquiring parental and extra-familial recognition and approval. On the other hand, psychological closeness, supportive caretaking, direct instruction, and facilitative modelling of developmental milestones are thought to be common positive experiences of sibling relationships. Bryant deemed sibling rivalry to develop for two reasons: competition for parental rewards and competition while seeking to define individual identities by establishing status in comparison with standards set in large part by brothers and sisters. Siblings are viewed as prime targets for social comparison, not only within the family system, but throughout the child's expanding extra familial social system.

Schachter, et al., (1978) argue that siblings come to experience themselves as different from one another by the beginning of middle childhood and that experiencing themselves as different from one another is a defensive manoeuvre to guard them against the unpleasant emotions associated with intense competition. Data presented supports the

view that siblings of the same sex who are the first two children in the family experience heightened rivalry and deindentification. Thus, it is of interest to me to analyse the correlations between age, gender, anxiety and depression due to the assumption that siblings who are close in age and are of the same sex are more likely to develop anxiety and depression due to their constant struggle to deidentify themselves from each other.

From a behavioural perspective of social comparison processes operating in a familial context, one needs to consider aspects of family interaction that children may use as a basis for their comparisons. Parental treatment that varies from one child to another can be a dimension on which siblings compare themselves with one another. Bryant and Crockenberg (1980) discovered that as a group, mothers treat their older and younger daughters differently.

5.4 Perceived Parental Favouritism

Bryant and Crockenberg's (1980) study suggested that more maternal attention is paid to the younger sibling relative to the older sibling. The child's behaviour related to both the way she was treated by her mother and to the way her sister was treated. If there was discrepancy in treatment, a child showed more negative behaviour toward her sister when her own needs were met. Ill will and emotional conflict are experienced in the sibling relationship when parents demonstrate preferential treatment to one of their children. The expression of ill will is characteristic of both siblings, not just the child who gets the short end of the parental resources.

Noller (2005) stated that there is sizable amount of evidence that differential treatment of siblings is associated with more negativity in the sibling relationship and lower levels of psychological adjustment for the disfavored child. Noller's (2005) findings indicate that where there is differential parenting, the disfavored sibling is likely to have problems in his or her psychological adjustment. Results showed that these individuals are likely to be insecure in attachment and lower in self esteem and higher in anxiety than their favored siblings. Boer, Goedhard & Treffers (1992) have also determined that perceived parental favouritism has been linked to negative sibling relationships. Therefore, it is possible that due to perceived parental favouritism, there are higher levels of conflict within a sibling relationship, which can then lead to higher levels of anxiety and depression. Consequently, it is also possible that children who report having high levels of jealousy of their sibling, or that their sibling is highly jealous of them, also report elevated levels of sibling conflict. I am also interested to see whether a high level of jealousy of a sibling correlates vastly with anxiety and/or depression.

Massey (2001) found that no significant differences were found when parental favouritism was examined separately for mother and father. However, when perceived parental favouritism was investigated for both parents combined significant differences were found. The results showed that adolescents who perceive they are the favoured child or that no parental favouritism is present will be less socially anxious than adolescents who perceive they are the unfavoured child; overall these adolescents will had better adjustment. Adolescents who reported no parental favouritism had lower levels of depression and higher global self-worth and social acceptance than adolescents who

reported that they were unfavoured by both parents or favoured by one parent and

unfavoured by the other. It is possibly that parental favouritism directly affects adolescent

adjustment by making the unfavoured child feel inadequate and unworthy.

Massey (2001) also found that adolescents who perceived they were favoured by

one parent and unfavoured by the other reported similar levels of maladjustment in

comparison to adolescents who perceived they were unfavoured by both. Suggesting

being favoured by one does not compensate for being unfavoured by the other.

Grüner, Muris and Merckelbach (1999) too examined perceived parental rearing

practices. Their results found first of all, that parental rejection turned out to be the

strongest predictor of anxiety symptoms in children. It has also been found by Barling,

MacEwen and Nolte (1993) that rejecting behaviour from the mother was related to

internalising anxious behaviours children.

McHale & Pawletko (1992) believe that a common concern for children is

whether or not their siblings are treated more favourably than them by their parents. They

believe that in addition to the effects of differential treatment in promoting differences

between siblings, children's realisation that they are treated differently from their siblings

and their cognitive and affective reactions to this realisation may have equally important

consequences for children's individual wellbeing and development. For example,

children who perceive their own treatment as less favourable may experience a host of

negative affective reactions that may be manifested in adjustment difficulties or in problematic sibling relationships.

5.5 Overview

In conclusion, previous research has shown that siblings have a considerable effect on each other and they do so from a very young age. Dunn & Kendrick (1982) demonstrated that siblings have an influential connection and shape each other from infancy. Growing up in close proximity with a sibling leads to children realising there are certain ways to behave in social situations. They discover what actions allow them to get away with certain acts and which actions do not, by learning off each other and testing each other. Young people also make inferences about themselves and how other people may perceive them. This includes a child's awareness that others are comparing them to their siblings, and their struggle to de-identify themselves from their siblings because of this. Lamb (1982) discussed how the resentment and rivalry between siblings caused by such perceived comparisons could lead to conflict, whilst O'Brian (1999) found that younger sisters use more emotional aggression and younger brothers assert more physical aggression. Massey (2001) found that warm and positive sibling relationships lead to adolescents with better adjustment than those with negative sibling bonds and Garcia et al., (2000) also claimed that sibling conflict can lead to anxiety and depression. In this study, I consider family factors such as birth order, age spacing, gender and gender distribution, and look at how they can influence sibling relationships. In addition, I look at different types of sibling relationships, and investigate which types are more likely to lead to anxiety, depression, social phobia, agoraphobia and fear.

6. HYPOTHESES

With analysis of previous research, it became clear that there was a strong connection between sibling relationships and adolescent adjustment. However, it is not obvious from prior studies whether there is a specific form of conflict that is more likely to lead to adjustment problems. For example, some conflicting relationships may be high in physical aggression, but low in emotional aggression, and vice versa. Some sibling relationships can be highly competitive with high levels of rivalry, but have low levels of physical and emotional conflict.

In this study, I am interested to see if there is one form of sibling conflict that is more likely to lead to the development of anxiety than the others, and the same for depression, social phobia and agoraphobia. First of all, I hypothesise that a positive sibling relationship is will negatively correlate with both anxiety and depression. Additionally I hypothesise that emotional and physical conflict will also significantly correlate to anxiety and depression, however, I believe emotional conflict will have more of an impact on depression and anxiety than physical conflict will. I also hypothesise that jealousy of other siblings will be a major influencing factor in levels of anxiety and depression. On top of these hypotheses, I also believe that girls will report higher levels of fear, anxiety and depression than boys. Also, boys with brothers will report higher levels of physically aggressive relationships and girls with sisters will report higher levels of emotionally aggressive relationships. In addition, I believe same-sex siblings will report higher levels of competitiveness than opposite sex siblings. Furthermore, I

hypothesise older siblings will report higher levels of "jealous of me" and younger

siblings will report higher levels of "jealous of them" and that siblings spaced close

together will report higher competitiveness, however, will have more positive sibling

relationships than siblings spaced far apart.

7. METHOD

7.1 Pilot

7.1.1 Participants

The sample included 20 University of Canterbury Students, 2 male and 18 female aged 18 and 19 years of age. Each participant received a $1 instant kiwi voucher and also went in the draw to win the Westfield vouchers.

7.1.2 Procedure

An email was sent out to all first and second year psychology students studying at University of Canterbury requesting participants who were under 20 years of age, for a study regarding sibling relationships, and was asked to email me if interested. Those who emailed me received the details that I had booked room 427 of the psychology building between the hours 12-2 on Monday the 19th of September and 10-12 on Wednesday 21st of September to fill out my questionnaires. I used this data to perform item-total analyses testing for reliability for my sibling questionnaire. The questionnaire was then updated ensuring no item within a subscale had a Cronbach alpha of less than 0.4.

7.2 Main Study

7.2.1 Participants

The sample included 121 adolescents, 34 male and 87 female, aged 13 to 18 years. An even spread across age groups was obtained, however with a slight over representation of 14 year olds (24%) and under representation of 13 year olds (10.7%).

Eighteen percent of participants were aged 15, 16.5% were 16, 11.6% were aged 17 and 19% were aged 18. Within the families, 68.6% of their parents (or primary caregivers) were married, 4.1% cohabiting, 25.71% separated or divorced and 2.5% had at least one deceased parent. Forty five participants had only one other sibling, 36 participants had two siblings and 29 participants had three siblings 11 participants had more than 3 siblings. Thirty three percent were first-born children, 25.6% had siblings both older and younger than themselves and 41.3% were the youngest. Adolescents were recruited whilst attending class, as I entered numerous classrooms, giving detailed instructions and handing out questionnaires to willing students. Students received a lollipop on completion of the questionnaires and went into a draw to win one of three $50 Westfield Shopping Mall vouchers. Eighty four percent of the participants were New Zealand European/Pakeha and 8.3% were Maori. There was a 48% response rate as 250 packs were handed out and 121 were returned.

7.2.2 Procedure

Email correspondence was made between the guidance counsellor at Westland High School in Hokitika, and I. I was informed of a student assembly at which I would speak at to inform students of my research and that questionnaires would be handed out to them later on in the day. I spoke in this assembly and explained to the students that they were to obtain parental consent to complete the questionnaires, finish them, keeping their answers secret and safe, and bring them back to me the next morning to receive their lollipop. I also stated clearly the time and place at which to do so. The following morning, all questionnaires were collected up, separating the consent forms from the remainder of the packs for each person to ensure anonymity. Each participant also

received a debrief letter describing my research and informing them of phone numbers to call or places to turn to if they wish to discuss any issues that arose from filling out my forms (See Appendix E). The draw for the vouchers was also performed there, with the help of the student council president. Each assessment pack contained a consent form (Appendix A), a background information questionnaire (Appendix B) and a questionnaire concerning sibling conflict (Appendix D). In addition, the BDI-II, the BAI and a Fear Questionnaire, (please refer to the Appendix C for copies of these psychometric measures).

7.3 Measures

7.3.1 Depression

Participants completed the *Beck Depression Inventory-Second Edition* (BDI-II; Beck, Steer & Brown 1996) a 21-item self-report instrument for measuring the severity of depression in adults and adolescents aged 13 years and older. Beck, et al., (1996) reported a 1-week test-retest correlation of 0.93 significant to p <0.001 and the coefficient alpha for their outpatients sample was 0.92 and 0.93 for their college student sample. The Cronbach alpha for my main study was 0.93. Scores of 0-13 are considered "minimal," 14-19 referred to as "mild," scores of 20-28 are "moderate" and scores of 29-63 portray a "Severe" rating.

7.3.2 Anxiety

Two measures were used to test anxiety, the Beck Anxiety Inventory (BAI) published in 1988 by Aaron Beck and the Fear questionnaire developed my Marks & Matthews (1979). First of all, the *Beck Anxiety Inventory* (BAI; Beck, Epstein, Brown &

Steer, 1988) which is a 21-item scale that measures the severity of anxiety in adults and

adolescents. Beck, et al., (1988) reported a 1-week test-retest correlation of 0.75

significant to p <0.001 and a high internal consistency reliability, where the Cronbach

alpha was 0.92 for their sample of outpatients. The Cronbach alpha for my main study

was 0.92 also. Scores 0-7 are described as "minimal", scores of 8-15 are referred to as

"mild", scores of 16-25 are classified as "Moderate" and scores of 26-63 are described as

"severe."

Secondly, a Fear Questionnaire is used. The Fear Questionnaire (FQ; I. M. Marks

& A. Mathews, 1979) includes three five-item subscales (for agoraphobia, social phobia,

and blood/injury phobia) measuring phobic avoidance. Scores can range from 0-40 on

each. The Total Phobia score (possible range of 0- 120) is the sum of scores on these

three subscales. The FQ and its subscales have high retest reliability (Marks & Mathews,

1979). Each question is rated on a Likert scale of 1-8 ranging from 1, "Would not avoid

it" to 8, "Would always avoid it." An Agoraphobia sub-scale score of 20 or greater is

suggestive of Agoraphobia and a Social Phobia sub-scale score of 20 or greater is

suggestive of Social Phobia. There has been little data reported in the literature on the

Blood/Injury Scale. The corrected item-total correlations of my main study for the

agoraphobia subscale were 0.72, for the social phobia subscale, the Cronbach alpha was

0.59 and for the blood/injury phobia subscale, the Cronbach alpha was 0.77.

7.3.3 Sibling Conflict

I constructed a sibling questionnaire that asks questions concerning the

relationship between the participant and their sibling(s) in terms of conflict. A 7-point

Likert scale was used for each question, ranging from "strongly disagree" to "strongly agree." In order to examine the reliability of my sibling questionnaire I conducted the pilot study using 1st and 2nd year students at the University of Canterbury. Item total analyses were conducted and 'bad' items were disregarded. The final questionnaire contained 6 subscales. A positive relationship scale (questions 1, 2, 3, 4, 5, 8, 11, 12, 17, 18, 20, 23, 24, 25), a competitiveness subscale (questions 6, 14, 21), an emotional conflict scale (questions 7, 15, 27, 32, 33), and a physical conflict scale (questions 26, 28, 29, 30, 31, 34). In addition, two jealousy scales, a "jealous of me" subscale (questions 9, 10, 19) and a "jealous of my sibling" subscale (questions 13, 22, 16). Once all questionnaires for the main study were returned, I performed item total correlations to ensure all questions in each scale correlated highly. First of all, the positive relationship scale, resulted with a Cronbach alpha of 0.876, however, question 23 had an item total correlation of –0.049. Once removed, the Positive Relationship scale had a Cronbach alpha of 0.901. I disregarded all answers to question 23 when analysing the data. There were no problems with any other questions in any of the individual scales. Competitiveness resulted with a Cronbach alpha of 0.799 and Physical Conflict's final Cronbach alpha was 0.917. The Cronbach alpha for Emotional Conflict was 0.858 and the two jealousy subscales had Cronbach alphas of 0.632 (jealous of me subscale) and 0.638 (jealous of them subscale). Although these two alphas are reasonably low, this can be dismissed, as there are only three items in each of the scales.

8. RESULTS

8.1 Descriptives

Table 1 below indicates the range in which participants could score, the minimum

and maximum scores that were attained in each scale, and the means and standard

deviations for each of the variables measured.

Table 1: Descriptive Statistics

	Mean	Std. Dev.	Possible Range	Min Scored	Max Scored
Agoraphobia	11.8	5.9	5-40	5	34
Social Phobia	16.1	5.9	5-40	5	30
Blood/injury	13.8	7.3	5-40	5	34
Fear Total	41.7	15.9	15-120	15	90
BAI	10.1	9.6	0-63	0	57
BDI	10.3	9.7	0-63	0	50
Positive Relationship	52.7	15.5	13-91	13	91
Competitiveness	9.7	4.8	3-21	3	21
Emotional Conflict	17.7	8.2	5-35	5	34
Physical Conflict	17.2	10.2	6-42	6	42
Jealous of Me	7.3	3.9	3-21	3	19
Jealous of Siblings	8.1	4.2	3-21	3	19

Concerning the BDI-II cut off scores set by Beck et al., (1988), 6.6% of the

participants in this study were rated "severe". Nine percent were classed as "mild" and

8.3% fell into the "moderate" category. Most participants scored in the "minimal" bracket

(76%). Concerning the BAI cut off scores and the scores of the participants in this study,

again, 6.6% resulted with a "severe" rating. Whilst most participants again scored within

the "minimal" range (46.3%) the percentage was much less than those scoring "minimal"

for depression. "Mild" ratings were obtained by 34.7% of participants and a "Moderate"

rating was scored by 12.4% of participants. Concerning the cut off scores set by Marks &

Mathews (1979), 12.4% scored above 20 on the Fear Questionnaire's subscale of

agoraphobia, whilst 30.6% scored above 20 on the social phobia subscale.

8.2 Frequencies

Due to there being such a large number of females in this study compared to boys,

the largest of the gender distributions also belongs to girls (having either sisters or

brothers), and also those girls who have a sister(s) and a brother(s). Twenty three

participants were girls with one or more sisters (no brothers), and 33.9% participants

were girls with one or more brothers (no sisters). Seven percent of participants were boys

with a brother or brothers only, and 15.7% were boys with a sister or sisters only. Twenty

percent of participants reported having both brothers and sisters, and were classed in a

"mixed" category. Seventy seven percent of participants in this study reported having

siblings close to their age (0-3 years apart), 16.5% were aged 3-5 years apart from their

sibling(s) and 6.6% were aged further than 5 years apart from their sibling(s). Due to the

nature of the questionnaire I distributed, it is possible that more of the participants did

have siblings more than 5 years older or younger than them, however, because another

sibling was closer to their age, (within 3 years apart for example) they were classed

"closely spaced".

8.3 Correlations

All correlations regarded as significant were so to p<0.05. See Table 2 for a full

listing of all correlations.

8.3.1 Gender

Gender significantly and positively correlated with agoraphobia (0.33), social

phobia (0.22), blood/injury phobia (0.32) and with fear total (0.35). Therefore, females

were more likely to report higher levels of fear and phobia. Neither males nor females

were more likely to report higher levels on any of the sibling relationship scales, or on the

depression and anxiety scales.

8.3.2 Age

Age significantly and positively correlated the positive sibling relationship scale

(0.28), whereas significantly and negatively correlated with agoraphobia (-0.40) social

phobia (-0.22) and fear total (-0.28). Therefore, the older participants were, the more

likely they were to receive higher ratings on the positive sibling relationship scale. The

younger participants were, the more likely they were to rate higher on the agoraphobia,

social phobia and fear total scales.

8.3.3 Number of Siblings

The number of siblings participants had positively correlated with whether or not

the participant reported their siblings as being "jealous of me" (0.20), meaning the more

siblings participants had, the more likely they were to perceive them as being jealous of

them. All other correlations were non-significant.

8.3.4 Depression

High BDI-II scores (depression) significantly and positively correlated with social

phobia (0.24), blood/injury phobia (0.19), Fear total (0.21), competitiveness (0.28),

emotional conflict (0.39), physical conflict (0.26), the "jealous of them" scale (0.29) and

BAI scores (0.65). These correlations demonstrate that depression and anxiety (including

fear and phobia) have a high comorbidity. Scores on the Positive relationship with

siblings scale significantly and negatively correlated with BDI-II scores (-0.39), meaning

a negative sibling relationship was more likely to be related to depression in adolescence. There was no correlation between BDI-II scores and scores on the "jealous of me" scale.

8.3.5 Anxiety

High BAI scores (Anxiety) correlated significantly and positively with competitiveness (0.31), emotional conflict (0.40), physical conflict (0.30), "jealous of me" (0.23) and "jealous of them" (0.41). This shows that anxiety relates to all the different types of sibling conflict, however, note there was no significant correlation between anxiety and positive sibling relationship score. BAI also correlated significantly with BDI-II scores (0.65, as mentioned previously) and blood/injury phobia (0.18). However, there were no significant correlations between BAI scores and agoraphobia, social phobia or fear total.

8.3.6 Sibling Relationships

A positive sibling relationship significantly and negatively correlated with competitiveness (-0.40), emotional conflict (-0.44) and physical conflict (-0.48). Physical conflict had a positive significant correlation with competitiveness (0.62), emotional conflict (0.68), the "jealous of me" scale (0.20) and the "jealous of them" scale (0.43). Emotional conflict significantly and positively correlated with competitiveness (0.63), the "jealous of me" scale (0.31) and the "jealous of them" scale (0.56). Competitiveness significantly and positively correlated with the "jealous of me" scale (0.31) and the "jealous of them" scale (0.37). Jealousy of other siblings significantly and positively correlated with social phobia (0.22), blood/injury phobia (0.22), fear total (0.24) and the "jealous of me" scale (0.21).

Table 2: All correlations.

	Gend	Age	No. Sib	Ag	SP	BI	Total	BDI-II	BAI	PosR	Comp	Emo	Phys	Jme
Gend	1.00													
Age	0.09	1.00												
No. Sib	0.07	0.00	1.00											
Ag	0.33	-0.40	-0.11	1.00										
SP	0.22	-0.22	0.00	0.53	1.00									
BI	0.32	-0.11	-0.04	0.55	0.51	1.00								
Total	0.35	-0.28	-0.06	0.82	0.80	0.86	1.00							
BDI-II	0.17	-0.04	0.07	0.09	0.24	0.19	0.21	1.00						
BAI	0.08	0.02	0.01	0.04	0.11	0.18	0.14	0.65	1.00					
PosR	0.16	0.28	0.09	-0.08	-0.05	0.03	-0.03	-0.39	-0.15	1.00				
Comp	0.02	-0.05	0.01	0.13	0.06	0.01	0.07	0.28	0.31	-0.40	1.00			
Emo	0.09	0.03	-0.01	0.07	0.08	0.09	0.10	0.39	0.40	-0.44	0.63	1.00		
Phys	-0.10	-0.15	0.05	0.01	0.02	-0.00	0.01	0.26	0.30	-0.48	0.62	0.68	1.00	
Jme	0.10	0.05	0.20	-0.00	0.01	0.06	0.03	0.12	0.23	0.09	0.31	0.31	0.20	1.00
Jthem	0.09	0.01	0.03	0.17	0.22	0.22	0.24	0.29	0.41	-0.12	0.37	0.56	0.43	0.21

"Gend" refers to the Gender of the participant. "No. Sib" refers to the number of siblings, "Ag" represents agoraphobia, "SP" refers to social phobia, "BI" represents blood/injury phobia and "Total" refers to Fear questionnaire total. The positive sibling relationship scale is referred to as "PosR", "Comp" refers to competitiveness, "Emo" signifies the emotional conflict scale, "Phys" signifies the physical conflict scale, "Jme" depicts the "jealous of me" scale, and "Jthem" depicts the "jealous of other siblings" scale.

Note: Italicised figures are significant p<0.05.

8.4 Multiple Regressions

Due to my interest in examining the unique effects of each form of sibling conflict as a predictor on depression, anxiety, social phobia and fear, whilst attempting to find out how much unique variance each of these predictors contributes, and to determine whether each prediction by the predictors is significant, I chose to use Simultaneous Multiple Regression.

The predictor variables (Competitiveness, emotional aggression, physical aggression, jealous of me and jealous of them) were entered into a simultaneous regression model predicting Depression. The results, shown in Table 3, indicate that emotional conflict was found to be a significant predictor of depression. Total $R^2 = 0.16$, Adjusted $R^2 = 0.13$, F $(5,115) = 4.43$, p<0.001.

Table 2: Regression for BDI-II

	Beta	B	t(115)	p-value
Comp	0.08	0.16	0.67	n.s
Emo	*0.31*	*0.36*	*2.24*	*P<0.05*
Phys	-0.04	-0.04	-0.32	n.s
Jme	-0.01	-0.03	-0.15	n.s
JThem	0.11	0.25	1.06	n.s

Secondly, the same predictor variables (Competitiveness, emotional aggression, physical aggression, jealous of me and jealous of them) were used for a simultaneous regression model predicting Anxiety. The results, shown in Table 4, indicate that jealousy of other siblings was found to be a significant predictor of anxiety. Total $R^2 = 0.22$, Adjusted $R^2 = 0.19$, F $(5,115) = 6.61$, p<0.001

Table 3: Regression for BAI

	Beta	B	t(115)	P-value
Comp	0.07	0.14	0.61	n.s
Emo	0.18	0.20	1.33	n.s
Phys	0.00	0.00	0.04	n.s
Jealme	0.10	0.25	1.17	n.s
JealThem	*0.26*	*0.60*	*2.61*	*P<0.01*

Again, the predictor variables (Competitiveness, emotional aggression, physical aggression, jealous of me and jealous of them) were inserted into a simultaneous regression model predicting social phobia. The results, shown in Table 5, indicate that jealousy of other siblings was found to be a significant predictor of social phobia. Total $R^2 = 0.05$, Adjusted $R^2 = 0.01$, F (5,115) = 1.33, p<0.26.

Table 4: Regression for Social Phobia

	Beta	B	t(115)	p-value
Comp	0.04	0.05	0.29	n.s
Emo	-0.01	-0.01	-0.09	n.s
Phys	-0.10	-0.06	-0.74	n.s
Jlme	-0.03	-0.04	-0.3	n.s
JThem	*0.26*	*0.36*	*2.35*	*P<0.05*

Following on, a simultaneous regression model predicting total fear and avoidance using the same predictor variables as the ones used in all of the above regressions was performed. The results, shown in Table 6, indicated that jealousy of other siblings was found to be a significant predictor of Fear. Total $R^2 = 0.07$, Adjusted $R^2 = 0.03$, F (5,115) = 1.79, p<0.12

Table 5: Regression for Fear Questionnaire Total

	Beta	B	t(115)	p-value
Comp	0.06	0.20	0.48	n.s
Emo	0.01	0.02	0.07	n.s
Phys	-0.15	-0.23	-1.15	n.s
Jlme	-0.02	-0.08	-0.20	n.s
JThem	*0.28*	*1.07*	*2.60*	*P<0.01*

Social Phobia and Fear are closely related to Anxiety. This can explain why they have the same significant predictor.

The correlations showed that Positive relationship only significantly correlated with BDI-II scores, so only one regression needed to be performed. The results, shown in Table 7, indicate that Positive Relationship was found to be a significant predictor of depression with a negative Beta weight signifying that a negative relationship is a predictor of depression. Total $R^2 = 0.24$, Adjusted $R^2 = 0.20$ F (6,114) = 6.01, p<0.001. Table 7 also shows that when controlling for positive relationship, emotional conflict is no longer a significant predictor.

Table 6: Regression for Depression including

Positive Sibling Relationship as a Predictor

	Beta	B	t(115)	p-value
Posrel	*-0.35*	*-0.22*	*-3.43*	*P<0.001*
Comp	0.02	0.03	0.14	n.s
Emo	0.20	0.23	1.46	n.s
Phys	-0.14	-0.13	-1.15	n.s
Jme	0.08	0.19	0.86	n.s
JThem	0.18	0.41	1.77	n.s

Overall, Emotional conflict significantly predicted depression, jealousy of other siblings significantly predicted anxiety, along with social phobia and overall fears. In addition, a positive sibling relationship negatively regressed with depression.

8.5 t-tests

8.5.1 Gender

Various t-tests were performed to compare gender, and the results reiterated the results found in the correlations. Females were statistically more likely rate higher on social phobia, t(119) = 2.46, p<0.01, agoraphobia t(119) = 3.80, p<0.01, blood/injury

phobia t(119) = 3.74, p<0.01 and fear total t(119) = 4.12, p<0.01. Although the means showed that boys rated their sibling relationships as being more physically aggressive than girls did, (18.76 and 16.59 respectively), and girls rated their sibling relationships as being more emotionally aggressive than boys did (18.15 and 16.47 respectively), these results were not statistically significant t(119) = -1.06, n.s, and t(119) = 1.01, n.s. respectively. It was also found that boys with brothers had a mean rating of physical aggression that was higher than what girls with sisters rated (means were 18.78 and 16.93 respectively) however this result was insignificant t(35) = -0.47, n.s.. Girls with sisters had a mean rating of emotional aggression that was higher than what boys with brothers rated (means were 15.56 and 19.19 respectively) however, these results were also insignificant t(35) = 1.17, n.s..

Very little difference was found between the same sex mean for competitiveness and the opposite sex mean for competitiveness (9.03 and 9.87 respectively), and the result was insignificant t(95) = -0.84, n.s.. There was no statistically significant difference between same sex sibling dyads to opposite sex sibling dyads on depression t(95) = -1.42, n.s, and anxiety scores t(95) = -0.18, n.s., positive sibling relationship scores t(95) = 1.54, n.s, and social phobia scores t(95) = -0.55, n.s.

Girls did not have significantly greater levels of depression as the t-tests of independent means were not significant t(119) = 1.92, n.s. however, the mean score for girls on depression was 11.37 and 7.65 for boys. The mean score for girls on anxiety was

10.6 and it was 8.94 for boys, nevertheless, this difference was also insignificant t(119) = 0.86, n.s.

8.5.2 Age Spacing

A t-test was performed to measure whether siblings who are closely spaced together reported a more positive relationship than further spaced siblings did. Closely spaced was defined as those who had siblings from 0-3 years of their own age, further spaced siblings were more than four years apart. This result was insignificant, t(119) = 1.74, n.s. those spaced close together did however report a lower mean of 51.35, compared to further spaced siblings where the mean was 57.12.

It was also found using a t-test that closely spaced siblings report more emotional aggression than further spaced siblings do, t(119) = -3.23, p<0.001. The closely spaced siblings mean was 18.96 and the further spaced siblings mean was 13.43. Closely spaced siblings also reported more physical aggression than further spaced siblings did. The means were 18.52 and 12.82 respectively, with a statistically significant result of t(119) = -2.66, p<0.01.

There were no significant results between closely spaced siblings and further spaced siblings when comparing levels of anxiety t(119) = -0.02, n.s. (means were 10.15 and 10.12 respectively), depression t(119) = -0.78, n.s. (means were 10.70 and 9.07 respectively), social phobia t(119) = 0.68, n.s. (means were 15.89 and 16.75 respectively) and competitiveness t(119) = -1.27, n.s. (means were 10.02 and 8.71 respectively).

8.5.3 Birth Order

Participants were classed as either the youngest, eldest or middle child. T-tests were performed to compare the "youngest" group to the "eldest" group. Younger siblings reported a statistically significantly higher level of competitiveness than older siblings did, t(88) = 2.24, p<0.05. Younger siblings reported a mean of 10.95 compared to the older siblings' mean of 8.70. Younger siblings perceived their siblings to be jealous of them more than older siblings did, this result was statistically significant t(88) = 4.23, p<0.05. The younger siblings mean was 9.40 compared to the older sibling's mean of 6.10.

There was also a statistically significant difference between older siblings scores of emotional aggression within their sibling relationships compared to younger siblings scores, t(88) = 2.35, p<0.05. Older siblings rated higher levels of emotional aggression compared to their younger sibling counterparts (means were 20.08 and 15.66 respectively).

There were no statistically significant differences between older and younger siblings when comparing positive sibling relationship scores (means were 49.68 and 55.8 respectively), t(88) = -1.85, n.s.. Nor when comparing "jealousy of me" scores t(88) = -0.64, n.s. (means were 7.63 and 8.20 respectively), anxiety t(88) = -0.39, n.s. (10.28 and 11.10 respectively), depression t(88) = 0.16, n.s. (means were 10.18 and 9.88 respectively), social phobia t(88) = 0.64, n.s. (means were 16.10 and 15.32 respectively) and physical aggression t(88) = 1.47, n.s.(means were 18.88 and 15.66 respectively).

9. DISCUSSION

9.1 RESEARCH OBJECTIVES AND FINDINGS:

9.1.1 Sibling Relationships and Adjustment.

The primary purpose of this research was to examine whether there was one form of sibling conflict that is more likely to lead to the development of anxiety, depression, social phobia and agoraphobia. The forms of conflict used in this research include, competitiveness, emotional conflict, physical conflict and jealousy. As McGuire et al., (1996) point out, sibling relationships cannot be classed as either positive or negative. Instead, they vary ranging in both warmth and hostility.

First of all, I hypothesised that a positive sibling relationship would relate to lower levels of both anxiety and depression. Previous research has repeatedly suggested that this is so, for example, McHale & Gamble, (1989) found evidence that the quality of sibling relationships in childhood was related to the adjustment variables of self-esteem, depression and anxiety. Stocker (1994) also found that the level of sibling conflict was negatively associated with self worth, and positively related to loneliness and depression. I wanted to ensure my research paralleled with these previous studies in order to validate any other results I may find. My results showed a strong and statistically significant relationship between positive sibling relationship score and depression levels, which does correspond with previous findings. However, no significant relationship between sibling relationship and anxiety emerged, nor with social phobia or agoraphobia. This opposes Massey's (2001) findings that showed that adolescents who have sibling relationships

that are high in social support and low in negativity will be less socially anxious. In addition, Epkins et al., (1997) found that sibling relationship satisfaction was negatively related to depression and anxiety, so my results only partly support theirs.

Secondly, I hypothesised that emotional and physical conflict would significantly relate to anxiety and depression, however, I believed emotional conflict would have more of an impact on depression and anxiety than physical conflict would. Brakel & Shevrin (2000) used Psychoanalytic theory to explain how anxiety disorders stem from unconscious conflicts that have arisen from discomfort during infancy or childhood. This discomfort could include experiencing conflicting sibling relationships, whilst Bank, et al., (1996) revealed that negative sibling interactions in middle childhood predicted poor peer relations, antisocial behaviours, and also symptoms of anxiety and depression during young adulthood. My results showed strong and significant correlations between emotional conflict and both anxiety and depression, and also between physical conflict and both anxiety and depression. My results also found that emotional conflict was the only predictor of depression, proving my hypothesis. Nevertheless, once positive sibling relationship was included as a predictor of depression, emotional conflict no longer had a significant relationship. Because the emotional conflict scale and the positive sibling relationship scale has such a high significant correlation, it is likely that the two measured much the same thing, and it is the factors within the emotional conflict scale that overlap with the positive relationship scale, that was having the strongest impact on depression. However, for anxiety, neither emotional conflict nor physical conflict was a predictor. It is possible that this means that the correlation between physical conflict, emotional

conflict and anxiety was not due to the conflict leading to anxiety, but the other way

around. Bank, et al., (1996) suggested the associations between sibling conflict and

children's adjustment may be bidirectional, implying that it is feasible that children with

anxiety may lack the skills to manage conflict with their siblings and thus conflictual

relationships are developed.

My third hypothesis was that jealousy of other siblings would be a major

influencing factor in levels of anxiety and depression. Noller (2005) discussed how when

a child perceives parental favouritism for another sibling, they are more likely to be

insecure in attachment, have lower self-esteem and rate higher in anxiety than their

favoured siblings. In addition, Massey (2001) found adolescents who reported no parental

favouritism had lower levels of depression and higher global self-worth and social

acceptance than adolescents who reported that they were unfavoured by at least one of

their parents. Two of the questions involved in my "jealousy of them" scale were "I think

about how my sibling(s) has things so much better than I do" and "my parents give my

sibling(s) more than they give me" which I believe touches on perceptions that other

siblings may have parental favouritism. My results found significant correlations between

"jealousy of them" and social phobia, fear, depression and anxiety. The multiple

regressions showed that "jealousy of them" was the sole significant factor for social

phobia, fear and anxiety.

9.1.2 Family Factors, and how they influenced Sibling Relationships.

I hypothesised that boys with brothers would report higher levels of physically aggressive sibling relationships and girls with sisters would report higher levels of emotionally aggressive relationships. Crick et al., (1999) found that boys use higher levels of physical aggression than girls do in peer relationships, whereas girls used what he called "relational aggression." However, my results could not prove these hypotheses as the results were insignificant. It was found that the mean rating for boys with brothers on the physical aggression scale was higher than what girls with sisters rated and girls with sisters had a mean rating of emotional aggression that was higher than what boys with brothers rated. Therefore, it could possible that these insignificant results could be due to the disproportionate number of female and male participants. Conversely, O'Brien (1999) found a relation between younger sibling's gender and the forms of aggression they used towards their older siblings, and the forms of aggression their older siblings used against them, however, these differences were due to gender *and* birth position, and not gender alone. The differences between gender and their form of aggression used may only be significant in terms of peer relationships, whereas with siblings, many other factors need to be included, such as birth order. When the younger sibling is male, and the older sibling is female for example, the older yet female sibling is still likely to be stronger and have more power than the younger male sibling and may therefore be more likely to use physical aggression than what he is against her, and vice versa for emotional aggression.

Another hypothesis was that same-sex siblings would report higher levels of competitiveness than opposite sex siblings. Both Bryant (1982) and Schachter, et al., (1978) discussed how deidentification and rivalry were found to be higher for same-sex siblings than opposite-sex siblings, so my hypothesis was that heightened levels of rivalry and deidentification issues lead to higher levels of competition between siblings. However, my results showed very little difference between the same sex mean for competitiveness and the opposite sex mean for competitiveness and an insignificant result suggesting that gender distribution does not influence competitive levels. This is assuming the gender imbalance of my participants had no effect on this result. Of course, my assumption could be wrong, in saying that rivalry and deidentification is not the same as competitiveness. My results instead showed that younger siblings reported a statistically significantly higher level of competitiveness than older siblings did, so it was birth order that played a role instead of gender distribution.

Continuing on, I hypothesised that older siblings would report that their siblings are more jealous of them than they are jealous of their younger siblings, and also that younger siblings would concur. Brim, (1958) found that siblings higher in the birth order hierarchy had higher status and therefore served as role models for later-born children, with younger siblings more likely to model older siblings than the reverse. Furman & Buhrmester, (1992) found that later-born siblings reported great admiration for older siblings. My results found that in fact, younger siblings reported the belief that their older siblings are actually jealous of them. This could be due to many reasons. Younger siblings may believe older siblings are jealous of them because they are now receiving

more parental attention. Bryant and Crockenberg (1980) discovered that as a group, mothers treat their older and younger daughters differently. Perhaps younger siblings view themselves as more favoured compared to their older sibling counter parts. In addition, Miller and Maruyama (1976) discussed how later-born children were found to be more popular among peers than their elder siblings. It could be that younger siblings see themselves as more social and more popular and because of this, believe their older siblings are jealous. My results could not conclude whether older or younger siblings rated themselves as being significantly more jealous of the other. There was also a statistically significant difference between older sibling's scores of emotional aggression within their sibling relationships compared to younger sibling's scores, where older siblings rated higher levels of emotional aggression compared to their younger sibling counterparts. O'Brien, (1999) found that older siblings were more likely to use relational aggression towards younger sisters than younger bothers. O'Brien, (1999) believed it was possible that older siblings used more relational aggression with younger sisters due to parental sanctions. Because parents are more likely to punish older siblings for physical aggression against younger siblings than vice versa (Felson & Russo, 1988), it is possible that older siblings are more aware of this restriction than younger siblings, so therefore, older siblings will perceive there is more emotional aggression than younger siblings perceive.

Gender did not influence the type of sibling relationship. Older participants reported more positive relationships than younger participants. Birth order influenced Competitiveness, emotional conflict and Jealousy. Younger Siblings reported being more

competitive and having more emotional conflict. Older siblings are more likely to perceive their siblings as being jealous. Closely spaced siblings reported more emotional aggression, and more physical aggression.

A significant correlation was found between age and positive sibling relationship levels showing that the older participants were, the more positively they rated their relationship with their siblings. This result could be due to maturity, the older a person is, the more understanding they have that sibling conflict is common, and therefore, do not take it as critically as people younger in age and therefore, they perceive any negativity lower in severity, resulting in a more positive sibling relationship score.

9.1.3 Family Factors influencing adjustment.

I hypothesised that girls would report higher levels of fear, anxiety and depression than boys. Gorenstein et al., (2005), Hankin, et al., (1998), Wade et al., (2002) all reported that girls were significantly more likely to develop depression than boys in adolescence and Carey et al., (1980) found that anxiety appeared most often in girls. My results found that females were statistically more likely to rate higher is social phobia, agoraphobia and blood/injury phobia than males. However, there was no statistically significant difference between males and females for depression or anxiety. Although the mean score for females were higher than males in both anxiety and depression these differences were insignificant. Therefore, in part, my results do agree with previous because the females scored significantly higher in fear and avoidance than the males, and on average, they did score higher on anxiety and depression also. It is possible that the

insignificance of these differences is due to the over-representation of females in my study and under-representation of males. It could also be due to the over-representation of 14 year olds in my study. Hankin, et al., (1998) found that the greatest differences between males and females in depression didn't appear until ages 15-18.

9.2 Theoretical and practical implications

To begin with, as Felson & Russo (1988) and O'Brien (1999) mention, parents perceive the use of physical aggression against siblings more damaging and worthy of reprimand than other forms of sibling conflict, especially when it is the older sibling against the younger sibling. The harm and hurt at the time of the aggression is more obvious when it is physical, it is also a lot harder to miss a physical aggression occurring in your home than an emotional one. Therefore, parental sanctions often focus more on disciplining physical conflict, than emotional conflict, and sometimes the emotional conflict can go unnoticed. Although physical aggression against a sibling may be more damaging at the time, my results show that it is the emotional aggression that is more damaging in the long term. Emotional aggression was a significant predictor of depression, where physical aggression was not. This study implies that the intervention needed involves providing parents with information and knowledge regarding the effects emotional conflict between siblings can have on their adjustment. Providing parents with good disciplinary methods against both emotional *and* physical conflict is important, and ensuring parents know that defence against conflict that is emotional, is just as important as defence against conflict that is physical.

A major finding of this research was that jealousy plays a major predictor role in anxiety, including social phobia and fear. Reasons for jealousy have been discussed, for example, Noller 's (2005) findings on perceived parental favouritism, and Miller & Maruyama's (1976) results showing higher popularity in later-born siblings. Many aspects of a child's life could cause a sibling to be jealous of them and it would be impossible to control them all. However, it is possible to control some. The finding that jealousy of other siblings is a major predictor implies that the intervention again involves getting information to parents and caregivers. Parents should be aware of the effects jealousy can have on their children, and be given advice and knowledge so they can be more educated on ways to ensure they give no favouritism to any of their siblings, and provide the same positive and nurturing environment for all their children, to reduce the opportunity for jealousy to arise.

Results from this study also have implications for intervention work with children, if Bank, et al., (1996) are correct, that certain children lack the ability to maintain non-conflicting relationships, these children need to be taught the ways in which to manage their anger or problem solving skills so that they develop the capability. Siblings who are conflicting and aggressing against each other a lot need to be taught how to solve their differences and also learn how to uphold a warm sibling relationship. Findings suggest that regardless of how normative sibling conflict is, it should not be ignored when attempting to understand and help adolescents with adjustment difficulties.

My results also showed that age spacing had an influence on emotion and physical aggression and also positive sibling relationships. This is important information to know because age-spacing is one thing that parents can control. If parents know that siblings aged closer together have higher levels of physical and emotional conflict, they may decide to spread their children further apart. Especially once they know that emotional aggression is a predictor of depression. However, siblings aged close together also reported more positive sibling relationships. In this case, parents have a choice, and can decide how they wish to age-space their children.

9.3 Limitations and future research

I managed to obtain a fairly even spread of participants across age groups, however there was an over representation of 14 year olds, and under representation of 13 year olds. This could be due to the fact that I attended more Third Form (Year 9) classes than any other. Also, I did not attend any Form Two (Year 8) classes, so the 13 year old participants are those who are the youngest in their fourth form class, and were most likely very close to turning 14. Also, there were a much larger number of females than males in this study. This may be due to the incentives I was giving away suiting females more than males, or perhaps males felt less secure about completing the questionnaires than females did. Westland High School is a mixed gender school and both females and males were informed and approached in the same way, and the large difference in percentage is unrepresentative of the school as a population, so this disparity remains unexplained. In future studies, it would be interesting to obtain similar numbers across all

age groups and an even ratio of females to males, to eliminate any doubt that the results

acquired were due to the sample, rather than what the sample reported.

Another qualm of my study is the measures I chose to use. Beck et al., (1988)

stated that because the BAI was developed with adult psychiatric outpatients, it should be

used cautiously with other clinical populations. A few adolescents were included in the

samples assessed by Beck, et al. (1988), and the reliability and validity of the BAI for

adolescents had not been directly tested. Furthermore, only one British study had

provided data about the BAI with normal adults, and the BAI's potential for detecting

clinical anxiety in normal adults requires further study, and therefore, the most

appropriate use for the BAI is that with adult psychiatric outpatients over the age of 17

years (Beck, et al., 1988). Using a psychometric scale designed to measure the anxiety

levels in adolescents perhaps would have been more beneficial and appropriate for this

study.

Also, Beck, et al., (1996) states that the BDI-II is an "assessment of severity of

depression in psychiatrically diagnosed adults and adolescent patients aged 13 years and

older" (p. 6). This statement also calls for caution when using the measure with non

psychiatric patients. Although Beck, et al., (1996) mention the BDI-II can be used on

adolescents aged over 13, it may have been more optimal to use a depression inventory

designed for children.

Another limitation of this study is that no test for validity was performed on my sibling relationship questionnaire. Because I used my own measure, a validity test needed to be done against a previously developed legitimate sibling questionnaire, for example, the Sibling Relationship Questionnaire (SRQ; Furman & Buhrmester, 1985). In terms of the questionnaire itself, more questions per scale would have been beneficial, so each conflict scale could be divided into two subscales concerning conflict against the participant and conflict performed by the participant. At the moment, it cannot be distinguished between siblings who are the victim of conflict, siblings who initiate conflict and siblings who have a variance of both. Information such as this would be useful to differentiate certain results, such as whether younger siblings perform or receive more emotional aggression (in relation to the study by O'Brien, 1999) so future research should look at making a distinction between the two. My questionnaire also does not allow for analyses of different types of conflict with different siblings. For example, it is possible that a participant has high physical conflict with one sibling, however, no physical conflict with another. All previous research focuses only on sibling dyads. Future research may find it interesting to have participants full out separate forms for every sibling they have, and then categorise participants in terms of the number of siblings they have, along with gender distribution and age-spacing, in order to analyse all the different variables and possibilities. However, this type of study would be very complex and would require a vast sample size.

Future research should also look at jealousy in more depth and its links with anxiety. It would be interesting to see if the type of jealousy mostly associated with anxiety was related to beliefs about parental treatment or is it due to all aspects of life. Further knowledge about jealousy and its impacts on adjustment would be helpful for parents and any other intervention provider with a goal to lessen anxiety in adolescents.

9.4 Conclusion

This study examined different forms of sibling conflict with the desire to discover whether there is one form of conflict more likely to lead to adjustment difficulties, such as anxiety and depression, in adolescents. The sibling relationship measure created for this research measured emotional conflict, physical conflict, competitiveness and jealousy. In addition, a positive sibling relationship scale was involved, to measure whether the sibling relationship was perceived to be more positive or more negative. Results indicated that a positive sibling relationship is significantly related to lower levels of depression, and jealousy of other siblings was found to be a significant predictor of anxiety and social phobia, whilst emotional aggression was found to be a significant predictor of depression. Further research in these areas will provide additional knowledge on the effects emotional conflict and jealousy has on adjustment which will aid in the development of effective intervention strategies to help parents and caregivers lower the levels of emotional aggression performed by their children and eliminate the development of jealous feelings.

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UNIVERSITY OF CANTERBURY   DEPARTMENT OF PSYCHOLOGY

PERCEPTIONS OF SIBLING RELATIONSHIPS IN MIDDLE CHILDHOOD AND THEIR EFFECTS ON ADOLESCENT ANXIETY AND DEPRESSION

BRIEF DESCRIPTION OF THE PROJECT: Developmental psychology places emphasis on the role the family plays in shaping the way a child matures. It is, however, important to remember that within a family structure, it is very common for there to be more than two children, resulting in sibling relationships. As children grow up, siblings are usually their primary playmates. A sibling is involved in many of a child's social interactions, therefore it is plausible that the sibling relationship is going to have a large impact on the way children learn to socialise, learn social skills, and perhaps impact on their overall well-being later on in life.

Therefore, if you choose to participate in this study, you will be asked to fill out a questionnaire in which you answer some background questions about yourself, your attitudes towards your siblings, and your current feelings about yourself and your life.

The aim of this study is to identify the relationships between your attitudes towards your siblings and the way in which you feel about yourself. It is hoped that this information may be used to identify some possible ways to help young adults form more positive attitudes towards both their siblings and themselves.

RISKS ASSOCIATED WITH THIS PROJECT: You may feel some anxiety as you complete the questions. Please ensure your answers are kept safe and secure.

TIME REQUIRED: Approximately 10-20 minutes

The project is being conducted by Loralee Pope and Mark Byrd who may be reached by telephoning 366-7001, ext. 7194.

This project has been reviewed and approved by the University of Canterbury Human Ethics Committee

CONSENT FORM TO BE SIGNED BY PARTICIPANT

I agree to participate in the project described above, on the understanding that at any time I wish to withdraw from the study I may, without prejudice, do so. I further understand that if I withdraw I have the right to have any data collected from me returned. All information collected will be kept confidential and will be destroyed at the end of the study. I understand that any information gathered from this study will be reported only in terms of group averages and that my name will not be associated with any particular piece of data. Lastly, I understand that I will be given the opportunity to review my decision after I have completed my participation in this study and discussed the details of the study with the researcher.

You are entitled to have a copy of this form if you wish.

NAME: _____

SIGNATURE: ——————————————————— **DATE:** ———————————————

CONSENT FORM TO BE SIGNED BY PARENT OR GUARDIAN

I have read and examined the accompanying questionnaire and agree to let my son/daughter participate in the study described above.

NAME: _____

SIGNATURE: ——————————————————— **DATE:** ———————————————

Background Information

Listed below are a number of questions about you. I would like you to provide me with this information so that I may interpret your answers on the rest of the questionnaire correctly.

1. Gender - Male / Female (Please circle one)

2. Date of Birth: _____

3. Family Heritage

I consider myself to be primarily (Please Tick one):

A NZer of European Heritage		A NZer of Pacific Island Heritage.	
A NZer of Māori Heritage		A NZer of Asian Heritage	
A NZer of _____ Heritage		A Foreign Student of _____ Heritage	

Other _____ Please explain

4. Parents marital status (Circle)

Married / Divorced / Separated / Cohabitating / A Parent Deceased / Other _____

5. What is the occupation of your PRIMARY Male caregiver?

_____

(No need to be Specific – Just the General Area is Fine)

6. What is the occupation of your PRIMARY Female caregiver?

_____

(No need to be Specific – Just the General Area is Fine)

7. Please list all of the siblings in your family from eldest to youngest stating their age and gender. Please do not indicate their names, just use their age and gender. Please put a tick to indicate yourself

	AGE	GENDER	(Tick Yourself)
Eldest			
Youngest			

APPENDIX C

Appendix C includes the subsequent three psychometric measures, which are to follow.

1. BAI (Beck & Steer, 1990)

2. BDI-II (Beck, Steer & Brown, 1996).

3. FQ (Marks & Mathews, 1979)

BAI®

NAME _____

DATE _____

Below is a list of common symptoms of anxiety. Please carefully read each item in the list. Indicate how much you have been bothered by each symptom during the PAST WEEK, INCLUDING TODAY, by placing an X in the corresponding space in the column next to each symptom.

	NOT AT ALL	MILDLY It did not bother me much.	MODERATELY It was very unpleasant but I could stand it.	SEVERELY I could barely stand it.
1. Numbness or tingling.				
2. Feeling hot.				
3. Wobbliness in legs.				
4. Unable to relax.				
5. Fear of the worst happening.				
6. Dizzy or lightheaded.				
7. Heart pounding or racing.				
8. Unsteady.				
9. Terrified.				
10. Nervous.				
11. Feelings of choking.				
12. Hands trembling.				
13. Shaky.				
14. Fear of losing control.				
15. Difficulty breathing.				
16. Fear of dying.				
17. Scared.				
18. Indigestion or discomfort in abdomen.				
19. Faint.				
20. Face flushed.				
21. Sweating (not due to heat).				

32 33 34 35 A B C D E

0154

BDI®-II

Date:

Name: _____ Marital Status: _____ Age: _____ Sex: _____

Education: _____

Occupation: _____

Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the **one statement** in each group that best describes the way you have been feeling during the **past two weeks, including today**. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

1. Sadness
0 I do not feel sad.
1 I feel sad much of the time.
2 I am sad all the time.
3 I am so sad or unhappy that I can't stand it.

2. Pessimism
0 I am not discouraged about my future.
1 I feel more discouraged about my future than I used to be.
2 I do not expect things to work out for me.
3 I feel my future is hopeless and will only get worse.

3. Past Failure
0 I do not feel like a failure.
1 I have failed more than I should have.
2 As I look back, I see a lot of failures.
3 I feel I am a total failure as a person.

4. Loss of Pleasure
0 I get as much pleasure as I ever did from the things I enjoy.
1 I don't enjoy things as much as I used to.
2 I get very little pleasure from the things I used to enjoy.
3 I can't get any pleasure from the things I used to enjoy.

5. Guilty Feelings
0 I don't feel particularly guilty.
1 I feel guilty over many things I have done or should have done.
2 I feel quite guilty most of the time.
3 I feel guilty all of the time.

6. Punishment Feelings
0 I don't feel I am being punished.
1 I feel I may be punished.
2 I expect to be punished.
3 I feel I am being punished.

7. Self-Dislike
0 I feel the same about myself as ever.
1 I have lost confidence in myself.
2 I am disappointed in myself.
3 I dislike myself.

8. Self-Criticalness
0 I don't criticize or blame myself more than usual.
1 I am more critical of myself than I used to be.
2 I criticize myself for all of my faults.
3 I blame myself for everything bad that happens.

9. Suicidal Thoughts or Wishes
0 I don't have any thoughts of killing myself.
1 I have thoughts of killing myself, but I would not carry them out.
2 I would like to kill myself.
3 I would kill myself if I had the chance.

10. Crying
0 I don't cry anymore than I used to.
1 I cry more than I used to.
2 I cry over every little thing.
3 I feel like crying, but I can't.

_____ Subtotal Page 1

Continued on Back

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FEAR QUESTIONNAIRE

Instructions

Choose a number from the scale below to show how much you would avoid the situations listed below because of fear or other unpleasant feelings. Then write the number you chose in the box opposite each situation.

| **1** Would not avoid it | **2** Would slightly avoid it | **3** | **4** | **5** Would definitely avoid it | **6** Would markedly avoid it | **7** | **8** Would always avoid it |

How much would you avoid:

1. Injections or minor surgery.. □
2. Eating or drinking with other people.. □
3. Hospitals.. □
4. Travelling alone by bus or coach... □
5. Walking alone in busy streets... □
6. Being watched or stared at.. □
7. Going into crowded shops.. □
8. Talking to people in authority.. □
9. Sight of blood.. □
10. Being criticised... □
11. Going alone, far from home... □
12. Thought of injury or illness... □
13. Speaking or acting to an audience.. □
14. Large open spaces.. □
15. Going to the dentist.. □

Please Leave Blank → □ □ □

Ag   Sp   BI

□

fearq.doc

This part of the questionnaire concerns your relationships with your siblings during middle childhood. Please read over each statement and circle the number that indicates your level of agreement or disagreement with each statement with regards to when you were growing up with your sibling. Please do not dwell on any statement too long. First impressions are best.

1. I share with my sibling(s)

      Never   1   2   3   4   5   6   7   Often

2. My sibling(s) share with me.

      Never   1   2   3   4   5   6   7   Often

3. My sibling(s) and I have very similar values/ideas about things.

      Never   1   2   3   4   5   6   7   Often

4. I go to my sibling(s) for advice.

      Never   1   2   3   4   5   6   7   Often

5. My sibling(s) come to me for advice

      Never   1   2   3   4   5   6   7   Often

6. My sibling(s) and I compete against each other.

      Never   1   2   3   4   5   6   7   Often

7. My sibling(s) can make me feel bad with some of the things they say to me.

      Never   1   2   3   4   5   6   7   Often

8. My sibling(s) agrees with my opinions

      Never   1   2   3   4   5   6   7   Often

9. My sibling(s) always want to come with me when I go out.

      Never   1   2   3   4   5   6   7   Often

10. My sibling(s) does things so they can be more like me.

      Never   1   2   3   4   5   6   7   Often

11. I enjoy sharing things with my sibling(s).

      Never   1   2   3   4   5   6   7   Often

12. I have civil conversations with my sibling(s).

      Never   1   2   3   4   5   6   7   Often

13. I think about how my sibling(s) has things so much better than I do.

      Never   1   2   3   4   5   6   7   Often

14. My sibling(s) and I compete for things.

      Never   1   2   3   4   5   6   7   Often

15. My sibling(s) will hold on to an object because they know I want it.

     19. Never   1   2   3   4   5   6   7   Often

16. I wish I could have the life of my sibling(s) rather than my own.

      Never   1   2   3   4   5   6   7   Often

17. I enjoy the same things my sibling(s) enjoy

      Never   1   2   3   4   5   6   7   Often

18. My sibling(s) and I have no difficulty finding things to talk about.

      Never   1   2   3   4   5   6   7   Often

19. My sibling(s) are jealous of me.

      Never   1   2   3   4   5   6   7   Often

20. My sibling(s) and I have different beliefs about things

      Never   1   2   3   4   5   6   7   Often

21. I feel like my sibling(s) and I are in constant competition

      Never   1   2   3   4   5   6   7   Often

22. My parents give my sibling(s) more than they give me.

      Never   1   2   3   4   5   6   7   Often

23. I often see my sibling(s), either around the house or outside of the home.

      Never   1   2   3   4   5   6   7   Often

24. My sibling(s) and I learn things about each other.

      Never   1   2   3   4   5   6   7   Often

25. My sibling(s) and I tend to ignore each other.

      Never   1   2   3   4   5   6   7   Often

26. When I am angry at my sibling(s) I will use physical aggression to show my emotion.

      Never   1   2   3   4   5   6   7   Often

27. My sibling(s) puts me down.

      Never   1   2   3   4   5   6   7   Often

28. My sibling(s) throw objects at me.

Never   1 2 3 4 5 6 7 Often

29. I throw things at my sibling(s).

Never   1 2 3 4 5 6 7 Often

30. I hit or punch my sibling(s).

Never   1 2 3 4 5 6 7 Often

31. My sibling(s) hit or punch me.

Never   1 2 3 4 5 6 7 Often

32. My sibling(s) say nasty things to me.

Never   1 2 3 4 5 6 7 Often

33. My sibling(s) physically hurt me

Never   1 2 3 4 5 6 7 Often

34. My sibling(s) emotionally hurts me.

Never   1 2 3 4 5 6 7 Often