An Age and Gender Comparison of Adolescent Hostility and its Relationship to Depression and Bullying

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Abstract

This study set out to establish the relationship of adolescent hostility to depression and bullying in respect to age and gender. The two groups measured comprised 355 children aged 13 and 14, and 17 and 18 from both urban and rural co-educational high schools. Students were required in class to complete a questionnaire comprising three clinical assessment tools - the Beck Depression Inventory-II, Cynical Distrust Scale (revised) and Peer Relations Questionnaire, measuring depression, hostility and bullying respectively. Results using Pearson's r, confirmed correlations of 0.01 significance between hostility and depression for both genders and age groups. The hostility-bullying relationship was found to be only significant for males. Boys-especially the younger group, reported more frequent and physical bullying, whereas girls experienced greater verbal and psychological bullying. Age was found to be a moderating factor, suggesting that boys as they get older use more covert ways of dealing with hostility. These findings contribute to current knowledge on adolescent hostility, and provide valuable information useful to schools and those developing strategies for the prevention and treatment of hostility, depression and bullying.

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PREFACE

This present study sets out to examine the relationship between hostility, and depression and bullying in New Zealand adolescents. In particular it looks at these relationships in respect to variance due to age and gender-areas where there has been little if any research.

My interest in carrying out this research is in response to the large number of problems currently being experienced by New Zealand adolescents. Depression, bullying and hostility are all symptoms of an unhealthy environment; areas which need to be addressed through research, public awareness, and by putting in place effective education and treatment programmes.

CHAPTER 1

Hostility

Hostility in adolescence has to date involved limited research. Yet it has been linked to heart-disease (Smith, Cranford, & Mann, 2000; Smith., McGonigle & Benjamin, 1998), depression (Moreno, Fuhriman, & Selby, 1993), bullying (Seals & Young, 2003), type A personality (Smith & Pope, 1991), cigarette and alcohol consumption (Whiteman, Fowkes, Deary, & Lee, 1997), and as a precursor to anger (Eckhardt, Norlander, & Deffenbacher, 2004). In the family and classroom, it has been found to be troublesome; often being characterised by contempt, disobedience, irresponsibility and sarcasm (Cramerus, 1990). Hostility negates any prospects of a harmonious environment. Its disruptive presence therefore threatens the well being of others as well as oneself.

Understanding this construct is important if we are to successfully develop preventative measures and effective treatment therapies. Extrapolating the interconnectedness it has with other adolescent problems will greatly enhance this knowledge. Of particular interest is the relationship of hostility to depression and bullying - especially in relation to adolescent gender and age; the focus of this research. Currently there have been few studies on how hostility, depression and bullying are associated, yet all three areas are important having strong links to mental well-being. VanderVoort (1995) in her research found in assessing college students, that out of all the demographic and health risk factors, depression and hostility were the most directly associated with their physical health.

While research has confirmed that there is a relationship between hostility and depression, this exact nature still remains equivocal (Moreno et al., 1993), though perhaps better understood than the relationship of hostility to bullying – a relatively new area of research. Hostility though similar in many ways to depression, is a different construct. Cognitively, the two differ; depression involving a negative self-representation, and hostility a negative other-representation (Shi, 1995). Blackburn, Lyketsos and Tsiantis (1979) in their study, found that hostility preceded mood changes, yet other studies have found hostility to result from depression. Similarly, there are differing cause-effect claims for the relationship of bullying to hostility, and depression to bullying. The reported nature of these relationships is therefore somewhat confusing and conflicting, and justifies further investigation.

Some of these inconsistencies may be due to operationalisation. In defining hostility for instance, psychologists have failed to reach consensus (Eckhardt et al., 2004). Other variations may have resulted through the use of introspective reports. Although pragmatic for collecting valuable data, self reports rely on the participant's perception (Leavitt, 1991). An example is in measuring bullying, where confirmation is dependent on whether the participant believes they have been bullied (Crothers & Levinson, 2004). Defining and understanding each of these constructs, and attention to reliability and validity issues are therefore essential.

Hostility has historically been described as an attitudinal construct comprising elements of dislike and negativity towards others (Eckhardt et al., 2004). It is a desire to conquer others (Marcovitz, 1982). Describing this construct might best be understood using the cognitive model (Figure 1). This model sets out the

interrelationship between the cognitive construct of hostility, behaviour, effect and biological components in an individuals functioning. For operationalisation purposes this is how hostility has been defined for the purposes of this research.

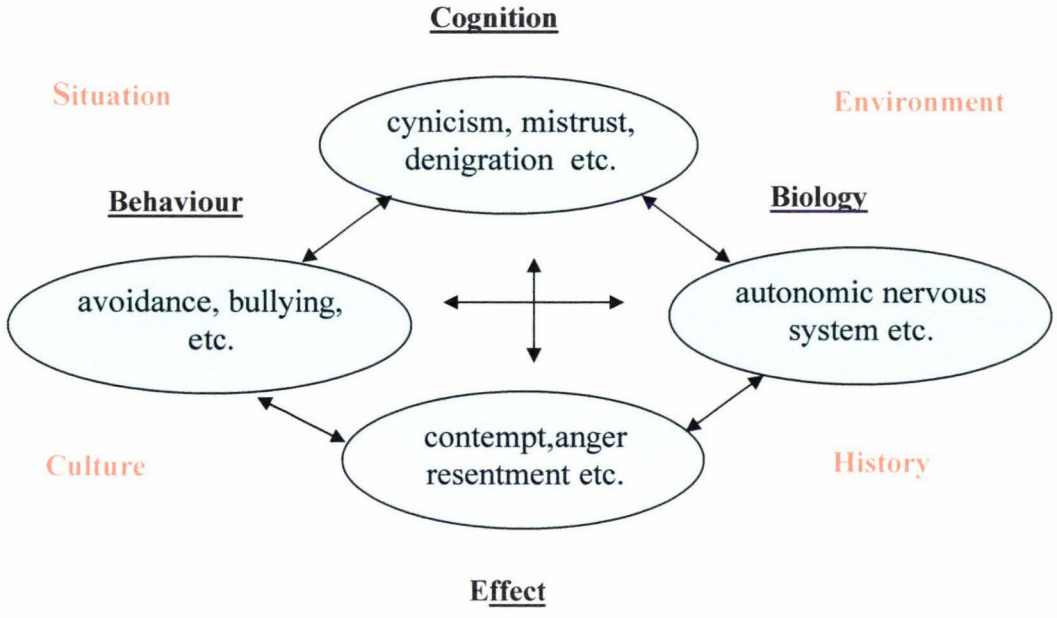


Figure 1. Cognitive model for hostility

Cognition. The cognitive variables in hostility have been seen to include: cynicism (believing that people are selfishly motivated), mistrust (believing others to be dishonest) and denigration (believing others want to be hurtful and derogatory) (Miller, Jenkins, Kaplan, & Salonen, 1996). It includes negative attitudes, and beliefs (Liehr, Meininger, Mueller, Wenyaw, Frazier, & Reyes, 2000). Cynicism has been found to be the principal cognitive component in hostility (Mittag, 2004).

Effect. This comprises: negative feelings such as contempt (Liehr et al., 2000), anger (Tangney, Wagner, Fletcher, & Gramzow, 2001), irritability (Evans, Heriot, & Friedman, 2002), resentment (Powch & Houston, 1996) and guilt (Moreno, Selby, Fuhriman, & Laver, 1994).

Biological. There are a myriad of biological responses to hostility. These include largely physiological responses such as fight and flight reactions of the autonomic nervous system. This system prepares the body for sudden stress and activity and therefore plays an important role in emotional behaviour (Davison & Neale, 1996).

Behavioural. This is displayed by being either internalised through responses such as withdrawal or avoidance, or externalised through actions like bullying. In displaying hostility both male and female display toughness and are indifferent to what other people think. Their behaviour is perceived to be a reaction to what they consider to be threatening and harmful. It involves ambivalence - a pressing need for autonomy on the one hand and intense dependence on objects in the other. Based on a perceived negative predicament they resort to hostility. This acts as a defense against loss (Cramerus, 1990). One study found that beliefs on revenge were the strongest predictors of externalising symptoms, and thoughts on personal failure or loss, were the strongest predictors of internalised symptoms such as depression (Schniering & Rapee, 2002). Slone (2001) found from their research on self schemas that those subjects who were negative and inflexible, were more predisposed to chronic anxiety and chronic depression. Whereas those who were positive and inflexible with an over inflated view of self, correlated significantly with chronic hostility. Most variance in hostility they found was in those with excessive emotional expression and a negative

inflexible schema. The difference in behaviour might also be explained by the cognitive processing of hostility through comparing cognitive distortions to cognitive deficiencies. Ronan and Kendall (1990) explain cognitive distortions as resulting from erroneous cognitive processing, and cognitive deficiencies as unplanned and deficient mental activity. Cognitive distortions tend to result in over-control and in disorders such as depression. Cognitive deficiencies lead to the lack of self-control and is externalised into behaviour that might be aggressive.

Anger

Anger has in particular been found to be highly related to both hostility and depression (Tangney, Wagner, Hill-Barlow, Marschall, & Gramzow, 1996). This relationship to hostility has been found in those who are aggressive (Tiedens, 2001). A number of researchers consider anger and hostility as being synonymous, or they use these words interchangeably. For the purposes of this study they are seen as two different constructs, as evidence would suggest hostility to be an attitudinal trait and anger an effect (Eckhardt et al., 2004). Evidence includes physiological differences found to support this belief, such as higher blood pressure and heart rates found in those cynically hostile, but not in those with aggressive anger (Powch & Houston, 1996). In addition, the quality of research to date on anger has been poor. It fails to meet a standard considered sufficient for defining this construct (Eckhardt et al. 2004). Anger can be either a precursor to, or a consequence of hostility. It can take on the form of anger-in or anger-out. Women are characterised mostly by anger-in, possibly due to traditional socialisation expectations (Powch & Houston, 1996).

CHAPTER 2

Depression

General Characteristics

The general characteristics of depression may be defined as:

> "an emotional state marked by great sadness and apprehension, feelings of worthlessness and guilt, withdrawal from others, loss of sleep, appetite and sexual desire, or loss of interest and pleasure in usual activities" (Davison & Neale, 1996, p.225).

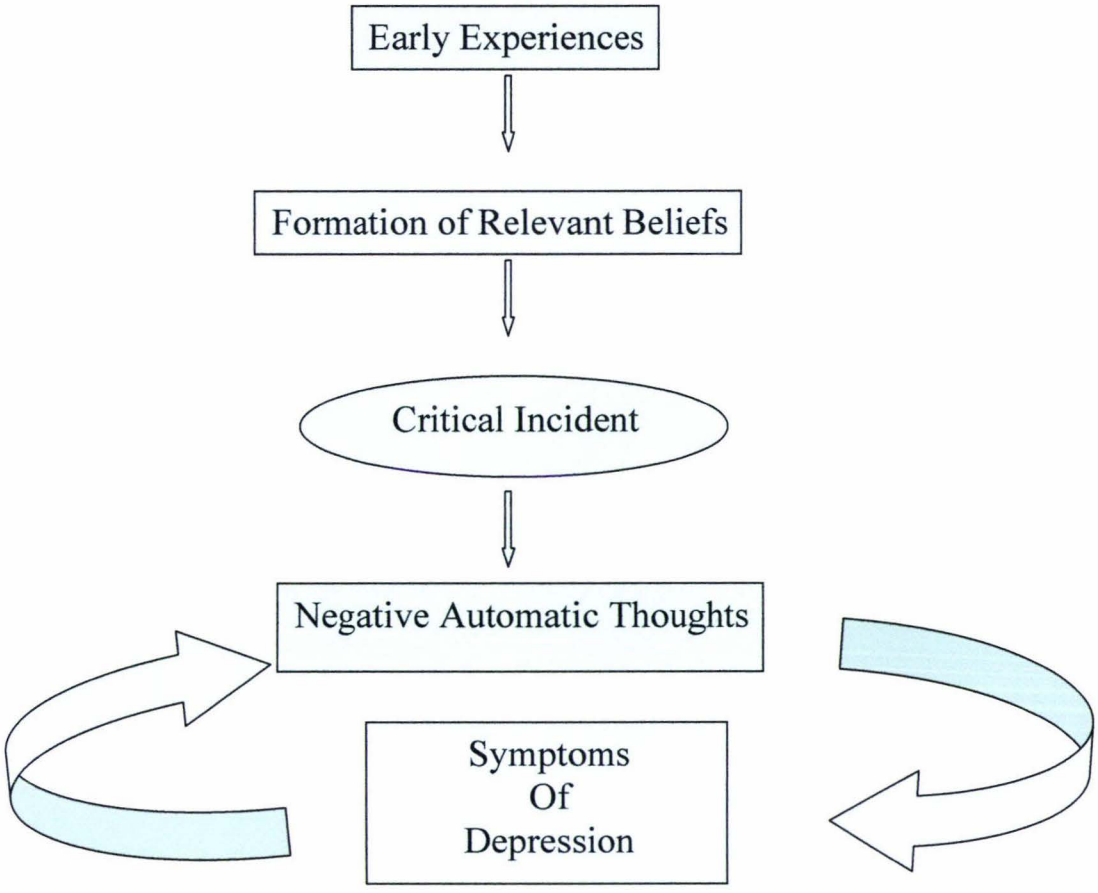
It is experienced at all stages of life by both sexes (Davison & Neale, 1996) and has a high commorbidity with many other psychological disorders (Kaplan & Sadock, 1998). Research has found a higher prevalence based on gender (Toros, Bilgi, Bugdayci, Sasmaz, Kurt, & Camdeviren, 2004), and socio-economic factors (Lehman, Taylor, Kiefe , & Seeman, 2005). Some studies also suggest that there is a higher rate for those living in urban areas, (Wang, 2004). But this conflicts with other findings that those living in rural areas are at greater risk (Jensen, Svebak, & Gotestam, 2004). Studies by Houlihan, Fitzgerald, and O'Regan (1994), and Patterson (2001), found girls of a rural background to be more depressed than other girls and boys. Demographic effect may however be more a case of individual life experience rather than where a person lives (Kovess-Masfety, Lecoutour, & Delavelle, 2005). This may also be the case for ethnicity, where Clarke and Jensen (1997) found that Maori with fewer life-event experiences had the higher depression. Family characteristics such as a more rigid parenting style (Santrock, 1998), and divorced parents (Strohschien,

2005) have also been linked to a higher risk for depression. However there is no significant variance in depression between multi-sibling and one-child families (Hesketh & Ding, 2005).

Depression is an area of major concern to psychologists as it is not only incapacitating but also life threatening. It is thought to account for at least 70% of suicides in the UK (Wilkinson, 1989, cited in Blackburn and Twaddle, 1996). New Zealand has the highest suicide rate out of all the OECD countries for males aged 15 to 24, and the second highest for females of a similar age group. In 2001, suicides in this age group were reported as being 20 deaths per 100,000 population (Newman, 2004). In New Zealand, Major Depression has been measured at a 13% prevalence (Ellis & Collings, 1997). As a mood disorder, depression is diagnosed on Axis 1 of the Diagnostic System of the American Psychiatric Association (DSM-1V).

Depression Theory

Aaron Beck, a central cognitive theorist in the area of depression, describes depression as having its roots in childhood or adolescence, when a negative schema is formed as a result of situations such as the loss of a parent, social rejection by peers, criticism, or depressive attitude of parents (Beck, 1995). This self-schema plays a concomitant role being activated by some factor such as a similar situation later in life (Figure 2). Together with cognitive biases it maintains a negative triad - a negative view of self, world and future (Kendall, 1985).



(From Cognitive therapy for depression and anxiety 2nd ed. Blackburn, I. M., Davidson, K.M: Blackwell Science Ltd, Oxford, 1995). .

Figure 2. The cognitive model for depression

Another theory of depression is the Helplessness-Hopelessness approach. This is an extension of the diathesis stress model, which attributes disease to an individual's predisposition when sufficiently burdened (Nichols & Schwartz, 2001). Helplessness is seen to characterise anxiety and is commonly found in depression, whereas

hopelessness is confined to depression. Negative events leading to the development of anxiety and depression, are perceived as pertaining to one self, to being stable by enduring over time, and to being global in applying to most areas of life. Helplessness is an expectation that should negative outcomes happen then they would be uncontrollable. Hopelessness expects these outcomes to happen. This approach then differs from Beck's approach as it attributes depression to the individual's perception within their social context (Swendsen, 1997).

Depression in Adolescence

Depression in adolescence has been found to have a high commorbidity with other psychological disorders (Lagges & Dunn, 2003; Toros et al., 2004). It has also been associated with risk- taking behaviours, such as smoking and substance abuse (Seals & Young, 2003). In one study involving depressed adolescents 19.4% were found to be at risk for a mental disorder. Of this group 12.5% expressed possible suicidal intent and 45% suicidal ideation (Lynch, Mills, Daly, & Fitzpatrick, 2004). High rates are also found in New Zealand as shown by a study of 18 year olds. This found 36.6% to have a psychiatric disorder such as depression (Feehan, McGee, Raja, & Williams, 1994). Depression is a problem in all cultures and has a high prevalence rate. For instance, Hesketh and Ding (2005) in their study of 1576 Chinese adolescents aged 13 to 16, found that one third had experienced a history of depression, with 16% expressing suicidal ideation and 9% attempting suicide. Five percent of adolescents in another study who were found to be depressed – mostly those bullied, were found to have had thoughts of self-harm (Seals & Young, 2003). For adolescence in New Zealand, the prevalence rate of depression is about 13%, similar to that of adults

and between 0.7% and 3.4% of adolescents at any one time are depressed (Andrews et al., 1998). Girls are 2 to 5 times more likely to be depressed (Toros et al., 2004).

Depression and Hostility

The relationship of hostility to depression is evident in shared characteristics. Moreno et al. (1994) reported a positive correlation between depression severity and all subscales of hostility. The highest correlation between hostility and depression found, when measured on the Hostility and Direction of Hostility Questionnaire subscale, was intropunitiveness (0.71) (Moreno et al., 1993). This was also established to be the best predictor of depression (Moreno et al., 1994). Defined, intropunitiveness is inward aggression, and extrapunativeness is aggression upon one's environment (Gupta & Agarwal, 2000). Both attitudinal (comprising: resentment, suspicion, guilt, and intropunitiveness) and motoric forms of hostility (composed of: assault and verbal hostility) were also found to increase with the severity of depression. Carey, Finch, and Carey, (1991) concluded from research that hostility was the best predictor of depression. In analysing the components of depression, they found 80% of difference between depressed and non-depressed subjects could be accounted for in symptoms of sadness, shame, surprise, lack of enjoyment, guilt, anger, shyness and intropunitiveness. In particular, shyness, shame, enjoyment and anger accounted for 51.4% of the variance- the primary emotion being anger followed by sadness. Min'er and Dejun (2001) add disgust, fear, avoidance and suppression to the symptoms for depression. Many of these symptoms such as anger and shame are also found in hostility.

CHAPTER 3

Bullying

Bullying has been found to be a common problem found in New Zealand secondary schools (Adair, Dixon, Moore, & Sutherland, 2000) and has been associated with academic failure, lower self-esteem, and depression (Raskauskas, 2005). In defining bullying, it could be described as being repeated intimidation of a person by either an individual, or a group who tend to be more powerful. This might take the form of being physical, verbal or psychological (Slee, 2002). There are four elements to bullying. These comprise a malicious intent, repeated aggression, unfairness and the pained reaction of the victim. Bullying is a cognitive act which includes behavioural, affect and biological areas of individual functioning, as set out in Figure 3. Bullies may operate in groups or individually (Rigby, 2002). Slee and Rigby (1993, cited in Rigby, 2002) found bullies in studies carried out in Australian schools to be characterised by hostility, impulsivity, low social sensitivity, and noncompliance. Depressive symptoms were found to be more evident in bullies compared to non-bullies.

Victims have been found to be those with the lowest self esteem and are the least popular (Seals & Young, 2003). They are more likely to be at risk at puberty and to experience depression, hopelessness, low self-esteem, hostility, difficulty in developing self-identity, negative self attribution, and poor peer relations. Victims often come from dysfunctional homes (Carney, 1997). Low self-esteem in particular has been found to be one of the best predictors of behavioural and emotional problems (Leary, Schreindorfer, & Haupt, 1995). Slee (1995) found a strong correlation

between depression and those bullied. In one New Zealand study, 58% of 2066 high school students reported having been bullied at school (Adair et al., 2000).

Boys and Bullies

Boys especially those of a younger age are more likely than girls to bully and use physical means. They are also more likely to bully other boys. The fact that boys are more physically hostile is supported by factors such as the relationship of testosterone production to aggression, and larger physical size. This is also reflected in the fact that boys engage in more rough and tumble activities than girls (Papalia, Olds, & Feldman, 2004). Rigby (2002) found that 62.7% of boys reporting being physically abused by another male or males, compared to 27.2% by girls.

Girls and Bullying

In comparison, Rigby (2002) reports girls physically abused by another female as 24.7%, and by boys 17%. While verbal bullying is found to be the most common form of bullying for both genders, it is more common in girls. They use more covert forms of bullying, and aggression has been found to be reactive rather than proactive. Raskauskas (2004) describes this type of bullying involving name-calling, teasing, ostracism, and psychological assaults, as relational aggression, and a type of bullying often not reported by the victim. For both boys and girls, bullying levels have been found to be different between schools. Girls at a co-education school are more likely to be bullied, and bullying is more likely to be by a boy and girl to a girl victim (Rigby, 2002).

Adolescence and Bullying

A large number of adolescents approve of bullying. One survey found 22% of boys and 16% of girls thought it was alright to call other children names, and 19% of boys and 10% of girls believed the victims deserved to be bullied (Rigby, 2002). Age tends to be a moderating factor with a transition from aggressive to more passive verbal forms with older adolescents. Coie, Dodge, Terry and Wright (1991) found reactive aggression and bullying was considered less socially acceptable by older boys. It may however be more common for younger boys when getting established into new peer groups (Seals & Young, 2003). Hostility has been found to be less common once a dominant hierarchy has been established (Papalia et al., 2004). The extent of bullying measured in a study of 454 pupils found 24% reported bullying involvement. There was no difference in ethnicity, but in gender there were twice as many males compared to females identified as bullies (Seals & Young, 2003). In a New Zealand study 44% admitted to having bullied others at school (Adair et al., 2000).

Research on bullying suggests a link between peer abuse and suicidal behaviours (Carney, 1997; Raskauskas, 2004). Bullying is also detrimental to the educational process as 19% of boys and 25% of girls who are frequently victimised report being absent from school due to being victimised (Rigby, 2002). Victims have also been found to have greater unhappiness at school, and greater isolation from their peers (Slee, 1995). Research involving 40 boys involved in school killings in the USA found that many of these killers had been bullied over long periods of time (Crothers & Levinson, 2004). Research also suggests that victims and those witnessing violence themselves are at high risk of becoming bullies and engaging in other delinquent behaviour (O'Donnell, Schwab-stone, & Ruchkin, 2006).

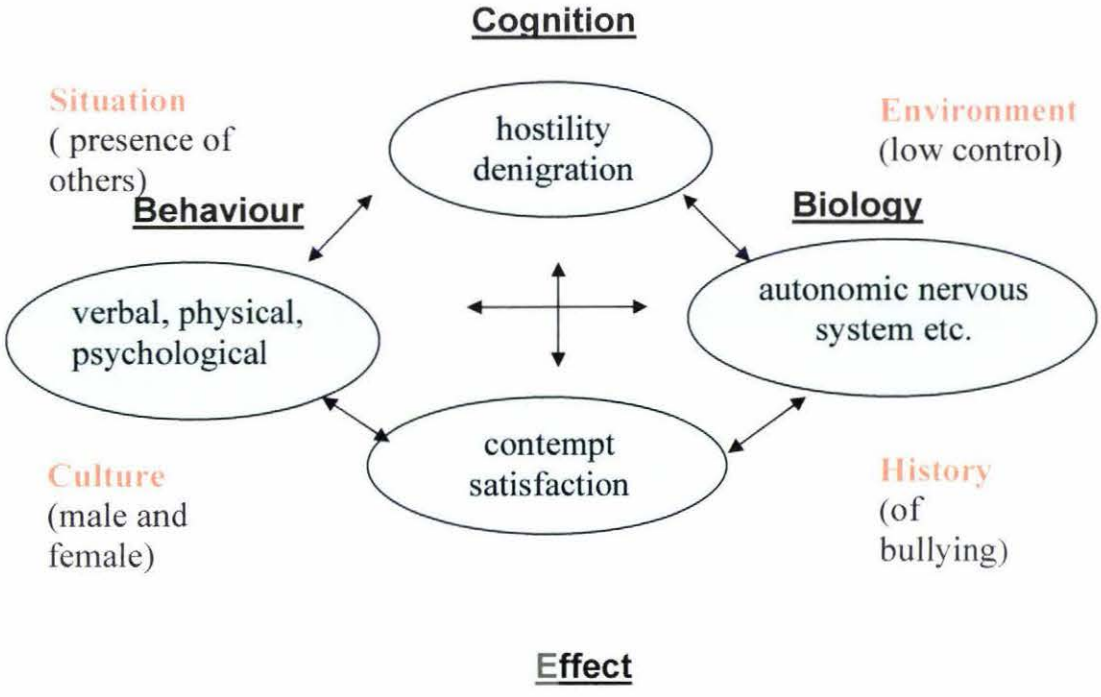


Figure 3. Cognitive model for bullying. An example is a cognitive desire to belittle another person. Behaviour may involve name-calling, or pushing. The effect will be demonstrated by the satisfaction gained by the action. Biological consequences may involve the bully experiencing an adrenaline rush.

CHAPTER 4

Hostility Expressed as Bullying and Depression

Research would appear to not only suggest that all three constructs are associated, but that depression and bullying in relationship to hostility would seem to be diametrically opposed; hostility being either manifested through depression, or externalised through bullying. This conclusion is also supported by Jakubaschk and Hubschmid (1994), who found that as aggression declines depression increases. Depression has been found to be linked to inward, but not outward aggression (Biaggo & Godwin, 1987; Moreno et al., 1993). Hostility then is not just related to externalised aggression as some researchers have suggested. This is also evidenced by studies showing gender differences, where females have been found to be more depressive and less aggressive than males (Jakubaschk & Hubschmid, 1994), yet report more hostility (Kopper & Epperson, 1996) and score higher on most hostility assessments (Moreno et al., 1994).

Girls and the Expression of Hostility

Current research would suggest that girls express hostility through depression, whereas boys tend to use external avenues such as bullying. Age could however have a moderating effect. Gjerde, Block and Block (1988) in their study described 18 year old girls displaying depressive symptoms as ruminating, ego-sensitive, and unconventional, with a tendency to internalise depression-related feelings aversive to others. Wyrick, Gentry and Shows (1977) found social constriction (especially involving suspicion) and assertion, to be related negatively for females, but not for males. Females were found to also exhibit resentment and indirect hostility, but were open to unconventional and theoretical ideas. Antagonism has also been found to

have a strong relationship to female hostile behaviour. This suggests that they may feel threatened by never winning in any interaction (Powch & Housten, 1996). Min'er and Dejun (2001) reported that those found to be depressed, differed not only in being more ruminating, but by also displaying more avoidance and suppression. Avoidance has been found to relate significantly to depression (Ruehiman & Karoly, 1991). Aggressive girls exercise hostility differently. Those aged from 13 to 18 years found to be aggressive in one study, displayed physical aggression, verbal aggression, shame, guilt, hostility, anger, and the belief that aggression is acceptable and will lead to improved negative self- image and increased self-esteem (Allison, 2000).

Boys and the Expression of Hostility

Boys in comparison appear to experience and manage hostility differently. Gjerde et al., (1988) found boys of 18 to be disagreeable, uncontrolled, and unconventional in thought and behaviour, alienated from their social surrounding, and belligerent and antagonistic. They concluded that boys with depressive tendencies tended to be aggressive, whereas girls tend to be introspective and attribute their problems to their own inadequacies. Males have been found to be negative, irritable, and more egotistical (Wyrick et al., 1977). Boys are therefore more likely to externalise hostile thoughts. This might also explain why boys are also more likely to report being bullied (Rigby, 2002). Rigby (2002) found that girls when they do externalise their behaviour, tend to use verbal means, whereas boys are more likely than girls to express this physically.

Gender and Covert and Overt Hostility

Gender differences are also evident when comparing covert and overt hostility. From a study by Gjerde, Block, & Block (1988), it was concluded that gender differences serve as a moderating factor for aggression in depressed adolescents. Depressed boys tend to differ from depressed girls through more overt expressions of hostility. Depression has however, been found to correlate more with covert attitudinal components of hostility (resentment, suspicion, and guilt) and with motor components such as irritability and indirect and verbal aggression (Selby and Neimeyer,1986). Covert hostility has been shown to be higher in those depressed (Zecca, 1996). This would suggest that hostility internalised or externalised verbally is more likely to manifest itself through depression and could explain the higher prevalence in girls. Maiuro, Cahn, Vitaliano, Wagner and Zegree (1988) established that domestically violent men were more likely to be depressed than generally assaultive men. This might also lend support to covert hostility being internalised and linked to depression. Shame and proneness have been related to covert hostility for both male and female, whereas overt hostility is associated with a tendency for anger to be experienced without provocation. Males are more likely to display overt hostility, whereas females are more likely to be inclined covertly (Hoglund & Nicholas, 1995).

Control and the Expression of Hostility

Expression of hostility through either bullying or depression may also be found in situations involving control. Depression might be seen as the consequence of control, whereas bullying the absence. Research has tended to identify subjects with lower masculinity as experiencing higher guilt, shame, sadness and lower hostility in high control situations. Subjects-especially female participants, in high control situations

report higher internal attributions (Gomaz-Lopez, 2001). Depth of depression has also been correlated positively with both covert hostility and external locus of control. The researchers concluded that covert factors together with external control were common to depression (Becker & Lesiak, 1977). Adolescents have been found to experience mood lows when they are in an adult–structured setting such as a classroom (Papalia et al., 2004). In comparison, bullying in schools was found to occur mostly in situations of low external control such as before and after school, and interval and lunch breaks (Rigby, 2002).

Age and the Expression of Hostility

The expression and level of hostility would also appear to be influenced by age. Liehr et al. (2000) refer to Woodall and Matthews 1989 and 1993 longitudinal study of adolescents, where hostility was found to increase from that measured in the subjects at 13 to 15 years of age, to that measured at the ages of 17 to 19 years old. This result would suggest then that bullying and / or depression might increase with age, despite other research showing age to be a moderating factor. For instance, older adolescent males display reduced physical bullying, though an increase in verbal bullying. In addition, for both males and females, bullying has been found to reduce with age (Rigby, 2002). Extrapunitiveness has also been found to decrease substantially in the 15 to 17 age range for both sexes (Henderson, 1977). In a Christchurch study, rates of reported depression were found to be higher for older teenagers of both sexes. In the fifteen-year-old group, 3.1% reported some depression symptoms over the previous 12 months compared to 16.7% of the eighteen year olds (Andrews, et al., 1998). This increase in reported depression coupled with the finding of reduced overt forms of hostility, may suggest that teenage males manage hostility

more through covert processes, as they get older. If this is the case, then this should be reflected through a higher prevalence in depression amongst older adolescents assessed as displaying hostility.

Intropunitiveness and Hostility

But how do we account for the decrease in intropunitiveness as this has been found to be highly correlated to hostility and depression? This decrease has been found for both gender between the ages of 15 and 17 – though to a lesser extent for girls (Henderson, 1977). One explanation could be that the decrease in intropunitiveness may result through adolescents developing greater social maturity. Negative social exchange has been found to be strongly related to depression (Ruehiman & Karoly, 1991). This decrease in inpunitiveness may be less for girls because they mature earlier socially. The higher depression rate in girls may also be partly explained by premenstrual effects, which have been found to contribute to both hostility and depression (Boyle, 1985).

CHAPTER 5

The Present Study

Overview

This research investigated the relationship between hostility, depression and bullying in New Zealand adolescents. In particular, it set out to look at these relationships in respect to age and gender. There has been little research to date in extrapolating and understanding this interconnectedness especially in respect to adolescence. Current research although limited, would however suggest that a relationship exists, but the exact nature is equivocal.

This study involves students from four high schools in Canterbury. These provide a good representation of New Zealand adolescent as the sample is comprehensive demographically, socio-economically and ethnically. The schools also are representative of both large and small learning institutions. Information in respect to how each participant rates in respect to hostility, depression and bullying has been gathered through a questionnaire comprising three clinical assessment tools, completed in a classroom setting-a controlled environment.

Researchers have identified the importance of studies involving hostility being carried out in the subject's social context (Powch & Houston, 1996). Schools, therefore provide an ideal setting for research, and are the most common place for bullying (Rigby, 2002). A co-education school provides for the best setting as in real life males and females are not segregated. In addition, research evidence has found differences between co-educational and single sex schools. For instance, girls are

more likely to be involved in mixed-gender group bullying, and girls attending co-education schools are twice as likely to be at risk for psychiatric disorders compared to girls at a single sex school (Seals & Young, 2003). A setting where there are interpersonal interactions between both sexes should therefore be used for research involving hostility (Lynch et al., 2004).

The Hypothesis

This is a correlational design measuring symmetrical relationships:

a). between hostility and depression.

b). between hostility and bullying

c). and the influences of age and gender on these relationships.

In testing these relationships it is hypothesised that:

1). In both groups tested, correlations will be found supporting the findings from earlier studies that hostility and depression are significantly related.

2). A comparison of gender will show a stronger hostility-depression correlation for both groups of girls, and for both groups of boys the hostility-bullying relationship will be larger.

3). Age will be found to be significantly correlated to hostility-depression and bullying outcomes. Boys in the group 17-18 compared to boys aged 13-14, will show a larger depression- hostility relationship, but reduced reported bullying of a physical nature. Girls in the 17-18 year old group in comparison to those 13 and 14 are predicted to show a slight reduction in hostility related depression, with physical bullying levels slightly increased.

CHAPTER 6

Method

Participants and Setting

This research involved 355 New Zealand adolescents from four mixed-gender high schools in the Christchurch–Canterbury region. The High Schools selected comprised two small rural schools of about 300 pupils each, a larger rural school of about 600 pupils, and one large urban school of over 1500 pupils. For all four schools ethnic composition was predominantly of European descent and is displayed in Figures 4 to 7.

Decile ratings are based on 1 = low socio-economic, and 10 = high socio-economic. Details of decile rating were as follows:

Urban school = 6

Large rural school = 8

Small rural schools = 6 and 8

Participants comprised city and rural children of two age groups, which will be referred to as young and older children. Young children consisted of 168 girls and boys aged 13 and 14. There were 95 boys (19 rural, 76 city) and 73 girls (17 rural, 56 city). Older children included 187 girls and boys aged 17 and 18. In this group girls numbered 101 (33 rural, 68 city) and boys 86 (38 rural, 48 city).

All classes in the targeted age groups were approached and every pupil meeting the age criteria was given the opportunity to participate through a brief presentation (Appendix H). Participation involved convenience sampling- those students who chose to participate, and who were able to give informed consent. For the older children this required completion of a consent form (Appendix B) after reading an information sheet (Appendix C or D). Young children were first required to get parental consent, which required a completed consent form (Appendix E) after their parents had read an information sheet (Appendix F or G). The second information sheets (Appendix D and G) were used for rural schools, as a requirement by the Massey University Ethics Committee, when the study was extended to include rural schools. This approval required a small number of improvements.

As an inducement, each participant was allowed to keep the pen provided to complete the questionnaire. On completion of the questionnaire, each participant was given a chocolate. They also were entered into a draw for CD vouchers.

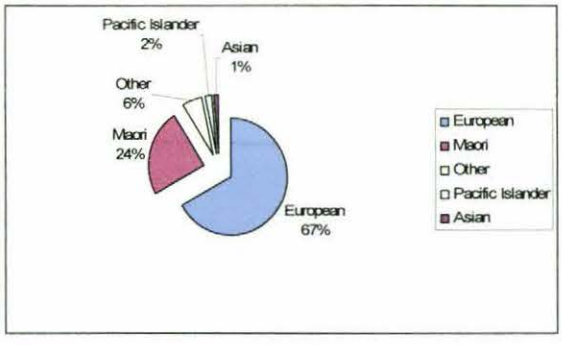


Figure 4. Composition of 13 and 14 year old boys.

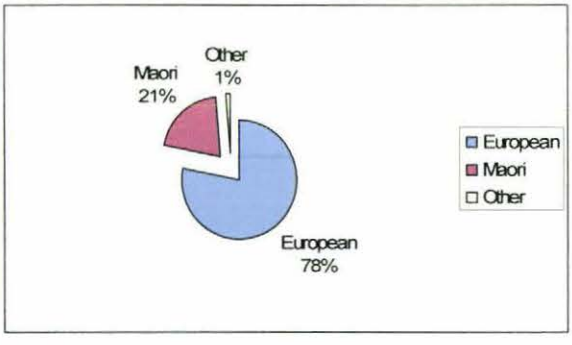


Figure 5. Composition of 13 and 14 year old girls.

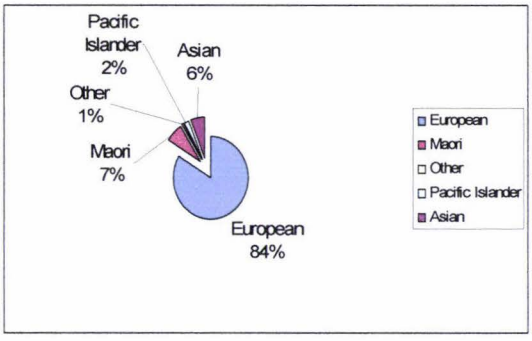


Figure 6. Composition of 17 and 18 year old boys.

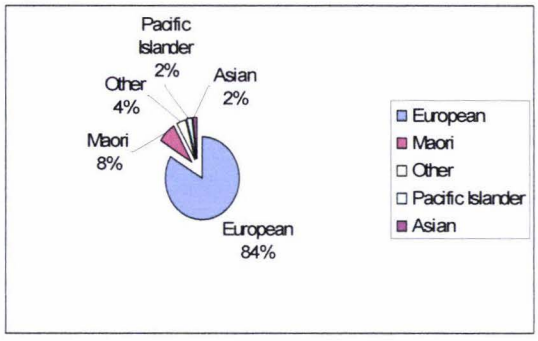


Figure 7. Composition of 17 and 18 old girls.

Measures

The BDI-II, CDS-Revised and PRQ assessment questionnaires were combined as one questionnaire (Appendix A.). This comprised 40 questions and took the participants between 5 and 10 minutes to complete.

Cynical Distrust Scale –Revised (Evans & Fitzgerald, unpublished)

The Cynical Distrust Scale-Revised (CDS-R), developed by Evans and Fitzgerald (2004), was used to assess hostility in this study. This revised model was an adaptation of the Cynical Distrust Scale (CDS) developed by Barefoot, Dodge, Peterson, Dahlstrom and Williams (1989). It involved language changes and the replacement of one item. These changes were made so this instrument would be suitable for testing New Zealand adolescents. Replacement of the item "when a boy is with a girl he is usually thinking about sex" was made following a preliminary study of the CDS in the Taranaki region. It was found that this item failed to discriminate among respondents. This has been replaced with the statement, "Those students who work hard in class are not really interested in the subject they are studying. They are

only interested in pleasing their parents and teachers." Factor analysis showing how well this item performed in this study, is set out in Appendix J.

The CDS was developed following realisation that hostility –more specifically cynicism and distrust, was one of the best predictors of cardiac problems. In addition, it was found from factor analysis of the Cooke-Medley Hostility Scales (CMS) –a popular measure of hostility, that suspicious alienation, cynical aggression, and justified mistrust accounted for 34.5% of the variance in hostility (Liehr, et al. 2000). Cynicism in fact was found to be the principle cognitive component in hostility (Mittag, 2004). The CMS was not used in this study as more recent research has shown this measure to be confounded by the nuisance variable of neuroticism (Eckhart et al., 2004). Hart & Hope (2004) found that the Cooke-Medley hostility scores accounted for 67% neuroticism. Recent studies involving use of the CDS include, research into psychological patterns related to coronary heart disease (Lisspers, Nygren, & Soderman, 1998) , and health behaviours and symptom load (Christensen et al., 2004).

The CDS-R, has been used in preference to the CDS, as it has been adapted for use with New Zealand adolescents. It is a self-report measure and uses the same adolescent version of question style as found in the Cook- Medley Hostility Scale. Participants are given a choice from five responses ranging from strongly agree to strongly disagree. This assessment tool is more user friendly as it is considerably shorter than the CMS involving only nine questions. These assess the level of distrust and cynicism in the participant. This has been marked based on strongly disagree = 0 to strongly agree = 4.

The Beck Depression Inventory II

This study has used Beck's Depression Inventory - II (BDI-II) as the self-assessment measure for depression. It is a user friendly, single symptom scale, comprising twenty-one questions and four different states. The first state in each question is normal functioning, the next mild depression, followed by moderate then severe. These are scored from 0 to 3 (3, being severe). The question scores are totalled – the maximum score attainable is 63. Score totals between 0-9 are considered normal, 10-18 mild-moderate depression, 19-29 moderate-severe depression and 30-63 extremely severe depression.

It has been used in this study as this involves a comparison between two age groups - one involving young adults. In addition, this measure has been found to be suitable for populations of age 13 and over (Plake & Impara, 1999). Steer Ball, Ranieri, & Beck (1999) found age to have no effect on the composition of factors for BDI-II. Only the symptom of lower self-esteem (or self-dislike) was found to be more associated with those of younger age. For the purposes of this study given the age and vulnerability of the participants, two questions, one involving suicide and the other on sex, have been excluded. Other changes made were of a superficial nature. These were improvements made to question headings- such as sadness (question 1) was reworded as happiness, in order to make this section of the questionnaire less negative-especially for adolescent participants.

The BDI II has also been used, as it is a revision of Beck's Depression Inventory-1A (BDI-1A), one of the most popular self-assessment methods for ascertaining depression severity. It therefore has a strong empirical base of over 40 years of

research. In addition, the BDI-II is an improvement on the BDI-1A. It includes four new symptoms and is now consistent with the Diagnostic and Statistical Manual of Mental Disorders (DSM 1V) diagnosis criteria for major depressive disorders. These new symptoms are agitation, concentration difficulty, worthlessness, and low energy. It also differs by excluding weight loss, work difficulty, image change and somatic preoccupation symptoms (Steer et al., 1999), items less related to depression. Beck, Steer, Ball and Ranieri, (cited in Steer et al., 1999) found the coefficient alphas for the BDI-1A and BDI-II in a study of outpatients to be 0.89 and 0.91 respectively.

Beck's depressive inventory 1A on which BDI-II is based, has been found to be similar in content to a depressed subjects state, and to effectively measure depression (Mark, Sinclair, & Wellens, 1991). Bergin and Garfield (1994) report that some studies investigating potential prognosis indicators of outcome have found the BDI to be clearly the best predictor of outcome. They also conclude from their research that it is one of the most commonly used self-report outcome measures. Beck, Steer and Brown (1996) have found the BDI-II to have internal consistency of 0.92 (outpatients) and 0.93 (college students), and construct validity of 0.93 when compared to the BD1-1A. Content validity is high as the BD1-II was developed to meet the criteria for depression set out in DSM -1V. Tests-Retest reliability was found to be 0.93. Plake and Impara (1999) report concurrent validity of 0.71 with the Hamilton Psychiatric Rating Scale for Depression-revised. Factor analysis of the BDI II measures has shown communalities to range from 0.71 to 0.82 and to be indicative of strong symptoms such as intropunitiveness (Ward, 2006).

Peer Relations Questionnaire

The peer relations questionnaire (PRQ) for children developed by Rigby & Slee (1992) is a twenty question assessment tool composed of a bully scale for identifying bullies – six questions, a victim scale identifying victims - five questions, and a pro-social scale measuring co-operative children - four questions. These scales are factorially distinct supporting the presence of the three dimensions with internal consistency reliability (Crothers & Levinson, 2004). Rigby and Slees also developed a shortened twelve-question version without filler items and comprising equal numbers of questions for each dimension from the twenty-question tool. The items included were the four items with the highest loadings on each factor – all exceeding 0.6. Reliability of the three 4-item scales was measured using alpha coefficients. These were tendency to bully 0.75 (school A) 0.78 (school B), victimized 0.86 (school A) 0.78 (school B), pro-social 0.71 (school A) and 0.74 (school B) (Rigby & Slee, 1993). The PRQ is a self-report measure with each response scored on a four-point scale; the higher the score indicating a greater frequency (Slee, 1995).

Procedure

Classes, which met the age criteria at each of the schools, were approached in class time. The researcher explained that the research was collecting information on what young adults thought and felt, and their relationships with others. They were invited to participate and given information sheets about the research. The same presentation was given to each class for the purposes of internal consistency (Appendix H). Those aged 13 and 14 (or in their thirteenth year) who wished to participate, were given information sheets and consent forms to take home for their parents to read and sign (Appendix C & D). Students aged 17 (or in their seventeenth year) and 18 were given

CHAPTER 7

Results

These findings show the relationships between hostility, depression and bullying, and the affects of age and gender.

Hostility

Participants were measured for hostility using the Cynical Distrust Scales (Revised). Each of the nine questions was scored on a possible score of 0 to 4. Largest possible score achievable was therefore 36. Reliability of this measurement was confirmed using Cronbachs Alpha and was as follows: Older city girls 0.714 and boys 0.773, younger city girls 0.782 and boys 0.657, older rural girls 0.799 and boys 0.729, and younger rural girls 0.889 and boys 0.730.

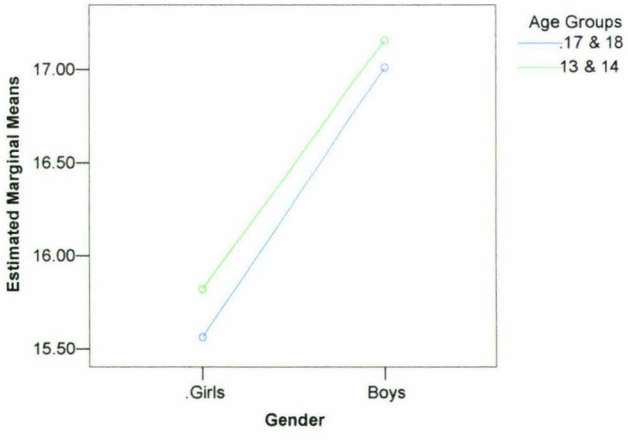


Figure 8. Estimated marginal means for age and gender effects on hostility. Biggest difference is in the estimated marginal means for gender.

A two-way ANOVA test (Figure 8, and Table 1) was significant at .05 (F 3.179) confirming age and gender differences.

Table 1 Levene's Test of Equality of Error Variances (a) for Hostility

Dependent Variable: Hostility

F	df1	df2	Sig.
3.179	3	351	.024

a Design: Intercept+Gender+Age+Gender * Age

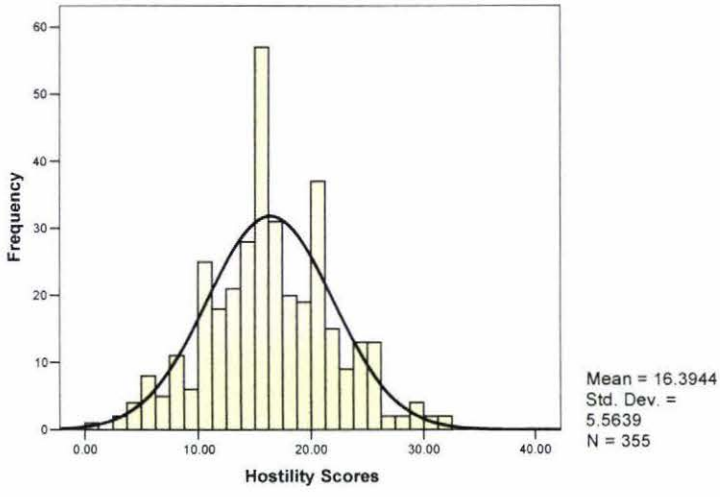


Figure 9. Hostility scores and distribution for the 355 school children. This is a normal distribution.

The frequency distribution chart of total participants (Figure 9) shows hostility to be of a symmetrical distribution. This is also reflected in the closeness of the mean (16.394) and median (16.00). In addition, the histogram is close to the normal curve, the standard deviation is 5.56 and there is little skewness (0.039). Comparison of group frequency distributions (Figures 11-14), shows some variance in the mean and

standard deviation. The largest standard deviation (6.59) is for the younger girls (Figure 11) and the lowest (4.75) is for the younger boys (Figure 12) - younger boys showing less variance. As shown in Figure 10 boys in both age groups have the highest mean.

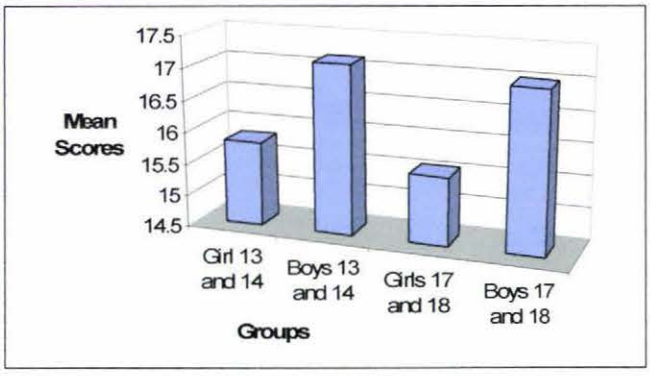


Figure 10. Hostility mean scores for the groups sampled.

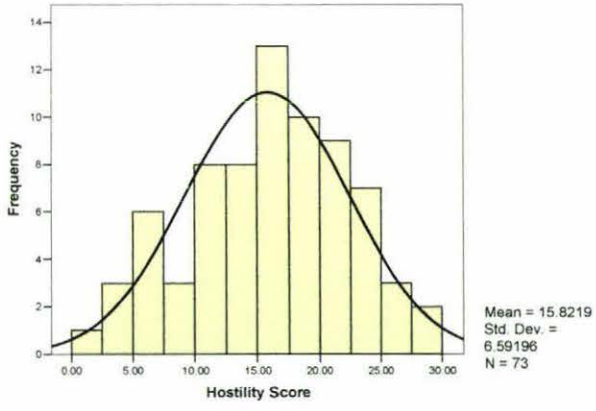


Figure 11. Hostility scores and frequency distribution for girls aged 13 and 14. Girls have more variance as a group.

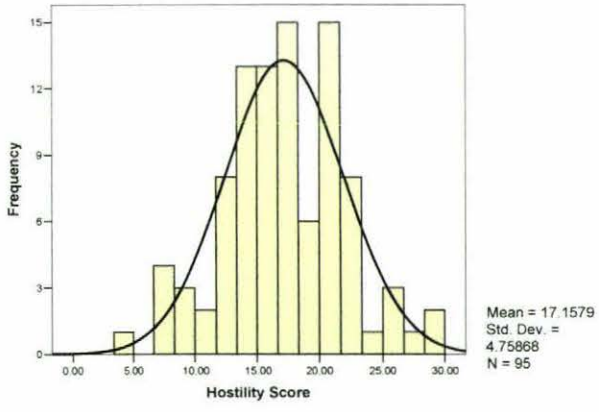


Figure 12. Hostility scores and frequency distribution for boys aged 13 and 14. Shows higher hostility at lower levels.

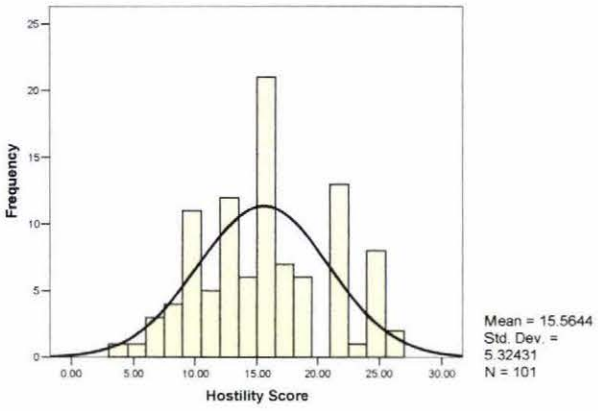


Figure 13. Hostility scores and frequency distribution for girls aged 17 and 18. Girls show greater variance to boys.

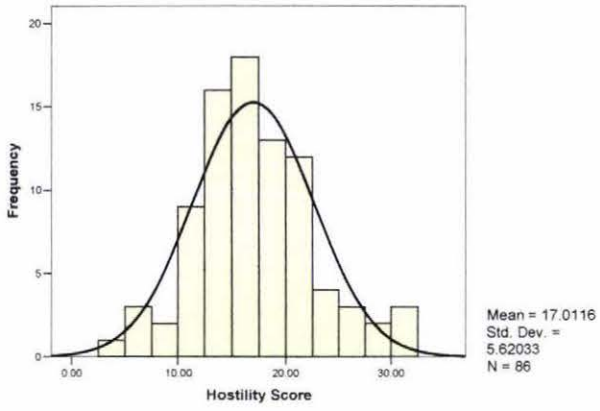


Figure 14. Hostility scores and frequency distribution for boys aged 17 and 18. Boys have greater consistency.

Depression

The BDI II was used to measure depression levels. In the course of collecting data, one participant was identified from the answers given as being suicidal. Given that the questionnaires were anonymous, I was unable to identify the participant apart from their age and gender. This information was given immediately to the school.

Reliability of data collected was measured using Cronbachs Alpha. Correlations were very high, and for city students were: older boys 0.910, younger boys 0.904, older girls 0.861, younger girls 0.883. Rural students were: older boys 0.851, younger boys 0.797, older girls 0.917, and younger girls 0.920. A two-way ANOVA test (Figure 15 and Table 2) confirmed gender and age differences for depression (F =1.544). Gender-depression (0.027) and age-depression (0.012) were found to be significant at .05 on one-way ANOVAs.

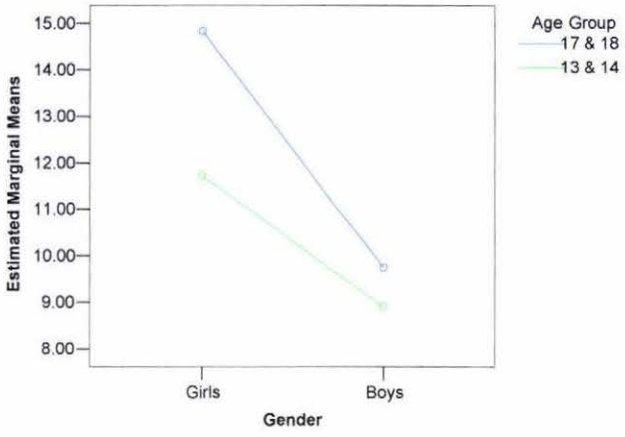


Figure 15. Estimated marginal means for age and gender effects on depression. The two age groups of girls are shown to have large mean differences.

Table 2 Levene's Test of Equality of Error Variances (a) for Depression

Dependent Variable: Depression

F	df1	df2	Sig.
1.544	3	351	.203

a Design: Intercept+Gender+Age+Gender * Age

The frequency distribution for total participants (Figure 16) was found to be asymmetrical with a 1.293 skewness. There was also a large difference between the mean (11.38), and the median (9.00) and mode (8.00). The standard deviation (8.88) was quite large. Group frequency distributions (Figures 18-21) when compared were dissimilar with large differences in means (Figure 17), standard deviations and skewness. The highest mean for depression (14.84) was for the older girls. Given the high skewing due to extreme scores, the medians of 13 (older girls), 8 (older boys),

9 (younger girls), and 7 (younger boys) would be a better representation (compared to the mean) for each group. Standard deviations were also high for each group; the highest (9.16) being for the younger girls.

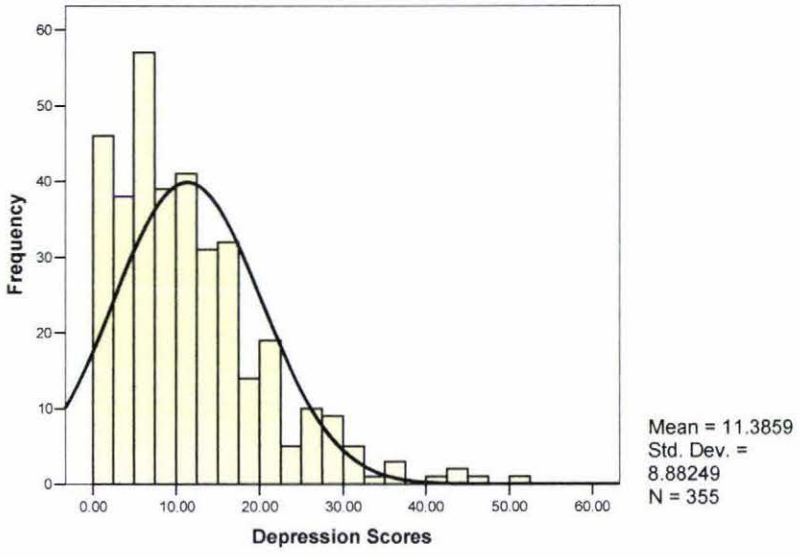


Figure 16. Depression scores and frequency distribution for the 355 school children. This shows large variance.

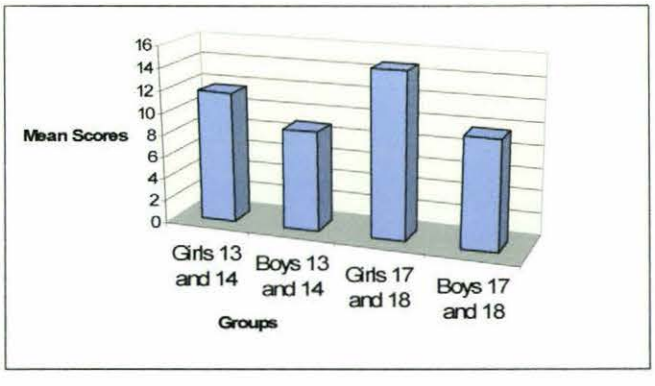


Figure 17. Depression mean scores for the groups sampled.

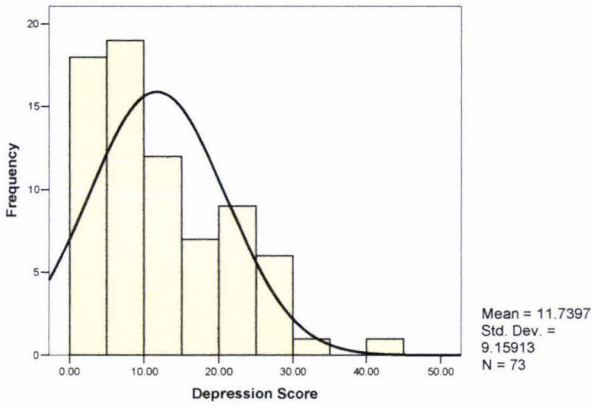


Figure 18. Depression scores and frequency distributions for girls aged 13 and 14. Shows greater variance and skewness.

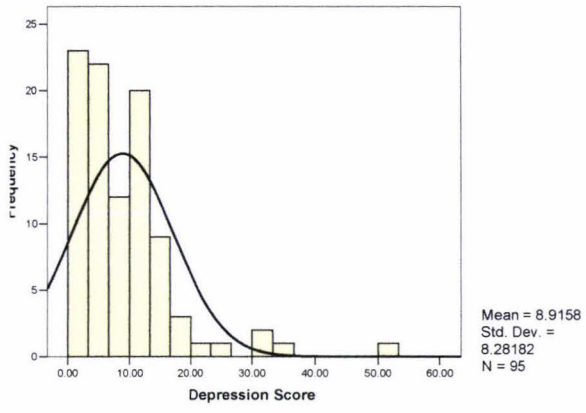


Figure 19. Depression scores and frequency distributions for boys aged 13 and 14. Some extreme cases but less variance.

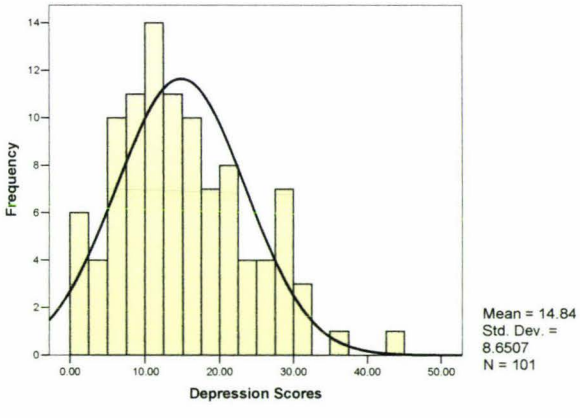


Figure 20. Depression Scores and Frequency distributions for Girls Aged 17 and 18. Greater variance for girls, but a lower standard deviation compared to the young girl group.

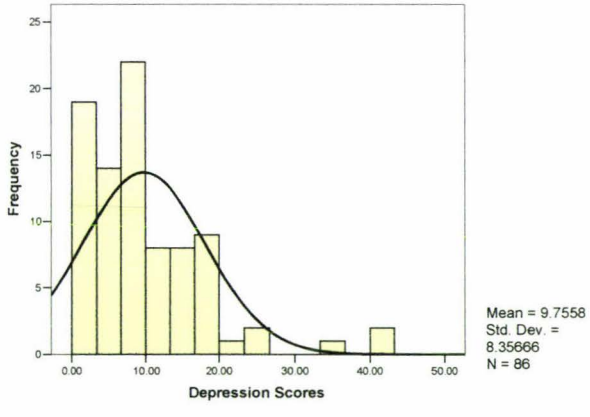


Figure 21. Depression Scores and Frequency distributions for Boys Aged 17 and 18. Less variance than girls, but a higher mean compared to the younger boy group.

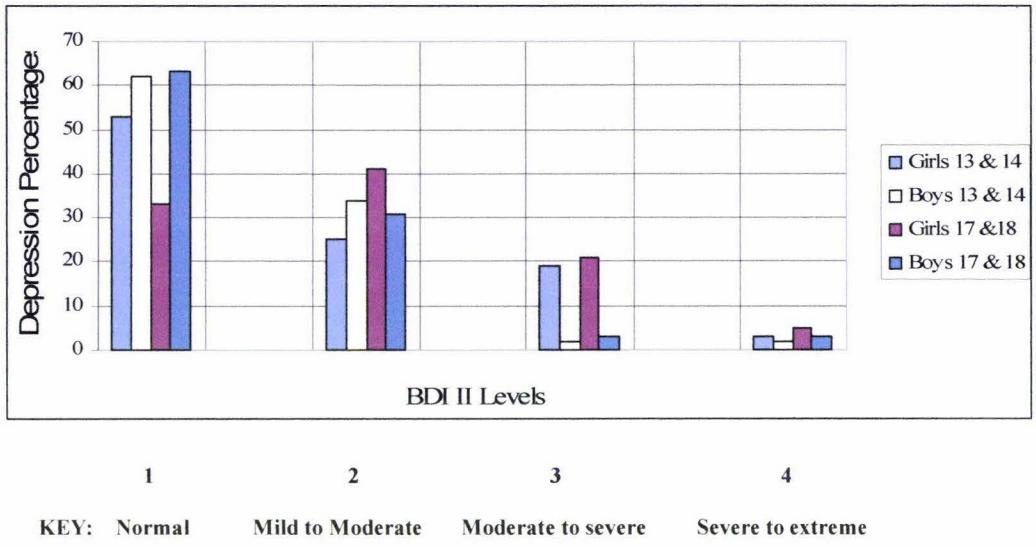


Figure 22. BDI II measurement comparison of depression in total participants.

BDI II assessment results (Figure 22) are set out under the four levels for depression based on the 21-question assessment tool. This shows depression to be high for both boys and girls. Both groups of girls reported higher depression and this was most noticeable in the moderate to severe range. Ten children scored in the extremely severe range. Highest depression was found at the city school, though high depression levels were also found for rural schools. Girls at the rural schools reported lower depression compared to their city counterparts. Those identified as severe to extreme comprised two boys and two girls in the 13 and 14-year-old age group, and two boys and four girls in the 17 and 18-year-old group.

The high prevalence of depression found can be explained using factor analysis. Applying Principal Component Analysis- the extraction method (Appendix I), all factors scored highly from 0.529 (except appetite 0.382) to 0.705 showing a strong relationship to depression (component 1). However, two factors –appetite and sleep, were found to have high correlations for the two competing components (components 2 and 3) as set out in Figure 23. The component plot shows these to be outliers, and Figures 24 and 25 show them to contribute largely to the depression scores. This would suggest high depression levels found might be confounded by other components possibly adolescent related.

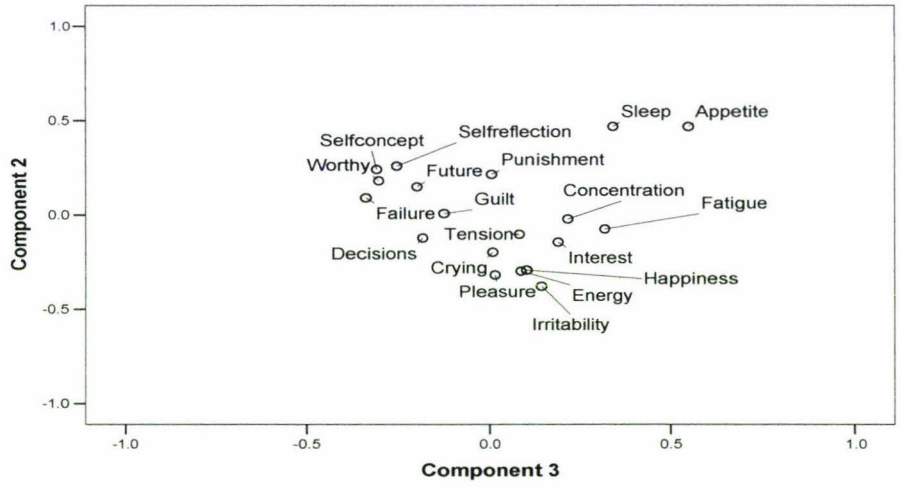


Figure 23. Component plot for the BDI II scores for 355 school children. This shows the 19 items of the BDI II when correlated to the competing components. All items except for sleep and appetite show weak correlations.

Depression Measures

Beck Depression Inventory responses (Figures 24 and 25), show girls in both groups to have higher means for most depression measures. Young girls were higher in every category compared to young boys except for the measures of pleasure, energy and failure. Apart from the measure of punishment, older girls similarly scored higher means, when compared to their male counterparts. All four groups were found to have their highest mean scores in appetite, concentration and sleep. The older groups and younger girls also had high mean scores for self-reflection. These scores were: older girls (0.990), older boys (0.6279), and young girls (0.7260). Lack of happiness, was found to be the most common problem experienced by girls being experienced by 75% (0.7651 mean) and 87% (0.8514 mean) of the young and older girls respectively. However, comparison to higher mean scores in areas such as appetite, sleep, concentration and self-reflection would suggest this problem to be less troublesome and to be generally experienced at a mild level.

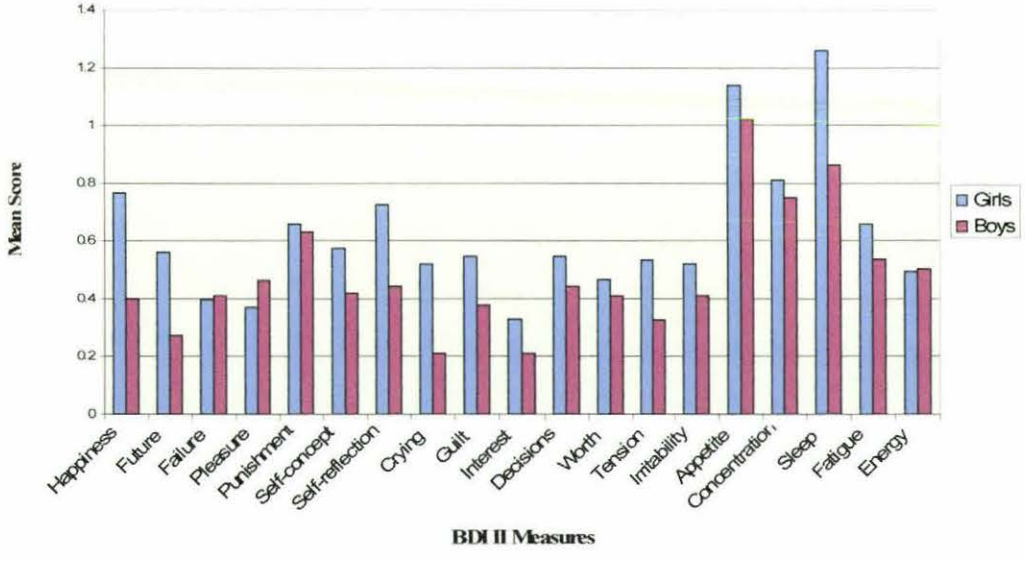


Figure 24. Comparison of Depression measures for school pupils aged 13 and 14.

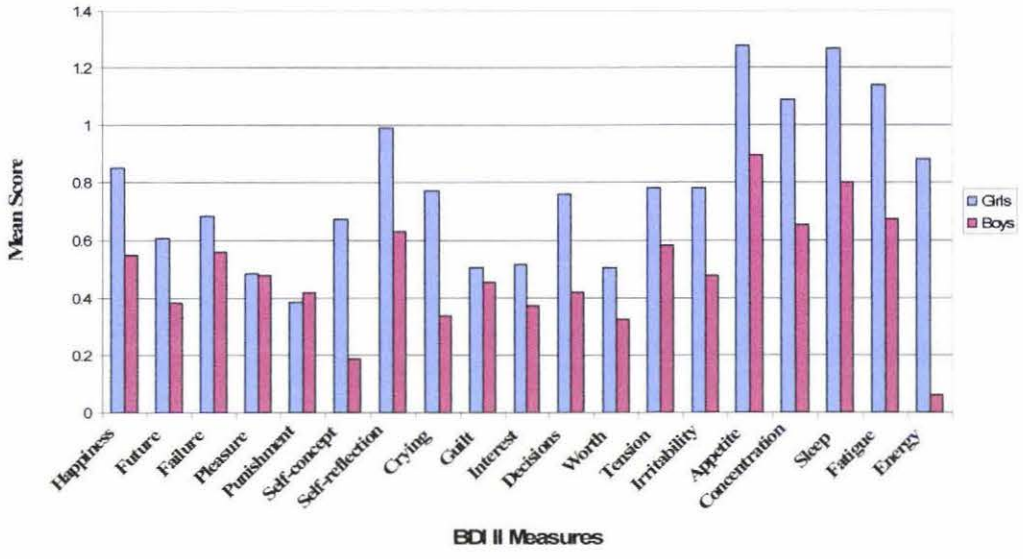


Figure 25. Comparison of Depression measures for school pupils aged 17 and 18.

Bullying

The PRQ was used to measure bullying. Four questions set out to identify bullies. These comprised questions on teasing, and scaring others, upsetting wimps, and fighting. A two-way ANOVA (Figure 26 and Table 3) confirmed gender and age differences for bullying (F=8.664). For girls there was a big mean difference in bullying as shown in Figure 28. The two groups of boys were very close in means for bullying.

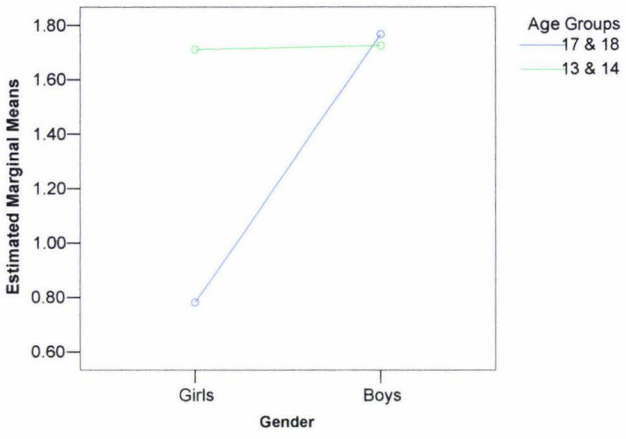


Figure 26. Estimated marginal means for age and gender effects on bullying. This shows large age difference for girls.

Table 3 Levene's Test of Equality of Error Variances (a) for Bullying

Dependent Variable: Bullying

F	df1	df2	Sig.
8.664	3	351	.000

a Design: Intercept+Gender+Age+Gender * Age

Reference to the frequency distribution chart for total participants (Figure 27) shows a high number of participants claiming to have never bullied. The distribution here is symmetrical with a low standard deviation of 1.916 and skewness of 1.715. The mean score of 1.4648 has a low standard error of .1017. Median of 1 compared to the mean score would suggest there are some extreme cases of bullying. Mean bullying scores (Figure 28) were young girls 1.7120, boys 1.7263, older girls .7822 and boys 1.7674.

Frequency distributions (Figures 29-32) show considerable differences between the groups. For young girls the high mean for bullying, is explained by a high skewness

(1.820) showing the mean to be distorted by extreme cases. Bullying here is in fact mainly at a low level. The standard deviation for this group (2.300) is also higher for this group. The younger boys in comparison show a greater consistency of bullying particularly at a medium level. Both younger groups have higher standard deviations.

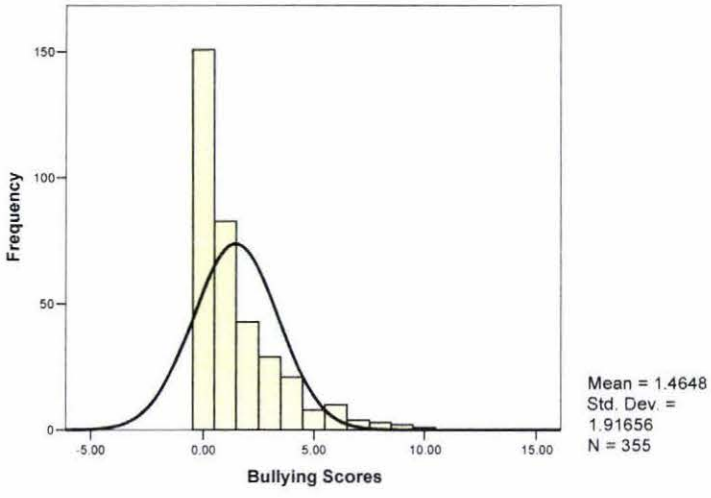


Figure 27. Bullying scores and frequency distributions.

for 355 school children.

Older girls (Figure 28) have the lowest bullying mean (0.7822) and this similarly to young girls, has been distorted by some extreme scores. The mean error is also high at 0.1317. Skewness is high at 2.734, while the standard deviation (1.3236) is the lowest for all four groups. Older boys have the highest mean (1.7674), but this is reflected in low level bullying with numbers involved in higher bullying levels falling away quickly. Standard error for the mean (0.1968) is high.

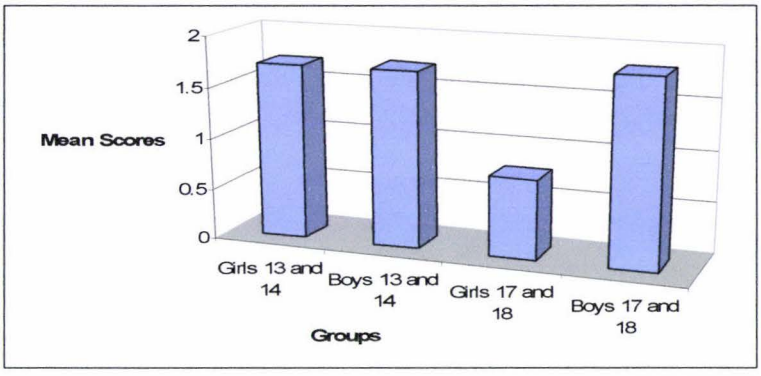


Figure 28. Bullying mean scores for the groups sampled. Older girls are shown to bully much less.

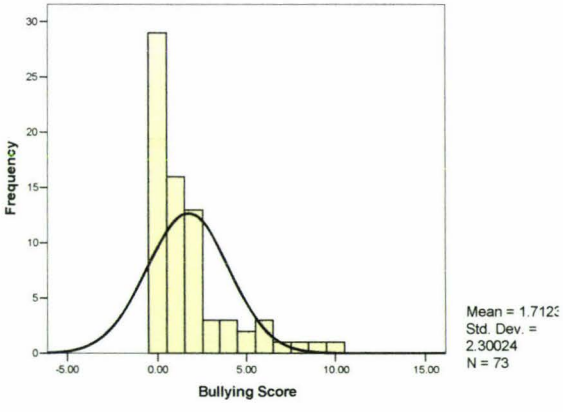


Figure 29. Bully scores and frequency distributions for girls aged 13 and 14.

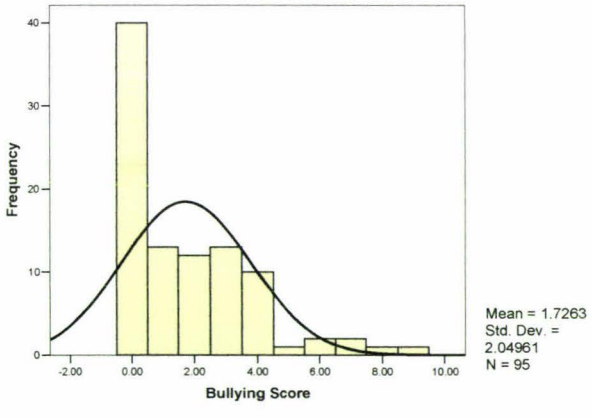


Figure 30. Bullying scores and frequency distributions for boys aged 13 and 14.

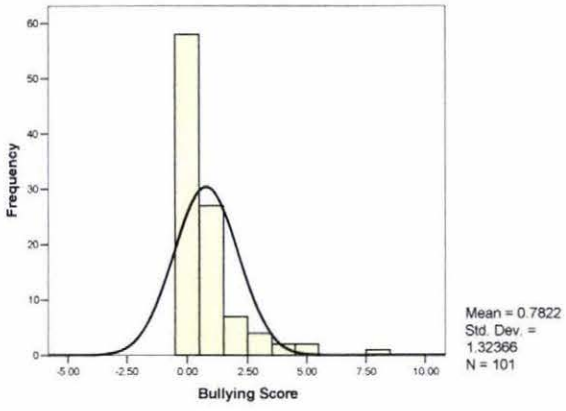


Figure 31. Bully scores and frequency distributions for girls aged 17 and 18.

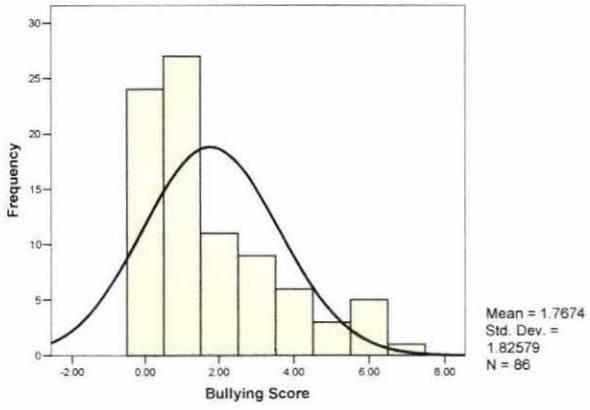


Figure 32. Bullying scores and frequency distributions for boys aged 17 and 18.

Table 4 Group Percentages for PRQ Measures on Bullies

PRQ self report	**Percentage of boys aged 13 and 14**	**Percentage of boys aged 17 and 18**	**Percentage of girls aged 13 and 14**	**Percentage of girls aged 17 and 18**
Bullies-mild(score 1-4)	44%	55%	45%	30%
Bullies-other levels(score 5-12)	12%	15%	12%	4%
Tease others sometimes	29%	33%	30%	17%
Tease others often	4%	5%	7%	2%
Scare others sometimes	33%	36%	31%	21%
Scare others often	12%	13%	4%	2%
Upset wimps sometimes	19%	21%	14%	6%
Upset wimps often	12%	13%	10%	2%
Fight sometimes	16%	17%	14%	10%
Fight often	3%	3%	10%	2%

Victims

Participants reported themselves as being victims in four questions of the PRQ. These consisted of: called names, being picked on, made fun of and pushed around. Means found for victims (Figure 35), were: young girls 3.137 and boys 3.484, and older girls 2.505 and boys 2.2326. Of note is the reduction of the mean with age for both genders. A significant age and gender differences at 0.05 level were found using a two way ANOVA (Figure 33 and Table 5) for victims (F=4.642) especially between the two groups of boys.

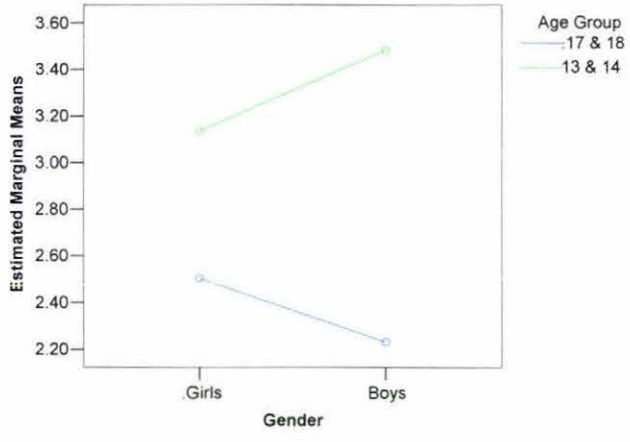


Figure 33. Estimated marginal means for age and gender effects on victims. Shows large age and gender differences.

Table 5 Levene's Test of Equality of Error Variances (a) for Victims

Dependent Variable: Victim

F	df1	df2	Sig.
4.642	3	351	.003

a Design: Intercept+Gender+Age+Gender * Age

The frequency distribution for total participants (Figure 34) is symmetrical with about 80% of the participants claiming to be a victim. There was some skewness (1.159). The mean (2.831) is very close to the median (3.000) and mode (3.000) indicating a low level of extreme cases. The standard deviation is small at 2.3625. Group comparisons (Figures 36-39) show that for young girls and boys, there are greater numbers experiencing more frequent victimisation; this accounting for higher mean scores. Both groups of girls show less skewness (young 0.605 and older 0.743) compared to boys (young 1.083 and older 1.503).

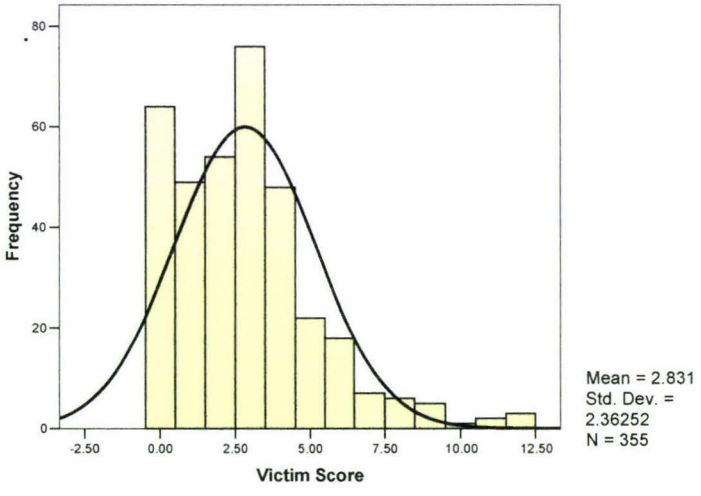


Figure 34. Victim scores and frequency distributions for 355 school children. Shows normal distribution with a small number of extreme cases.

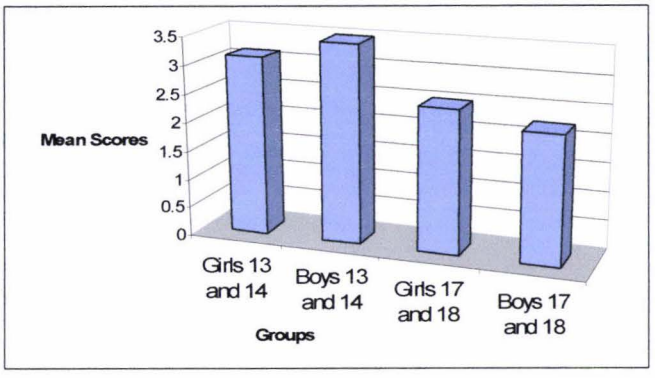


Figure 35. Victim mean scores for the groups sampled.

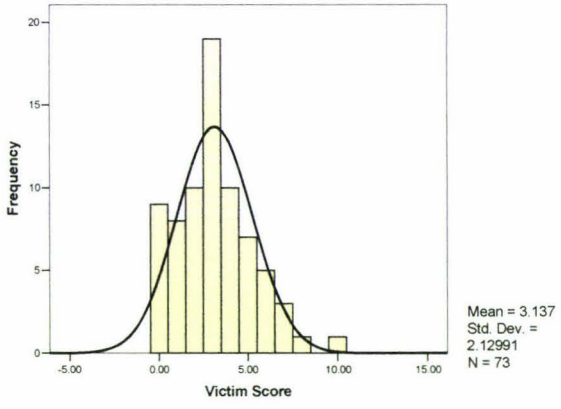


Figure36. Victim scores and frequency distributions for girls aged 13 and 14. Graph displays low variance.

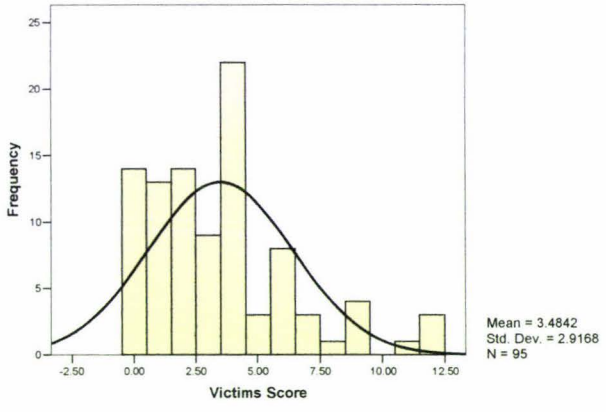


Figure 37. Victim scores and frequency distributions for boys aged 13 and 14. This is the largest variance compared to the other groups.

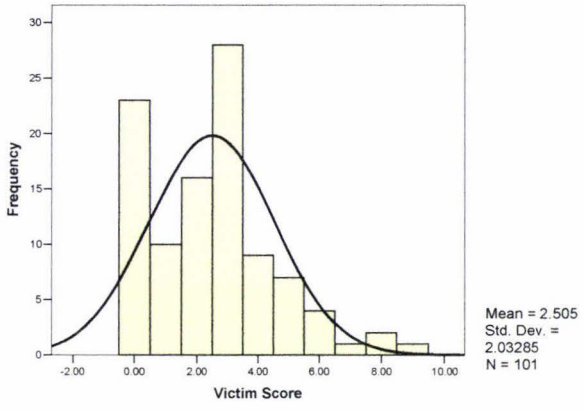


Figure 38. Victim scores and frequency distributions for girls aged 17 and 18. More variance compared to male counterparts.

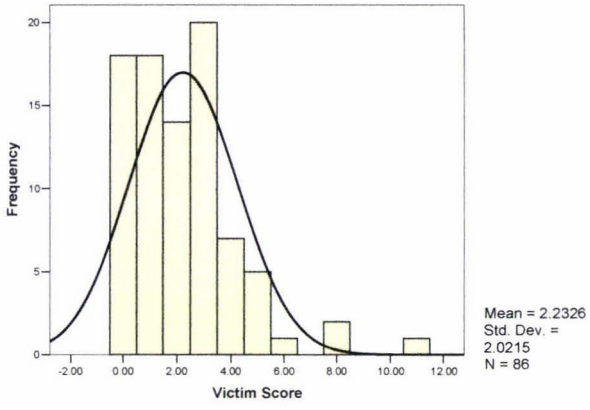


Figure 39. Victim scores and frequency distributions for boys aged 17 and 18. Victims are concentrated at low levels.

Table 6 Group Percentages for PRQ Measures on Victims

PRQ self report	**Percentage of boys aged 13 and 14**	**Percentage of boys aged 17 and 18**	**Percentage of girls aged 13 and 14**	**Percentage of girls aged 17 and 18**
Physical, verbal, Psychological (score 1-4)	38%	60%	53%	45%
Physical, verbal, psychological (score 5-12)	47%	19%	34%	19%
Called names once and while	57%	55%	56%	44%
Called names often	19%	15%	29%	12%
Picked on once and a while	38%	45%	55%	47%
Picked on by others-often	26%	6%	12%	6%
Make fun of some times	42%	44%	62%	48%
Make fun of often	14%	8%	10%	7%
Pushed around once in a while.	29%	12%	27%	12%
Pushed around often.	18%	6%	4%	2%

Pro-social

The PRQ questionnaire has four questions assessing the participant's pro-social level. These are: I like to make friends, help people being harassed, share with others, and enjoy helping others. The highest score of 12 reflects the highest level of social skills measured. A two way ANOVA (Figure 40 and Table 7) confirmed at a .05 level of significance age and gender differences for pro-social (F= 3.336). The largest difference for pro-social was for gender. The two groups of boys were found to be very close in mean scores. Mean scores for the groups (Figure 42) were: young girls 7.8767 and boys 6.6000, and older girls 8.3168 and boys 6.6512.

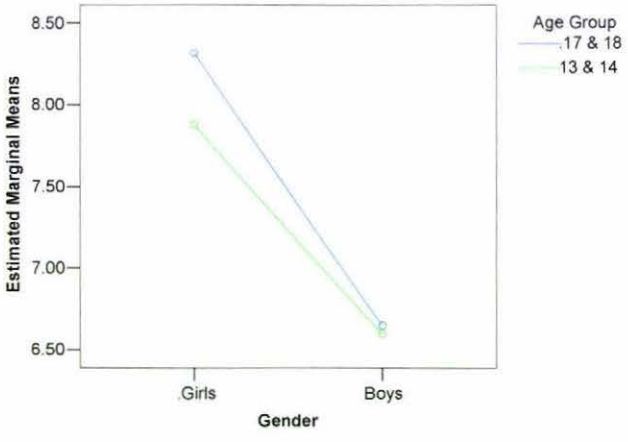


Figure 40. Estimated marginal means for age and gender effects on pro-social. Largest difference is shown to be in gender.

Table 7 Levene's Test of Equality of Error Variances (a)

Dependent Variable: Prosocial

F	df1	df2	Sig.
3.336	3	351	.020

a Design: Intercept+Gender+Age+Gender * Age

The frequency distribution (Figure 41) is symmetrical with the mean for the total group (7.3634) being very close to the median (7.000) and mode (7.000). Both groups of girls (Figures 43 and 45) show a greater concentration compared to boys (Figures 44 and 46) in the higher levels of this pro-social measure.

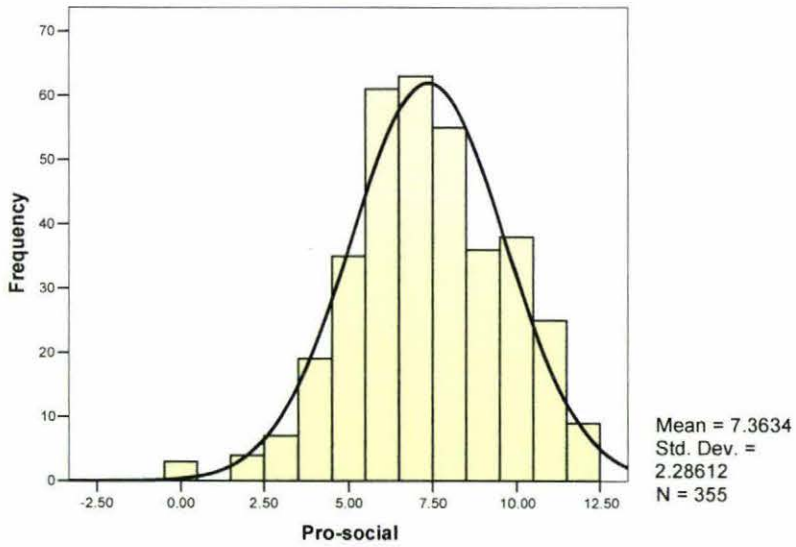


Figure 41. Pro-social scores and frequency distribution for 355 school children. The mean for the children is shown to be high.

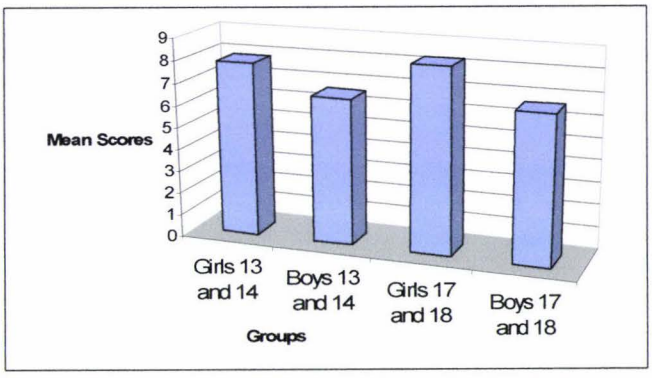


Figure 42. Pro-social mean scores for the groups sampled.

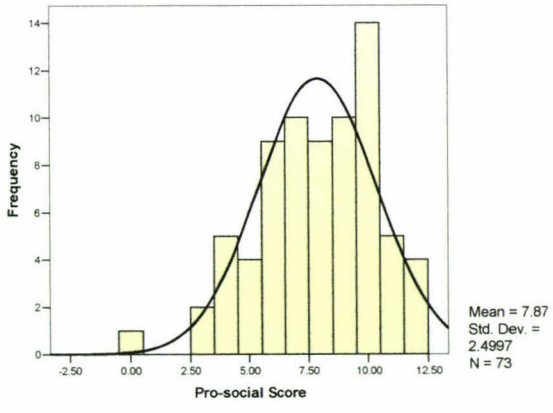


Figure 43. Pro-social scores and frequency distributions for girls aged 13 and 14.

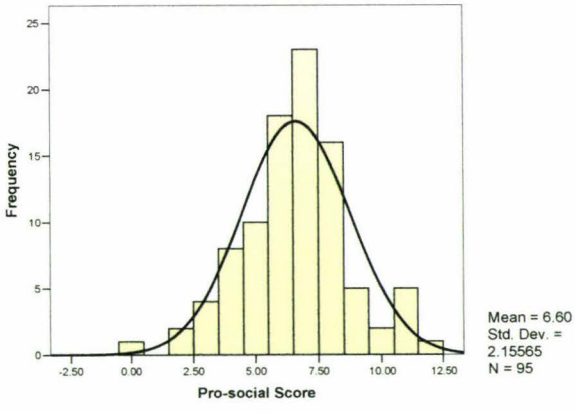


Figure 44. Pro-social scores and frequency distributions for boys aged 13 and 14.

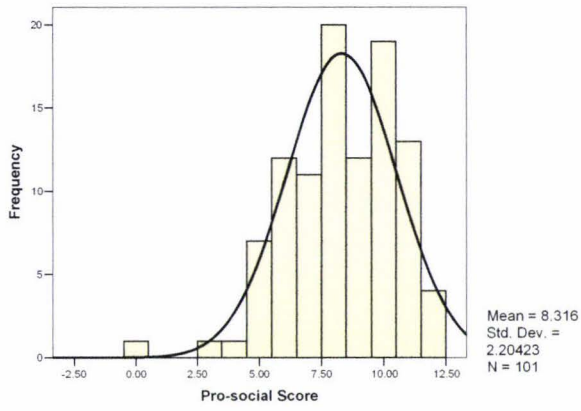


Figure 45. Pro-social scores and frequency distributions for girls aged 17 and 18.

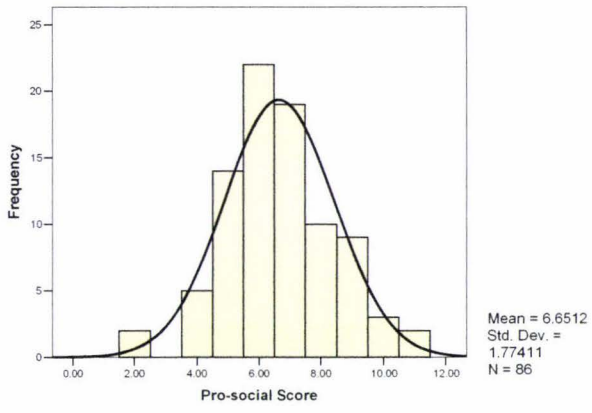


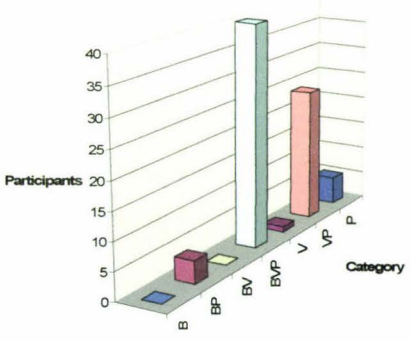
Figure 46. Pro-social scores and frequency distributions for boys aged 17 and 18.

Table 8 Group Percentages for PRQ Measures on Pro-social

PRQ self report	**Percentage of boys aged 13 and 14**	**Percentage of boys aged 17 and 18**	**Percentage of girls aged 13 and 14**	**Percentage of girls aged 17 and 18**
Low Pro-social (1-6)	43%	49%	27%	52%
High Pro-social (7-12)	53%	51%	73%	29%
Make friends	32%	30%	20%	18%
Make friends often	68%	56%	80%	79%
Help harassed	64%	47%	30%	37%
Help harassed often	32%	36%	63%	62%
Share	25%	23%	14%	16%
Share often	75%	58%	86%	79%
Help others	43%	31%	25%	8%
Help others often	57%	52%	71%	88%

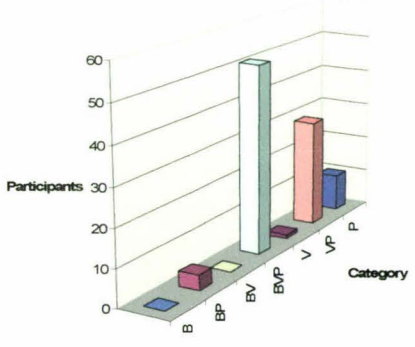
Bullying, Victims and Pro-social Compared

Age difference for both boys and girls was found to account for changes in bullying patterns. Self-reported bullies for boys comprised 56% of the 13 and 14 year olds, and 70% of the 17 and 18 year olds (Table 4). Difference was most evident in the type of bullying and frequency. This is supported by mean comparisons. Older boys compared to those in the 13 to 14 age group were shown (in Figures 51 and 52) to fight less (0.2906, 0.3578), though were more likely to scare others (0.6627, 0.5052), tease others (0.4186, 0.4105) and upset wimps (0.6627, 0.5052). As victims older, compared to younger boys reported much less frequent and physical bullying. Fewer experienced being hit and pushed around (0.1976, 0.6736), picked on (0.5116, 0.8842), made fun of (0.6279, 0.8000) and called names (0.8837, 1.0947). A higher number of the older boys reported being both a bully and victim, and had high representation as both bullies and victims (BV), and bullies, victims and pro-social (BVP). A number of the older boys were just victims and pro-social (VP), (Figures 50). Younger boys (Figure 48) similarly showed high representation in the BVP, and VP categories. Pro-social scores were found to be slightly higher for the older boys.



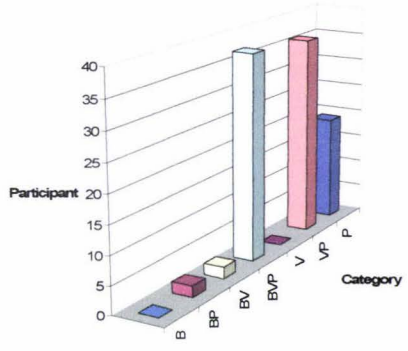
Key: B= Bully V= Victim P= Pro-social

Figure 47. Comparison of bullying, victim and pro-social groupings for Girls Aged 13 and 14.



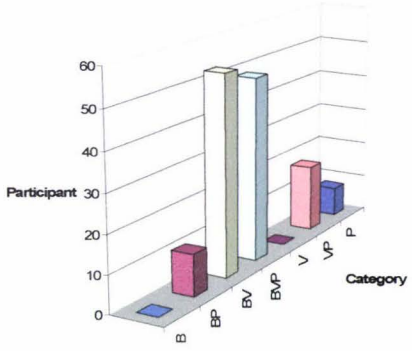
Key: B= Bully V= Victim P= Pro-social

Figure 48. Comparison of bullying, victim and pro-social groupings for boys aged 13 and 14.



Key: B= Bully V= Victim P= Pro-social

Figure 49. Comparison of bullying, victim and pro-social groupings for girls aged 17 and 18.



Key: B= Bully V= Victim P= Pro-social

Figure 50. Comparison of bullying, victim and pro-social groupings for boys aged 17 and 18.

Girls, particularly the older group also reported different patterns of bullying. Only 34% identified themselves as being involved in some type of bullying, compared to 57% of the younger girls (Table 4). Mean score comparisons (Figure 52) are lower for the older girls in teasing (0.2376, 0.4657), scaring others (0.2772, 0.452), upsetting wimps (0.099, 0.3698) and in fighting (0.1683, 0.4109). For older girls the BVP group remained strongly represented, but it was matched in numbers by those in the VP category (Figure 49). Unlike the 17-18 year old boys there were only a small number of older girls as only bullies and victims. There were also a large number of participants who were just Pro-social. As victims only 14% of the older group said they had been physically bullied against 31% of younger girls (Table 6). Experiences of verbal bullying were also much lower than that for the 13 and 14 year olds. While

the older group findings suggest a more mature pro-social approach to their peers in reduced bullying, this has not been reflected in their pro-social responses to things such as sharing and helping others (Table 8). Only 29% recorded a high pro-social score, compared to 73% of the younger girls. In the younger girl group (Figure 47), 54% were bullies, victims and pro-social combined. Another large combination for this group was those who were only victims and pro-social (VP). This group made up 32%. Younger girls were found to have a mean close to their male counterparts (Figure 35). They were also found (Figure 51) to have a higher mean for fighting (0.4109, 0.3578) and upsetting wimps (0.3698, 0.4105). Both groups of girls were shown to be more pro-social when compared to boys (Table 8).

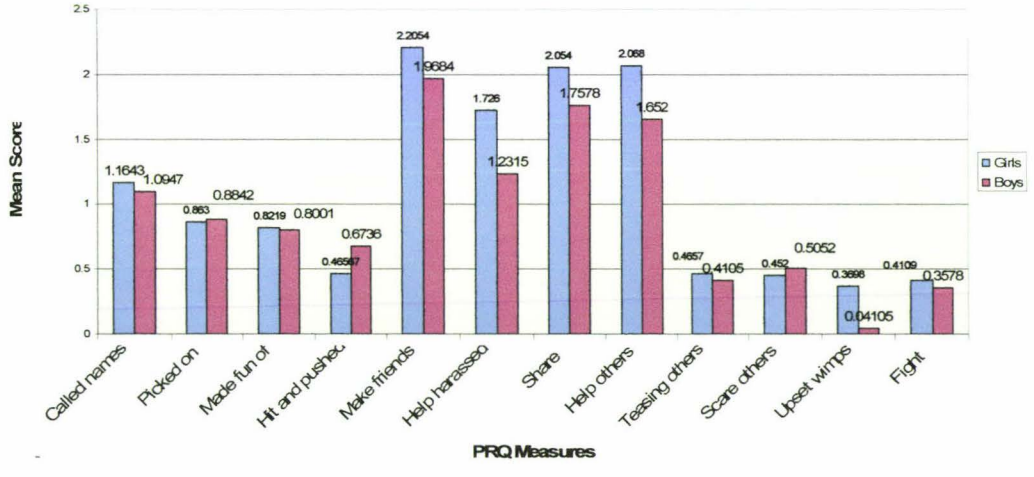


Figure 51. PRQ mean scores for boys and girls aged 13 and 14.

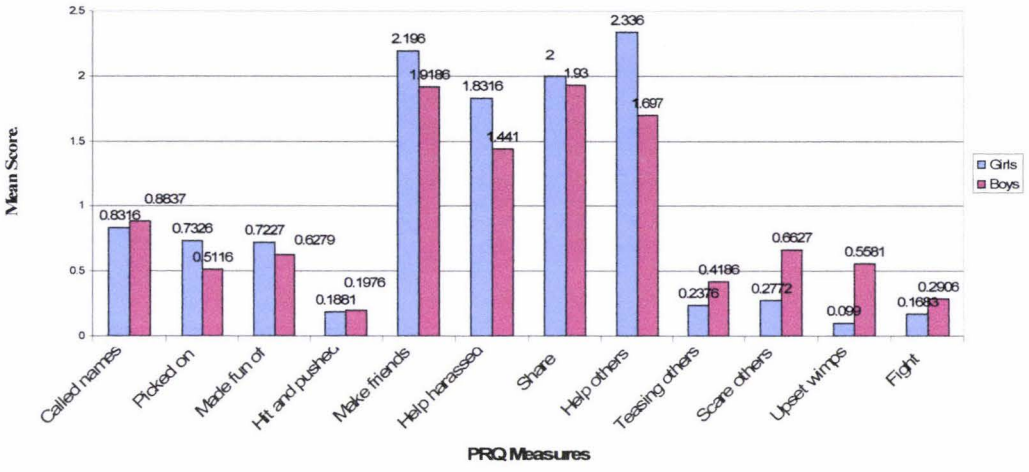


Figure 52. PRQ mean scores for boys and girls aged 17 and 18.

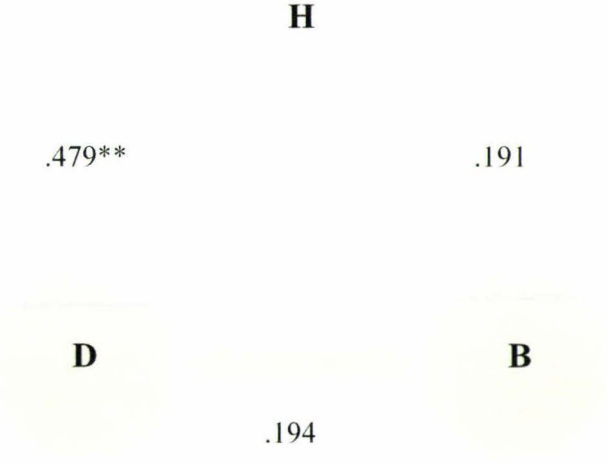
Inter-Group Comparisons

The relationships of hostility, depression and bullying were measured using Pearson's r. A total group comparison (Table 9) shows a high hostility-depression correlation of 0.473 with significance of $p<.01$. The hostility-bullying relationship is of a smaller magnitude of 0.271 but is also significant with $p<.01$. There are also high correlations for hostility-victims (0.348) and hostility- pro-social (-0.269). Depression and victims (0.309), and bullying and victims (0.280) also are shown to be correlated. The bullying-victim relationship was also shown in Figures 47 to 50. Pro-social shows only very small relationships to victims and depression. However, the negative correlation with bullying is significant at $p<.01$. Depression and bullying are also significantly correlated.

Table 9 Total Group Intercorrelations Between Hostility, Bullying, Victims and Pro-social

	Hostility	Depression	Bullying	Victims	Pro-Social
Hostility	-	.473**	.271**	.348**	-.269**
Depression	-	-	.142**	.309**	-.062
Bullying	-	-	-	.280**	-.150**
Victims	-	-	-	-	-.044
Pro-Social	-	-	-	-	-

Key: * = p < .05, ** =p < .01



Key: * = p < .05, ** =p < .01

Figure 53. Correlations for girls aged 13 and 14 for hostility, depression and bullying.

Correlations for the various groups show differences due to age and gender. Girls in the 13 and 14 year old group are shown to have a hostility-depression correlation of 0.479 (Figure 53) which is higher than the correlation for the total group. The hostility-bullying and depression-bullying correlations are not significant. Hostility-victim (0.405) and depression victim (0.540) correlations (Table 10) are high and significant $p<.01$. For boys in the 13 and 14 year old group (Figure 54) all three correlations: hostility-depression (0.446), hostility-bullying (0.308) and bullying-depression (0.288) are significant $p<.01$. Other correlations (Table 11) all show some large differences when compared to girls of the same age group. Apart from the small negative correlation for bully-pro-social, all other correlations are at.01 significance. Of particular note are the high negative correlation for depression and pro-social (-0.389) and large correlations for hostility-pro-social (0.440), bully-victim (0.305) and the depression-victim (0.367). An observation made when collating the data was that those who reported frequent victimization tended to also score highly for depression.

Table 10 Intercorrelations Between Hostility, Bullying, Victims and Pro-social for Girls Aged 13 and 14

	Hostility	Depression	Bullying	Victims	Pro-Social
Hostility	-	.479**	.191	.405**	-114
Depression	-	-	.194	.540**	-.092
Bullying	-	-	-	.119	-.207
Victims	-	-	-	-	-.106
Pro-Social	-	-	-	-	-

Key: * = $p < .05$, ** = $p < .01$

Differences were observed for the older age groups. Girls in the 17 and 18-year-old group were found to have the highest hostility-depression correlation (0.595) of the four groups (Figure 55), while hostility-bullying (0.097) and depression-bullying (0.076) were the lowest. Hostility-pro-social (-0.285) was the highest negative correlation and this was significant (Table 12).

Boys in the 17 and 18 year old age group were found to have a hostility-depression correlation (0.594) close to that of the older girls (Figure 56), and this is of a larger magnitude compared to boys and girls in the younger age groups. Both correlations (Table 13) for hostility-bullying (0.438) and depression-bullying (0.405), are the highest of all groups.

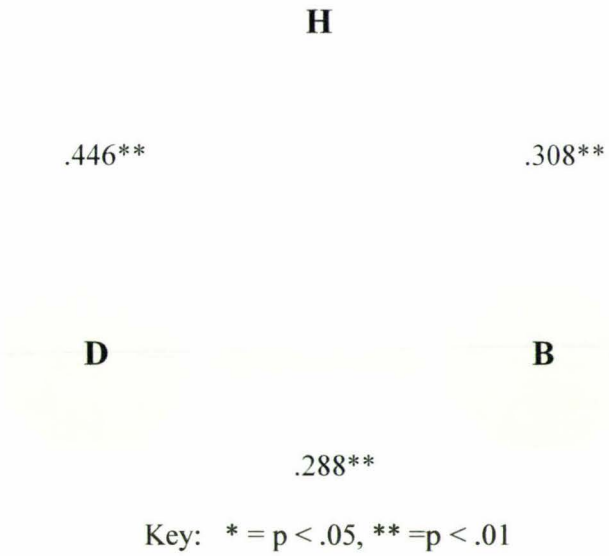
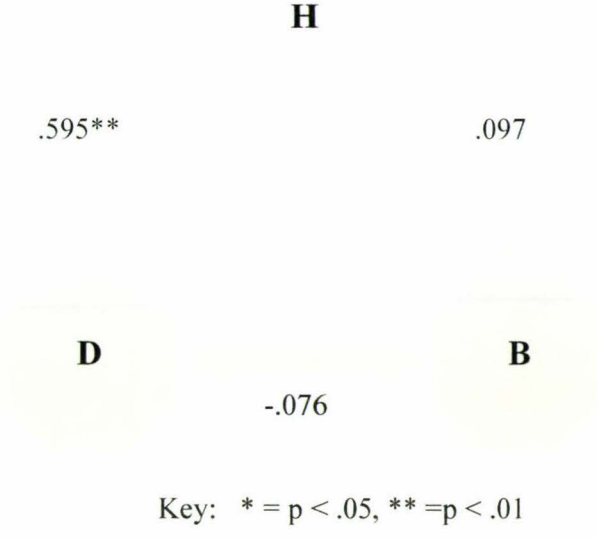


Figure 54. Correlations for boy aged 13 and 14 for hostility, depression and bullying.

Table 11 Intercorrelations Between Hostility, Bullying, Victims and Pro-social for Boys Aged 13 and 14

	Hostility	Depression	Bullying	Victims	Pro-Social
Hostility	-	.446**	.308**	.378**	-.440**
Depression	-	-	.288**	.367**	-.389**
Bullying	-	-	-	.305**	-.179
Victims	-	-	-	-	-.175
Pro-Social	-	-	-	-	-

Key: * = p < .05, ** =p < .01



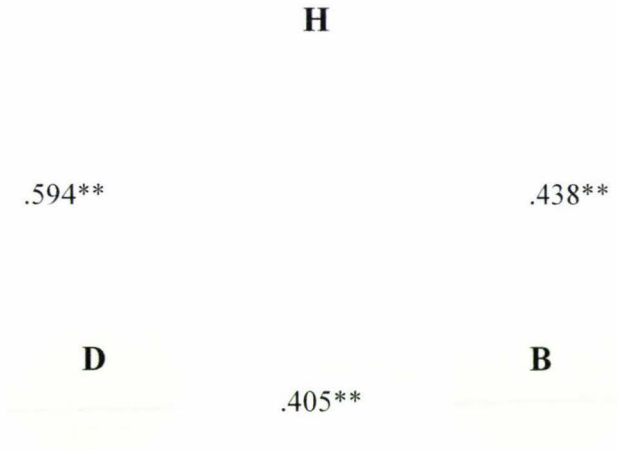
Key: * = p < .05, ** =p < .01

Figure 55. Correlations for girls 17 and 18 for hostility, depression and bullying.

Table 12 Intercorrelations Between Hostility, Bullying, Victims and Pro-social for Girls Aged 17 and 18

	Hostility	Depression	Bullying	Victims	Pro-Social
Hostility	-	.595**	.097	.404**	.-285**
Depression	-	-	.076	.342**	-.137
Bullying	-	-	-	.335**	.051
Victims	-	-	-	-	.102
Pro-Social	-	-	-	-	-

Key: * = p < .05, ** =p < .01



Key: * = p < .05, ** =p < .01

Figure 56. Correlations for boys 17 and 18 for hostility, depression and bullying.

Table 13 Intercorrelations Between Hostility, Bullying, Victims and Pro-social for Boys Aged 17 and 18

	Hostility	Depression	Bullying	Victims	Pro-Social
Hostility	-	.594**	.438**	.258*	-.145
Depression	-	-	.405**	.193	-.003
Bullying	-	-	-	.372**	.026
Victims	-	-	-	-	.151
Pro-Social	-	-	-	-	-

Key: * = $p < .05$, ** = $p < .01$

Depression and Hostility

Pearson's r was calculated on each hostility - BDI II depression measure to identify gender and age differences as well as the relationship each measure had to hostility. While lack of happiness was found to have a higher mean score for both groups of girls (Figure 24 and 25), the relationship of hostility to lack of happiness (Table 14) was greater for boys. Participants' concern about the future, lack of pleasure, punishment and lack of energy appeared to be more age related, being more closely linked to hostility for the older groups. Failure however, was strongly correlated for all groups. Girls were shown to have stronger hostility links for concentration and irritability. Worth and interest were strongly correlated to both groups of boys and the older group of girls, whereas self-reflection was shown to be stronger for both groups of girls and the older boys. Guilt and appetite tended to have stronger hostility links for younger girls and older boys.

Table 14 Hostility-Depression Measure Correlations for the Groups Sampled

DEPRESSION MEASURE	Girls 13-14	Boys 13-14	Girls 17-18	Boys 17-18
Happiness	.237*	.348**	.251*	.401**
Future	.184	.177	.318**	.248*
Failure	.395**	.342**	.356**	.276**
Pleasure	.240*	.258*	.387**	.317**
Punishment	.282*	.229*	.439**	.451**
Self-concept	.292*	.359**	.364**	.170
Self-reflection	.356**	.222*	.385**	.371**
Crying	.294*	.200	.449**	.295**
Guilt	.378*	.296*	.265*	.397**
Interests	.009	.406**	.409**	.516**
Decisiveness	.377**	.394**	.275**	.261*
Worth	.290*	.458**	.435**	.408**
Tension	.367**	.146	.334**	.464**
Irritability	.360**	.241*	.360**	.279**
Appetite	.300**	.125	.171	.435**
Concentration	.369**	.228*	.336**	.169
Sleep	.259*	.257*	.240*	.366**
Fatigue	.319**	.395**	.344**	.277**
Energy	.131	.226*	.407**	.468**

Key: * = $p < .05$, ** = $p < .01$

Bullying and Hostility

A correlation measure was also carried out between hostility and items of the PRQ (Table 15). This also showed interesting gender and age differences. For the younger girls, strong correlations were found for victims in being called names, made fun of and hit and pushed around. Being made fun of was strongly linked to hostility for all four groups. Boys in the 13 and 14-year-old age group were shown to be different in the area of fighting (0.330). Both boys and girls in the younger group were found to have a higher hostility relationship with upsetting wimps and helping those harassed.

Table 15 Hostility-Bully Measure Correlations for the Groups Sampled

	Girls 13 and 14	Boys 13 and 14	Girls 17 And 18	Boys 17 and 18
Called names	.244*	.313*	.307**	.254*
Picked on	-.145	-.234*	-.278**	-.256*
Made fun of	.305**	.381**	.304**	.254*
Hit and pushed	.321**	.124	.125	.329**
Tease others	.035	-.232*	-.214*	.122
Scare others	.116	.248*	.155	.395**
Upset wimps	-.339**	-.334**	-.138	-.186
Fight	.067	.330**	-.087	.042
Make friends	.101	.259*	.049	.339**
Help harassed	.427**	.426**	.299**	.067
Share	-.087	.201	.342**	.240*
Help others	-.136	-.263**	-.303**	-.177

Key: * = $p < .05$, ** = $p < .01$

The older group hostility relationship was higher for sharing-especially for girls. The older girls also had a larger negative correlation compared to the other groups for being picked on. This group and the younger boys also showed a larger negative correlation for helping others. Older boys similarly to younger girls were found to have a higher correlation for being hit and pushed around.

A gender comparison showed that for both groups of boys there were strong hostility relationships with scaring others, and making friends. For the two groups of girls, there were few similarities in correlations found.

CHAPTER 9

Discussions

Summary of Major Findings

The relationship of hostility to depression and bullying is an area where there has been little research. This study set out to examine the relationship of hostility to depression and bullying in a sample of adolescents. It was predicted that a correlation between hostility and depression would be found, as a relationship had previously been found by other studies. A significant correlation was confirmed.

Past studies had also suggested that girls tend to internalise hostility with it being manifested through depression, while boys tend to externalise it through behaviour such as bullying. My study set out to test this theory. These gender differences were also confirmed as hypothesised: correlations being higher in hostility-depression for girls and in hostility-bullying for boys. The magnitude for hostility-depression, was 0.445 and 0.594 for the young and older boys respectfully, and 0.479 and 0.595 for the young and older girls. For hostility-bullying the correlations were 0.308 and 0.438 for young and older boys respectfully, and 0.191 and 0.097 for young and older girls. All correlations (apart from girls for bullying) were at a 0.01 level of significance.

The study thirdly set out to show age differences. It was predicted that as boys grew older they would internalise more hostility; that the 17 and 18-year-old boys would therefore have a higher correlation for hostility-depression, and conversely participate less in physical types of bullying. This was confirmed through the higher hostility-depression correlation found, and by a number of indicators such as group means for

fighting. The mean for older boys was 0.3578 compared to 0.4109 for younger boys. Boys of 17 and 18 also had a lower mean as victims for being hit and pushed.

The hypothesis for girls was the only hypothesis not upheld. Older girls were found to have a higher correlation for hostility-depression, and physical bullying decreased when compared to the 13 and 14-year-old girls. Intropunitiveness was shown to increase, rather than decrease (as previously reported), when compared to the group of young girls. In particular, the correlation for punishment and hostility was high for older girls. This plus findings such as the higher negative mean score for helping others, would suggest that the older girls are more empathic and more inclined to repress their hostility.

Gender

Hostility. In this study, hostility was found to be strongly correlated to depression for both boys and girls. The hostility-bullying relationship however varied for boys and girls. For both groups of girls the relationship was extremely small, and would suggest that girls prefer to deal with hostility using covert means. Gender difference in the expression of hostility may be partly due to the different social roles for each group. For instance, there is an acceptance for boys to display more aggression. It is not uncommon for boys of 13 and 14 to engage in rough and tumble. Younger girls were also shown to be aggressive with high mean scores for fighting and picking on wimps. These were in fact higher than their male counterparts. For older boys and girls this type of behaviour is less acceptable, and may explain why the older boys and girls engage in less physical bullying. Group mean score comparisons for hostility

showed that both groups of girls had lower scores for hostility; this being contrary to the findings in earlier studies of girls displaying higher hostility.

Depression. Prevalence of depression in both age groups of schoolchildren was found to be extremely high in comparison to the national rate of 13%. This may however be partly due to the age groups sampled and to related developmental stage effects such as growth spurts. While past studies have shown girls to have 2 to 5 times as much depression as boys, a large difference was only found in the moderate to severe range. The comparison in this study showed only small gender difference in the mild to moderate and extremely severe ranges. Over-all girls reported much higher depression; this being consistent with earlier study findings. Adolescent development may offer some explanation for the high depression found for both boys and girls. The mean scores for both groups of girls were high for appetite, sleep, fatigue, energy, tension and self-reflection- areas associated with adolescent development. Younger boys also scored highly on problems involving appetite, concentration, and sleep. In addition, factor analysis showed the high scores on appetite and sleep to correlate highly with other components.

Both groups of girls were found to have a stronger relationship for hostility and depression. They also had larger correlations for hostility and problem areas of concentration, self-reflection and irritability. While more girls identified unhappiness to be the most common problem, the hostility-happiness correlation was larger for both groups of boys. This would suggest that while girls tend to be unhappier, they are more mentally adapt at handling such problems. Boys were also found to have higher correlations for interest, and self worth. Interest and self worth could be seen

as self-perception indicators for achievement. Girls in comparison showed strong correlations for self-reflection – an area more relationship focused. These findings are consistent with theory that describes males as achievement oriented and females as being more relationship focused, and may offer some explanation for male-female differences in respect to internalised and externalised behaviour.

Bullying. This as reported by previous studies was found to be higher for boys. My study confirmed that boys engage more in physical and more frequent levels of bullying, whereas girls are more likely to engage their victims in less frequent, verbal and psychological ways. Compared to boys both groups of girls engage in more verbal/ psychological bullying. The relationship with hostility for this type of bullying was however, found to be strong for all four groups. Large percentages of both males and females reported being both bullies and victims, and yet also being pro-social. This might suggest that some degree of bullying is considered acceptable and a necessary part of this developmental stage. For instance, on three questionnaires a small number of participants when answering the question "people make fun of me sometimes" added the words "only jokes."

Age Difference

It was envisaged that age transition would be reflected through changes in hostility, depression and bullying. While research in this area has been limited to two age groups, it has indicated that age is a moderating factor.

Hostility when correlated to depression was found to be much greater for the 17 and 18-year-old group of both boys and girls. Depression levels were also found to

increase for older girls. These increases correspond with lower levels of physical bullying, and lend support to a conclusion that depression and overt bullying work in opposition- one increasing as the other decreases.

Older boys were found instead to resort to more verbal means of bullying and experience less frequent bullying. The much smaller depression-victim correlation also suggested that they were more accepting of those who are depressed. The lower hostility-victim correlation would reflect the facts that there are fewer victims in this group and victims are less likely to get hostile. While this group shows the highest amount of bullying they are more likely to exercise hostility by scaring others as indicated by the high correlation for this measure. Most of these older boys bully in some way and are categorised as BVP or BV. This is different to other groups where those who are not BVP are VP and P.

Younger boys in comparison engage in more physical and frequent bullying. This also corresponds with the lowest reported depression for the four groups. Previous studies have suggested that younger boys bully in order to gain position in the pecking order. Boys do not want to be victims and as a defense bully, as indicated by the strong bully-victim relationship. This defensive approach is supported by the large representations in the category BVP found in all four groups. A high depression-victim correlation for all groups, except the older boys would also suggest that those whom are more likely to be victims are, or become depressed. A large negative correlation between depression and pro-social for younger boys, indicates that depressive symptoms diminish this hierarchical standing for the younger boys. This is also suggested by the negative victim-pro-social relationship for younger boys. This

conclusion would be consistent with earlier studies, which refer to victims as those who are not popular, nor social. These studies also suggest that those who are depressed are more likely to bully, and this could be construed by the high number who self report as being both a bully and victim. Younger boys also show a large negative correlation between hostility and pro-social. This is probably reflective of their higher and more frequent bullying and the fact that while it might gain a ranking in the pecking order, it does not promote friendships.

In comparison, both groups of girls showed a weaker relationship between bullying and hostility. Older girls had an almost zero relationship, though a large 34% still reported being bullied. This percent is almost half that of the younger girls bullied. Those who are victims in this older group may bully as a defense measure, as indicated by the strong bullying-victim correlation. The stronger correlations between hostility and most measures on the Beck Depression Inventory would suggest older girls may in fact, contrary to my hypothesis, increase and not decrease their internalised feelings of hostility. It would seem as indicated by the high correlation for self-reflection, that girls are focused on relationship building, and would prefer to internalise their hostility therefore maintaining a high pro-social position. This is also suggested by the high negative hostility- pro-social correlation. It would explain the higher correlation for hostility and depression.

Younger girls show a number of differences in this age comparison. The mean score for younger girls in bullying was almost as high as their male counterparts. They were also found to engage extensively in physical bullying with a high correlation found for hostility and hit and pushed, and a higher mean score for fighting. Though compared

to boys they returned a higher pro-social mean score. A further difference is in the low bully-victim correlation for younger girls. This could be explained by girls of this age being more submissive and accepting, rather than reactive. This conclusion is also supported by their hostility- pro-social negative correlation being very small, yet 73% having reported themselves to be highly pro-social. It would seem that girls of this age are intent upon making friends, and for this reason internalise their hostile feelings, yet engage in bullying possibly to impress their male counterparts. Older girls in comparison would appear to take a dichotomous approach to friendship- having decided who they do and do not want to socialise with. This is indicated by the contradiction of a high negative hostility- pro-social correlation to their self-reported low interest in being highly pro-social.

Limitations

Adolescent hostility, depression and bullying are three areas of major concern especially for New Zealand schools. Compared to other OECD countries, New Zealand has many problems in the area of adolescent well-being and they need to be addressed by both research and positive action. This study provides valuable research findings that can be generalised nationally, given that this study encompasses schools both small and large and is representative demographically, socio-economically, ethnically and in gender. However, as in most studies there are limitations in its applicability. In this case, these comprise: ethics requirements, and the dangers in cross-sectional studies.

Currently the quality of such research involving adolescents is impeded by the bottleneck of ethical and legal requirements. For instance, ethics committees require

parental consent for participants less than 16 years of age. Schools however, are able to carry out research for their own purposes, without such consent. The requirement to get parental consent presents problems especially for research validity. This is because adolescents are not reputed for their reliability in returning signed consent forms. Those who return these forms may be the more intelligent and alert, with a more positive approach to life. In the case of this study, the detrimental effects of ethic committee requirements is evidenced by only 36 of about 100 thirteen and fourteen year old rural children approached returning signed consent forms. In comparison, 80% of the older rural students approached (who were able to give their own consent) participated in this research. Most of those older children who did not participate for all the schools involved, were those who were absent on the day.

As a cross-sectional study involving age comparisons, there is a danger of generation distortions. These would not be expected in this study, as there is only a two-year difference between group ages. One cross-sectional distortion could however be in intelligence. Children in years 9 and 10 are required by law to attend school, but this is not the case for year 13. By year, 13 a number of pupils who are not academic will have left school. The group of 17 and 18 year olds sampled might therefore be considered as more intelligent. School attendances however have changed over the last few years with more children staying to complete year 13, and those who have failed are now more likely to return to repeat subjects. Schools are also more adaptable and in the case of the city school sampled cater for such pupils and adult students. In addition, data collection in this study gave every 17 and 18 year old irrespective of whether they were in year 13, 12 or 11 classes, the opportunity to participate.

Conclusion

In carrying out this study, there have been a number of areas noted as offering potential for future research. While my study included rural schools for the purposes of external validity, demographic differences were not covered. This is an area which could be worth investigating. My study was also limited to public co-educational schools and did not include private and single-sex schools. Given the importance of research into adolescent problems- especially hostility, depression and bullying, and the value of my research findings for schools, researchers and those designing solutions, these are areas strongly recommended for future research.

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APPENDIX A - Participants Questionnaire

Feelings-Thoughts-and You.
☺

Please complete every question by ticking the circle of the response that applies to you. First please set out details below. The information supplied will remain anonymous.

General Details

1. Are you? Male ☐ Female ☐
2. How old are you? Age _____
3. Are you European/ Pakeha ☐ Māori ☐
   Pacific Island ☐ Asian ☐ Other ☐

Feelings and Moods

Tick the circle of the response in each question that is how you feel and have felt over the **last two weeks**. If in doubt between two answers then take the highest number.

1. Happiness

0. I don't feel sad. ○
1. I feel sad some of the time. ○
2. I'm sad all the time. ○
3. I'm so sad or unhappy that I can't stand it. ○

2. Thinking about the future.

0. I'm not discouraged about my future. ○
1. I feel more discouraged about my future than I used to be. ○
2. I don't expect things to work out for me. ○
3. I feel my future is hopeless and will only get worse. ○

3. Past Failure

0. I don't feel like a failure. O
1. I have failed more than I should. O
2. As I look back, I see a lot of failures. O
3. I feel I am a total failure as a person. O

4. Pleasures in Life

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

5. Punishment Feelings

0. I don't feel I'm being punished. O
1. I feel I may be punished. O
2. I expect to be punished. O
3. I feel I am being punished. O

6. Self-Concept

0. I feel the same about myself as ever. O
1. I have lost confidence in myself. O
2. I'm disappointed in myself. O
3. I dislike myself. O

7. Self-Reflection

0. I don't criticise or blame myself. O
1. I'm more critical of myself than I used to be. O
2. I criticise myself for all of my faults. O
3. I blame myself for everything bad that happened. O

8. Crying

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

9. Guilty Feelings

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

10. Interests

0. I have not lost interest in other people or activities. ○
1. I am less interested in other people or things than before. ○
2. I have lost most of my interest in other people or things. ○
3. It's hard to get interested in anything. ○

11. Making Decisions

0. I make decisions about as well as ever. ○
1. I find it more difficult to make decisions than usual. ○
2. I have much greater difficulty in making decisions than I used to. ○
3. I have trouble making any decision. ○

12. Feeling Worthy

0. I do not feel I am worthless. ○
1. I don't consider myself as worthless and useful as I used to. ○
2. I feel more worthless as compared to other people. ○
3. I feel utterly worthless. ○

13. Tension

0. I am no more restless or wound up than usual. ○
1. I feel more restless or wound up than usual. ○
2. I'm so restless or agitated that it is hard to stay still. ○
3. I'm so restless or agitated that I have to keep moving or doing something. ○

14. Irritability

0. I am no more irriTable than usual. ○
1. I am more irriTable than usual. ○
2. I am much more irriTable than usual. ○
3. I am irriTable all the time. ○

15. Changes in Appetite

0. I haven't experienced any changes in my appetite. ○
1. A. My appetite is somewhat less than usual. ○
   OR
   B. My appetite is somewhat greater than usual. ○
2. A. My appetite is much less than before. ○
   OR
   B. My appetite is much greater than usual. ○
3. A. I have not appetite at all ○
   OR
   B. I crave food all the time. ○

16. Ability to Concentrate

0. I can concentrate as well as ever. O
1. I can't concentrate as well as usual. O
2. It's hard to keep my mind on anything for very long. O
3. I find I can't concentrate on anything. O

17. Change in Sleeping Pattern (

0. I have not experienced any change in my sleeping pattern. O
1. A. I sleep somewhat more than usual. O
   OR
   B. I sleep somewhat less than usual. O
2. A. I sleep a lot more than usual. O
   OR
   B. I sleep a lot less than usual O
3. A. I sleep most of the day. O
   OR
   B. I wake up 1-2 hours early and can't get back to sleep. O

18. Tiredness

0. I am no more tired or fatigued than usual. O
1. I get tired or fatigued more easily than usual. O
2. I am too tired or fatigued to do a lot of the things I used to do. O
3. I am too tired or fatigued to do most of the things I used to do. O

19 ENERGY

0. I have as much energy as ever. O
1. I have less energy than I used to have. O
2. I don't have enough energy to do very much. O
3. I don't have enough energy to do anything. O

Thoughts

Circle the response in each question that best supports your view

20. No one cares much about what happens to you

strongly agree agree undecided disagree strongly disagree

21. It is safer to trust nobody

strongly agree agree undecided disagree strongly disagree

22. I think most people will lie to get ahead

strongly agree agree undecided disagree strongly disagree

23. Most people inwardly dislike putting themselves out to help other people

strongly agree agree undecided disagree strongly disagree

24. Most people will use somewhat unfair means to gain profit or an advantage rather than lose it.

strongly agree agree undecided disagree strongly disagree

25. Most people are honest mainly because of their fear of being caught

strongly agree agree undecided disagree strongly disagree

26. I usually wonder what hidden reason another person may have for doing something nice to me.

strongly agree agree undecided disagree strongly disagree

27. Most people make friends because friends are likely to be useful to them

strongly agree agree undecided disagree strongly disagree

28. Those students who work hard in class are not really interested in the subject they are studying. They are only interested in pleasing their parents and teachers.

strongly agree agree undecided disagree strongly disagree

YOU

29. I get called names by others

Never Once in a while Pretty Often Very often

30. I like to make friends

Never Once in a while Pretty Often Very often

31. I get picked on by others

Never Once in a while Pretty Often Very often

32. I am part of a group that goes around teasing others

Never Once in a while Pretty Often Very often

33. I like to help people who are being harassed.

Never Once in a while Pretty Often Very often

34. I like to make others scared of me.

Never Once in a while Pretty Often Very often

35. I share things with others.

Never Once in a while Pretty Often Very often

36. I enjoy upsetting wimps.

Never Once in a while Pretty Often Very often

37. I like to get into a fight with someone I can easily beat.

Never Once in a while Pretty Often Very often

38. Others make fun of me

Never Once in a while Pretty Often Very often

39. I get hit and pushed around by others

Never Once in a while Pretty Often Very often

40. I enjoy helping others

Never Once in a while Pretty Often Very often

☺☺ Hey, thanks heaps for answering this questionnaire! ☺☺

Bring up your completed questionnaire and claim a well earned chocolate and don't forget to keep the pen.
☺

Appendix B- Participants consent form

Name ---------- (full name printed)

Class ----------

Feelings Thoughts & You Questionnaire

PARTICIPANT CONSENT FORM

I have read the information sheet and have had the details of the study explained to me.

My questions-if I have any, have been answered to my satisfaction.

I have decided to participate in this study under the conditions set out in the information sheet.

Signature ---------- Date----------

Appendix C - Participants information sheet (Urban)

Feelings-Thoughts-and You.

Information Sheet for Participants

Hi,

My name is Brian Wilson and I am also a student. I am conducting a thesis project in partial fulfillment of a Masters of Arts degree in psychology at Massey University under the supervision of Professor Ian Evans.

The attached consent form seeks your permission. If you choose to participate then as my way of saying thank you, each participant will be entered into a draw for one of 2 $30 CD vouchers. Each participant will also get to keep the specially inscribed pen provided.

What do you have to do?
Students who agree to participate will be required to complete a questionnaire taking about six to ten minutes. Teenagers need to be heard and understood. This questionnaire gives you the opportunity to say what you think and how you feel.

Why?
The well-being and happiness of teenagers is very important. New Zealand statistics in this area show that we need to listen more to teenagers in order to provide a better and healthier environment. The information gathered will not only be valuable to your school, but also for other teenagers throughout New Zealand.

Confidentiality
No one will know that these are your answers. This is because there are a large number of participants, and the questionnaires only have your answers- nobody's names are on the questionnaires. The consent forms with your names on will be collected separately and will not be matched to the questionnaires.

Your Rights
You are under no obligation to accept this invitation. If you decide to participate then please sign the attached form. You have the right to decline to answer any particular question. Please note that this is voluntary and you can choose not to participate without this affecting school grades etc. As a participant you will also be entitled to a copy of the research findings. These will be made available through your teacher.

Parental Consent
If you are 16years of age or under, the law requires parental consent before you can participate in the questionnaire.

What will happen to the forms
After data is extracted from the completed questionnaires, the questionnaires and consent forms will be placed in secure storage for a five-year period at the School of Psychology, Massey University. At the end of five years, the researcher's supervisor will destroy them.

Approval from Ethics Committee:
This project has been reviewed and approved by the Massey University Human Ethics Committee: PN Application 05/66. If you have any concerns about the conduct of this research, please contact Dr John G O'Neill,, Chair, Massey University Human Ethics Committee: telephone 06 350 5249, email humanethicswn@massey.ac.nz

Support
Reminder-your school counselor is available should you wish to talk about your feelings, thoughts or relationships with other pupils.

If you have any questions about this thesis project, the researcher and his supervisor will be contactable throughout the course of the study.

Researcher: Brian Wilson, c/- School of Psychology, Massey University, Private Bag 11-222, PALMERSTON NORTH.
E-mail: WILSONBD@xtra.co.nz
Telephone: 06 350 5799 ext 2042

Supervisor: Professor Ian Evans, Head of School, School of Psychology, Massey University, Private Bag 11 222, PALMERSTON NORTH
E-mail: i.m.evans@massey.ac.nz
Telephone: 06 350 5799 ext 2070

Regards

Brian Wilson
Researcher

Appendix D-Information sheets for participants (rural)

Feelings-Thoughts-and You.

Information Sheet for Participants

Hi,

My name is Brian Wilson and I am also a student. I am conducting a thesis project in partial fulfillment of a Masters of Arts degree in psychology at Massey University under the supervision of Professor Ian Evans.

The attached consent form seeks your permission. If you choose to participate then as my way of saying thank you, each participant will be entered into a draw for one of 2 $30 CD vouchers. Each participant will also get to keep the specially inscribed pen provided.

What do you have to do?
Students who agree to participate will be required to complete a questionnaire taking about six to ten minutes. Teenagers need to be heard and understood, This questionnaire gives you the opportunity to say what you think and how you feel.

Why?
The well-being and happiness of teenagers is very important. New Zealand statistics in this area show that we need to listen more to teenagers in order to provide a better and healthier environment. The information gathered will not only be valuable to your school, but also for other teenagers throughout New Zealand.

Confidentiality
No one will know that these are your answers. This is because there are a large number of participants, and the questionnaires only have your answers- nobody's names are on the questionnaires. The consent forms with your names on will be collected separately and will not be matched to the questionnaires.

Your Rights
You are under no obligation to accept this invitation. If you decide to participate then please sign the attached form. You have the right to decline to answer any particular question. Please note that this is voluntary and you can choose not to participate without this affecting school grades etc. As a participant you will also be entitled to a copy of the research findings. Your teachers will hand out to you a summary of these findings later this year once the study has been completed.

Parental Consent
If you are 16years of age or under, the law requires parental consent before you can participate in the questionnaire.

What will happen to the forms
After data is extracted from the completed questionnaires, the questionnaires and consent forms will be placed in secure storage for a five-year period at the School of Psychology, Massey University. At the end of five years, the researcher's supervisor will destroy them. Results collected from the study will be made available to the school.

Approval from Ethics Committee:
This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application 06/09. If you have any concerns about the conduct of this research, please contact Dr Karl Pajo, Chair, Massey University Human Ethics Committee: Southern B, telephone 06 350 5799 x 2383, email humanethicsouthb@massey.ac.nz

Support
Reminder-your school counselor is available should you wish to talk about your feelings, thoughts or relationships with other pupils.

If you have any questions about this thesis project, the researcher and his supervisor will be contacTable throughout the course of the study.

Researcher: Brian Wilson, c/- School of Psychology, Massey University, Private Bag 11-222, PALMERSTON NORTH.
E-mail: WILSONBD@xtra.co.nz
Telephone: 06 350 5799 ext 2042

Supervisor: Professor Ian Evans, Head of School, School of Psychology, Massey University, Private Bag 11 222, PALMERSTON NORTH
E-mail: i.m.evans@massey.ac.nz
Telephone: 06 350 5799 ext 2070

Regards

Brian Wilson
Researcher

Appendix E- Parents consent form

Pupils Name ---------- (full name printed)

Class ----------

Feelings Thoughts & You Questionnaire

PARENTAL/GUARDIAN CONSENT FORM

I have read the attached information sheet and hereby give my consent for my son/daughter to participate in this project conducted by Brian Wilson.

Thanking you in anticipation of your agreed consent.

Signature _____ (Guardian/Parent)

Date_____

Name printed _____

Appendix F- Parent information sheet(Urban)

Feelings-Thoughts-and You.

Information Sheet for Parents/Guardians of Participants

Hi

My name is Brian Wilson and I am a student at Massey University. I am conducting a thesis project in partial fulfillment of a Master of Arts degree in psychology at Massey University under the supervision of Professor Ian Evans. Your son / daughter has agreed to participate in this research.

The attached consent form seeks permission from you for your son/daughter to participate in a survey. This consent is required as it is a legal requirement that any child under the age of 16 years must have parental/guardian consent to participate.

The purpose of this research is to increase our knowledge in certain areas of adolescent well-being which have to date in New Zealand been problematic. Details regarding this research are as follows:

Participants
This research will comprise both girls and boys aged between 13 and 18. Selection criteria is based on age and gender.

Participant Involvement
Students who agree to participate will be required to complete a questionnaire taking about six to ten minutes. This will gather information on their thoughts and feelings in general. This will take place at school during February 2006.

Project Procedures
Participants will retain their anonyminity. All questionnaires will be unnamed. The data from the questionnaires will be gathered and analysed, and the results made available to your school. This information is important as it will contribute greatly to understanding areas such as adolescent depression. Data collected will be made available to the school and for the purposes of research. A copy of the research results will also be made available to your child through their teacher.

Participants Rights
Participation is voluntary and those who agree to participate have the right to decline to answer any particular question.

Participants completed questionnaires and consent forms will be placed in secure storage for a five-year period at the School of Psychology, Massey University. At the end of five years, the researcher's supervisor will destroy them.

Approval from Ethics Committee:

This project has been reviewed and approved by the Massey University Human Ethics Committee: PN Application 05/66. If you have any concerns about the conduct of this research, please contact Dr John G O'Neill, Chair, Massey University Human Ethics Committee: telephone 06 350 5249 x 2383, email humanethicswn@massey.ac.nz

Support

Reminder-your school counsellor is available should your child wish to talk about their feelings, thoughts or relationships with other pupils.

If you have any questions about this thesis project, the researcher and his supervisor will be contacTable throughout the course of the study.

Researcher: Brian Wilson, c/- School of Psychology, Massey University, Private Bag 11-222, PALMERSTON NORTH.
E-mail: WILSONBD@xtra.co.nz
Telephone: 06 350 5799 ext 2042

Supervisor: Professor Ian Evans, Head of School, School of Psychology, Massey University, Private Bag 11 222, PALMERSTON NORTH
E-mail: i.m.evans@massey.ac.nz
Telephone: 06 350 5799 ext 2070

As an appreciation

Each participant will have the chance of winning one of two $40 CD vouchers.

Regards

Brian Wilson
Researcher

Appendix G: Information Sheet for Parents(rural)

Feelings-Thoughts-and You.

Information Sheet for Parents/Guardians of Participants

Hi

My name is Brian Wilson and I am a student at Massey University. I am conducting a thesis project in partial fulfillment of a Master of Arts degree in psychology at Massey University under the supervision of Professor Ian Evans. Your son / daughter has agreed to participate in this research.

The attached consent form seeks permission from you for your son/daughter to participate in a survey. This consent is required as it is a legal requirement that any child under the age of 16 years must have parental/guardian consent to participate.

The purpose of this research is to increase our knowledge in certain areas of adolescent well-being which have to date in New Zealand been problematic. Details regarding this research are as follows:

Participants
This research will comprise both girls and boys aged between 13 and 18. Selection criteria is based on age and gender.

Participant Involvement
Students who agree to participate will be required to complete a questionnaire taking about six to ten minutes. This will gather information on their thoughts and feelings in general. It takes the format of 40 simple questions of multi-choice and agree/disagree format. This will take place at school during April 2006.

Project Procedures
Participants will retain their anonyminity. All questionnaires will be unnamed. The data from the questionnaires will be gathered and analysed, and the results made available to your school. This information is important as it will contribute greatly to understanding areas such as adolescent depression and bullying. Data collected will be made available to the school and for the purposes of research. A copy of the research results will be given to your child later in the year (once the study has been completed), through their teacher. You can also obtained a copy through the school office.

Participants Rights
Participation is voluntary and those who agree to participate have the right to decline to answer any particular question.

Participants completed questionnaires and consent forms will be placed in secure storage for a five-year period at the School of Psychology, Massey University. At the end of five years, the researcher's supervisor will destroy them.

Approval from Ethics Committee:
This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application 06/09. If you have any concerns about the conduct of this research, please contact Dr Karl Pajo, Chair, Massey University Human Ethics Committee: Southern B, telephone 06 350 5799 x 2383, email humanethicsouthb@massey.ac.nz

Support
Reminder-your school counsellor is available should your child wish to talk about their feelings, thoughts or relationships with other pupils.

If you have any questions about this thesis project, the researcher and his supervisor will be contactable throughout the course of the study.

Researcher: Brian Wilson, c/- School of Psychology, Massey University, Private Bag 11-222, PALMERSTON NORTH.
E-mail: WILSONBD@xtra.co.nz
Telephone: 06 350 5799 ext 2042

Supervisor: Professor Ian Evans, Head of School, School of Psychology, Massey University, Private Bag 11 222, PALMERSTON NORTH
E-mail: i.m.evans@massey.ac.nz
Telephone: 06 350 5799 ext 2070

As an appreciation

Each participant will have the chance of winning one of two $30 CD vouchers.

Regards

Brian Wilson
Researcher

Appendix H: Class presentation

Hi,

My name is Brian Wilson and I would like to invite you to participate in some Massey University research. This is research I am doing towards a Masters Degree. It involves xxx students at your school.

On xxxday, those who agree to participate (or in the case of those 13 and 14-those who have completed parental consent forms), will be given a questionnaire which contains easy questions on how you think, feel and relate to others. It only takes 6 to 10 minutes to complete and you get to do it in class time. In addition, those who participate get to keep this inscribed Massey University pen which comes with the questionnaire.

The questionnaire is anonymous- you don't put your name on it. So nobody knows it was your answer.

But wait! that's no all.

Those who participate will go into a draw for xx CD Vouchers worth $30 each.

All you need to do now is to sign the consent form (if 16 or over), or get a parent to sign it and return it to your teacher before xxday.

Thankyou.

Appendix I:

Extraction Method: Principal Component

Analysis for depression

	Component		
	1	2	3
Happiness	.576	-.292	.104
Future	.573	.150	-.200
Failure	.592	.091	-.341
Pleasure	.551	-.318	.015
Punishment	.529	.216	.005
Self-concept	.683	.243	-.312
Self-reflection	.684	.261	-.255
Crying	.595	-.197	.008
Guilt	.617	.008	-.125
Interest	.599	-.145	.189
Decisions	.630	-.122	-.184
Worthy	.705	.182	-.306
Tension	.617	-.103	.084
Irritability	.606	-.378	.143
Appetite	.382	.468	.549
Concentration	.606	-.022	.215
Sleep	.549	.469	.342
Fatigue	.636	-.075	.319
Energy	.632	-.298	.088

Appendix J:

Extraction Method: Principal Component

Analysis for Hostility.

	Component	
	1	2
Item 1	.610	-.096
Item 2	.693	-.158
Item 3	.733	-.292
Item 4	.702	-.137
Item 5	.657	-.383
Item 6	.233	.643
Item 7	.598	.270
Item 8	.493	.504
Item 9	.445	.381

This shows that item 9 –the new item,

has a strong correlation with the

cynical distrust components.