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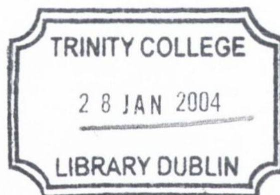
A Longitudinal Study of Anxiety, Self-Esteem and Personality of Bullying Groups.

By Irene Connolly.

A thesis submitted in fulfilment of the requirements for the degree of doctorate at Trinity College, Dublin.

2003.



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SUMMARY.

Bullying can be defined as "repeated aggression, verbal, psychological or physical conducted by an individual or group against others" (Department of Education, 1993. p.6). Once regarded as a childhood issue, the prolonged suffering of victims into adulthood, the quality of their relationships and their ability to operate effectively in the workplace is an area of concern. These children mature into adults with self-esteem issues, anxiety about life in general and feelings of inadequacy. Being the victim of bullying can persist in adulthood, as the coping skills necessary to deal with the problem have not been suitably developed. For the victims it may lead to a life of depression and low self-esteem causing problems in adult relations and accomplishments. The victims may never develop appropriate self-confidence, preventing them from engaging in adult relationships and pursuing careers. It may in extreme cases even lead to them committing suicide. The bully themselves appear to suffer in a similar manner. The skills for living a well-adjusted life are underdeveloped or simply do not exist at all. They too appear to suffer from relationship problems, a pattern of aggressive behaviour that makes familial relationships difficult; low self-

esteem and high anxiety also appear to be characteristic of the adult bullies. Violent criminals frequently have school records of physical aggression. This research examined the anxiety, self-esteem, personality and general mental health of the participants of bullying. Children who are victimised are generally reported to be anxious individuals (Besag, 1989). Bullies do not appear to suffer from social anxiety or low self-esteem (Pulkkinen and Trembley, 1992). It was claimed that children who bully do not suffer from poor self-esteem but that passive bullies may be anxious and insecure (Olweus, 1993b). Self-esteem can be defined as relatively permanent positive or negative feelings about the self that may become more or less positive or negative as individuals encounter and interpret successes and failures in their daily lives (Osborne, 1993b). There are several competing theories connecting aggressive and violent behaviour to either low or high self-esteem. A long tradition has regarded low self-esteem as a powerful and dangerous cause of violence. It has been cited that low self-esteem is a persistent cause of the violence among gangs (Anderson, 1994) and the jealousy and possessiveness that lead to domestic violence (Renzetti, 1992). The correlational and experimental findings are all consistent with the

proposition that self-esteem protects individuals from anxiety, people low in self-esteem tend to be anxious, threats to self-esteem cause anxiety and defence of self-esteem reduces anxiety. However, to directly assess whether self-esteem buffers anxiety it would be necessary to manipulate self-esteem, expose subjects to threat, and then measure anxiety.

The Five-Factor theory is among the newest models developed for the description of personality, and shows promise to be among the most realistic and pertinent models available in the field of personality psychology (Digman, 1990). The "Big Five" Personality theory recognises the frequent recurrence of five personality traits across studies and across theorists. The Five-Factor Model was initiated in Allport and Odbert's effort to accumulate trait-related terms. The five traits include neuroticism, extraversion, openness, agreeableness, and conscientiousness. This set of traits appears to persist throughout the entire life span, even up to the mid-90s, the highest ages that have been studied (Costa and McCrae, 1988).

It is oversimplifying matters to conceive of the tendency to bully and to be bullied as polar opposites (Rigby and Slee, 1992). It is possible to isolate certain physical, psychological,

personality and behavioural characteristics shared by children in both categories (Heinemann, 1972). There exists within the literature different types of bullies, the pure bully, the anxious bully and the bully/victim. Furthermore several types of victims also exist; these include the pure victim, the passive victim and the provocative victim.

The first questionnaire used in this study was called "Life at School". This questionnaire was designed by the researcher to examine the participant's knowledge of the original study. It investigated what had occurred in their lives following the research, examining both secondary school and work environments. The purpose of the research was to examine the levels of anxiety and self-esteem of the different groups using the Manifest Anxiety Scale and the Rosenberg Self-Esteem Scale respectively. Personality was examined using the Revised NEO Personality Inventory and the Sixteen Personality Factor and an investigation of mental health was examined using the General Health Questionnaire. The "Life at School" looked at the bullying patterns of the participants, examining the recollection the participants had of the first questionnaire they had completed, then examining bullying patterns in secondary

school and the workplace. Following that questionnaire, the Manifest Anxiety Scale, Rosenberg Self-Esteem Scale and The Revised NEO Personality Inventory all provided quantitative information relating to each of the bullying groups. The General Health Questionnaire and the Sixteen Personality Factor Fifth Edition were used to gather qualitative information on the general mental health of the participants and provided a personality profile of each participant.

The results of the "Life at School" questionnaire revealed different patterns of bullying and victimisation across the lifespan, with more specific groups being developed within the research such as School Victim, Adult Victim, Life-Long Victim, Child Bully, Child Bully/Victim, Periodical Bully/Victim and Control. The victim and bully/victim groups were combined, Victim (combined) and Bully/Victim (combined) and these were analysed also. The Anxiety levels and Self-Esteem levels did not vary significantly between these groups on the whole. Personality types did not vary significantly across the groups however, the qualitative research revealed great detail of the participants' personalities. The Mental Health of the participants was relatively positive revealing no

psychopathology across the groups. This study revealed a great deal of information about bullying across the lifespan which will contribute to the research field, therefore providing insight into bullying and victimisation that takes place over the years.

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Irene Connolly.

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Chapter

One.

1.1 INTRODUCTION.

Often referred to as a childhood issue, there is growing evidence of the persistence of bullying into adulthood and the immense repercussions connected with it. In previous research, this researcher investigated the personality and family relations of children who bully. This research instigated the desire to look at the adult lives of children involved in bullying, both as a bully and a victim. Bullying originally came to the attention of the professionals through the work of Heinemann, a Swedish doctor of medicine who in 1969, published his revolutionary article "Apartheid", which was followed by a book called "Bullying: Group-Violence among Children and Adults", in 1973. This created a spark of interest and curiosity in the world of research regarding the topic of bullying. Bullying can be defined as "repeated aggression, verbal, psychological or physical conducted by an individual or group against others" (Department of Education, 1993. p.6). Bullying is all embracing, including anti-social acts such as assault, extortion, intimidation and violence. It should be seen on a continuum of severity, but the most important thing is to appreciate in each instance that bullying is a wilful, conscious desire to hurt

another person (Tattum, 1989). Bullying is very secretive and many children are reluctant to admit to bullying others or being bullied (Tattum, 1988; Rigby and Slee, 1990; Smith, 1991). Many victims are reluctant to speak up about their situation for fear that it will make the situation even worse. Research carried out by Besag (1989) shows that children have little confidence in adults' ability to stop bullying. It is generally thought that the estimate of bullying is underestimated because it is hidden and only infrequently reported to adults (Foster, Arora and Thompson, 1990).

In Ireland several studies have been carried out to determine the number of children involved in bullying either as a bully or as a victim. In a study restricted to examining bullies only, an incidence of 6% was reported by Mitchel and O' Moore (1987) and in a further examination of an urban post primary school for boys, Byrne (1987) found an incidence of 5.3% victims and 4.9% bullies. A year later Hillery and O' Moore (1988) examined the incidence of bullies and victims in four Dublin Primary schools. The study comprised 783 children of 7-13 years of age. Overall 10.5% of the children were involved in serious bullying, that is 2.5% were serious bullies and 8% were

seriously bullied, serious bullying implies bullying or being bullied once a week or more often. These findings of Hillery and O' Moore showed that as many as 43.3% have occasionally bullied other children and that 55% have been bullied occasionally. Indeed 20.8% of the total group of children expressed fear in coming to school as a result of bullying, 2.6% of these expressed a strong fear. Almost ten years later, a study carried out by O' Moore et al (1997a) revealed that 18.6% of primary school pupils reported being bullied occasionally. A further 8.4% stated that they had been frequently bullied and 4.3% indicated that they had been bullied once a week or more often. With regards to post primary schools, 10.8% of the pupils reported that they had been bullied occasionally. A further 2.9% were bullied sometimes and 1.9% claimed that they were bullied frequently. These figures give a clear indication of the enormity of this problem in Ireland. The volume of the incidence of bullying has acquired the attention of the Department of Education and several external agencies in an effort to stamp out the ever-growing problem. In 1994, the Minister of Education launched Dr. Brendan Byrne's "Coping with Bullying in Schools". The I.S.P.C.C. worked in association with the British based

Kidscape, the Department of Education and The National Parents Council, in the production of "Stop Bullying", a set of guidelines to prevent, identify and respond to the problem of bullying. Programmes currently being promoted in Irish schools include "The Stay Safe Programme," (1993), which contains sections on bullying to assist teachers and other staff in their fight against this problem. The "Anti-Bullying Centre", located in Trinity College Dublin, is another service involved in the battle to prevent the spread of bullying in our schools.

There are five types of bullying, physical and verbal, extortion, exclusion and gesture (Department of Education, 1993). Physical bullying is more common among boys than girls. It involves pushing, shoving, kicking and tripping. It may also take the form of severe physical assault. While boys engage in 'mess fights' they can sometimes be a disguise for physical harassment or inflicting pain. Verbal bullying includes name-calling and slagging. The slagging can refer to remarks about personal appearance, hygiene or family, particularly if embedded in sexual innuendo. O' Moore et al (1997) identified that within Irish schools name-calling was the predominant method of bullying, with 58% of primary school children and

55% of post primary pupils being subjected to this form of bullying. Extortion involves demands for money or belongings. Exclusion or isolation is largely prevalent among girls. A certain person is deliberately isolated, excluded or ignored by some or all of the class. Some bullying such as gesture bullying takes the form of intimidation. It is based on the use of very aggressive body language with the voice being used as a weapon. Particularly upsetting to victims can be the so-called 'look' a facial expression that conveys aggression and/or dislike. Signs of a child who is becoming a victim in school include coming home in a dishevelled state or without some of their belongings, some deterioration in concentration or other aspects of school work, or even a fear of going to school (Crabtree, 1981; Mortimore et al, 1983). Children may be frightened to walk to or from school, be unwilling to go to school, begin doing poorly in schoolwork, come home starving, come home regularly with their clothes or books destroyed, have unexplained cuts or bruises, cry themselves to sleep, become withdrawn or begin stammering. In the course of his work on truancy, Reid (1984) discovered that approximately 19% of truants had started to miss school because of bullying and continued to miss school for this reason. Furthermore, it

has been suggested that at the beginning of the school year, when children do not know each other well that bullies engage in a selection process to determine which children are likely to make the best victims. About 22% of students report at least one victimisation experience; however by the end of the school year only 8% of pupils are likely to be regular victims (Ladd, 1990). The teachers' pet is a frequent target of contempt for pupils who feel themselves to be out of favour. To be favoured or judged to be courting favour can be perceived as an offence and is likely to bring contempt and retribution. In some classes a child may be victimised because they are academically successful. The prevailing atmosphere in some classes may dictate that this is unacceptable. Children like this are called 'swots'. The dilemmas they face is one of lowering their own standards in order to conform and so achieve a level of acceptance within the class group, or continue to achieve and so be the focus of negative attention. This form of victimisation is more likely to occur in mixed-ability classes rather than in rigidly streamed classes (Frude, 1984). Teachers can unwittingly engage in, instigate or reinforce bullying behaviour in a number of ways. This can be achieved through the use of sarcasm or other insulting and demeaning forms of

language when addressing pupils and making negative comments about a pupil's appearance or background.

The issue of bullying in adulthood appears to occur within the workplace. The characteristics of the bullies and victims persist into adulthood, as do the methods of bullying. Statistics in relation to the occurrence of workplace bullying are not widely available, however a MSF (Manufacturing Science Finance Union) survey of workplace representatives in Britain and Ireland in 1994 showed 30% of respondents thought that bullying was a significant problem in the workplace. A further 72% of respondents indicated that their employer had no policy for dealing with bullying. In a study carried out by the Irish Nursing Organisation (INO) in 1997 it was found that 9 out of 10 nurses stated been victimised, approximately 3% were subjected to threatening behaviour. Physical assaults also took place but the most common form of bullying was verbal abuse. In another study by O' Moore et al (1998) of thirty victims of workplace bullying, the results showed that 56.6% reported being bullied as children. A further 23.5% of the victims reported bullying other children and the majority of the victims reported being bullied between the ages of 7 and 10 years of

age. This indicates that as children progress into adulthood, those involved in bullying do not necessarily leave all the problems within that developmental.

Chapter

Two.

2.1 INTRODUCTION.

Conferences, in–service days for teachers, workshops and newspaper articles all focus on the issue of bullying in an attempt to raise the awareness of bullying within our society. Once regarded as a childhood issue, the prolonged suffering of victims into adulthood, the quality of their relationships and their ability to operate effectively in the workplace is an area of concern. These children mature into adults with self-esteem issues, anxiety about life in general and feelings of inadequacy. Being the victim of bullying can persist in adulthood, as the coping skills necessary to deal with the problem have not been suitably developed. The bully themselves appear to suffer in a similar manner. The skills for living a well-adjusted life are underdeveloped or simply don't exist at all. They too appear to suffer from relationship problems, a pattern of aggressive behaviour that makes familial relationships difficult; low self-esteem and high anxiety also appear to be characteristic of the adult bullies. The bully and victim both have problems in adulthood that can be linked back to the episodes of bullying throughout school, perhaps

indicating the extent to which bullying is underrated by society.

2.2 SELF–ESTEEM AND ANXIETY.

The importance of self in consciousness was introduced in the 17th century by Descartes who put forward the philosophy "cogito ergo sum" (I think therefore I am). Self-esteem was considered to be a vital element of human nature "as worthy to be classed as a primitive emotional species as are for example, rage or pain" (James, 1890/1950, p.37). Self-esteem is an area of great interest for psychologists, in particular with regards to bullying. This longitudinal study examines the adult self-esteem of the participants of the original "Life at School" study. Everyone possesses self-esteem it simply varies in quality and quantity. It has a motivational force, those with high self-esteem work to maintain it and those with low self-esteem labour to improve it (Rosenberg, 1979). The notion of global self was proposed by James, which comprised four components. These when placed in descending order of their consequence for self-esteem are spiritual self, material self, social self and bodily self. These four selves combine in unique ways to establish people's view of themselves, which cannot be neatly split up. James' principle of self-esteem, known more commonly as James's Law may be stated as follows: "With no

attempt there can be no failure, with no failure any humiliation. So our self-feeling in this world depends entirely on what we back ourselves to be and to do. It is determined by the ratio of our actualities to our supposed potentialities, a fraction of which our pretensions are the denominator and the numerator of our success" (James, 1890/1950, p.37). Global self-esteem has been described by Rosenberg (1965, 1979) as the overall negative or positive attitude toward the self. In this conceptualisation, high self-esteem does not signify arrogance or conceit but simply acceptance of oneself as a person of worth; low self-esteem means a view of oneself as unworthy. This definition assumes that a favourable self-esteem carries with it positive emotions and that a very negative self-esteem implies some pain. The question arises as to whether there is such an entity as global self-esteem, or whether instead the individual evaluates himself or herself segmentally. That is, do individuals rate themselves differently depending on the task at hand, the situation at issue or the role relationship or identity involved (Harter, 1983; Rosenberg, 1979). Research has emphasised global self-esteem on one hand and more specific dimensions of self-evaluations on the other, of worthiness in the moral dimension, of power or control and of social

acceptance (Epstein, 1973; Harter, 1983). Self-esteem can be defined as relatively permanent positive or negative feelings about the self that may become more or less positive or negative as individuals encounter and interpret successes and failures in their daily lives (Osborne, 1993b). This definition makes the assumption that self-esteem can fluctuate based on the daily successes and failures that one encounters. Self-esteem may not be one global entity but a combination of situational feelings toward self and a conglomerate of self-feelings based on prior experiences and expectations for future performance. The possibility that self-esteem can fluctuate has only recently made its way into self-esteem literature (Harter, 1986; Kernis et al, 1993; Rosenberg, 1986). It is suggested that the stability of self-esteem influences cognitive and emotional reactions following feedback (Kernis et al, 1993). Therefore, an eclectic approach to self-esteem assumes that, self-esteem revision is possible, self-esteem is a multi–faceted construct, self-esteem is a relatively enduring self-feeling that nonetheless can fluctuate depending upon situational and individual characteristics and an individual's interpretations of success and failure play a key role in determining the impact those events will have on self-esteem. This may be related to

Mead's (1934) contributions to this area, which were an expansion of James' social self. Mead concluded that self-esteem is mainly derived from the reflected assessment of others. The appraisal of self-evaluation is a mirror of the criteria employed by the important persons of our social world. To Mead, no man is an island in his self–appraisal. No matter how secluded and autonomous he may believe himself to be, internally he is reflecting the opinions of his social group. If he places high value on himself there have been key persons in his life who have been concerned about him and treated him with respect and therefore if he has a low opinion of himself significant individuals have treated him in a substandard manner.

Three Neo Freudians Horney, Sullivan and Adler have theorised on the origins of self-esteem. Their formulations appear to have derived from retrospective reports of clinical patients. Sullivan accepts Mead's interpretation of the social origins of personality and then proceeds to a more extended analysis of the interpersonal processes involved. He believes that the awareness of other people is practically universal and has a large evaluative element. The individual is constantly

protecting against a loss of self-esteem, as this loss produces feelings of distress, which are often termed as anxiety. Sullivan also questions how the individual learns to reduce or to prevent threats to his self-esteem. The ability to minimise or avoid loss of self-esteem is important in maintaining a relatively high, acceptable level of esteem. Sullivan suggests that early familial experiences play an important part in this area. His focus on the interpersonal bases of self-esteem, the particular importance of parents and siblings and the importance of procedures to minimize undignified events are Sullivan's general contributions to the study of the origins of self-esteem.

Horney (1945, 1950) also focuses on the interpersonal processes and on ways of warding off self–demeaning feelings. She lists a wide range of adverse factors that might produce feelings of helplessness and isolation or 'basic anxiety' these include domination, indifference, lack of respect, criticism, lack of warmth, segregation and prejudice. Though she points out that the list of specific factors could be virtually endless, the common precursor of all these conditions is a disturbance in the relationship between parent and child, which is usually

connected with parental narcissism. It is however, in her discussion of the consequences and defences against feelings of anxiety that Horney makes her major contribution to the topic of self-esteem. With regard to defences, Horney proposes that one way of dealing with anxiety is the creation of an idealised image of one's competence and ambitions. This has the effect of strengthening self-esteem by its very arrogance while at the same time leading to frustration when its improbable levels are not achieved. The idealised image thus plays an important role in how the individual evaluates himself. It differs from the ideal of aspiration noted by James in that the idealised image necessarily stems from negative feelings, whereas aspirations may arise from either positive or negative sources. Therefore, it would be concluded that the level and flexibility of the ideal is a crucial constituent in self-evaluative process. According to this theory, anxiety is inclined to create low self-esteem. There is reason to believe that the opposite sequence may also occur, that is that low self-esteem may create anxiety.

Adler (1927, 1956) places greater emphasis on the importance of the actual limitation in developing low self-esteem. In his

early work Adler suggests that feelings of inadequacy may develop around certain organs or patterns of behaviour in which the individual is indeed substandard. He also proposes that feelings of inferiority are an inevitable occurrence of the childhood experiences of every individual. Three antecedent conditions are noted by Adler that may have adverse results on the development of self-esteem. The first are the organ inferiorities and differences in size and strength. To a great extent these circumstances are unavoidable and since they do have motivating effects their presence can also result in a favourable outcome. Whether they do or do not depend in good part upon the acceptance and support of parents and good friends. These experiences represent the second major antecedent condition. With acceptance and support children with inferiorities or disabilities can convert these weaknesses into strengths whereas without support they become without hope and embittered. Whereas Adler believes in the beneficial effects of support and acceptance, he warns against the destructive effects of the third antecedent, overindulgence. He believes that children who are spoiled come to have an unrealistic overstated value of themselves. They are egocentric and difficult and are not willing or prepared to participate in

mature, reciprocal social relationships. The precursor of low self-esteem in relation to the bully group, the bully/victim group and the victimised group may lie within the confines of these theories. Relating these theories to this research it appears that the theories of both Sullivan and Horney of low self-esteem and familial relationships, relate to the bully and bully/victim group and Adler's aspect of over-indulgence relates significantly to the bully group and the victims familial difficulties of over-protection.

Many researchers share the opinion that high self-esteem is desirable and adaptive and can even be used as one indicator of good judgement (Taylor and Brown, 1988). Pupils with high self-esteem behave distinctively different from those with low self-esteem. It is possible to highlight those distinct behaviours by firstly identifying behaviours that are associated with pupils of high self-esteem and hence with those which are associated with pupils of low self-esteem. Research has shown that pupils with high self-esteem have a realistic view of them and accept themselves for what they are, are able to identify their strengths and accept their limitations, usually find it easy to relate to others and are not afraid of taking risks. In terms

of responding to challenges they do not feel under pressure when confronted with new situations or challenges, react positively to praise, acknowledge recognition for their achievements because they feel responsible for the results, can cope with mistakes and failures, view their failures as opportunities for further learning and can establish goals for themselves. High self-esteem is an essential ingredient for successful living. It enables individuals to cope with mistakes, failures, disappointment and success. An individual with high self-esteem can feel good about him/her in general and is able to establish goals while at the same time accepting his/her limitations. Individuals with high self-esteem are more confident and ambitious and are effective in using direct clear communication with others. They are not defensive, can cope with criticism, don't have a need to boast of their achievements and can form healthy relationships with others. They are also less likely to abuse drugs and alcohol (Department of Education, 1993). Self-esteem is vital in every aspect of a person's life. A person with high self-esteem has at his/her disposal the prime ingredient for success in school; work, home or in relationships with others. An individual with high self-esteem is likely to be enthusiastic in dealing with new

situations and challenges and will be confident about his/her ability to be successful. It is obvious from the description that this is not an accurate description of a child who bullies or is bullied. In contrast to the previous description, students with low self-esteem can be easily recognised in a classroom setting. They usually adopt defensive mechanisms in order to prevent others knowing how lacking in confidence or how incompetent they feel. Such behaviours may include bullying or threatening others, daydreaming, extreme shyness or withdrawal, unwillingness to take responsibility for their own actions, teasing or making disparaging remarks about others, putting blame on others when things don't go right, challenging, rebelling or retaliating, and participation in forms of escapism such as truancy, alcohol or drug dependency (Reasoner, 1992). Such persons find it difficult to attempt something in which they might not succeed. They may be unwilling to accept criticism, to ask for help in solving problems or be ill disposed to being open with others. It is suggested that low self-esteem is a chronic dislike of oneself (Kernis et al, 1993). People with low self-esteem are more likely than people with high self-esteem to expect failure (Cohen, 1959; McFarlin and Blascovich, 1981). Individuals who

suffer from low self-esteem are assumed to have a self-defeating attitude that can perpetuate the feelings of low self-worth (Brockner, 1983). It is recognised that children who have been subjected to peer victimisation have poor self-esteem (Olweus, 1978; O' Moore and Hillery, 1991; Rigby and Slee, 1992; Neary and Joseph, 1994; O' Moore, 1995; Callaghan and Joseph, 1995; Austin and Joseph, 1996; Mynard and Joseph, 1997; O' Moore, 2000; O' Moore and Kirkham, 2001). The ascendancy of children's friendships in their lives has been identified by writers such as Sullivan (1953) who has argued that the child's growing sense of self is a function of their personal relationships with significant others. Research links the quality of a child's peer relationships with self-perceptions of social competence. Negative self-perceptions of social competence have been linked with withdrawal and isolation, depression and loneliness (Slee and Rigby, 1993). Social isolation can have consequences in terms of peer rejection, however it is not clear whether children withdraw because they are rejected or are rejected and then withdraw. Withdrawal might be more typical of children and adolescents that are unsure of themselves (Coie, Dodge and Kupersmidt, 1990). Furthermore, interpersonal rejection or exclusion is a central

cause of anxiety (Baumeister and Tice, 1985), which suggests that decreases in self-esteem would cause anxiety. This leads to the issue of depression where one firmly established finding is the inverse association between self-esteem and depression where studies of children, adolescents, adults and the elderly all show the same pattern (Wylie, 1979; Rosenberg, 1985; Neary and Jones, 1994). Therefore the low self-esteem experienced by students may lead to depression, which causes them to withdraw socially and become more appealing targets for the bully. These depressive tendencies may persist into adulthood causing further social isolation and low self-esteem.

There are several competing theories connecting aggressive and violent behaviour to either low or high self-esteem. A long tradition has regarded low self-esteem as a powerful and dangerous cause of violence. It has been cited that low self-esteem is a persistent cause of the violence among gangs (Anderson, 1994) and the jealousy and possessiveness that lead to domestic violence (Renzetti, 1992). It is often suggested that school bullies have low self-esteem, bullying seen as their way to compensate for this negative image of themselves. This view is consistent with the traditional but

recently disputed claim that aggression is related to low self-esteem. The view of bullies as having low self-esteem has been criticised by Olweus (1991). Although he has not reported empirical data on the self-esteem of the bullies, he has compared them with other children in regard to anxiety and insecurity. According to his findings, the bullies were neither anxious nor insecure under a tough surface. On the contrary, they were less anxious and surer of themselves than other children. Support for this view suggests that bullies tend to have comparable self-esteem levels to non-involved children (Boulton and Underwood, 1992; Lagerspetz et al, 1982; Olweus, 1978). Correspondingly, Rigby and Slee (1993) found (from self-reports of students from 12-18 years) no relation between a tendency to bully others and scores on the Rosenberg Self-Esteem Scale. Although there was in fact a slight but non-significant tendency for bullies to have above average self-esteem and through the use of other measures it was found that children who bullied were less happy and disliked school more than children not involved in bullying. It has been suggested that the major cause of violence is high self-esteem combined with an ego threat (Baumeister, Smart and Boden, 1996). When favourable views about one are

queried, opposed or censured, mocked people may aggress. In particular they will aggress against the source of the threat. In this view then aggression emerges from a particular discrepancy between two views of self: a favourable self-appraisal and an external appraisal that is much less favourable. That is, people turn aggressive when they receive feedback that contradicts their favourable views of themselves and implies that they should adapt less favourable views. More to the point it is mainly the people who refuse to layer their self-appraisals who become violent. One major reason to suggest that violence may result from threatened egotism is that people are extremely reluctant to raise their self-appraisals in a downward direction. Further support for this view comes from research with delinquent groups. One of the most thorough research projects on youth gangs was that of Jankowski (1991) whose work involved 10 cities and 37 gangs. Although a sociologist he was disinclined to use self-esteem or personality factors as explanatory constructs, his study did furnish several important observations. Jankowski specifically rejected the notion that acting tough is a result of low self-esteem or feelings of inadequacy. When they failed they blamed something external rather than personal inadequacy of

error, as is normal for people with high self-esteem. However, this researcher puts the opposite and more traditional view of low self-esteem and aggression forward, furthermore support for this argument is extensive. Using a cross–lag correlation procedure Rosenberg and Rosenberg (1978) found from self-reports that adolescent boys with low self-esteem are somewhat more likely than those with high self-esteem to manifest higher levels of delinquency, irrespective of their original delinquency levels. On the other hand, delinquent boys unless they already manifest low self-esteem, are not more likely than non-delinquents to develop lower self-esteem. The most substantial study of the relationship between self-esteem and delinquency is the program of research by Kaplan (1975) analysing a large three-wave panel of Houston junior high school students. A series of papers (Kaplan, 1975b; 1975c; 1975d; 1976a; 1976b; 1977a; 1977b; 1978) report in detail the changes that occur in self-esteem and delinquency activities during a three-year period. Focusing on respondents who reportedly did not engage in delinquent actions prior to the initial measurement, Kaplan examined subsequent adoption of delinquent behaviours and changes in self-esteem. Separate analyses of 28 different forms of delinquent behaviour revealed

that negative social experiences are related to lowered self-esteem, self-derogation is positively associated with subsequent delinquency and adoption of delinquent behaviours is positively related to increased self-esteem among self-derogating persons. However, the cross–lag analysis was done in a way that made self-esteem–to–delinquency causation unlikely (Bynner, O' Malley and Bachman, 1981). Research has shown that bullies of primary and post primary schools have lower self-esteem than peers of similar age who neither bullied nor have been bullied. The results also strongly indicate that children and adolescents who have bullied or been bullied frequently have a lower self-esteem than those involved in occasional or moderate victimisation or bullying (O' Moore, 2000). Furthermore, children and adolescents who are involved in a dual role of bully and victim have significantly lower levels of self-esteem than their peers who are classified as either bullies or victims (O' Moore, 2000). Children who bully share with victim's feelings of lower self-worth than children who were not involved in bullying behaviour (O' Moore and Hillery, 1991; Byrne, 1994; O' Moore, 1997; O' Moore and Kirkham, 2001). Low levels of self-esteem were associated with reported bullying behaviour among teenage girls, but not boys (Rigby

and Cox, 1996). However, more recent research found that lower levels of self-esteem found among primary and post primary victims and bullies characterise both boys and girls (O' Moore et al, 1997a). Research also found that those who bullied also perceived themselves to be significantly 'less well behaved' to have 'lower intellectual and school status' and be 'less popular' than children not involved in bullying (O' Moore, 1997). Higher scores on the 'Bullying Behaviour Scale' were associated with lower global self-worth and lower scores on scholastic competence, social competence and behavioural conduct (Austin and Joseph, 1996; Mynard and Joseph, 1997). This was further supported by evidence presented by Salmivalli (1998) who also found differences in the dimensional nature of self-esteem among adolescent bullies. Analysis of the self-esteem of children who participated in the second stage of a nationwide study by O' Moore et al (1997a) further indicates that children who bully have greater feelings of inadequacy than children who are not involved in bullying. The more frequently those children bullied, the lower their self-esteem. It has been suggested that the act of bullying directly affects self-esteem as students generally report feeling worse about themselves after bullying (Boulton and Underwood, 1992; Slee

and Rigby, 1993a). It was found that whereas children who were pure bullies had higher self-esteem than bully/victims, they had significantly lower global self-esteem than children not involved in bullying (O' Moore et al 1997b; O' Moore and Kirkham, 2001). Children and adolescents who bullied only did not feel significantly less adequate than did the control children in relation to their physical appearance, popularity, and level of anxiety.

There are two huge literatures, one correlational and one experimental, that are generally consistent with the proposition that self-esteem functions to buffer anxiety. The correlational literature is replete with evidence of positive associations between self-esteem and various indexes of mental and physical well–being (Hobfoll and Leiberman, 1987) and negative associations between self-esteem and anxiety and anxiety related problems (Lipsitt, 1958; French, 1968; Rosenberg and Simmons, 1972). Although the correlational nature of these findings precludes causal inference, they are consistent with the notion that self-esteem serves an anxiety–buffering function. The experimental literature on threats to self-esteem is also generally consistent with this idea. If self-

esteem protects people from anxiety, then threats to self-esteem should produce anxiety, research using both self-report and physiological indexes has shown that they do (Burish and Houston, 1979). There is a large body of evidence demonstrating that threats to self-esteem do indeed produce defensive reactions to either defuse the specific threat or to restore a more general sense of self worth. It also seems clear that these defensive manoeuvres are mediated by the negative affect produced by threats to self-esteem. Research has shown that high levels of arousal in response to failure are associated with self-serving external attributions (Brown and Rogers, 1991). It appears that encouraging subjects to attribute any arousal they experience after failure to a neutral source reduces their tendency to engage in such defences (Fries and Frey, 1980). Increasing subjects' perceived level of arousal increases their tendency to engage in such defences (Gollwitzer et al, 1982) and anxiety is reduced when threatened individuals defend their self-esteem (Bennett and Holmes, 1975). The correlational and experimental findings are all consistent with the proposition that self-esteem protects individuals from anxiety, people low in self-esteem tend to be anxious, threats to self-esteem cause anxiety and defence of self-esteem

reduces anxiety. However, to directly assess whether self-esteem buffers anxiety it would be necessary to manipulate self-esteem, expose subjects to threat, and then measure anxiety. If self-esteem serves an anxiety–buffering function, then when exposed to threatening stimuli subjects whose self-esteem has been bolstered should exhibit less anxiety than subjects whose self-esteem has not been altered.

The 1980s were a decade of advancement in the knowledge of anxiety disorders in children and adolescents (Bernstein and Borchardt, 1991). Bullying creates an unsafe environment for children that quite apart from psychological ill–effects; it can lead to truancy or to thoughts of staying away. In a study of primary school children (Slee, 1994) it was found that 10% of victims reported actually staying away from school to avoid bullying and 29% thought of doing so, which suggests that the anxiety arises specifically out of their concern regarding peer evaluations of them. Children who are victimised are generally reported to be anxious individuals (Besag, 1989). Bullies do not appear to suffer from social anxiety or low self-esteem (Pulkkinen and Trembley, 1992). It was claimed that children who bully do not suffer from poor self-esteem but that passive

bullies may be anxious and insecure (Olweus, 1993b). Furthermore, the bullies who were frequent victims were more anxious, less popular and unhappier than bullies who were victimised only occasionally or moderately. The high levels of anxiety, which characterised the bully/victims, were also found by Olweus (1993b) to distinguish his typical bully from the passive bully, the latter being more anxious. Houston et al (1972) found that as Lazarus (1966) proposed, beliefs that the environment is generally dangerous and threatening to self-esteem are significantly related to dispositional anxiety. Viewed in another way, the results indicate that chronically anxious persons generally expect bad events to occur in situations involving threat to physical well-being and in situations involving potential threat to self-esteem. Victims and bully/victims may be anxious as they feel in danger from the threat of being bullied at any time.

The adaptive value of anxiety and other emotions and their importance for evolutionary development was set out by Darwin (1872) in "The Expression of Emotions in Man and Animal". One famous passage differentiates between the emotions of anxiety and depression in a manner that also implies a relationship

between them. Darwin drew attention to the association between anxiety and ordeals to be suffered in the future on the one hand and the connections between depression and pessimism that springs from real or imaginative defeats that are past on the other. An emphasis was placed on the importance of emotion in promoting through its signal function the bonding between mother and infant and the forging of relationships between individuals with a social group. The influence of Darwin can be clearly detected in Freud's contributions to the area of anxiety. The concept of anxiety in research came to the foreground throughout the twentieth century, which has often been referred to as the age of anxiety. Despite knowledge of prior existence, anxiety was not fully recognised as a separate and omnipresent human condition until shortly before the beginning of the last century. However it was Freud who first proposed a critical role for anxiety in personality theory and in the causation of psychosomatic and psychoneurotic disorders. For Freud, anxiety was "something felt" – a specific unpleasant emotional state or condition of the human organism that included experimental, physiological and behavioural components. Anxiety was not only a central problem in neurosis, but

understanding anxiety was also essential to the development of a comprehensive theory of human behaviour. It was different from other unpleasant affective states such as anger, grief or sorrow by its unique amalgamation of physiological and phenomenological qualities. The subjective phenomenological characteristics of anxiety–the feelings of apprehension, expectation or dread, were accentuated by Freud, whereas other aspects such as the physiological-behavioural discharge phenomena were of little consequence to him, despite being regarded as a crucial element of anxiety state and a central provider to its unpleasantness. Freud was less concerned with the analysing of properties of anxiety states than with the actual identification of the sources of stimulation, which precipitated anxiety. Freud visualized anxiety as an indication of a perceived dangerous situation and distinguished between objective anxiety and neurotic anxiety mainly based on whether the source of the danger was from the external world or as a result of internal impulses. Objective anxiety was associated with fear and involved a complicated internal reaction to anticipated injury or harm from some external factor; the intensity of the anxiety reaction was comparative to the enormity of the external danger that induced it. The

offensiveness of the anxiety reaction paired with signals provided by the perception of its source, resulted in the individual being motivated to flee the dangerous situation or to protect oneself. Neurotic anxiety was also characterised by feelings of apprehension and physiological arousal. However, neurotic anxiety differed in the fact that it was the source of the danger that created this reaction was internal rather than external, and this source was not consciously perceived because it had been repressed. Thus, neurotic anxiety was produced as a result of an aversive conditioning process (Mowrer, 1939) involving instinctual impulses and repression and commonly occurring in childhood. Freud hypothesised that everyone to some extent, experienced this anxiety from time to time, but when manifested in pathological amount, it defined the clinical syndrome, anxiety–neurosis. The psychoanalytic theory has been severely criticized over the years (Grunbaum, 1977), the paucity of reproducible evidence being one of the major shortcomings of psychoanalysis.

Over the past fifty years, clinical studies of human anxiety have appeared in the psychiatric and psychoanalytic literature with increasing regularity, but prior to 1950 there was

relatively little research on human anxiety (Spielberger, 1966). The complexity of anxiety phenomena, the ambiguity and vagueness in theoretical conceptions of anxiety, the lack of appropriate measuring instruments and ethical problems associated with inducing anxiety in laboratory settings, all contributed to the scarceness of research. Since 1950 research on human anxiety has facilitated two fronts. Conceptual advances have clarified anxiety as a theoretical construct, and a number of scales have been created for measuring anxiety. The term anxiety is currently used to refer to at least two related, yet logically quite different constructs. Empirically, anxiety is perhaps most often used to describe an unpleasant emotional state or condition. Anxiety is also used to describe relatively stable individual differences in anxiety proneness as a personality trait. Researchers disagree about the nature of anxiety, the actual stimulus condition that causes arousal and the kind of past experiences that make individuals more or less vulnerable to it. The theories of Eysenck (1965, 1967) and those of Wolpe (1958) have important implications for the Psychology of anxiety. Eysenck was most interested in neuroses and the personality factors that pre-dispose people to develop these disorders. Emotionally unstable introverts are at

high risk for acquiring conditioned anxiety responses whereas unstable extroverts are at risk for developing conduct disorders, personality problems or hysteria. Wolpe's aim was to explain the genesis of neuroses with a view to developing effective methods of treatment. The original work on the anxiety neuroses was based on a two-dimensional model of personality. These are emotional instability or neuroticism and introversion/extraversion. Conditioned anxiety responses are the result of single traumatic events or a series of sub–traumatic events, involving strong autonomic nervous system reactions. It was assumed that a previously neutral stimulus becomes connected through association with an unconditioned stimulus giving rise to the traumatic emotional reactions (Eysenck, 1957). Eysenck relied on Mowrer's (1939, 1960) theory to explain the persistence of anxiety and the associated avoidance behaviour. In brief, anxiety reactions once established also take on motivating properties. In an attempt to reduce the anxiety, people engage in escape or avoidance behaviour. To the extent that the escape or avoidance is indeed followed by a reduction in anxiety, this behaviour becomes strengthened and the anxiety reactions are preserved from extinction. The personality theory was supported by a

great deal of psychometric and experimental data and the clinical implications were drawn out (Eysenck and Rachman, 1965). A cognitive theory of trait anxiety was put forward by Eysenck (1992). This theory has as its starting point the assumption that the most important function of anxiety is to facilitate the early detection of impending danger in potentially threatening environments. People are primed to detect threat cues by their past experiences and present beliefs. They are prepared even before entering the potentially threatening situation, by memories of past misfortunes and anxiety that combine with their current beliefs about the sources of danger that can threaten them. People who have a temperamental vulnerability tend to have high scores on measures of introversion and neuroticism. The cognitive vulnerability appears to include differences in vigilance, the collection and use of information, perceptual process, variations in attentional processes and judgmental biases among other variables. It follows from this assumption that individuals high and low in trait anxiety should differ in terms of their pre–attentive and attentional functioning, since it is the attentional system which is involved in threat detection. This part of the overall theory is known as hyper-vigilance theory. According to

the hyper-vigilance theory, there are several ways in which individuals high in trait anxiety demonstrate hyper-vigilance. There is general hyper-vigilance or distractibility; there is also specific hype-vigilance, which involves a propensity to attend selectively to threat–related rather than neutral stimuli, which is often referred to as selective attentional bias. However, another important difference between those high and low in trait anxiety is in theory interpretation of ambiguous stimuli and situations (Eysenck, MacLeod and Mathews, 1987). It also assumes that high anxious individuals possess a negative memory bias in explicit memory, which is the tendency to remember disproportionately more threat–related than non-threatening information and this bias was also assumed to apply to social threat and physical threat stimuli (Eysenck, 1992).

Gray (1971, 1982, 1987) agreed with several components of Eysenck's theory, including the dimensional approach to the analysis of the personality predispositions to anxiety, recognition of the biological contributions to the main dimensions of personality and the role of conditioning. A rotation of Eysenck's dimensions of introversion and emotional

stability was suggested to emphasise the importance of impulsivity (Gray, 1987). It was claimed that contrary to Eysenck's suggestion, extroverts have difficulty in acquiring fear reaction and are not slow at developing conditioned responses in general. Neuroticism closely resembles trait anxiety with questionnaire measures of the two personality factors typically correlating approximately +0.70 with each other (Watson and Clark, 1984). Gray's (1982) theory of trait anxiety and Eysenck's (1967) theory of neuroticism both involve two major assumptions. The first assumption is that individual differences in the personality dimension of trait anxiety or neuroticism depend to a large extent on genetic factors. The second major assumption is that heredity influences the level of trait anxiety or neuroticism via the physiological system. According to Eysenck (1967) individual differences in neuroticism depend upon the functioning of the so-called "visceral brain". This consists of the hippocampus, amygdala, cingulum, septum and hypothalamus. Somewhat similar structures were identified by Gray (1982) who reviewed evidence, which indicates strongly that the septo–hippocampal system is centrally involved in anxiety. This evidence comes from various anti-anxiety drugs such as benzodiazepines;

barbiturates and alcohol have been found to exert broadly comparable effects on behaviour. Secondly, lesions to the septo–hippocampal in rats and other species produce several behavioural effects.

Trait anxiety, namely the tendency to respond to stressors with anxiety is at least in part inherited. The level of trait anxiety is normally distributed in the general population. Therefore Eysenck (1975) suggested that intermediate levels of neuroticism, which corresponds roughly to trait anxiety, has been favoured by natural selection and constitutes that population optimum for this particular trait. The most important evidence relating to the role of heredity in determining trait anxiety and neuroticism comes from twin studies. Greater similarity in emotional responses including tension and shyness, were found in monozygotic than dizygotic twins (Kendler, 1986). Eysenck and Prell (1951) studied neuroticism and found that the correlation between monozygotic twins was +0.85, compared to only +0.22 for dizygotic twins. These findings suggested that 80% of individual differences in neuroticism are due to heredity. A review of eight other twin studies found that the highest

correlation for monozygotic twins in any of those studies was +0.67, and the mean correlation was only +0.52 (Zuckerman, 1987). The largest twin study in which neuroticism was assessed studied over 12,000 twin pairs, obtaining a correlation of +0.50 for monozygotic twins and +0.23 for dizygotic twins (Floderus-Myrhed et al, 1980). However most studies (e.g. Shields, 1962) are flawed because many of the monozygotic twins were brought up together during the first few years of life. In addition, other monozygotic twin pairs who were brought up apart were placed in different branches of the same family and sometimes even attended the same schools.

The theoretical approach to trait anxiety and neuroticism advocated by Eysenck (1967) and Gray (1962) has only been partially successful. Genetic factors determine individual differences in trait anxiety and neuroticism to some extent, but they are less important than was assumed by Eysenck (1967) and by Gray (1982). Evidence suggesting the importance of environmental factors was reviewed by Conley (1984). He averaged the data from several studies and found that the consistency of trait anxiety or neuroticism from one year to the next was +0.98. This may seem high, but it still implies that

fairly large changes in trait anxiety or neuroticism occur over a period of a few years. The level of year-by-year consistency is lower than that of intelligence, which is +0.99 (Conley, 1984). It is assumed within the physiological approach that individuals systems will be anxious across virtually all stressful situations, whereas low trait–anxious individuals will generally experience rather little anxiety. Eysenck (1992) termed this the "unidimensional view" of trait anxiety, and pointed out that there is evidence against it. Endler (1983) proposed a multi-dimensional approach, according to which the increase in state anxiety produced by a threatening environment will be greater among those high in trait anxiety only when there is congruence between the nature of the threat and the dimension or facet of trait anxiety possessed by the individual. This prediction has been confirmed several times when the dimensions of social evaluation and physical danger have been investigated (Donat, 1983; Kendall, 1978).

2.3 PERSONALITY OF BULLIES AND VICTIMS.

Research indicates that both nature and nurture contribute to the development of our distinctive personality traits, usually in interaction (Lee, 1993). Twin studies comparing identical twins reared together and apart, as well as identical versus fraternal twins, have shown that about half of the individual–differences in many personality traits are inherited (Bouchard, 1997). However, heritability may differ somewhat as a function of the particular trait, as well as of the population in which it was studied. Heritability also varies as a function of age, with effects increasing as people grow older (McGue et al, 1993). There are many different theories of personality development. Within the confines of this research, the Trait-Based Approach will be examined, with particular reference to the Big Five, and Cattell's Sixteen Personality Factors. Trait theories emphasise traits, stable characteristics distinguishing one person from the next. Gordon Allport put forward the theory that personality is characterised by personal dispositions, which are traits unique to each person (Allport, 1937). Traits have been viewed both as psychological realities and also as the causes of behaviour. Traits can be defined in two ways, as systems or dispositions

in persons that predispose them to perceive situations in particular ways and to react in a consistent manner across situations as perceived (Allport, 1937) and as a summary of the frequency and intensity of past reactions to situations (Spielberger, 1966). The first definition views traits as dynamic causal agents, whether their sources are biological or cognitive structures. The second definition is more operational, describing the usual objective methods of assessing traits. It is widely assumed that traits are relatively stable and enduring predispositions that exercise fairly generalised effects on behaviour (Sanford, 1963). These predispositions either may be acquired through learning or may be constitutionally or genetically inherent.

The Five-Factor theory is among the newest models developed for the description of personality, and shows promise to be among the most realistic and pertinent models available in the field of personality psychology (Digman, 1990). The "Big Five" Personality theory recognises the frequent recurrence of five personality traits across studies and across theorists. The Five-Factor Model was initiated in Allport and Odbert's effort to accumulate trait-related terms. The five traits include neuroticism, extraversion, openness, agreeableness, and

conscientiousness. This set of traits appears to persist throughout the entire life span, even up to the mid-90s, the highest ages that have been studied (Costa and McCrae, 1988).

Neuroticism plays a role in most of the contemporary factor models for personality. In some studies, adjustment is examined as a factor, instead of neuroticism. In this case, higher scores will indicate a positive result, consistent with the other four factors. This is because the term neuroticism has an inherent negative denotation. The bases of neuroticism are levels of anxiety and volatility. Within these bounds, neuroticism is described as a dimension of personality characterised by stability and low anxiety at one end as opposed to instability and high anxiety at the other end. Research has proven that perfectly 'normal' people can score high on the neurotic scale. There are some distinct advantages; this individual usually has a lot of 'drive' (Gibson, 1981). Neurotics tend to have characteristics typical of the unstable or emotionality type and normal people of the stable type. A high neurotic scorer may be characterised as an anxious, moody type of person and prone to depression. Sleep is usually insufficient and they may suffer from various psychosomatic disorders. They are incredibly emotional, over

reacting to all situations and then having great difficulty returning to normal following an emotional outburst. This strong emotional state makes proper adjustment difficult causing them to react in a rigid and anxious manner. Some traits such as neuroticism are associated with poorer life adjustment (Ormel and Wohlfarth, 1991).

The construct of extraversion is largely attributed to Jung (1923), but has been found and described in many subsequent studies such as those by Eysenck (1960) and Cattell et al, (1970). Eysenck suggests that individual variations in introversion-extraversion reflect differences in neurophysiological functioning. Extraversion is described as the turning out of the mind onto people and objects in the outside world. Extraverts are more prone to crime and anti–social behaviour, because they pursue rewards without fear of consequences, and are impatient and impulsive. Introversion is an inner directness and a preference for abstract ideas rather than concrete objects. Introverts tend to be quiet, retiring and introspective. They enjoy spending time alone and are often reserved and distant with all but their closest friends.

Openness, agreeableness, and conscientiousness are all terms with which most people outside the realm of psychology are familiar. In general, openness refers to how willing people are to make adjustments in notions and activities in accordance with new ideas or situations. Agreeableness measures how compatible people are with other people, or basically how able they are to get along with others. Conscientiousness refers to how much a person considers others when making decisions. These three scales, like neuroticism and extraversion, slide between their limits to give a clear picture of personality. Psychoticism is the third dimension that Eysenck added to his personality theory. On the upper level of the psychoticism scale people tend to be insensitive, unconcerned about others, solitary, and against social custom (Pervin, 1993). High psychoticism scorers are typical of people who are solitary, sensation-seeking, lacking in feeling, cruel, hostile and enjoy upsetting others. They seldom feel guilty. These personality dimensions contain many characteristics of those found in children who bully. One study found that people high in psychoticism tend to be low in agreeableness and that people low in psychoticism tends to be high in conscientiousness (Goldberg and Rosolack, 1994). Some studies have looked at

the relation between Eysenck's theory and Five-Factor theory. Eysenck's theory of criminality (1964) and theory of anti–social behaviour (Eysenck, 1977), suggests that such conduct would be found more frequently in people with high scores on extraversion, neuroticism and psychoticism dimensions of personality. The tendency to bully was significantly associated with psychoticism while the tendency to be victimised was significantly associated with introversion and low self-esteem. No relationship between victimisation and neuroticism was found. This is surprising as victims are considered to be anxious people (Robins, 1966; Olweus, 1978). Therefore, Slee and Rigby (1993) suggest that the major personality factor differentiating victims from others is not neuroticism but introversion.

The NEO-PI (NEO-Personality Inventory) is designed to measure the basic five factors of personality (Pervin, 1993). Illustrative scales have been developed for discriminating characteristics of people with high and low scores. Trait psychologists have noted both strengths and limitations of the model. Support for the Five-Factor model comes from three main areas: the factor analysis of trait terms in language, the relation of trait questionnaires to other questionnaires and

ratings, and the analysis of genetic contributions to personality. Limitations of the theory come from theorists who believe that less than five factors can be used to describe personality. There is scepticism over people's ability to report accurately when giving a self-evaluation. Pervin (1993) cited work by Buss (1989) and McAdams (1992) that suggests that many trait theorists would believe that there is more to personality than the Big Five, including factors such as, people's self-concepts, their identities, their cognitive styles, and the unconscious. The model focuses on stability of personality, but it doesn't discuss change of personality.

Dr. Raymond Cattell and his colleagues set out to measure the broad range of normal personality over 45 years ago. Research was based on the Allport and Odbert (1936) trait lexicon, a set of 18,000 adjectives that illustrate people. At the outset, Cattell and his colleagues asked observers to rate subjects well known to them on the basis of a subset of adjectives condensed to reduce similar terms in the Allport and Odbert set. The researchers then subjected the observers' ratings to factor analysis. Cattell performed this factor analysis with the intent of identifying the "primary" personality traits, or those that could explain the entire personality domain.

Two decades of intensive factor analytic research by Cattell has lead to the identification of 16 source traits as the basic factors of the human personality (Cattell, 1965). These factors are perhaps best known in the form in which they are most often used in an objective test of personality call the Sixteen Personality Factor (16PF) Questionnaire. Cattell presented the traits in bipolar form; the personality characteristics associated with these traits are listed in everyday language. Based on the subject's reaction to certain situations, namely, individual interpretations based on certain questions, a profile of that subject's personality is constructed based on each of the following sixteen factors: warmth, reasoning, emotional stability, dominance, liveliness, rule-consciousness, social boldness, sensitivity, vigilant, abstractedness, privateness, apprehension, openness to change, self–reliance, perfectionism, and tension.

Methodologically, Cattell favours a theoretical approach in which factor analysis is used in an exploratory way to discover personality factors. For Cattell the structure and measurement of personality does not stop at describing temperament and ability, but also includes dynamics or motivation. Motivation is

regarded as having two aspects requiring separate investigation and measurement, its strength and goals involved (Cattell and Child, 1975). Cattell studies motivational strength using objective tests. When the scores were factor analysed, three main dimensions of motivational strength emerged. They correspond approximately to the Freudian concepts of id, ego and superego. Cattell calls the ultimate goals of motivated behaviour the "ergs". These are roughly comparable to instincts. While ergs are culturally universal because of their biological origins, the means by which ergs can be satisfied will vary from culture to culture. Culture specific ergs are called sentiments.

Temperament, ability and motivation factors make up the main fundamentals of Cattell's theory of the construction of personality. They outline what may be observed as its somewhat fixed base. Cattell has studied relatively short-term moods and states and concludes that anxiety is the most important aspect of these transient conditions (Cattell and Scheier, 1961). More permanent changes in personality structure are the result of maturation and learning

experiences, and Cattell has begun to develop an account of how learning structure can bring about enduring changes.

Cattell's theory has received a good deal of admiration because of its empirical nature. As a personality theorist, Cattell's scientific approach to the study of personality deserves attention. Cattell is concerned with developing precise measures in order to study personality structure (Hall, Lindzey, and Campbell, 1998). Critics of Cattell's theory suggest that portions of his vast theoretical structure are somewhat lacking empirically. Takemoto-Chock (1981) states that some of the source traits Cattell has found have not been replicated by other researchers. Additionally, Goldberg (1981) argues that Cattell's Sixteen Factors (16PF) may only be five factors. Critics have also pointed to the subjective nature of naming the factors produced by the factor analysis (Hall, Lindzey and Campbell, 1998). However, despite these criticisms, Cattell's theoretical approach promises to be an important tool in future personality research (Hall, Lindzey and Campbell, 1998). This rigorist, scientific approach to the study of personality will surely benefit a branch of psychology filled with subjectivity.

The development of personality is a complicated one; siblings brought up in the same environment can vary significantly. A child's personality will affect the quality of relationships throughout his/her lifetime. The personality traits of the groups involved in bullying are analysed below. In this research, the participant groups are adults yet this researcher concludes that the same traits are persistent through the developmental years and therefore can be applied to the adult population also. Research by Thomas and Chess (1977) have shown that a child's temperament may have an influence on behaviour. Children who are irregular in their eating and sleeping habits, intense in their emotional responses, aggressive, irritable, adapt slowly to new situations and show a great deal of negative mood are those most likely to develop behavioural problems. These characteristics meet with many of the traits displayed by both victims and bullies, especially the bully/victim group. Children who demonstrated these characteristics from birth onwards were reported to push, hit and fight more in nursery school (Billman and McDevitt, 1980), and to have "Difficult Child Syndrome" (Graham et al, 1973). Further research found that parents of bullies reported that there was never a "goodness of fit", between them and their

children. The parents indicated that days of peace and quiet, were interrupted by weeks of hostile bickering and misbehaving. By the time they were two, the children had firmly established sets of behaviour which produced periods of endless long screaming and crying, biting and over-activity, which almost appears to verge on hyperactivity. The response of these parents demonstrated the beginning of a circular tragedy, because the parents become more assertive in discipline and punishment, the child responds more aggressively which can play a part in the development of a bully (Randall, 1990; Srouffe 1988). A point that must be addressed here is that parents of difficult children may treat them differently than other children. Research with Attention Deficit Hyperactivity Disorder (ADHD) children has shown that parental discipline of these children can be more severe and frequent than their non-ADHD siblings (Detweiler et al, 1999). This may be where the labelling of a child as difficult, simply becomes a self–fulfilling prophecy. Furthermore, the development of severe behaviour problems may require a combination of variables such as difficult temperament in addition to adverse parental attitudes and practices (Besag, 1980; Bates, 1980). An irritable child may influence the

mother's behaviour, and even siblings may be caught up in a coercive situation (Bell and Harper, 1977). A hostile marital relationship reflects on the children, resulting in them possessing little empathy or warmth. This is strongly correlated with the bullying behaviour of boys (Roland, 1989). As role models, the type of relationship that parents have with each other can influence the way the child learns to interact with others. A child cannot learn to show empathy and consideration, if he does not experience it in the home.

Furthermore with regards to victims of bullying, a study of 8-to 11-year old boys and girls (Bowers et al, 1994) found victimised children perceived their parents as over-protective and reported an over-involved, enmeshed family system. However, sex differences in these relations were not explored. This may contribute to the anxiety that victimised children often feel in social gatherings. Their inability to defend themselves may also be attributed to the fact that their parents over-protect them, unarming the child to defend themselves in the bullying situation. Bullies systematically test at the beginning of the year to see which targets would make the best victims. Those with over–protective parents and an over-reliance on their parents appear to make good candidates.

In a preadolescent group, Rigby (1993) found that victimised girls perceived their mothers to be hostile including behaviour such as being critical, bossy or sarcastic. Rigby failed to find parenting correlates of boys' victimisation but this may be that measures were limited. This negatively perceived mother-daughter relationship may cause low self-esteem and therefore, increasing the girls likelihood of being victimised. The interaction of the parent and child relationship will reflect clearly in the child's personality. Environmental and genetic factors play an essential role in the development of personality and may therefore make a child more prone to either bullying behaviour or being victimised.

It is oversimplifying matters to conceive of the tendency to bully and to be bullied as polar opposites (Rigby and Slee, 1992). It is possible to isolate certain physical, psychological, personality and behavioural characteristics shared by children in both categories (Heinemann, 1972). There exists within the literature different types of bullies, the pure bully, the anxious bully and the bully/victim. The pure bully displays certain characteristics which include aggression, lack of empathy, extraversion, assertiveness, impulsivity, competitiveness, a

need to dominate and control others, seldom paying attention to the feelings of others and not thinking of the consequences their actions may bring. They tend to lack guilt; bullies scored high on psychoticism scales (Slee and Rigby, 1993) and rationalize their bullying by putting forward the idea that the victim deserved it. Olweus (1991) has described typical bullies as having an aggressive personality pattern in the sense that they are aggressive not only toward their victims but towards their teachers, parents and siblings as well. Therefore, the experiences of children who come from less cohesive homes may be related to their personality type. Lack of academic ability is often linked with bullying behaviour, where students with low ability are seen as disruptive and vent their frustrations on those who excel. However, research indicates a great variety amongst the academic level in bullies, especially with regards to gender. Boy bullies were found to be below average on school grades and intelligence (Olweus, 1978; Roland, 1980, 1987) but this was not the case for girl bullies. Quite the contrary girls received better grades than those not involved in bullying and were also slightly more intelligent (Roland, 1980, 1987). Furthermore, bullies were more likely to be hyperactive and disruptive in class and had higher

neuroticism scores than their controls (Byrne, 1994). The stereotypical view of the bully is that they are popular amongst their peers and this is the reason the episodes often go unreported. Several studies examining the popularity of bullies have produced conflicting results. The bullies were quite popular among their peers (Stephenson and Smith, 1989) although not as popular as the well-adjusted average boys (Olweus, 1978). Female bullies constituted an exceptional group, whose popularity was surprisingly high (Lindman and Sinclair, 1988). In primary schools bullies especially boys enjoy a status due to their ability to control the group. However, in secondary schools bullies tend not to be popular. Bullies by this stage often confuse leadership with dominance. Glow and Glow (1980) examined the popularity of bullies versus non-bullies and concluded that bullies on the whole were not popular; however they were not as unpopular as the victims (Lagerspetz et al, 1982). Bullies had reciprocal friendships with other bullies. Consistent with other research (Carins et al, 1988) aggressive youngsters may be rejected by most of their peer group, but they do not affiliate reciprocally with other aggressive children. The emergence of growing independence in adolescence may decrease conformity within the social

group. People may feel stronger about not simply bowing to the bully's request, therefore diminishing a false sense of popularity. Both popularity and educational differences are displayed across the different bully groups.

The anxious bully group was identified by Stephenson and Smith (1988). They are the least confident children and are less popular than other bullies (Lowenstein, 1978). These children appear to have other difficulties, such as problems at home or educational failure. Anxious bullies have few likeable qualities and are sometimes regarded as cowards. They share many characteristics of the victim they are anxious and aggressive, possess low self-esteem, have much insecurity and are friendless. They pick unsuitable victims, provoke attacks by other bullies, and appear extremely emotionally unstable. This group was also identified by Mitchel and O' Moore (1988) where they were referred to as neurotic and by Olweus and Roland (1983) were they were referred to as hangers on.

A third group is referred to as the bully/victim group. These are victims in one situation but bullies in another. Olweus (1985a) found that 6% of those who were seriously bullied and

18% of those who were bullied occasionally, in turn bullied others. These children are subjected to harsh discipline at home to the extent that their parents bully them; they are more likely than others to be aggressive to those younger and more vulnerable. In this way they seem to have the dual role of both victim and bully. These children were found to be physically strong and able to assert themselves, but are less popular with their peers than the main group of bullies (Stephenson and Smith, 1988). This group demonstrates more disturbed behaviour than the typical bully (Olweus, 1989). Bully/victims scored higher in the neuroticism and psychoticism scales than children who were not involved in bullying (Mynard and Joseph, 1997). Bully/victims perceive themselves, to be the least socially acceptable and are the most neurotic (Austin and Joseph, 1996). The bully/victims are highly rejected by their peers and differ from other victims by being provocative and starting fights (Smith and Boulton, 1991). Bullies who had been victims possess more feelings of inadequacy than pure bullies. They are more troublesome, anxious and dissatisfied than typical bullies. It appears that victims may want to demonstrate their own superiority and do so by becoming a bully themselves. The bully/victim group scored more

negatively on behavioural conduct than the pure victims or pure bullies. However they were similar to the bully only group in athletic competence and similar to the victim only group in scholastic competence, social acceptance, global self worth and depression (Austin and Joseph, 1996). This group was also referred to as the false victim by Besag (1992).

Furthermore several types of victims also exist; these include the pure victim, the passive victim and the provocative victim. The pure victim is isolated by a number of distinct physical characteristics and personality traits that appear to be associated with children who were likely to be bullied. These victims seldom provoke or show aggression and are rarely involved in episodes of teasing. The boys amongst them tend to be physically weak and of small stature (Olweus, 1978). Social skills and the capacity to communicate, being popular and showing an interest in others are features likely to alleviate against being bullied. Children who are physically robust, socially sensitive, unselfish, flexible, conforming to group norms, non-attention seeking and modest individuals are less likely to be bullied than those of the opposite trait (Lowenstein, 1978b). Studies of victims of bullying in middle

childhood suggest that these children tend to be generally anxious, cautious, insecure, physically weak (O' Moore, 1988), possess low self-esteem (Slee and Rigby, 1993b; O' Moore, 1997) be non-aggressive, weak, passive, socially ineffective, and reluctant to retaliate in the face of provocation (Olweus, 1978; Stephenson and Smith, 1989). Children who were bullied scored low on the extraversion scale (Slee and Rigby, 1993; Mynard and Joseph 1997) and on the neuroticism scale (Byrne, 1994). Most victims are lonely, unhappy at school (Slee and Rigby, 1993a) socially isolated, cry readily, are unpopular in the group and have below average school attainment (La Fontaine, 1991; Boulton and Underwood, 1992; Nabuzoka and Smith, 1993). Victims earn significantly lower school grades than pupils not involved in bullying and they are less intelligent (Olweus, 1978; Roland, 1980, 1987). This finding holds true for both boys and girls. Victims of both sexes are very low on self-esteem (Olweus, 1978; Mykletun, 1979; Bjorkqvist et al, 1982). This may of course be the reason that so many get bullied but having low self-esteem is probably also at least to some degree a result of humiliating experiences on the part of the victim. In fact, some of the victims seem to start thinking that they deserve it (Roland, 1980). Many victims

give the impression of being independent and unfriendly. This is often the result of being shy and anxious and having poorly developed social skills. However, it is interpreted by the group as rejection. Consequently, the victim has no support group if problems do arise. Bullying and aggressive victimisation was positively related to youngsters' emotionality and activity and negatively related to peer popularity. Having friends and being liked by one's peers were protective factors against victimisation, although the latter was more powerful than the former. Having friends who were victims did not serve as a protective role. It may be that these victims are weak and do not provide adequate protection from victimisation (Hodges et al, 1997). Even students not directly involved in bullying are unlikely to stand up for a person who is perceived as being unfriendly. Victims tend to be rejected not only by bullies but by non-bullying peers also. They are liked by few children and disliked by many. They complain of being lonely and feel a great deal of stress because they do not have supportive relationships within their peer groups. Research has shown that children do not approve of bullying but that they also have negative attitudes towards some children who are bullied (Randall, 1995). Among boys and girls, victims had a lower

status than any other group. They scored high in social rejection, low in social acceptance and their most frequent status group was that of being rejected (Lagerspetz et al, 1982; Lindman and Sinclair, 1988; Salmivalli et al, 1996). It has also been suggested that depression may be associated with victimisation at school (Besag, 1989). This status may prevent the victim from cultivating the ability to put an end to the bullying behaviour or from seeking help. The unpopularity of victims can be seen both as a cause and as a result of continuous bullying. One reason for their being picked on and harassed in the first place may be their original unpopularity within the group. On the other hand, as Olweus pointed out when describing the group mechanisms involved in bullying, there are gradual cognitive changes in the perceptions of the victim by the peers. As the bullying continues they start to see the victim as deviant, worthless and almost deserving of being harassed, along with the cognitive changes, the victim becomes unpopular. It becomes a social norm of the group not to like him/her. Victimisation is highly stable, indicating that many of the same children experience verbal and physical attacks from peers over several years (Olweus, 1978; Hodges, Malone and Perry, 1995; Egan and Perry, 1998). Some victimised children

have internalising difficulties and others have externalising problems, such as disruptiveness, aggression and argumentativeness (Olweus, 1978; Boivin and Hymel, 1997). These behaviours have been hypothesised to irritate other children and provoke them, especially bullies. Several investigators have recently proposed that having one or more friends help to protect children against victimisation (Hodges et al, 1997; Kochenderfer and Ladd, 1997). Children are well aware of the social networks within the classroom (Cairns et al, 1988) and aggressive children probably prefer to target children who lack friends because they can do so without fear of retaliation or ostracism from the children's friends. However, having a best friend may not be sufficient in protecting children who are at risk for victimisation. Variability exists in children's abilities to provide a protective function (Hodges et al, 1997; Hodges and Perry, 1997).

Passive victims are children who are ineffectual in the face of attack. Olweus (1978) labelled them as "passive" or "submissive" because they seek to conciliate rather than be aggressive in response. These children are described as being fearful, physically weaker than their peers, cautious, withdrawn

and often find it difficult to make friends. A significant number have co-ordination difficulties. They are often clumsy and awkward (Besag, 1992) and who tend to be weak with poor self-esteem, lacking in confidence and not popular with their peers (Stephenson and Smith, 1982). These are children who are ineffectual in the face of attack, when attacked they display helpless, futile anger (Olweus, 1978). They avoid aggression and confrontation and lack the confidence or skill to elicit support from their peers.

Provocative victims intentionally provoke and antagonize others. They tease and taunt and yet are quick to complain if others retaliate. In extreme cases such a child may be in need of specialist help. Some children take on the role of the victim to gain acceptance and popularity. They are known as colluding victims (Besag, 1992) and are more active, physically stronger, easily provoked and often complain about being picked on (Stephenson and Smith, 1982). They are more actively irritating, tension creating and restless. They were also considered to be hot-tempered and when attacked they react differently than the passive victims. In the areas of anxiousness and self-esteem there seemed to be small and

inconsistent differences between the passive and provocative victim, however unlike the passive victim, these children would probably still be at risk even if there were no bully to act as a catalyst. These children seem to bring on trouble themselves by being excessively attention seeking. They may have a habit that is very off-putting. The end result is negative attention. The provocative victim because of the nature of the behaviour is usually picked on by a number of people, perhaps even the whole class. Data of primary school children clearly distinguished the passive victim from the provocative victim (Olweus, 1978; Stephenson and Smith, 1987) and because these children actively provoke the bullying to which they are subjected they are a particularly vulnerable and problematic group. However, a distinction between the provocative and passive victim, was not made by Lowenstein (1978). If this distinction is ignored it might so easily cloud results. Lowenstein found his controls to be less aggressive than the victims, a finding that is in the opposite direction of what one would expect of the passive victim. Several short–term longitudinal studies have shown that victimisation contributes over time to losses in self-esteem and to gains in depression, anxiety, social withdrawal, peer rejection and school avoidance

(Hodges et al, 1995; Egan and Perry, 1998). Olweus (1992) found that boys who had been victimised during middle school were more depressed and had more negative self-concepts a decade later as young adults. These findings are consistent with other data and theory suggesting that adversity suffered in the peer group can leave enduring scars on children's personalities (Parker and Asher, 1987; Harris, 1995). Preadolescent boys who behaved submissively in initial sessions of all boy playgroups became increasingly victimised over sessions (Schwartz, Dodge and Coie, 1993). Similarly, Egan and Perry (1998) found that preadolescents with poor self-concepts were at risk for increased victimisation over school year and Kochenderfer and Ladd (1996) reported that kindergartners who were victimised in the fall of a school year were likely to avoid school and to report feeling lonely in the spring. Olweus (1992) found that middle-school boys who were abused by peers were depressed and had low self-esteem 10 years later in adulthood. A study by Egan and Perry (1998) found that poor self-concept results from and contributes to victimisation. Some victimised children display "externalising problems" such as disruptiveness, ineffectual aggression, dishonesty and argumentativeness (Olweus, 1978). Such

behaviours may serve to irritate and provoke aggressors. In addition to lacking friends, victimised children tend to be generally disliked by peers and their low position in the status hierarchy is also likely to contribute to their victimisation. Even non-aggressive, mainstream peers tend to express negative attitudes toward rejected classmates (Dodge, 1986). Hodges and Perry (1998) carried out a study to determine whether the personal and interpersonal difficulties that characterise victimised children are antecedents of victimisation, consequences of victimisation or both. Boys and girls in the 3rd through to 7th grades were assessed on victimisation, personal variables (internalising problems, externalising problems and physical strength) and interpersonal variables (number of friends and peer rejection). One year later children were assessed again on all variables. Internalising problems, physical weakness, and peer rejection contributed uniquely to gains in victimisation over time. Moreover, initial victimisation predicted increases in later internalising symptoms and peer rejection. These reciprocal influences suggest the existence of a vicious cycle and the strong temporal stability of peer victimisation.

2.4 EFFECTS OF FAMILY ON SELF-ESTEEM AND ANXIETY.

Low self-esteem and raised anxiety levels appear to be intrinsically bound. Each one derived from interpersonal relationships as a whole but primarily within the family. The family unit plays an essential role in the development of every child. A child with loving and caring parents, who communicate openly and treat each child as an individual with rights, develops into a well–adjusted individual, who can contribute positively to the family as a whole. The family is the single most influential basis for the development of self-esteem and in turn, anxiety. Until the child commences school, the family remains the most important learning ground for the child. This later extends to peers, teachers and other non-family members of significance. Children have their first experience of self-esteem enhancement or reduction as early as six weeks with reference to how individuals respond to their physical and emotional needs (Reasoner, 1992). Parents act as mirrors for their children from the perspective that children learn about themselves from parents. As children grow older, significant others such as teachers or friends will act as mirrors to tell them who they are. As children go through the various stages

of development their level of self-esteem is changed with regard to how the significant adults in their lives fulfil their needs and the extent to which they are successful in getting through each developmental stage. Individuals with low self-esteem are products of environments where there is a lack of encouragement and love, where the uniqueness of the individual is not appreciated, where condemnation, derision and cynicism proliferate, where love and acceptance are given on a conditional basis, where there is a lack of acknowledgment, support and admiration for accomplishment. It is not surprising that these individuals adopt a defensive facade, participate in boasting, have difficulty in developing and sustaining strong healthy relationships or that they feel unlovable and incapable and constantly fear failure (Reasoner, 1992). This description of low self-esteem applies to the traits of all the participants of bullying behaviour. Individuals with low self-esteem, who are dissatisfied with them, have contempt for themselves even to the extent of feeling a sense of self-rejection. Research conducted by Coopersmith (1967) which examined the home conditions of 1,730 families to ascertain which aspects of parental behaviour significantly changed the child's level of self-esteem, pinpointed three basic conditions

which are influential in creating high self-esteem in the home environment. Firstly, unconditional love and affection that enables children to grow and develop if they are considered by parents and significant others as being lovable and competent. Within the family, every communication of a verbal or non-verbal nature conveys a message to the child about his/her loyalty or capability. Such a message conveys to the child their value. Children are certain that their parents are always correct and they depend on them for their self-image. Secondly, the enforcement of consistently well-defined limits. Children will not develop high self-esteem if they live in a home with no rules and boundaries or on the other hand too many rules and boundaries. Children will grow and improve if they are persistently supported to fulfil whatever regulations or limits are drawn up. In families where there are no limits laid down due to either over protection or neglect, the result will be lack of incentive and feelings of apathy and vulnerability. Finally, there must be a clear amount of respect shown to children. It is essential that children feel that they are valuable human beings who have a donation to make to the home environment. It is important that adults view them as having a role in the family. By the time a child is ready to begin school

the groundwork of a child's self-esteem has already been put in place and those children with either high or low self-esteem can be easily identified. Furthermore, anxiety levels appear to be directly related to familial relationships. A study carried out by Adams and Sarason (1963) found parental correlates of anxiety in high school age children. There is considerable evidence available that demonstrates that high and low anxious individuals differ in their responses to a variety of situations (Sarason, 1960). High anxious individuals emit more personal, self-oriented interfering responses than do low anxious individuals. It has been suggested that these interfering responses are learned as a function of life experiences, presumably those involving the family being particularly important. Therefore, it would be valuable to know something about of the characteristics of the family, which might relate to an individual's anxiety. The results of the Adams and Sarason (1963) study showed that only in the case of girls and their mothers were there consistent positive correlations, and anxiety scores of both boys and girls were much more related to mothers than to fathers' anxiety scores. It was found that the anxiety scale means of boys, girls and mothers tended to be higher than fathers means. Additional findings was that

children whose fathers' occupations was classified as professional obtained lower test anxiety scale scores than did other children and that the correlation between anxiety in parents and anxiety in children is influenced by socio-economic factors. Research in particular looks at the parental relationships and early attachment as can be seen from research carried out by Sullivan (1953). It has been put forward that anxiety is an intensely unpleasant state of tension arising from experiencing disapproval in interpersonal relations, through an empathic linkage between an infant and its mother "the tension of anxiety, when present in the mothering one, induces anxiety in the infant" (Sullivan, 1953, p.41). This section will focus on the types of familial relationships conducive to the development of low self-esteem and anxiety in the bully, bully/victim and victim groups.

A high proportion of both bullies and victims have been found to have problematic backgrounds (Stephenson and Smith, 1988). Family therapists have long regarded positive and effective communication in families as a crucial determining of healthy family functioning among adolescents (Duhl and Duhl, 1981). Supporting communication within the family is seen as

encouraging the development of positive identities among adolescents and higher levels of social and coping skills (Noller and Callan, 1991). The families of adolescent bullies were found to be functioning less well than others, as also were the families of female but not male victims. It has been suggested that bully/victim behaviours are strongly influenced by children's experiences of family life. An over punitive, authoritarian rather than authoritative style of family discipline could result in the child becoming hostile and aggressive. Children growing up in a coercive environment commonly develop into coercive people who in turn rear children likely to repeat the pattern (Pizzey, 1974). The reverse is also possible in that a hostile and punitive parent could sap the young child's confidence so that he/she becomes anxious and fearful. Such children sometimes develop nervous habits, self punitive actions or disturbed bodily functions such as bedwetting, all of which could result in them being unpopular, victimised and a target for the jibes and taunts of others. Children, who bully, are aggressive often using their power and violence to communicate instead of words. The families of these children are dysfunctional, emotions are muted, and there is a lack of communication. The members of these families suffer in

different ways, where one child may become introspective another may turn his/her troubles out onto the rest of the world. The parents of bullies often do not spend enough time with their child or may openly show a preference for one child over another. The mother of a bullying child may care for every physical need of the child while neglecting the child's emotional needs. A father, who uses physical punishment as a means of discipline, is teaching the child that it is appropriate to hit others in certain circumstances. Family factors, which are associated with childhood aggression, are absence of a father, loss of a parent through divorce rather than death, a depressed mother, an irritable parent and marital discord (Wolff, 1985). In a dysfunctional family where there is little warmth and poor communication between family members, girls are more inclined to become bullies or victims, the boys in such families tend to always become bullies. Poor family functioning has a particularly devastating effect on the self-esteem of girls (Noller and Callan, 1991). Researchers have found relationships between children's self–esteem and different aspects of paternal involvement. The self-esteem of elementary school boys was highly influenced by the extent to which their fathers were involved (Coopersmith, 1967) and that

adolescents who had become father-absent in early childhood had particularly low self–esteem compared to their father-present counterparts (Rosenberg, 1965). In a relatively extensive research project, Amato (1986) studied aspects of the father-child relationship and the child's self–esteem. This study included boys and girls in middle childhood and adolescence divided among three different types of domestic situations. The results indicated that degree of paternal involvement with children was moderately to strongly related to children's self-esteem. This was true of both the middle school aged boys and girls and adolescents. For eight and nine year old boys and girls the father–child relationship measure was more strongly associated with self-esteem than the mother-child relationship measure. For adolescent males, the contribution of both parents to self-esteem was about the same, but among adolescent females, the mother-child relationship seemed more relevant. The majority of the children and adolescents felt secure about the mother's positive availability, interest and help. However, the interest, attention and help provided by the father were less of a perceived constant, varying to a much greater extent among the children. As a result of this, the father's level of

involvement appeared to be an especially important factor in variation in self-esteem among children (Amato, 1986). Adolescents who have closer relationships with their fathers are higher in self-esteem than are those with more distant, impersonal relationships (Rosenberg, 1965). The results of Rosenberg's study (1965) found that only 1 out of 25 of those adolescents with the highest self-esteem were characterised as "highly depressed" compared with 20 out of 25 of those with lowest self-esteem. Clinical observation also reveals that low self-esteem and depressive affect are consistently associated. These studies support this researcher's view that bullying behaviour is associated with low self-esteem. The fact that low self-esteem and depression are inter-related and also associated with bullying conveys the importance of raising a child's self-esteem in an attempt to eliminate bullying at the source.

A few investigators have sought a relationship between traumatic events and anxiety symptoms in children (Gordan, 1977; Martinez-Monfort and Dreger, 1972). The three studies identified have yielded negative results. This leads to the controversy regarding the genetic and environmental

contributions to anxiety. The genetic aspect of anxiety is explored by Freud (1952). The complex of sensory, motor and physiological experiences, which suddenly flood the immature nervous system of the foetus at birth, is considered to be the prototype of all later anxiety reactions. The important point is that the first anxiety reaction is an ungoverned "automatic" reaction, which can be thought of as the most helpless state of affairs in which the human organism will ever find itself. It is assumed that genetic factors play a role in producing individual differences in susceptibility to anxiety (Pedersen et al, 1988). However, early attachment experiences may be important in determining whether a given child becomes highly anxious or adopts an avoidant or defensive coping style. Separation Anxiety disorder is defined as excessive anxiety over separation from those to whom the child is attached. This anxiety is evidenced by such features as unrealistic and persistent worry about the possible harm befalling attachment figures or about some calamitous event separating the child from loved ones, reluctance or refusal to go to school, to sleep without attachment figures or to be alone and excessive distress or physical symptoms when separated or in anticipation of separation. It is often stated that families of

children with anxiety disorders are psychologically deviant and that their psychopathology plays an etiologic role in the child's symptoms (Prince, 1929, 1968). Mothers of children with separation anxiety have been described as being highly anxious of letting go of the child and of transmitting separation anxiety to the child in order to maintain proximity with the child (Eisenberg, 1958a). Many other characteristics have been attributed to the immediate families of youngsters with separation anxiety disorders. Mothers have been described in turn as over dependent on their own mothers, immature, ambivalent toward their child, overprotective, perfectionistic, depressed, overindulgent, socially isolated and dissatisfied with their marital relationships and therefore using the child as a lover substitute (Eisenberg, 1958a, 1958b). Fathers have not been reported to have as much psychopathology as mothers. With regards to the victims of bullying, they tend to have an association of over protectiveness and over involvement with their parents. It has been suggested by Bowlby (1971) that separation from the mother early in life makes children vulnerable to later anxiety states. Victims of bullying display similar characteristics as mentioned above. Their vulnerability to be victimised may begin early in life as a result of

separation from the primary caregiver, the over–dependence on the primary caregiver preventing them from developing the correct abilities to interact positively with their own peers. Children with anxiety disorders comprise a significant portion of patients treated at mental health centres (Cytryn et al, 1984). There is evidence that childhood anxiety may be predictive of pathology at later development stages of an individual's life (Bowlby, 1973; Kellam et al, 1975). A study carried out by Sroufe and Waters (1977) found that infants with an avoidant attachment style appear unconcerned upon the return of their caregiver but nevertheless displayed an accelerated heart rate. Evidence linking it to adult repressiveness comes from studies by Dozier and Kobak (1992) and Myers and Brewin (1994). It seems that young children who experience indifference and antagonism from one or both parents develop an avoidant attachment style, combining apparent behavioural calmness with high physiological arousal. A possibility is that parental inconsistency plays a role in the development of an avoidant attachment style. An avoidant attachment style in children often develops into adult defensive coping style characteristic of repressors.

It appears that there is a part played by the child's family in providing models of aggression or in creating emotional disturbance in the child that might lead to maladaptive behaviour. Infant school bullies were found to be exposed to parental inconsistency, rejection or aggression at home (Webb, 1969). As role models, the type of relationship that parents have with each other can influence the way the child learns to interact with others. A child cannot learn to show empathy and consideration, if he does not experience it in the home (Manning et al, 1978). Family factors seem to be of major significance in the development of the personality of children who are bullies or victims of bullying. The development of severe behaviour problems may require a combination of variables such as a difficult temperament in addition to adverse parental attitudes and practices (Bates, 1980). Even Olweus (1984) who on the basis of research mainly confined to boys aged 13 to 15 in Sweden favours a personality explanation of bullying acknowledges the role of early child rearing practices in the genesis of bullying. Mitchel and O' Moore (1988) found that 70% of the bullies studied had problematic family backgrounds, while Stephenson and Smith (1982) found that one-third of those involved in bullying both bullies and victims

had difficult backgrounds. Some children have a more positive attitude to the use of aggression than the majority of their peers, some factors significant to bullying behaviour are a negative attitude between parent and child, especially mother and son. Over-punitive physical discipline, or inconsistent and lax control, the use of physical aggression which is seen as socially acceptable and the temperament of the child (Olweus, 1980). Children model their parents' behaviour, and their children will also model the methods of discipline used by parents. Researchers such as Sears et al, (1957) have distinguished two contrasting general methods of child rearing called "love oriented" and "object oriented". It is claimed that love oriented methods are favoured by middle class parents (Bronfenbrenner, 1958) and that these methods are more effective in producing well socialized and less delinquent children (Trasler, 1962). An authoritative style of parenting is considered a protective factor and it involves high acceptance of the child, good supervision and the granting of psychological autonomy (Baumrind, 1966; Steinberg et al, 1992). This means encouraging children to grow and develop in their own independent way and to say what they think, but meanwhile providing support and firm guidance. This type of parenting

will produce children who contribute positively to society, it also produces high self-esteem and low anxiety as the child feels confident about themselves and the parent–child relationship. However, the parents of bullies are generally more violent (Farrington, 1993), they are more likely to use physical punishment, more likely to disagree with each other and more likely to be cold and rejecting (Bandura and Walters, 1959). Aggressive boys were more likely to have punitive, rejecting parents who imposed erratic discipline, were in conflict with each other and did not closely supervise the boy (McCord et al, 1961). The aggressiveness of children was related to the severity of the punishment imposed by the parents (Eron et al, 1963). Children tend to imitate the behaviour of someone acting aggressively (Berkowitz, 1965; Bandura, 1973). Parents who use physical punishment often do not realize that they are conveying the message to their child that it is all right to use violence. This type of inconsistent and physical discipline produces instability within the child, lack of confidence and low self-esteem. The inconsistency of parenting may cause increased anxiety as different wrong doings, regardless of the magnitude will produce inconsistent punishment. In a study carried out by Newson and Newson,

(1970) the results showed that 50% of parents smacked their children for disobedience, 8% of children were smacked daily and more boys than girls were punished in this way. Perhaps, this is why boys tend to use more physical violence in bullying than girls. A considerable number of children receive and witness violence at home, to such an extent that they can come to regard violence as normal behaviour (Mitchell, 1973). Parents may apply power assertive strategies in an inconsistent manner. They may fiercely punish aggression within the home but actually encourage it within the peer group outside the home (Parke and Slaby, 1983). Parents may have aspirations for their child to dominate within the peer group and will therefore reward such behaviour in school, even though they would suppress it in the home (Patterson, 1982). A fundamentally negative rejecting attitude from the parent creates strong aggressive tendencies and hostility in a child (Bandura and Walters, 1959). Parents of very aggressive boys and delinquents have been characterised by a combination of lax mothers and hostile fathers (Andry, 1960). Bullies perceive their family as lacking in cohesion; they see their fathers as more powerful than mothers and siblings as more powerful than themselves (Bowers, Smith and Binney, 1992).

Psychoanalysts have laid great emphasis upon the emotional attitudes of parents, especially mothers, in the formation of the characters of their children. A cold and rejecting attitude on the part of the mother referred to as "silent violence" is correlated with the bullying behaviour of the son (Olweus, 1980). Aggressive teenage boys expressed more hostility against their father and weakly identified with them. It seems that cruel, passive or neglectful fathers are just as detrimental as cruel, passive or neglectful mothers (Glueck and Glueck, 1950). However, this contrasts with the findings of McCord et al (1959) where bad fathers were not as destructive as bad mothers, but that the delinquents came from less cohesive homes, in which there was less warmth between the two parents and between each parent and child. Bullies are less likely to have a father at home and to be in cohesive families (Berdondini and Smith, 1997). Paternal absence seems to affect boys more than girls, making the boys less aggressive when young, but more aggressive during adolescence (Zigler and Child, 1969). Delinquency rates are higher in boys if the father is absent from the home but in girls the rate is higher if the mother was missing (Gregory 1965). Pre-school children tend to prefer the parent of the same sex (Ammons and Ammons,

1949) whereas older children prefer the parent of the opposite sex (Newell, 1932). It may be that the importance of the same sexed parent is marked only at certain ages, perhaps in adolescence. Behaviour towards peers is seen as resulting from a failure in bonding with a parent figure, giving rise to chronic insecurity and suspicions. This characteristic is commonly found among children who bully their peers. The influence that families have upon children has also been conceived more broadly as deriving from the social environment of the family as a total entity or interlocking system. It has been suggested that experience of living with families in which interactions are continually negative and communication inadequate may lead children to internalise a model of how relationships are conducted that is basically non-caring and hostile. This model may determine how such children behave in their relations with peers (Tory and Srouffe, 1978). This is the beginning of a circle of failed or violent relationships they will experience as adults. Research indicates that the mothers of aggressive children appear to hold beliefs about social development that are different from mothers whose children are not aggressive and display normal social behaviours (Rubin and Mills, 1992). However, mothers of aggressive children frequently do not see

themselves as having any responsibility for the development of this behaviour. Instead they are more likely to attribute it to internal or temperamental factors, even to diet or additives. These mothers also become less and less surprised by their children's behaviour as time goes by. They become used to it and so express less surprise and anxiety about it than the mothers of children who are not normally aggressive. Parental rejection is frequently associated with early childhood aggression. Rejecting parents are more likely to apply power assertive strategies and punishments. The general finding is that parents who are cold and rejecting towards their children use physical punishments and whose discipline is inconsistent are more likely to have aggressive children than other parents (Conger et al, 1992). Overburdened parents have limited opportunity to monitor their children's activities or to exercise consistent control over misconduct. Lack of individual attention from parents promotes reliance on peer groups who may exert pressures towards delinquency. The older children in the family are left to manage the younger ones, a situation known to be conducive to indiscipline and aggressive conflict between siblings and probably also to delinquency (Burgess and Couter, 1978). One epidemiologic study has reported a higher

frequency of anxiety disorders in firstborns (Rutter et al, 1981) however; this finding has not been well documented in clinical studies, which have reported no consistent pattern of anxiety regarding birth order (Hersov et al, 1960). Large numbers of children in a family of limited income often results in overcrowding in the home and this in turn may have an adverse effect on behaviour (Gove et al, 1979). Negative relationships with siblings can produce fights within the family, which can spill over into school. Anger and jealousy, felt towards a sibling may be misdirected onto other students in school. Research shows that bullying does in fact take place between siblings (Elliott, 1986). The bully may be a younger sibling, it has been shown that younger children are twice as likely to provoke quarrels as older children but the latter are twice as likely to be blamed if they retaliate (Koch, 1960). Boys are twice as likely to fight outside the home, but girls fight equally as much at home with siblings (Newson and Newson, 1976).

With regards to the relationship between parental practices and family relationships of the victims of bullying Olweus (1991b) found an association between male victims and maternal over-protectiveness. Children's perceptions of parenting and family

practices indicated that victims showed high and positive involvement with other family members, which might indicate an over-protective or enmeshed family (Bowers et al, 1992; Berdondini and Smith, 1997). A correlation between self reported victims and poor family functioning was found with particular relevance to girls (Rigby, 1993). Victims of bullying tend to have family members who are too supportive and over-involved in the child's decisions and activities and on the whole are over-protective (Byrne, 1994). Children whose parents prevent them from developing their own independent social and interpersonal skills are more at risk of being victimised (Hazler et al, 1997). According to Wilczenski et al (1997) being victimised at home will signal to others the child's weakness. The more the child is victimised the more he or she thinks that there is nothing that can be done to change the situation and therefore will not even ask for help. There is a trend that suggests that first children are more likely to be victims at school than later children in a family (Hillery, 1989). This raises questions about whether child-rearing practices are very different for first children. In some cases first children may be over-protected. Inexperienced and conscientious parents may be more reluctant to allow them to be independent when

compared with other children. This may increase the likelihood that first children will be less integrated into the class group. It was found that self-esteem was related to order of birth. Only children and particularly only male children are higher in self-esteem (Rosenberg, 1965). An examination of social background also highlights some interesting differences. Victims tend to have parents who are friendlier. These parents may not teach children that it is appropriate to stand up for yourself in certain situations and therefore may unwittingly produce low self-esteem within the child. The victims tend to come roughly from the same social background as the norms in the school. This is not generally true of the bullies. Neither bullies nor victims tend to come from homes where there is a balanced attitude to child rearing. Children who are commonly anxious and discontented in the company of their peers are more likely to have parents who demonstrated authoritarian socialisation behaviours, creating social anxiety and despondency, than the parents of children who were socially competent (Baumrind, 1967). A study by Lempers, Clark-Lempers and Simons (1989) found that authoritarian parents use child-rearing practices such that their children develop low self-esteem, lack impulsiveness and show poor self-belief in

social situations. Boys who tend to be socially withdrawn, cautious and viewers rather than contributors in the company of their peers, tend to have fathers who are highly commanding, are less engaging and show reduced physical playfulness in their exchanges (MacDonald and Parke, 1984). The mothers of these boys tended to be less likely to engage in verbal exchange and communication. The parents of socially withdrawn children of both sexes are less spontaneous, less playful and less effectively positive than the parents of socially competent and confident youngsters. It was discovered that whereas bullying children tended to have weak intra-familial links, those children who were victims tended to have enmeshed family structures, which reinforced patterns of high dependency (Bowers, Smith and Binney, 1994). Their high dependency seems to be linked with an inability to devise successful conflict resolution strategies such that withdrawal from conflict is an inevitable, trait development. This tendency to withdraw shows itself in an easy agreement to the demands of bullies, whereby the victims are likely to cry easily and display a very defensive stance. Not only do these children not retaliate but also they give their belongings to the bully, thereby positively reinforcing their behaviour both physically

and psychologically. Children's coyness, social withdrawal and dependency upon adults are strongly connected with over-protection by parents, a practice which has many similarities in terms of outcome with power assertion and parental intrusion (Martin, 1975; Parker, 1983). In a study of pre-school children it was suggested that the link between parenting and social withdrawal is a matter of not just the parents' behaviour but also that of the children (Hinde, Tamplin and Barret, 1994). The data indicated that the children sought their mothers frequently, suggesting dependency, and that the mothers responded with reinforcing protectiveness and overly solicitous behaviour. Over-protective parents encourage their children to be dependent on them and restrict their exploratory behaviour (Randall, 1996). Little research has been carried out regarding the study of parenting of the bully/victim group. As in the case of bullies, bully/victims are less likely to have a father at home and had difficult relationships with their parents (Bowers et al, 1994). Bully/victims reported the lowest monitoring and warmth by parents and had the highest over-protective and neglecting parents, indicating inconsistent discipline/monitoring practices (Smith and Myron-Wilson, 1998). Bully/victim groups were reported to have the poorest

family functioning (Rigby, 1993). This type of parenting does not encourage independence. It inhibits the social development of the child, causing over-dependence on a parent, usually the mother.

Furthermore, a study carried out by Smith et al (1999) hypothesised that problems with bullies and victims are related to parenting styles and lack of structure in the home. A method of in-school intervention that included martial arts and mentoring type activities was developed. The programme reduced suspension rates and violence in elementary schools. It was suggested that children who were not read to by parents often become bullies and/or victims of bullies. Every parent wishes to protect their children from the perils of the world; however these parents are damaging their children. Preventing the child from developing independent thought and action leaves them open to victimisation by peers and an inability to interact normally with the peer group. It is obvious that low self-esteem emulates from these relationships and intense anxiety is experienced when separated from the primary care giver. These traits may be carried into adulthood where an

inability to defend oneself and develop relationships will persist.

2.5 LONG–TERM EFFECTS OF BULLYING.

The prognosis for children who bully and are bullied is not encouraging. When this childhood behaviour is not dealt with it appears to spiral out of control in adolescence and adulthood, affecting not only the person themselves but all future relations. Violent criminals frequently have school records of physical aggression. For the victims it may lead to a life of depression and low self-esteem causing problems in adult relations and accomplishments. Children, who bully, do not grow up to be well-adjusted individuals contributing positively to society. Instead, they may become dangerous to both themselves and others. An effort to stamp out bullying in childhood can allow these individuals to lead normal well-adjusted lives rather than the horrendous adult life that research indicates lies ahead of them. Children who bully are very likely to become aggressive, anti-social adults, with unsatisfactory marriages. They are more likely to use violence against their own children, spouses, aged parents and relatives (Eron et al, 1987; Lewis, 1988; Brock, 1992). Some continue to use bullying tactics in adulthood, bullying others professionally, for their own advancement. Their personal

relationships are poor; they have fewer friends and many become adults convicted of assault, grievous bodily harm, and other violent crimes (Lane, 1989). To some people, the problem of bullying may appear to belong to childhood alone however, the link between childhood aggressive behaviour and adult violence is a reason that bullying should be taken seriously. It appears that bullying is the forerunner of adult violence and has its roots in unchecked infant behaviour (Randall, 1996). It has been argued that behaviour in school does predict later criminality (Lane and Hymans, 1981; Topping, 1983; Lane 1987). Several limitations should be noted regarding predictions based on early childhood behaviour. First the age at which childhood conduct disorders can be identified is not clear. Typically, stable predictions have been noted from the age of school entry but not before (Robins, 1979; Rutter and Giller, 1983). Secondly, although serious conduct disorders in childhood appear to be virtually a prerequisite for serious antisocial behaviour in later life, fewer than half of those with behaviour problems in childhood will manifest serious behaviour problems later (Robins, 1978). Evidence of future demise can be found in a longitudinal study, where 409 subjects were traced to the age of 30, young bullies were

found to have a 1 in 4 chance of having a criminal record by the age of 30, while for control boys there was only a 1 in 20 chance (Eron et al, 1987). In this study "bullying" was not specifically named, but it did however, contain items such as saying mean things, pushing and taking things which belonged to others. This study began in the 1950's, when the word "bullying" was not used to describe peer-peer aggression, yet would openly be recognised as bullying behaviour in research today. Loeber and Dishion (1983) report that 30-43% of children engaging in maladaptive behaviour at ages 4 through 11 continue the same behaviour 4 to 9 years later. Further research supports this argument where Olweus (1989), found that approximately 60% of the boys who were characterised as bullies in grades 6-8 had at least one court conviction at 24 years of age. As much as 35-40% of former bullies had three or more court convictions at this age while this was only true of 10% of the control boys.

Aggressive people are more likely to marry aggressive spouses and raise aggressive children (Huesmann et al, 1984). There is growing evidence that bullying is an intergenerational problem that adult males who were known as bullies produce a new

generation of bully. The model "cycle of violence" (Tattum, Tattum and Herbert, 1993) illustrates the cyclic progression from pre-teen bullying to juvenile delinquency and into violent adult criminality and family abuse. Several studies show the continuity between aggression in childhood and adolescence and later violent crime and supportive evidence of the final stage of the model, the intergenerational link is provided by Farrington (1993). It is presented in the new analysis of the Cambridge study in delinquent development which found that there was a significant tendency for study males who were bullies to have children who also became bullies, a total of 35% of the study males convicted of violent crimes had children who were bullies compared to the 7.9% of the remaining study. The continuity between the male's bullying and his child's bullying was statistically independent of any continuity between the male's general anti–social behaviour and his child's general problem behaviour. There was a significant tendency for the bullies to have children who were bullies. This evidence indicates an intergenerational transmission of bullying and that bullying by children in primary school and especially at the age of 14, significantly predicted their bullying behaviour at the ages of 18 and 32.

Aggressive behaviour problems in the early school years are highly related to later delinquency and/or psychopathology (Conger and Miller, 1966). These problems, especially in boys, account for the majority of referrals to mental health services in childhood and at older ages are commonly associated with serious learning problems (Miller, Hampe, Barrett and Noble, 1971). A number of studies show (Robins, 1966; West and Farrington, 1973; Lane, 1983) problems in childhood are reflected in the adult criminal statistics. It was found that aggression at age 8 was the best predictor of aggression at age 19, irrespective of I.Q., social class or parenting models and that aggression is a socially learned phenomenon (Lefkowitz et al, 1977).

Some of the consequences for those who are bullied include, long term unhappiness or misery, increased probability of depression (Olweus, 1997) or emotional disorder, low self-esteem and feelings of low self worth, reduced social skills, failure to develop effective assertiveness, poor long term social relationships, truancy, poor concentration, sleeping difficulties and appetite disorders. Former victims seem to function well in a number of respects as young adults; however there are two

dimensions on which they clearly differed from their peers, these included depressive tendencies and poor self-esteem (Olweus, 1994). The elevated levels on these dimensions can be interpreted as a consequence of earlier persistent victimization, which results in the negative evaluations of themselves as worthless and inadequate individuals (Olweus, 1991). These negative self-perceptions, which also imply an increased vulnerability to depressive reactions, tend to become internalised and a stable fixture within the individuals. These perceptions and reaction tendencies may become lasting (Allport, 1937). Victimisation by peers in school appears to be a factor whose causal role in the development of depressive reaction patterns in adolescents and young adults has been much neglected. Since it is known that a considerable proportion of young people who actually commit or attempt to commit suicide, are depressed (Sudak, Ford and Norman, 1984) one can hypothesise that victimisation may be an important contributory feature in suicidal behaviour. It is worth noting that the nationwide campaign against bully/victim problems in Norwegian schools, launched by the Ministry of Education was initiated after it had been discovered that three 10-14 year olds had committed suicide as an outcome of severe bullying

and harassment by peers (Olweus, 1991, 1993a). Victims of bullying do appear to be trapped in the situation, frequently over a long period of time. When no method of escape can be determined, depression can result. The causes of adult depression were once sought in childhood but it is now recognized that depression can begin in childhood (Trad, 1987). Quite young children are known to make serious attempts to end their lives some as young as 5 years of age (Kosky, 1983). People of any age who are bullied risk a continuing and all-encompassing misery, lower self-esteem and the possibility of psychosomatic illness associated with the stress (Randall 1996). Teenage boys who become victims at school between 13 and 16 years of age were by the age of 23, more likely to show serious depressive tendencies and to have poor self-esteem. As most were not continuing to experience victimisation at this age it is clear that the effects are long lasting (Olweus, 1993). There are well-documented episodes of suicide, but victims can experience such low self-esteem and self worth that their latter relationships are not based on trust and intimacy and that this can pervade the formation of close relationships with the opposite sex (Gilmartin, 1987).

Adult bullying at work presents a less developed field with perhaps the most advanced work to be found in Scandinavia (Leymann, 1990, 1992a; Einarssen and Skogstad, 1996). Physical bullying appears to be rarely reported (Einarssen et al, 1994) with verbal and indirect bullying at higher levels of incidence. Generally bullying behaviours can be grouped into the following categories, threat to professional status, and threat to personal standing, isolation, overwork and destabilisation. Bullies are perceived as manipulating for power or privilege and that some positions of power encompass the privilege to inflict harassment (Brodsky, 1976). Such arguments provide strong support for the evaluation of the cost/benefit of bullying (Bjorkvist, Osterman and Hjelt-Back, 1994). A definition includes persistency and continuity of actions with negative effect on the victim (Leymann, 1992b; Einarssen and Skogstad, 1996). Incidence studies show 4-5% of employees being bullied at any one time, the average period being 3 years. The effects of bullying have been classified by Leymann as incorporating the victims' abilities to retain communication skills, social contact, and the respect of others, the effect on work and like situations and finally the effect on health. The 'ripple effect' of bullying was addressed where friends and

family can become involved, this emphasises the importance of distinguishing stress reaction indicators, which are present as a result of bullying from those already in place before the incident.

Gender differences have revealed a variety of results. Keg (1997) identified that the bullies were usually seen as being managers or senior managers of the targets, gender inconsistency of bullies was found as only 33% of women bullied. This may be a reflection of the numbers of women in management compared to that of males and therefore may not necessarily indicate gender difference between men and women as bullies accurately. A significant interface as regards gender between the bully and bullied was found, with men rarely perceiving themselves to be bullied by women, and women reporting a more equal gender balance of bully. These findings reflect the Scandinavian work (Leyamnn, 1989; Einarssen and Raknes, 1991). Age has been investigated, with inconclusive results, Einarssen et al, (1994) found older people were significantly more likely to be bullied than younger people, whereas Raynor and Hoel (1997) found the opposite, however a skewed age sample in the latter study may have affected this

result. Furthermore, Leymann (1992b) found a lack of significance between the age groups. Clearly national culture and work culture differences may have a considered effect here. Job type has also been investigated, again with inconclusive findings. It is worth noting that many authors who rely on anecdotal data (Adams, 1992) identify mostly white-collar workers. A shocking statistic was put forward by Leymann (1992d) that one in seven adult suicides are as a result of workplace bullying.

2.6 SUMMARY.

Bullying is not simply an issue of childhood it persists into adulthood. The adult lives of both the bully and the victim continue to suffer as a result of this maladaptive behaviour. It can affect society at large, with many bullies developing into criminals and then going on to produce children who bully. They may continue their bullying tactics in work, affecting the lives of their colleagues. Children who bully are very likely to become aggressive, anti-social adults, with unsatisfactory marriages. They are more likely to use violence against their own children, spouses, aged parents and relatives (Eron et al, 1987; Lewis, 1988; Brock, 1992). Some continue to use bullying tactics in adulthood, bullying others professionally, for their own advancement. Their personal relationships are poor; they have fewer friends and many become adults convicted of assault, grievous bodily harm, and other violent crimes (Lane, 1989). The victims on the other hand may never develop appropriate self-confidence, preventing them from engaging in adult relationships and pursuing careers. It may in extreme cases even lead to them committing suicide. Some of the consequences for those who are bullied include, long term

unhappiness or misery, increased probability of depression (Olweus, 1997) or emotional disorder, low self-esteem and feelings of low self worth, reduced social skills, failure to develop effective assertiveness, poor long term social relationships, truancy, poor concentration, sleeping difficulties and appetite disorders. Former victims seem to function well in a number of respects as young adults; however there are two dimensions on which they clearly differed from their peers, these included depressive tendencies and poor self-esteem (Olweus, 1994). It is obvious from this literature review, that there are no winners in bullying situations. To the unskilled observer, it may appear that the bully is benefiting from this behaviour but from the evidence gathered through research this is obviously not the case. Research is making headway in the battle against bullying. Schools and workplaces are learning to deal with the situation in a sympathetic and professional manner. Anti–Bullying policies are much more wide spread and people are learning to stand up for their rights as human beings. Research has made an impact but there is still more to be carried out in an attempt to eliminate this behaviour from society altogether.

2.7 RESEARCH QUESTIONS.

The following research questions are related to the review of literature, little research exists in relation to bullying across the lifespan, therefore an investigation of bullying and victimisation from childhood into adulthood will be investigated, and events throughout the lifespan which can positively and negatively affect a participant.

1. An investigation of the bullying pattern of the participants across the lifespan.

Anxiety levels, self-esteem levels and personality traits may begin in childhood but do they remain stable? People with low self-esteem and high anxiety in childhood may maintain this throughout the lifespan if some sort of intervention or counselling does not exist.

2. The following research questions examine the Anxiety levels of the School Victim Group, the Life-Long Victim Group, the Adult Victim Group, the Child Bully Group, the Child Bully/Victim Group, the Periodical Bully/Victim Group and the Control Group.

(i). An investigation of Anxiety comparing the School Victim Group with the Life-Long Victim Group, the Adult Victim Group, the Child Bully Group, the Child Bully/Victim Group, the Periodical Bully/Victim Group and the Control Group.

(ii). An investigation of Anxiety comparing the Life-Long Victim Group with the Adult Victim Group, the Child Bully Group, the Child Bully/Victim Group, the Periodical Bully/Victim Group and the Control Group.

(iii). An investigation of Anxiety comparing the Adult Victim Group with the Child Bully Group, the Child Bully/Victim Group, the Periodical Bully/Victim Group and the Control Group.

(iv). An investigation of Anxiety comparing the Child Bully Group with the Child Bully/Victim Group, the Periodical Bully/Victim Group and the Control Group.

(v). An investigation of Anxiety comparing the Child Bully/Victim Group with the Periodical Bully/Victim Group and the Control Group.

(vi). An investigation of Anxiety comparing the Periodical Bully/Victim Group with the Control Group.

(vii). An investigation of Anxiety across the Victim Group (all Victim Groups combined), Bully Group (also Child Bully Group), Bully/Victim Group (all Bully/Victim Groups combined) and Control Group.

(viii). An investigation of gender for Anxiety across the Victim Group (all Victim Groups combined), Bully Group (Child Bully Group), Bully/Victim Group (all Bully/Victim Groups combined) and Control Group.

3. To investigate the relationship of Self-Esteem across the School Victim Group, the Life-Long Victim Group, the Adult Victim Group, the Child Bully Group, the Child Bully/Victim Group, the Periodical Bully/Victim Group and the Control Group.

(i) An investigation of Self-Esteem comparing the School Victim Group with the Life-Long Victim Group, the Adult Victim Group, the Child Bully Group, the Child Bully/Victim Group, the Periodical Bully/Victim Group and the Control Group.

(ii) An investigation of Self-Esteem comparing the Life-Long Victim Group with the Adult Victim Group, the Child Bully Group, the Child Bully/Victim Group, the Periodical Bully/Victim Group and the Control Group.

(iii) An investigation of Self-Esteem comparing the Adult Victim Group with the Child Bully Group, the Child Bully/Victim Group, the Periodical Bully/Victim Group and the Control Group.

(iv) An investigation of Self-Esteem comparing the Child Bully Group with the Child Bully/Victim Group, the Periodical Bully/Victim Group and the Control Group.

(v) An investigation of Self-Esteem comparing the Child Bully/Victim Group with the Periodical Bully/Victim Group and the Control Group.

(vi) An investigation of Self-Esteem comparing the Periodical Bully/Victim Group and the Control Group.

(vii) An investigation of a relationship between the Anxiety Levels and the Self-Esteem levels.

(viii) An investigation of Self-Esteem across the Victim Group (all Victim Groups combined), Bully Group (Child Bully Group), Bully/Victim Group (all Bully/Victim Groups combined) and Control Group.

(ix) An investigation of gender for Self-Esteem across the Victim Group (all Victim Groups combined), Bully Group (Child Bully Group), Bully/Victim Group (all Bully/Victim Groups combined) and Control Group.

Personality development begins early in life, the nature-nurture debate continues with regard to the origins of personality. Studies show that by the time a person is in their 20's the mould of personality begins to harden. By 30 it is stable. After that major shifts tend to be unusual. When major changes do occur, they are associated with dramatic life events, such as personal catastrophes or tragedies (Costa and McCrae, 1992). With regard to the changing role that the participants played in bullying throughout the lifespan, personality development and the presence or absence of particular traits may determine a great deal.

4. To investigate the relationship of Neuroticism, Extraversion, Openness, Conscientiousness and Agreeableness across the School Victim Group, the Life-Long Victim Group, the Adult Victim Group, the Child Bully Group, the Child Bully/Victim Group, the Periodical Bully/Victim Group and the Control Group.

(i). An investigation of the relationship between N1 of the Revised NEO Personality Inventory and Anxiety of the Manifest Anxiety Scale.

(ii). An investigation of the relationship of Neuroticism across the School Victim Group, the Life-Long Victim Group, the Adult Victim Group, the Child Bully Group, the Child Bully/Victim Group, the Periodical Bully/Victim Group and the Control Group.

(iii). An investigation of Neuroticism across the Victim Group (all Victim Groups combined), Bully Group (Child Bully Group), Bully/Victim Group (all Bully/Victim Groups combined) and Control Group.

(iv). An investigation of gender for the Neuroticism variable across the Victim Group (all Victim Groups combined), Bully

Group (Child Bully Group), Bully/Victim Group (all Bully/Victim Groups combined) and Control Group.

(v). The investigation of the relationship of Extraversion across the School Victim Group, the Life-Long Victim Group, the Adult Victim Group, the Child Bully Group, the Child Bully/Victim Group, the Periodical Bully/Victim Group and the Control Group.

(vi). An investigation of Extraversion across the Victim Group (all Victim Groups combined), Bully Group (Child Bully Group), Bully/Victim Group (all Bully/Victim Groups combined) and Control Group.

(vii). An investigation of gender for the Extraversion variable across the Victim Group (all Victim Groups combined), Bully Group (Child Bully Group), Bully/Victim Group (all Bully/Victim Groups combined) and Control Group.

(viii). The investigation of the relationship of Openness, Agreeableness and Conscientiousness across the School Victim Group, the Life-Long Victim Group, the Adult Victim Group, the Child Bully Group, the Child Bully/Victim Group, the Periodical Bully/Victim Group and the Control Group.

(ix). An investigation of Openness across the Victim Group (all Victim Groups combined), Bully Group (Child Bully Group),

Bully/Victim Group (all Bully/Victim Groups combined) and Control Group.

(x). An investigation of Agreeableness across the Victim Group (all Victim Groups combined), Bully Group (Child Bully Group), Bully/Victim Group (all Bully/Victim Groups combined) and Control Group.

(xi). An investigation of Conscientiousness across the Victim Group (all Victim Groups combined), Bully Group (Child Bully Group), Bully/Victim Group (all Bully/Victim Groups combined) and Control Group.

(xii). An investigation of gender for the Openness, Agreeableness and Conscientiousness variables across the Victim Group (all Victim Groups combined), Bully Group (Child Bully Group), Bully/Victim Group (all Bully/Victim Groups combined) and Control Group.

The following section refers to the Sixteen Personality Factor Fifth Edition and the General Health Questionnaire. A qualitative examination of personality may reveal a great deal of information about how the participants conduct themselves in life, in relation to social and personal situations. The General Mental Health of the participants can detect any signs of mental illness immediately before or during the research.

5. An investigation of the personality profile of the Participants

6. An investigation of the General Mental Health of Participants.

Chapter Three.

3.1 OBJECT OF THE STUDY.

The purpose of the design was to examine the levels of anxiety and self-esteem of the different groups using the Manifest Anxiety Scale and the Rosenberg Self-Esteem Scale respectively. Personality was examined using the Revised NEO Personality Inventory and the Sixteen Personality Factor and an investigation of mental health was examined using the General Health Questionnaire.

The first questionnaire was called "Life at School" (Appendix B). This questionnaire was designed by the researcher to examine the participant's knowledge of the previous study. It investigated what had occurred in their lives following the research, examining both secondary school and work environments. In order to test the ease of administration, the researcher administered this questionnaire to an undergraduate Psychology class (N=35) and to a group of mature students participating in an Introduction to Psychology course (N=15). The participants found the questionnaire simple to understand and to complete.

A letter of introduction (Appendix C), the "Life at School" questionnaire and a stamped-envelope addressed to the Education Department, Research and Resource Centre in Trinity College Dublin, were distributed, and the participants were asked to return them on the 4th of May. The letter of introduction informed the participants of the research being carried out, it also asked if the addressee was not at that address or was unable to return the questionnaire that the person who opened the letter should return it in the accompanying envelope. These questionnaires were distributed in brown C5 envelopes with the participants address printed on the envelope. Initially, 120 questionnaires were returned. These consisted of 79 completed questionnaires, 34 returned to sender as the addressee no longer lived at that address, and five who had emigrated did not fill out the questionnaire. Finally, two questionnaires were returned where the addressee was deceased.

A second round of the "Life at School" questionnaire was sent out, accompanied by a letter (Appendix D) on July the 13th to be returned on August the 13th. A further 20 completed questionnaires were returned, 1 participant had emigrated, and

15 were returned as "unknown at this address". One questionnaire was returned without a name and therefore the original information could not be matched up with it, which prevented grouping that participant and was therefore eliminated. Again C5 envelopes were used to distribute the questionnaires and also for the participants to return the questionnaire. These addresses were printed on white labels.

On the 15th of March a set of questionnaires were sent to the ninety-nine participants who returned the "Life at School" questionnaire. These questionnaires included the Manifest Anxiety Scale (Taylor, 1956), Rosenberg Self-Esteem Scale (Rosenberg, 1965), and the Revised NEO Personality Inventory (Costa and McCrae, 1992). A letter accompanied these questionnaires (Appendix E) which provided the participants with instructions as to complete the questionnaires. They were asked to return the questionnaires in a stamped-addressed envelope to the Education Department, Research and Resource Centre in Trinity College. A total of 35 sets of questionnaires were returned completed and two uncompleted were returned. The label on the stamped envelope had a code printed on it. This code corresponded to an identification number for each

participant on the researcher's database. The questionnaires were all self-administered.

On the 8th of May two further questionnaires, The Sixteen Personality Factor Fifth Edition (Cattell, 1993) and the General Health Questionnaire (Goldberg and Williams, 1988) were administered to 35 participants who returned the previous set of questionnaires. One participant who returned the three questionnaires was eliminated from the next round as the participant informed the researcher that they were emigrating. Stamped addressed envelopes were provided to return the completed questionnaires. As before, the labels on the stamped envelopes carried identification codes. The questionnaires were accompanied by a letter (Appendix I) and participants were asked to return the self-administered questionnaires by the 17th of May. A total of 10 sets of completed questionnaires were returned. Eight were returned uncompleted.

3.2 DESIGN OF THE INVESTIGATION.

This is a longitudinal study of children who were involved in bullying either as victims, bullies, or both; the original study took place in the academic year of 1987/88. Four national schools participated in the original research. In the original study 783 children (285 boys and 498 girls) aged between 7 and 13 years (third to sixth class, including special classes) were drawn from 30 classes in 4 national schools in Dublin (O' Moore and Hillery, 1989). The four schools and the number of children attending these schools were as follows:

School A: 473 students (mixed)

School B: 148 students (females only)

School C: 139 students (females only)

School D: 76 students (mixed).

The schools were chosen on the basis of being typical national schools within the urban area of Dublin city and not on any particular problems. All children were tested in class by their own teachers. The level of bullying and victimisation was assessed using a self-report questionnaire used in Norwegian studies (Olweus and Roland, 1983). Prior to distribution,

teachers explained in their own words the meaning of bullying. "Bullying is a longstanding violence, mental or physical, conducted by the individual or a group and directed against an individual who is not able to defend himself/herself in the actual situation". The participants of the original study (O' Moore and Hillery, 1989) answered the questions anonymously. Each questionnaire was supplied with a barcode to allow for further examination of the results. These barcodes allow for comparison of data within the present study.

A pilot study was carried out prior to the administration of the questionnaires to the participants of Schools A, B, C and D. Students from third class of an all male school completed the questionnaires. The results from this were also used in the present study, this school will be referred to in this study as School E. The four groups consist of victims, bullies, bully/victim, and controls.

The original questionnaires were distributed at the same time to ensure that participants had no prior knowledge; this in turn prevented them from "faking good" and prevented an opportunity for any intimidation to take place. The Piers-Harris

Self–Concept Scale (Piers, 1984), a self–report questionnaire was used to examine the Self-Esteem of the children in the study. Teachers also rated the behaviour of the children using the Behaviour Questionnaire (Rutter, 1967).

In the present study all five schools were contacted, however School C had shut down. Efforts to locate these addresses were unsuccessful; no records were kept by the parish or sister secondary school. A letter of contact (Appendix A) was sent to the other schools, informing them of the research and requiring their assistance. The schools were not computerised and records were not kept efficiently. Out of the original 538 participants, 450 addresses were supplied.

3.3 PARTICIPANTS.

The participants consisted of 48 males and 51 females. New groups were developed on the basis of the answers to the "Life at School" questionnaire. The main groups are victim, bully, bully/victim and control. The sub-groups are as follows:

Victim Group.

School Victims reported episodes of bullying in either primary or secondary school but no episodes were reported as adults in the work place. **Life-Long Victims** are participants that reported bullying throughout both school and in the workplace. **Adult Victims** were not subjected to bullying in either primary or secondary schools however have become the victims of bullying in the workplace.

Bully Group.

Child Bully acknowledged this behaviour in the original study only. **School Bully** consisted of bullying within primary and secondary school settings only and not within the workplace.

Bully/Victim Group.

Child Bully/Victim acknowledged this behaviour in the original study only. **Periodical Bully/Victim** consisted of participants who alternated between the role of bully and victim at different stages of their lives, including both school and the workplace. **Life–Long Bully/Victims** are a group of participants that have performed the role of bully and victim consistently throughout both school and the workplace.

Control Group.

Controls are participants that did not admit to being bullied or to bullying others in the original study and this behaviour persisted through secondary school and the workplace.

Information relating to lives following primary school was gathered. Of the questionnaires completed and returned all participants, 48 males and 51 females had attended secondary school.

An examination of marital relationships and the number of dependents of the group of participants found that all 48 males are unmarried. Five males have one child each and one male

has two children. Two of the female participants are married, ten females have one child each and three females have two children each.

The gender distribution, the average age and range of the participants and the number of dependents they have is provided in Table 1.

Table 1. Gender Distribution, Age Range, Mean and Number of Dependents of each Participant Group.

Participant Group	Males =48	Females N=51	Age Range	Age Mean	Dependents
School Victim	14	10	22-25	23.78	7
Life-Long Victim	4	4	22-25	23.62	2
Adult Victim	1	2	25-28	26.33	0
Child Bully	3	3	24-28	25.67	3
School Bully	2	0	24-25	24.5	1
Child Bully/Victim	9	17	22-26	23.52	6
Periodical Bully/Victim	8	9	22-27	22.41	3
Life-Long Bully/Victim	1	0	22	22	0
Control	6	6	23-27	24.67	3

Occupational information was also provided in the "Life at School" questionnaire. The original study provided information of the father's occupation. A comparison is shown in Table 2 of the father-child occupations.

Table 2. Fathers' Occupation and Participants' Occupation (N=99).

Occupation Category	Fathers' Occupation	Participants' Occupation
Higher Professional	12.12%	11.11%
Lower Professional	5.05%	18.18%
Routine non-manual	8.08%	18.18%
Technical, Supervisor	5.05%	11.11%
Skilled Manual	15.15%	14.14%
Semi-skilled/Unskilled	34.34%	25.25%
Unemployed	18.18%	1.01%
R.I.P.	1.01%	(-)
No Response	1.01%	1.01%

When the Manifest Anxiety Scale, the Rosenberg Self-Esteem Scale and the Revised NEO Personality Inventory were returned, the number of participants in each group had decreased. The groups were as follows.

Table 3. Groups from Round Two of Questionnaires (N=35).

Group	Female	Male
School Victim	1	5
Life-Long Victim	0	3
Adult Victim	2	1
Child Bully	1	1
Child Bully/Victim	3	6
Periodical Bully/Victim	5	2
Control	1	4
Victim (combined)	3	9
Bully/Victim (combined)	8	8

The Victim Group (combined) consists of the grouping of School Victims, Life-Long Victims and Adult Victims. The Bully/Victim Group (combined) consists of grouping the Child Bully/Victim and Periodical Bully/Victim Groups together.

When the Sixteen Personality Factor Fifth Edition and the General Health Questionnaire were distributed the number of participants in each group decreased. A total of ten sets of questionnaires were returned completed. Eight were returned uncompleted. The remaining participants were as follows:

(i). The School Victim Group, Participant A (Male).

(ii). The Life-Long Victim Group, Participant B (Female).

(iii). The Child Bully Group, Participant C (Male).

(iv). The Child Bully/Victim Group, Participant D (Male) and Participant E (Male).

(v). The Periodical Bully/Victim Group, Participant F (Female).

(vi). The Control Group, Participant G (Female), Participant H (Male), Participant I (Male) and Participant J (Male).

<u>3.4 TESTS AND MEASUREMENTS.</u>

<u>The Manifest Anxiety Scale (Taylor, 1956).</u>

The Manifest Anxiety Scale was originally constructed by Taylor (1951) for use in a study of eyelid conditioning. Approximately 200 items from the Minnesota Multiphasic Personality Inventory were submitted to five clinicians, along with a definition of manifest anxiety that followed Cameron's (1947) portrayal of chronic anxiety reactions. The judges were asked to assign the items symptomatic of manifest anxiety consistent with the definition. Sixty-five items on which there was 80% agreement or better were selected for the anxiety scale. These 65 statements, supplemented by 135 additional "buffer" items homogeneously classified by the judges as non-indicative of anxiety, were administered in group form to 352 students in a course of introductory psychology. The measures varied from a low anxiety score of 1 to a high score of 36, with a median of approximately 14. The form of the distribution was slightly skewed in the direction of high anxiety.

The scale went through several amendments. At present it consists of 50 of the original 65 items that showed a high correlation with the total anxiety scores in the original group tested. Furthermore, the buffer items have been changed so that the total test which has been lengthened from 200 to 225 items, includes most of the items from the L, K and F scales of the MMPI and 41 items that represent a rigidity scale developed by Wesley (1950). The 50 anxiety items (see Appendix F) are along with the responses to these items considered as "anxious" and the ordinal numbers of the statements as they appear in the present form of the test.

A series of studies (Lucas, 1952; Peck, 1950) have demonstrated that performance in several experimental situations, varying from simple conditioning and reaction time to a "therapy" situation involving experimentally induced stress, is related to the level of anxiety as shown on a test of manifest anxiety. Most of these researchers were concerned with the role of drive or motivation in performance, drive level being varied by means of selection of subjects on the basis of extreme scores made on an anxiety scale rather than by experimental manipulation. The use of the anxiety scale in this

connection was based on two assumptions, that variation in drive level of the individual is related to the level of internal anxiety or emotionality, and also that the power of this anxiety could be determined by a paper and pencil test consisting of items describing what have been termed overt or manifest symptoms of this state.

A revision of the test represents an attempt to simplify the vocabulary and sentence structure of some of the anxiety items that appear to be difficult to comprehend, especially for a non-college population. Toward this end, the 50 anxiety items were first submitted to 15 judges who were instructed to sort them into four piles according to comprehensibility, the first position representing the simplest to understand and the fourth the most difficult. It was found that 28 of the items had a mean scale value of 2.00 or more. These 28 items were selected for revision and rewritten in at least two alternate forms. Each set of alternatives was then ranked by a different set of 18 judges, first for ease of understanding and then for faithfulness of meaning to the original statement. For most of the items, the alternative judged to be the simplest was also chosen as being closest on meaning to the original item and was therefore

selected for the new scale. For those items in which a discrepancy occurred, faithfulness of meaning was chosen over simplicity. However, in every case, the new statement selected for inclusion on the scale was judged simpler than the original.

To show the relationship between the old and new versions of the test both forms were administered to students in introductory psychology at North Western University College. A sample was selected from the college population for this purpose since it was thought that this group would show the least confusion in interpreting the original versions of the two forms than less verbally sophisticated individuals. Scores obtained from 59 students showed a Pearson Product-moment coefficient of .85 between the old and new version, the latter being administered three weeks after the initial testing. This figure is quite comparable to the test-retest coefficient found for the previous form of the scale after a similar time interval. Considering only the 28 rewritten items, the correlation becomes .80.

While the correlation coefficient shows the high degree of relationship between the old and revised forms, the question

still remains as to whether rewriting the 28 items has reduced the difficulty level of these statements so as to decrease misunderstanding. In an attempt to determine this, the scores of the 59 students given both versions were analysed into two components: that for the 28 items and that for the 22 items left intact. For each form, scores on the 28 items were correlated with the remaining 22. It was reasoned that if the original forms of the 28 items were confusing, then the rewritten items, if attempts to simplify were successful would show a high correlation with the 22 items left in tact than would the original statements. The authentic correlations obtained in this method were .81 for the old version and .83 for the new. Although the difference between the coefficients was in the required direction, a t-test indicated that it was statistically insignificant. However, a significant difference in correlations might be gained with subjects of lesser educational attainment since misapprehension of the 28 original items would be more likely to occur with such a group.

Under the title of "Biographical Inventory", the test in its present form has been administered to a total of 1971 students in introductory psychology at the State University of Iowa

during five consecutive semesters from September 1948 to June 1951. As with the original test, the distribution of the test shows a slight positive skew. A comparison of the scores of males and females in this total sample exposed that the mean score of the women was somewhat higher. The difference between the two means however was not statistically significant. For this reason, both sexes were included in a single distribution.

To determine normative characteristics of the distribution of scores on the new version, 229 students in introductory psychology were given only the revised form of the scale (Ahana, 1952). It was found that the shape of the distribution and the values of the quartiles did not differ significantly from those obtained with the previous form. Retest scores are also available for 179 individuals from the sample described above. A product-moment correlation of .88 was found after an inter-test interval of four weeks. However, while the position of the individuals in the group tended to remain the same, a downward shift in the absolute scores of the entire distribution was noted from test to retest. The difference between means (14.94 vs 12.92) was significant at the .01 level of confidence,

as indicated by a t-test. Scores are also available for samples drawn from rather different populations. Distributions for 683 airmen at the beginning of basic training at Lackland Air Force base and for 201 Northwestern University night-school students of introductory psychology show fundamentally the same form as the group reported above, while the quartiles are in close agreement.

In an effort to establish the constancy of the anxiety scores over time, groups of individuals have been retested on the scale after various periods. On one occasion, the results of retesting 59 students in introductory psychology after a lapse of three weeks yielded a Pearson product–moment coefficient of .89. In a second test-retest study (Cameron, 1947) the scale was given to 163 students in an advanced undergraduate psychology course who had previously taken the test as introductory students. For 113 of these cases 5 months had elapsed since the first testing, while an interval of 9-17 months had intervened for the remaining 50. The test-retest coefficient was found to be .82 over 5 months and .81 for the longer period. Furthermore, no systematic change, upwards or downwards was found in these distributions, that is the means

of each of the three sets of scores remained essentially the same after retesting. Thus, for all groups tested both the relative position of the individual in the group and his absolute score tended to remain constant over relatively long periods of time.

Further work has examined the validity of the MAS, Neva and Hicks (1970) examined the efficacy of the MAS scores as a measure of situational drive level. The MAS was used as a dependent variable, it was administered while drive level was systematically manipulated. Drive state was varied at four levels by the induced muscular tension technique while HR (Heart Rate) and GSR (Galvanic skin response) activity were recorded. The physiological measures between MAS scores and HR and GSR activity were observed. These results were in contradiction to Runquist and Ross' (1959) report of a significant correlation between MAS scores and composite HR and GSR scores. While it is difficult to resolve this contradiction, it appears to be the result of important differences in methodology. The self-report and physiological measures of anxiety were obtained within the same experimental situation in this study while in the Runquist and

Ross study MAS scores obtained in a non-anxious situation were correlated with physiological activity accompanying non-anxious stimulation. The present failure to demonstrate a significant functional relationship appears to dispute the claim for MAS validity of the Runquist and Ross study. In conclusion, the validity of the MAS as a selection device for subjects differing in situational drive strength remains questionable. The methodology which Neva and Hicks (1970) used reduced the sources of uncontrolled variance of earlier studies of the MAS as an independent variable but the relationship that Taylor (1956) predicted was not observed.

The cultural validity of item content with reference to two different cultures on the MAS was examined by Moerdyk and Spinks (1979). It was administered to 60 male subjects, as previous studies have noted (Sarason et al, 1960; Vassiliou et al, 1967) differences in MAS scores between sexes. Subjects were grouped along culture (Indian versus European) and education. Vassiliou et al (1967) found that MAS scores were inversely related to education. To investigate the validity characteristics of the items in particular their internal consistency, point bi-serial correlations were calculated for

each item score with test–score remainders. Twenty items were valid for the total sample. It may be noted that Hoyt and Magoon (1954) for 289 college counsellors isolated 16 'valid' items (using chi-squared) and Buss (1955) in an extension of the Hoyt and Magoon study with 64 psychiatric inpatients, showed 13 of these 16 items to be significantly valid (p>.05). Of the 20 significant items (14, 19, 21, 22, 23, 25, 26, 27, 28, 34, 36, 37, 40, 42, 43, 44, 45, 47, 49, 49) in the Moerdyk and Spinks (1979) study, eight overlap those in prior studies (27, 34, 40, 44, 45, 47, 48, 49). The fact that eight items appeared valid in all three studies suggests that these items are valid across broad sample characteristics and across diverse cultures.

The relative validity of specific items for Europeans versus Indians found that 17 items have significant positive correlations (for 28 df, r>0.361) for both Indians and Europeans and appear to be 'valid' for both cultural groups (22, 23, 25, 26, 27, 28, 34, 35, 36, 37, 40, 42, 43, 46, 47, 48, 49). Five items were significantly valid for the Europeans alone (8, 10, 14, 17, 21) and six for the Indians alone (11, 13, 19, 24, 29, 31). It appears then that the MAS is sensitive to

certain cross-cultural differences which are closely related to educational level and that care should be taken in interpreting data from this anxiety measure when used on non-Western societies, irrespective of educational level.

Two studies (Hoyt and Magoon 1954; Buss 1955) have indicated that a majority of the 50 items of MAS are not valid in predicting clinical criteria of manifest anxiety. The consistency in item validity results of independent studies suggests that a shortened form of the MAS keeping only valid items might be more useful and clinically valid than the standard MAS. However, such a shortened MAS might lack the desirable normative characteristics, such as high reliability of the longer MAS. The 20 most consistently valid MAS items were selected as a shortened form of the MAS. The 50 item MAS was administered to 744 college students and their papers scored for the 20 item scale. The 20-item scale, omitting the 30 'non-valid' items was distributed to an additional 324 subjects. No significant difference in scale means or variances were found for the two methods of administration, nor were any sex differences evident. A survey of studies using the 50 item MAS shows its median internal consistency reliability to be .82,

while the similar reliability of the 20-item scale was .76. Three scores were obtained for 100 random subjects who had taken the 50 item form (a) score on all 50 items (b) score on the 20 'valid' items (c) their scores on the 30 'non-valid' items. The reliabilities of the three scores were (a) .78 (b) .78 (c) .48. The inter-correlations among the scores were (a) and (b) .93; (a) and (c) .91 and (b) and (c) .70. It was concluded that the 20 item Pittsburgh revision of the MAS (a) has eliminated from the standard MAS, items of low internal consistency and validity, (b) provides scores that are about as reliable as the 50 items MAS and are highly related to scores on the standard form and (c) is more parsimonious of testing time and probably more valid than the longer MAS.

The reliability of the MAS has been shown to vary between .81 and .96 (Hillgard et al, 1951; Spence and Taylor, 1951) according to the method employed, and therefore it can be concluded that adequate reliability has been demonstrated. There has been conflicting evidence as to its validity. Rosenbaum (1950) in the process of studying anxiety and stimulus generalisation found that a division of his subjects into high and low anxiety groups by means of the MAS and

psychiatric rating gave the same results. However opposing results presented by Bitterman and Holtzman (1952) found that a division of subjects by means of extensive clinical evaluation demonstrated a significant relation between anxiety and conditioning, whereas a division by means of the MAS alone did not produce significant findings. Furthermore, Holtzman, Calvin and Bitterman (1952) obtained MAS and Winnescale scores for a group of subjects. A correlation of .72 was obtained between the scales which were interpreted as evidence of the validity of the MAS since the Winnescale is an empirically derived scale of neuroticism. Taylor (1953) obtained indirect evidence of the scales validity through the distribution of scores for 103 neurotic and psychotic subjects and found that the median scores was equivalent to the 98.9 percentile for normal subjects. On the assumption that the former exhibit greater manifest anxiety than normals, she concluded that her findings seemed to indicate a relationship between the MAS and clinical observations of manifest anxiety.

Kendell (1954) in a study of 93 patients undergoing active treatment for pulmonary tuberculosis (18-56) examined that validity of the MAS as a measure of manifest anxiety. A

manifest anxiety rating scale was developed to facilitate ratings which were to serve as criterion for validation. Ratings accomplished by means of this scale by ward nurses were found to be satisfactorily reliable when reliability was determined by the interjudge agreement method. The MAS scores were obtained and the extreme groups were selected so as to include the upper and lower 27%. Each subject was rated independently by two ward nurses and their combined ratings served as the criterion for validation. A test of significance between the mean ratings of these two groups did not make it possible to reject the null hypothesis. A supplementary comparison between upper and lower 13% did make it possible. The results are interpreted as indicating that the MAS is valid only as an extremely coarse measure of manifest anxiety.

The scoring of the Manifest Anxiety Scale ranges from a possible score from 0 to 50. The lower score demonstrates that a person is less nervous and less anxious than a higher scorer. The higher scorer demonstrates a more nervous and anxious person. This test is a self-administered questionnaire. It was sent in the post to participants who then filled them out in their own home. The instructions written on the questionnaire

asked the participant to read each statement and decide whether it is true or false for them. If they were uncertain, they were instructed to decide which is more applicable to how they felt at the moment while filling out the questionnaire. Furthermore, they were instructed to answer based on their first reaction and not to spend too long on any single statement.

The Rosenberg Self-Esteem Scale (Rosenberg, 1965).

The Rosenberg Self-Esteem Scale (RSES) is the most frequently used measure of global Self-Esteem. It measures personal worth, self-confidence, self-satisfaction, self-respect and self-deprecation. Originally Rosenberg designed The Rosenberg Self-Esteem Scale (see Appendix G) to be a unidimensional measure of global self-worth, as a result there are many applications to the prediction and explanation of behavioural phenomena and therefore also plays a major role in psychological theory and research (Wylie, 1974). The main factors contributing to the popularity of this test is its ease of use, no more than fifth grade-level language is required and it is short consisting of only 10 items which allows the scale to be administered in only a few minutes. This was an advantage in the present study as three questionnaires were being administered at the one time. The Guttman scale insures a unidimensional continuum. The adequacy of each item is not determined primarily by its relationship to a total score but by its patterned relationship with all other items on the scale. The reproducibility of this scale is 92% and its scalability is 72%. While the Guttman model can usually insure that the items on a

scale belong to the same dimension they cannot define the dimension. As Suchman notes "even if an item is reproducible perfectly from scale scores, this is not proof that the item is part of the definition of the universe...Only a judgment of content can determine what belong to a universe and not correlations or reproducibility" (p.129). As a result items were selected which openly and directly dealt with the dimension under consideration. Respondents were asked to strongly agree, agree, disagree or strongly disagree with the 10 items. Positive and negative items were presented alternately in an effort to diminish the effect of respondent set. The participant may question some of the items, however there is little doubt that the items generally deal with an approving or critical attitude toward oneself.

Global self-esteem refers to an over-all evaluative set with wide ranging implications for self-experience. Global self-esteem scores may predict behaviour across a wide range of situations, particularly when behaviour is aggregated across many situations (Epstein, 1980). The Rosenberg Self-Esteem Scale is based on conceptual models which suggest that the scales measure global self-esteem as a unidimensional trait

(Rosenberg, 1965). Even though there has been higher-order structures reported occasionally, psychometric studies have generally supported the unidimensionality of the RSES (Hensley and Roberts, 1976; Fleming and Courtney, 1984; Marsh, 1996). Research suggests that the scale is internally consistent and temporally stable (Silber and Tippett, 1965; Fleming and Courtney, 1984). In addition, scores on the scale have been shown to correlate positively with scores on other self-esteem measures such as the Lerner Self-Esteem Scale (Savin-Williams and Jaquish, 1981) and the Coopersmith Self-Esteem Inventory (Demo, 1985) and negatively with anxiety and depression (Fleming and Courtney, 1984).

The original sample for which the scale was developed in the 1960s consisted of 5,024 high school juniors and seniors from 10 randomly selected schools in New York State and was scored as a Guttman scale. The scale generally has high reliability: test-retest correlations are typically in the range of .82 to .88, and Cronbach's alpha for various samples are in the range of .77 to .88 (Rosenberg, 1986; Blascovich and Tomaka, 1993). Studies have demonstrated both a unidimensional and a two-factor (self-confidence and self-deprecation) structure to the

scale. Rosenberg (1965) demonstrated that his scale was a Guttman scale by obtaining high enough reproducibility and scalability coefficients. Multiple studies have been conducted to investigate the validity and reliability of the RSES. Whereas some studies have shown that the scale is a valid and reliable unidimensional measure of self-esteem, others have found that the RSES comprises two factors. It is suggested that the RSES factor structure depends on age and other characteristics of the sample. Investigations that used high school or college students supported the scales unidimensionality (Silbert and Tippett 1965; Crandal 1973; McCarthy and Hoge 1982), or obtained factors that were interdependent and had similar patterns of correlates.

In a study of 206 females undergraduates at the University of Massachusetts, O' Brien (1985) examined the unidimensionality of the RSES. The factor analysis of the Rosenberg scale suggested the presence of a single factor with an eigenvalue of 5.28 which accounted for 52.8% of the total variance. No other factor had an eigenvalue > 1.00. All 10 items of the scale had strong factor loadings on the first factor. The results strongly supported the unidimensionality of the RSES. Furthermore, with

a sample of adults of all ages, Kaplan and Pokorny (1969) analysed the scale with a varimax rotation, scoring the 10 items across a four-point response framework. They reported a two factor solution and concluded that the factors represented independent dimensions. Sampling university undergraduates, Hensley and Roberts (1976) scored the 10 items across a five point response framework and employed a varimax rotation. They also found a two factor solution but it was dissimilar to the structure observed by Kaplan and Pokorny. Hensley and Roberts alleged that their two factors characterized only a response set and concluded that the scale was unidimensional when the participants were adolescents. The researchers recommended caution in using the scale with adults, pointing to changes with age in elements of self-esteem as a possible explanation for the difference in findings in the two studies. Further support for unidimensionality of the 10 item scale with college age persons comes from the one-factor solution reported by Hensley (1977). Dobson et al, (1979) included the RSES in an interview schedule administered to 1,332 older men living in or near non metropolitan communities in Iowa. All the men were at least 60 years old and two thirds were between the ages of 60 and 69 years. Each of the 10 items was scored

with the five-step Likert framework and the reliability as measured by coefficient alpha was 0.77. The responses were analysed by using principal-factor extraction and both a varimax and an oblique rotation. The findings coincide with those of Kaplan and Pokorny in two cases (Items 3 and 5) and with those of Hensley and Roberts in the other two cases (Items 6 and 7). In the oblique rotation, the factors were correlated 0.52 with the first seven items loading on Factor 1 and the last three on Factor 2. Support for the unidimensionality of the scale is not as strong as with the adult samples as with the younger sample, but the relationship of the factors in the oblique rotation argues against the independence of the two factors. The dynamics of the effect of age on the structure of this self-esteem measure require further clarification.

Although RSES was designed to be unidimensional, the research has provided evidence that it contains not only one but two independent constructs (Kaplan & Pokorny, 1969). These constructs are usually called a self-derogation and a defensive assertion of self-worth. Self-derogation is defined primarily in negatively worded items and is interpreted to represent the expression of negative affect towards general

self-conception. The second factor is defined primarily in positive worded items and this causes doubt regarding the uni-dimensionality of the RSES, although the model used in Kaplan's and Pokerny's study provided a poor fit to the data (Shahani, Dipboye & Phillips, 1990).

The Shahani, Dipboye & Phillips study (1990) supports the findings of Kaplan and Pokerny. Their results were that the intercorrelations of the scales were .28 between self-derogation and self-enhancement, .97 between self-derogation and global self-esteem and .49 between self-enhancement and global self-esteem. They also examined several work related attitudes, job related tensions, which are associated with global self-esteem. In addition to the support of a two-factor approach, the scores of two factors were found to show different relations to work-related attitudes. The results support the use of RSES as a uni-dimensional scale and also the use of two-factor structure. Despite the support of two-factor model of RSES the use of Kaplan & Pokerny's self-derogation factor is only slightly better than the use of total RSES. In addition the findings of the study did not suggest a direct, practical application, but Shahani and his co-workers believe that the consistent differences in the pattern

correlations found for the two factors are theoretically quite interesting.

A coefficient of reproducibility (Rep.) of .90 or more has been taken as an arbitrary minimum for a possible inference that one is dealing with a satisfactory reliable, uni-dimensional scale. Although a Rep. of <.90 is taken as a primary and necessary criterion for inferring that one's items comprise a uni-dimensional scale, it is not a sufficient criterion for that inference. Not only may Rep. be high for a number of statistically artifactual reasons, but a high Rep. can be obtained with items which are obviously not representative of the same construct. Rosenberg chose items which seemed to him to have face validity. This gave him a basis in addition to Rep. for inferring that his scale had unidimensionality. He stated that while the reader may question one or another of his items, there is little doubt that the items generally deal with a favourable or unfavourable attitude toward self.

However, achievement of face validity and a satisfactory Rep. value still do not suffice to produce a unidimensional scale. This is evidenced in the RSES by the internal factor analysis performed by Kaplan and Pokorny (1969) on a matrix of

intercorrelations of all ten original Rosenberg items. They obtained two uncorrelated factors which accounted for 45% of the total variance. In correlating factor scores from each factor with other variables, they found that Factor 1 scores frequently correlated in an expected fashion, essentially replicating some of the correlation Rosenberg had obtained with the total scale. Factor 2 scores did not correlate with these other variables. The items with "appreciable" loadings on Factor 1 and insignificant loadings in Factor 2 were: "On the whole I am satisfied with myself" (disagree); "I wish I could have more respect for myself" (agree); "I certainly feel useless at times" (agree); "At times I think I am no good at all" (agree). This factor they called self-derogation. Factor 2 appeared to them to "reflect a posture of conventional defence of individual worth, a stance which is apparently compatible with either high or low scores on the self-derogation factor" (Kaplan and Pokorny, 1969, p.425). This factor was defined primarily in terms of the following items: I feel that I'm a person of worth, at least on an equal plane with others" (agree); "I feel that I have a number of good qualities" (agree); "I am able to do things as well as most other people" (agree). Face validity is important but is not sufficiently established in this scale. The

adequacy of this scale can be defended by the fact that the scores in this scale are associated with other data in a theoretical way.

Among 50 normal volunteer subjects at the National Institute of Mental Health who were rated by nurses. Subjects with low RSES scores were significantly more often rated as gloomy and frequently disappointed (Rosenberg, 1965). In the New York study, self reports on a Guttman scale of depressive affect were significantly associated with self-esteem: and in the Kaplan and Pokorny (1969) study with 500 community adults in Texas, Rosenberg's Guttman scale of depressive affect was significantly associated with factor scores based on the authors' self-derogation factor from the Rosenberg Scale. Not only are people with low self-esteem scores more likely to appear depressed to others but they are, more likely to express feelings of unhappiness, gloom and discouragement. If they did not, then the validity of the scale would be questionable. Among the 50 normal volunteers, nurses significantly more often rated subjects with low RSES scores as touchy and easily hurt, and not well thought of (Rosenberg, 1965). Rosenberg's New York subjects with low RSES scores significantly more

often reported themselves as having difficulty in making friends, being sensitive to criticism from others; being lonely or shy and being bothered by people's low opinion of them. From 1,800 Washington seniors who took the Rosenberg scale, 18 with very high and 18 with very low RSES scores were selected to fill out the questionnaire used with the New York subjects and to be interviewed. These data, though based on small numbers gave a strong impressionistic support to the more quantitative findings (Rosenberg, 1965).

The presence of low self-esteem among neurotics is commonly observed in clinical practice. Some clinicians actually characterise low self-esteem as one of the basic elements of neurosis. The measure of neuroticism was developed by the Research Branch of the U.S. Army in World War II. It is based on a list of "psychosomatic symptoms" which proved extremely effective in differentiating between large samples of normal and neurotics soldiers. The results found that without exception, each step on the self-esteem scale finds a larger proportion of respondents with many psychosomatic symptoms. At the extremes the differences are particularly great. Whereas 60% of the highest self-esteem group had few symptoms, this

was true of only 16% of those with the least self-esteem. This already strong relationship can be made even sharper if 10 out of these 14 symptoms are selected for consideration. Sixty nine percent of those highest in self-esteem but only 13% of those lowest in self-esteem experienced two or fewer symptoms. Conversely, 69% of the latter, compared with 19% of the former, reported four or more symptoms. Furthermore, participants were asked to indicate in relation to a list of ailments the ones they had been bothered by in the last five years. People with high and low self-esteem differed in reporting "nervousness", "loss of appetite", "insomnia" and "headache". The results indicated that as self-esteem scores declined, the proportions reporting being bothered by three or more of these ailments were 15%, 18%, 24%, 22%, 33%, 37%, and 64%. There is a clear, though imperfect, relationship between self-esteem and psychosomatic symptoms of anxiety. In Kaplan and Pokorny's (1969) study using self-derogation factor scores, low RSES was significantly associated with a larger number of psychosomatic symptoms reported.

Hunt and Hardt (1969) obtained RSES scores at six points in a 2-year longitudinal study of a sample of 303 students in the

Upward Bound program which was intended to generate the skills and motivation for college success among young people from low income backgrounds and inadequate secondary school preparation. In both African American and Caucasian American groups, RSES scores increased steadily and significantly across the six testing points with no difference between control subjects at comparable younger and older ages being observed. It must be noted that the control observation were made cross-sectionally, so that possible effects of retesting in the Upward Bound sample are not accounted for in this comparison.

Cooley, Mead and James all agree that the individual's self-opinion is largely determined by what others think of him. Two items of evidence bear on this question. The first is based on a socio-metric study conducted among 272 seniors from two high schools in the vicinity of Washington, D.C. The respondents were given the following directions: "Think of the people in your English class. If you were asked to vote for a leader in your English class today, which person would you be most likely to choose? Second most likely? Third most likely? The results showed that among those with high self-esteem scores, 47% received two or more choices as a leader, among those

with medium self-esteem scores the proportion was 32% and among those with low scores the proportion was 15%. Therefore, low self-esteem people were half as likely as medium self-esteem people and one-third as likely as high self-esteem respondents to be selected as leaders by others. When students were asked who they felt would actually be chosen as a class leader if an election were held, similar results appeared.

Rosenberg (1965) reported internal consistency reliability ranging from .85 to .88 for college samples. Based on a sample of Korean respondents, Shin (1992) reported alpha coefficients ranging from .71 to .73 and Sim (1994) reported an alpha coefficient of .88. This study yielded a standardized alpha coefficient .78 for the Korean version and .88 for the English version. The overall alpha coefficient score was .87 for this global self-esteem scale. Rosenberg (1965) reports a Rep. for his New York high school subjects of .92 and in a private communication he states that he obtained a slightly higher Rep. in a group of about 560 British adolescents. Silber and Tippett (1965) obtained a 2-week test-retest reliability coefficient of .85 for 28 college subjects.

As in the case with all self-concept measures, nothing definite can be said about the degree to which deliberate distortions or more subtle desirability considerations affect responses. It appears that subjects could easily discern the desirable answers. However, in Rosenberg's research, subjects were guaranteed anonymity. In Silber and Tippett's (1965) study, which gives convergent-validity coefficients, subjects were volunteers for a long-term project who may plausibly be assumed to be well motivated toward cooperating in research. Furthermore, subjects were assured of confidential treatment and care was taken to establish rapport with each subject and to reduce test-taking defensiveness through the manner of presenting the tests.

Acquiescence response set is somewhat controlled by the fact that there is an equal number of items for which "agree" and "disagree" responses indicate high self-esteem and these were presented alternately. Furthermore, one might question whether some of the combinations of items wording and response-scale possibilities create unnecessary interpretative difficulties for subjects. That is, some of the items have degrees of intensity or frequency built into the stem, some do

not. For example, compare the items "On the whole I am satisfied with myself" and "I take a positive attitude toward myself". When each item is evaluated by a subject on the same 4-point scale from "strongly agree" to "strongly disagree" comparisons between items may be unnecessarily confusing. Since Rosenberg in fact used only an agree-disagree dichotomy in his scoring, this difficulty may be partly counteracted.

Internal Correlational Analyses: In an interview study involving 223 sections, Kohn (1969) factor analysed 57 of the items, including 6 RSES items or modifications. Two of the resulting 12 factors were defined primarily in terms of RSES items. These factors appear to be similar to those of Kaplan and Pokorny (1969); and Kohn's division of 5 of his 6 items between factors replicates the comparable division made by Kaplan and Pokorny. While these findings offer support to the idea that RSES is not unidimensional, there is still need for a replication of Kaplan and Pokorny's analysis involving all 10 RSES items.

Convergent and Discriminant Validity: Silber and Tippett (1965) correlated RSES scores against three other measures of self-

esteem: Kelly Repertory Test, sum of [Self-Ideal] discrepancies, on 20 bipolar dimensions, r=.67, Heath Self-Image questionnaire, sum of 20 selected items, r=.83 and Interviewers' rating of self-esteem, r=.56. The subjects were 44 college students who volunteered for extensive participation: 7 were hospitalised for emotional disturbances, 37 were normal volunteers. These convergent validities are among the highest observed in cross-instrument correlations. Silber and Tippett (1965) present an evaluation of the discriminant validity of the RSES scores as part of a multitrait-multimethod matrix. Besides including the self-esteem scores from three measures, the matrix also included four self-image stability measures: a 5-item Guttman scale by Rosenberg aimed at changeability of subject self-view, interviewers' ratings of subjects' self-image stability and the amount of change in 2 weeks on the Heath and Repertory tests. The convergent validity values between Rosenberg self-esteem and self-esteem measured by three other methods were .67, .83 and .56. All of them exceed the correlation of .53 between two different "traits" measured by the same method. Moreover, the three convergent-validity values also exceeded the three heterotrait-heteromethod rs, those between RSES and Repertory Test self-

image stability (.40, .34, and .21). The problem with this matrix is the "different trait" (self-image stability) is not entirely different operationally from self-esteem in that the same instrument is used in the case of the Heath and Repertory tests to get both self-esteem and self-image stability scores. However, it seems plausible that even lower heterotrait-heteromethod rs would have been obtained if this were not true, so evidence for discriminant validity may be conservative.

While designed as a Guttman scale, the RSES is now commonly scored as a Likert scale. The 10 items are answered on a four point scale ranging from strongly agree to strongly disagree.

- To score the items, assign a value to each of the 10 items as follows:
- For items 1, 3, 4, 7, 10: Strongly Agree=3, Agree=2, Disagree=1, and Strongly Disagree=0.
- For items 2, 5, 6, 8, 9 (which are reversed in valence) Agree=0, Agree=1, Disagree=2, and Strongly Disagree=3.

The scale ranges from 0-30, with 30 indicating the highest score possible.

This is a self-administered questionnaire. It was sent with the Manifest Anxiety Scale to the participants' homes where they were asked to complete them. The instructions were given on the questionnaire itself. The instructions were as follows: "Below is a list of statements dealing with your general feelings about yourself. If you strongly agree, circle SA. If you agree with the statement, circle A. If you disagree, circle D. If you strongly disagree, circle SD."

Revised Neo-Personality Inventory (Costa and McCrae, 1992).

There are two versions of the Revised NEO-Personality Inventory. The version used in this research is a self-report item booklet (Form S). This is an eight-page booklet which contains the 240 statements comprising the Revised NEO-Personality Inventory NEO PI-R (see Appendix H). The first page of the booklet provides the instructions for completing the hand-scoring sheet, and the second page presents the instruction for completing the machine–scoring answer sheet. The participants were instructed to use the hand-scoring answer sheet in this research. The items of the NEO PI-R are presented from page 3 to page 8.

The hand-scoring answer sheet consists of a two-part, carbonless paper form designed for use with Form S item booklets. The answer sheet contains areas for recording basic demographic information and for recording responses to the NEO PI-R items. The three validity check items of the NEO PI-R are also presented on the answer sheet. Participants complete the demographic information and mark their item responses on the top sheet. The information is reproduced on the bottom

sheet. The bottom sheet also provides scoring keys for easily scoring the facet and domain scales of the NEO PI-R.

Throughout this decade many personality psychologists found that major themes that recur in personality descriptors in both natural languages and scientific theories are the dimensions of the Five-Factor model (Digman, 1990). However, at the advent of the NEO-PI-R there was no agreement on the Five-Factor model. Instead there was a variety of competing systems that all claimed to offer the best representation of personality structure. The systems of Eysenck (Eysenck and Eysenck, 1975), Guilford (Guilford, Zimmerman and Guilford, 1976), Cattell (Cattell, Eber and Tatsuoka, 1970), Buss and Plomin (1975) were compared to find that there was a great deal of consensus on the higher-order factors, such as Neuroticism (N) and Extraversion (E) than on specific traits that defined them. N and E appeared to be broad domains of traits that could be broken up in many different ways. The main aim of Costa and McCrae's research was that personality assessment should begin at the top and work down. The broadest traits should be identified and then each domain analysed to identify the most important and useful facets to measure.

This lead to the recognition of a third domain, called Openness to Experience (O) (Costa and McCrae, 1976, 1978), then to the development of scales to measure facets of N, E, and O (Costa and McCrae, 1980c). This was followed by the recognition of Agreeableness (A) and Conscientiousness (C) as major domains (McCrae and Costa, 1985b) and more recently to develop scales to measure facets A and C (Costa, McCrae and Dye, 1991). There is a great deal of agreement on the broadest terms of personality as represented by the five factors, than there are about more specific traits (Briggs, 1989). There is also a growing recognition that assessment at the level of the five factor themselves is inadequate to a full and detailed understanding of an individual's personality (Briggs, 1989; Mershon and Gorsuch, 1988). The 30 facet scales of the NEO PI-R were chosen to represent constructs frequently identified in the psychological literature that embody important distinctions within each of the five domains. By offering both domain and facet scores, the NEO PI-R facilitates understanding of personality in individuals and groups.

The NEO PI-R began in 1978 as the NEO Inventory, a set of three domain and 18 facet scales measuring traits related to N, E and O. In 1983, a brief, 18-item domain scales measuring A

and C were added, and in 1985 the instrument was published as the NEO Personality Inventory. In 1990 facet scales were completed for A and C and some minor modification were made in the original N, E, and O items. This is the NEO PI-R or the Revised NEO Personality Inventory.

Two of the NEO PI-R domains–Openness and Conscientiousness are of particular interest within the area of educational psychology. Openness is modestly related to measures of intelligence and more strongly related to measures of divergent thinking, an ability generally thought to contribute to creativity (McCrae, 1987). NEO PI-R Openness is correlated with Gough's (1987) Achievement via Independence, which in turn is a predictor of college-level academic achievement (McCrae, Costa and Piedmont, in press). Conscientious people consider themselves, and are rated by others as being more intelligent (McCrae and Costa, 1987) and scores on this domain scale may be a useful supplement to ability measures as predictors of academic and later-life success. The NEO PI-R was developed on and for adults, but it appears to work equally well for college students (Costa, McCrae and Dembroski, 1989). Separate norms have been developed for college students and

seem to be applicable to individuals of college age who do not attend college (Costa and McCrae, in press-a).

The NEO PI-R was developed to operationalize the Five-Factor model of personality, a representation of the structure of traits which was developed and elaborated over the past four decades (Digman, 1990). The five factors represent the most basic dimensions underlying the traits identified in both natural languages and psychological questionnaires. Factors are defined by groups of inter-correlated traits. These more specific traits are called facets and each cluster of facets as a domain. Summing the facet scales yields the domain score, which can be thought of as an approximation to the factor score. The initial step in interpreting a NEO profile is to examine the five domain scales to understand personality at the widest level. The following section describes each of the domains or factors and presents basic definitions as well as crucial distinctions.

Neuroticism (N): The most persistent domain of personality scales contrasts adjustment or emotional stability with maladjustment or neuroticism. Even though clinicians

differentiate among many different kinds of emotional distress, from social phobia to agitated depression to borderline hostility, countless studies have shown that individuals prone to any one of these emotional states are also likely to experience others (Costa and McCrae, 1992). The common tendency to experience negative affects such as fear, sadness, embarrassment, anger, guilt and disgust is the centre of the N domain. However, N comprises more than vulnerability to psychological distress. Perhaps because distracting emotions hinder adaptation, men and women high in N are also prone to have illogical ideas, to be less able to control their impulses and to cope more poorly than others with stress.

Patients traditionally diagnosed as suffering from neuroses tend to score higher on measures of N (Eysenck and Eysenck, 1964). But the N scale of the NEO PI-R measures a dimension of normal personality. High scorers may be at risk for some kinds of psychiatric problems, but the N scale should not be interpreted as a measure of psychopathology. It is possible to obtain a high score on the N scale without having any diagnosable psychiatric disorder. Individuals who score low on Neuroticism are emotionally stable. They are usually calm,

even-tempered and relaxed and they are able to face stressful situations without becoming upset or rattled.

Extraversion (E): Extraverts are sociable, but this is only one of the traits that make up the Extraversion domain. Enjoying spending time with people, particularly in large groups and gatherings, extraverts are also assertive, active and talkative. They like excitement and stimulation and tend to be cheerful in disposition. They are upbeat, energetic and optimistic. At the other end of the spectrum exists the introvert. Introverts are reserved, independent, even-paced and shy in certain social situations. They may prefer to be alone, but this does not mean that they suffer from social anxiety. Finally, although they are not prone to the exuberant high spirits of extraverts, introverts are not unhappy or pessimistic.

Openness (O): The elements of this facet, Openness to Experience are active imagination, aesthetic sensitivity, attractiveness to inner feelings, and preference for variety, intellectual curiosity and independence of judgment. The NEO PI-R Openness scale is perhaps the most widely researched measure of this broad domain (McCrea and Costa, 1985a, in

press-a). Open individuals are curious about both inner and outer worlds and their lives are experimentally richer. They are willing to consider original ideas and alternative values and they experience both positive and negative emotions more keenly than do closed individuals.

Other principles of the Five-Factor model often label this factor Intellect, and O scores are discreetly linked with both education and measured intelligence, such as divergent thinking that contribute to creativity (McCrae, 1987). But Openness is by no means comparable to intelligence. Some very intelligent people are closed to experience and some very open people are quite limited in intellectual capacity. Both men and women who score low on O tend to be conventional in behaviour and conservative in outlook. They favour the familiar and their emotions are subdued. Although openness or being closed may influence the form of psychological defence used (McCrae and Costa, in press–a), there is no evidence that being closed itself is a generalised defensive reaction. Instead, it seems likely that closed people simply have a narrower scope and intensity of interests. Similarly, although they tend to be socially and politically conservative, closed people should not

be viewed as authoritarians. Closedness does not imply hostile intolerance or authoritarian aggression. These qualities are more likely to be signs of extremely low Agreeableness. Open individuals are unconventional, willing to question authority and prepared to entertain new ethical, social and political ideas. These tendencies, however, do not mean that they are unprincipled. An open person may apply his or her evolving value system as conscientiously as a traditionalist does. Openness may sound healthier or more mature to many psychologists, but the value of openness or closedness depends on the requirements of the situation and both open and closed individuals perform useful functions in society.

Agreeableness (A): Like Extraversion, Agreeableness is mainly a dimension of interpersonal tendencies. The agreeable person is essentially humane. He or she is caring to others and eager to help them, and believes that others will be equally helpful in return. In contrast, the disagreeable or antagonistic person is self-centred, dubious of others' intentions and competitive rather than cooperative. It may be appealing to see the agreeable side of this domain as both socially favourable and psychologically healthier, and it is certainly the case that

agreeable people are more popular than antagonistic individuals. However, the willingness to fight for one's own interests is often advantageous and agreeableness is not a virtue on the battlefield or in the courtroom. Cynical and critical thinking contributes to precise analysis in the sciences. Just as neither pole of this dimension is inherently better from society's point of view, so neither is necessarily better in terms of the individual's mental health. Horney (1945) discussed two neurotic tendencies, moving against people and moving toward people, which bear a resemblance to pathological forms of agreeableness and antagonism. Low A is associated with Narcissistic Antisocial and Paranoid Personality disorder, whereas high A is associated with the Dependent Personality Disorder (Costa and McCrae, 1990).

Conscientiousness (C): A great deal of personality theory, particularly psychodynamic theory, concerns the control of impulses. During the course of development most individuals learn how to manage their desires, and the inability to resist impulses and temptations is generally a sign of high N among adults. But self-control can also refer to a more active process of planning, organising and carrying out tasks and individual

differences in this tendency are the basis of Conscientiousness. The conscientious individual is determined, strong-willed and probably few people become great musicians or athletes without a reasonably high level of this trait. Digman and Takemoto-Clock (1981) refer to this domain as Will to Achieve. On the positive side, high C is associated with academic and occupational achievement, on the negative side, it may lead to annoying fastidiousness, compulsive neatness or workaholic behaviour. Conscientiousness is a feature of what was once called character; high C scorers are conscientious, prompt and dependable. Low scorers are not necessarily lacking in moral principles, but they are less exacting in applying them, just as they are more apathetic in working toward their goals. There is some evidence that they are more self-gratifying and interested in sex (McCrae, Costa and Busch, 1986).

The Facet Scales: Each of the five domains of the NEO PI-R is represented by six, more specific scales that measure facets of the domain. There are several advantages to the strategy of examining an assortment of facets. First, it guarantees that the items used to measure the domain will cover as wide a range of relevant thoughts, feelings and actions as possible. The N

scale for example must include items measuring antagonism, depression, self-consciousness, spontaneity and susceptibility to stress as well as anxiety. Domain scores are therefore intended to replicate the broadest possible dimensions of personality. Second, having several independent facet scales allows internal replication of findings. For example each of the six facets of N is significantly related to negative affect and lower life satisfaction (Costa and McCrae, 1984) which gives a great deal of confidence that N is indeed related to psychological well-being. Similarly, the clinician who sees that a patient is high in anxiety, antagonism and self-consciousness as well as depression can be confident that he or she has insidious psychological distress. A third and important advantage to the multi–faceted approach to the measurement of the five factors appears from the fact that meaningful individual differences can be seen within domains. Openness to fantasy, aesthetics, emotions, action, ideas and values co-vary to form the domain of Openness and individuals high on one facet are likely to be high in others. But this is only a statement of probability. Some individuals are open to new facts but not ethics, or are open to emotions but not aesthetics. These individual differences within domains are

stable over time and confirmed by observer ratings (McCrae and Costa, 1990) so they must be regarded as real facts of personality and not merely random scatter. Examination of facet scales can provide a more fine-grained analysis of persons or groups. The detailed information available from consideration of facet scores can be useful in interpreting constructs and formulating theories. The Neuroticism Facets include Anxiety, Angry Hostility, Depression, Self-Consciousness, Impulsiveness and Vulnerability. The Extraversion Facets are Warmth, Gregariousness, Assertiveness, Activity, Excitement-Seeking and Positive Emotions. The Openness Facets are as follows: Fantasy, Aesthetics, Feelings, Actions, Ideas and Values. The Agreeableness Facets are Trust, Straightforwardness, Altruism, Compliance, Modesty and Tender-Mindedness and finally the Conscientiousness Facets are Competence, Order, Dutifulness, Achievement Striving, Self-Discipline, Deliberation (see NEO-PI-R Manual for further details).

The normative sample on which the NEO PI-R Adult Form S profile forms are based is a composite of three sub-samples; (A) a group of 405 men and women in the Augmented Baltimore Longitudinal Study of Aging (ABLSA) who were part of the 1989 Normative Sample and in addition who completed the new items of the NEO PI-R in 1990; (B) 329 ABLSA participants who completed the NEO PI-R by computer administration between 1989 and 1991; and (C) 1,539 men and women who participated in a national study of job performance. This latter sub-sample of subjects were volunteers whose responses were not used for job selection or rating (Costa and McCrae, in press).

Internal consistency, calculated as co-efficient alpha, can be generally understood as the degree to which items in a scale measure the same thing. The implicit theory behind the construction of most scales, including those of the NEO PI-R, is that the individual items tap some small aspect of the trait the scale is designed to assess, by summing them, a broader and more reliable measure is obtained. If all the items do in fact measure the same trait, they should all be correlated with each

other. The average intercorrelation of items together with the number of items, determines co-efficient alpha.

The Technical Manual gives the coefficient alpha for form S scales in the Employment Sample (Costa, McCrae and Dye, 1991). Internal consistencies for the individual facet scales ranged from .56 to .81 in self–reports and from .60 to .90 in observer ratings. These values are acceptable for scales with only eight items. The 48-item domain scales had correspondingly larger coefficient alphas, which ranged from .86 to .95. Other studies using the NEO PI-R have reported very similar values for men and women (McCrae and Costa, 1983a), for clinical samples (Fagan et al, 1991) and for college students (Piedmont, McCrae and Costa, 1992).

One small study examined retest reliability for NEO PI-R scales in a sample of 31 men and women. Reliabilities for the facet scales ranged from .66 to .92; reliabilities for the N, E, and O domain scales were .87, .91 and .86, respectively (McCrae and Costa, 1983a). A subset (N=208) of the college students who provided normative data on the NEO PI-R had completed the NEO-FFI about three months previously. By scoring the NEO-

FFI scales from the NEO PI-R data, it is possible to estimate the three-month retest reliability of NEO-FFI scales in a college sample. Coefficients were found to be .79, .79, .80, .75 and .83 for N, E, O, A and C respectively, $p<.001$.

Although short-term reliability has not been well studied in the NEO-PI, long-term stability has. A six-year longitudinal study of N, E and O scales showed stability coefficients ranging from .68 to .83 in both self-reports and spouse ratings. Three-year retest coefficients of .63 and .79 were seen for brief versions of the A and C domain scales (Costa and McCrae, 1988b). A seven-year longitudinal study of peer ratings using the full 18 N, E and O facet scales showed stability coefficients from .63 to .81 for the five domain scales in men and women (Costa and McCrae, in press).

Retest reliability is a prerequisite for the stability in a trait measure and most personality measures show adequate retest reliability. The NEO PI-R however is one of the few instruments that have demonstrated that it does, in fact measure enduring dispositions, whether assessed by self-reports or by the ratings of spouses or peers.

Factor Structure: The NEO PI-R is intended to represent the Five-Factor model of personality, and one obvious test of its adequacy is how well its internal structure corresponds to the predictions of this model. This can be examined on at least two levels. Costa, McCrae and Dye (1991) factored the 240 NEO PI-R items. When five varimaxrotated principal components were examined, they correspond clearly to the five intended factors. Correlations between the factor scores and the N, E, O, A and C domain were .91, .89, .95, .95 and .89 respectively.

Internal Consistency and Factor Structure of NEO PI-R Scales provided in the Technical Manual provides another test of the structure. The factor loadings are based on correlations among the facets in the normative sample of 500 men and 500 women. Each facet scale has its highest loading on the intended factor, and where large secondary loadings appear, they are appropriate and meaningful. Very similar results were found in the larger, but somewhat less representative, employment sample. In addition, the diverse composition of the Employment sample allowed an examination of the factor structure of the NEO PI-R in several different sub-samples: men and women, whites and nonwhites and young adults (21 to 29) and older

adults (30 to 64). The same factors were found in each group, with congruence coefficients between contrasting groups ranging from .91 to .99. The NEO PI-R therefore shows factorial validity across gender, race and age groups (Costa, McCrae and Dye, 1991). When the data used for College-Age norms were examined, the five familiar factors were again recovered. Coefficients of congruence between these factors and the factors ranged from .94 to .98. Finally, the 30 NEO PI-R facets of Form R were factored in the Peer Ratings sample. As in the analyses of Form S, five factors had eigenvalues of 1.0 or greater. After varimax rotation, very similar factors emerged.

In the NEO PI-R, content validity is addressed by identifying six distinct facets to sample each domain, and by selecting non-redundant items to measure each facet. Criterion group validity means that identifiable groups of individuals differ in their mean scores in theoretically predictable ways. The finding that patients in psychotherapy score high on Neuroticism (Miller, 1991) and that drug abusers score low on Agreeableness and Conscientiousness (Bronner et al, 1991) provide some evidence of this kind of validity for NEO PI-R scales.

Although factor analyses reproduce the intended structure of the NEO PI-R facets, it remains to be shown that these factors actually measure the intended constructs. External evidence of validity is required. The Five-Factor model was originally discovered in analyses of natural language trait adjectives, and a number of adjective-based measures of the five factors have been proposed. McCrae and Costa (1985b, 1987) administered 80 bipolar adjective scales to ABLSA subjects and their peer raters. When factored, the five familiar factors appeared, and these showed strong evidence of convergent and discriminate validity with NEO-PI factors. John (1989) asked judges to select items from Gough and Heilbrun's (1983) Adjective Check List (ACL) that would represent the five factors as they were described in the literature. McCrae (1990b) summed these adjectives to form five scales and showed that convergent and discriminant validity for both Form S and Form R NEO PI-R-factors. Several alternative sets of adjective definers of the five factors were created by Goldberg (1989). In a student sample, all of these were substantially correlated with the corresponding NEO-PI domain and factor.

Convergent and Discriminant Validity of Facet Scales: In a study by Costa, McCrae and Holland (1984) the study showed that Investigative vocational interests were most highly correlated with O5: Openness to Ideas, whereas Artistic interests were most highly correlated with O2: Aesthetics. Two recent studies have systematically examined the convergent and discriminant validity of all 30 NEO PI-R facet scales.

One of these two studies used the longitudinal data archives of the BLSA and correlated each facet with 116 different scales from 12 different inventories (Costa and McCrae, in press-c). The finding of the highest correlates for each of these are presented in the Technical Manual for each facet. These data provide strong evidence for the convergent and discriminant validity of the facets. Of the 150 correlations, 66 are greater than .50 in absolute magnitude, despite the fact that the criterion scales were all administered on a different occasion from the NEO PI-R scales.

Convergent validity is seen in the fact that NEO PI-R facet scales are correlated with alternative measures of similar constructs. For example, N1: Anxiety is related to Anxiety as

measured by the State-Trait Personality Inventory (Spielberger et al, 1979) and Tension as measured by the Profile of mood States (McNair, Lorr and Droppleman, 1971). A1: Trust is positively correlated with the Trusting scale of the Interpersonal Style Inventory (Lorr, 1986) and negatively correlated with the Suspicion scale of the Buss-Durkee Hostility Inventory (Buss and Durkee, 1957). All 30 scales show substantial correlations with appropriate criteria. Discriminant validity is seen by contrasting the correlates of different facets, particularly within the same domain. Bear in mind the Personality Research Form or PRF (Jackson, 1984) correlates of the E facet scales. PRF Affiliation is related to E1: Warmth and E2: Gregariousness. PRF Dominance is related to E3: Assertiveness; PRF Harmavoidance is negatively related to E5: Excitement-Seeking; and PRF Play is related to E6: Positive Emotions.

Another study examined the 300 items of the Adjective Check List or ACL (Gough and Heilbrun, 1983). The seven largest correlates were identified for each of the 30 NEO PI-R facets (except O6: Values, for which only four large correlates were found). These are provided in the Technical Manual. In

concordance with the previous study, these correlates demonstrate an appropriate and distinctive pattern that testifies to the discriminant validity of the facet scales. The pattern is sufficiently clear that in most cases judges could identify the facet scale on the basis of these ACL correlates (McCrae and Costa, in press- b).

Convergence with Sentence Completion Measures: One of the habitual concerns in personality assessment has been the relative merits of structured instruments versus less structured instruments. The following study examines this problem. The Twenty Statements Test or TST (Kuhn and McParland, 1954) asks the participant to give 20 different answers to the question "Who am I?". Responses are scored by content categories which include social roles, physical characteristics, abilities, traits, life circumstances and activities and attitudes. In a study of men and women in the ABLSA, about one-quarter of the responses described personality traits directly and many others included trait information as qualifiers of social roles. Once all 20 responses were read, global ratings on the five personality domains were made by two independent raters, blind to the NEO PI-R scorers. The two raters agreed with each

other beyond simple chance (rs=.29 to .55, N= 120, $p<.001$), and their combined ratings were significantly correlated with self-reports on corresponding NEO PI-R factors (rs=.24 to .40, N = 110, $p<.05$). These findings provide evidence for the construct validity of Form S of the NEO PI-R factors.

Consensual Validation of NEO PI-R Traits: The NEO PI-R has shown itself to be relatively impervious to socially desirable responding, at least in co-operative respondents (McCrae and Costa, 1983b). Self-report questionnaires depend on the individual's self-concept and to the extent that this is distorted or inaccurate, the results of any self-report questionnaire will be comprised. As a result, one of the main methods of validation of the NEO PI-R has been a comparison of self-reports with observer ratings (McCrae, 1982; McCrae and Costa, 1987). Because the observer ratings were responses to Form R of the NEO PI-R, the same results, viewed from a different perspective, provide data on the validity of Form R as well as Form S.

Early studies on the NEO PI-R and its precursors showed strong evidence of convergence between self-reports and spouse

ratings (McCrae, 1982) and between self-reports and mean peer ratings (McCrae and Costa, 1987) in the ABLSA sample and in smaller samples recruited to study medical stressors and hypertension (McCrae and Costa, 1985a). Muten (1991) reported correlations between behavioural medicine patients' self-reports and their spouses' ratings which ranged from .29 to .71 for the 23 domains and facet scales. Correlations between several different kinds of observers for the five domains and 30 facet scales of the NEO PI-R can be found in the Technical Manual (Costa and McCrae, in press-c; McCrae, 1991). Agreement is evidenced between peer ratings and self-reports and between spouse ratings and self-reports. Spouses appear to agree with self-reports more strongly than do peers, perhaps because spouses reveal more of themselves to each other than to friends and neighbours. Higher correlations can be acquired with peer ratings if multiple ratings are amassed. Four raters appear to be the most advantageous number; there are deteriorating returns from combining more raters (McCrae and Costa, 1989d). The data provided in the Technical Manual refer only to the convergent validity of NEO PI-R scales across observers, but these studies also showed discriminant validity of scales. In the first study of N, E, and O facet scales,

spouse ratings of specific facets correlated more highly with self-reports of the same facet than with self-reports on any other facet in 16 of the 18 cases (McCrae, 1982). In a comparison of self-reports with single peer ratings on all 30 NEO PI-R facet scales, the median convergent validity co-efficients for the facet scales in each domain were examined (Costa and McCrae, in press-c). These values are .30, .40, .38, .31 and .34 for N, E, O, A, and C respectively.

The issue of "semi-convergent" correlations, mainly the correlations of each Form S facet with the Form R scales that represent different facets of the same domain. For each domain there are 30 such correlations, and the median values were .20, .18, .21, .19 and .21 for N, E, O, A and C domains respectively. These values are smaller than the true convergent correlations but they are consistently positive. Finally the true discriminant correlations were calculated between self-reports on facet scales in one domain and with peer ratings on facet scales in other domains and vice-versa. There are 288 such discriminant correlations for each domain. The median absolute correlations for the five domains were .07, .10, .08, .09 and .08. These correlations, which are close to zero, provide strong

evidence of the discriminant validity of individual NEO PI-R facet scales.

The Revised NEO Personality Inventory was distributed with the Manifest Anxiety Scale and the Rosenberg Self-Esteem Scale. The participants were instructed to complete the questionnaire in a quiet place and to read the instructions accompanying the questionnaire. The instructions indicated that the participants could use the neutral response option if unsure of how to respond. If the participant had not provided a response to every item the researcher must determine whether the data may be validly scored and interpreted. If fewer than 41 responses were missing, the missing items should be scored as if the neutral response option was selected. The participant was instructed to mark all answers on the answer sheet and to write only where it is indicated. The participant was instructed not to write on the test booklet. The questionnaire contains 240 statements and the participant was instructed to read each one carefully and then to circle the one answer that best corresponds to their agreement or disagreement. There is no time limit for completing the NEO PI-R. Most participants require 30 to 40 minutes to complete it, but those with limited

reading skills may take longer. There are no right or wrong answers, the participant was asked to describe themselves honestly and to state their opinions as accurately as possible. Every item requires an answer. The answers are numbered down the columns on the answer sheet; care is required to ensure the answer is marked in the correctly numbered space. If a mistake is made, the participants can put an "X" through the incorrect response and draw a circle around the correct answer.

Items A, B, and C presented on the answer sheet provide simple validity checks and help ensure that the respondent has completely and accurately completed the NEO PI-R. Item A asked if the respondent had responded to the items in an honest and accurate manner. Ninety-eight percent of the participants responded agree and 2% responded strongly agree to item A in the present study. A disagree or strongly disagree response to item A normally invalidates formal scoring of the NEO PI-R. Items B and C, asks if the participant has answered all the items and has marked his or her responses in the correct spaces. These are intended mainly as reminders to the participant to complete missing items and to double-check the

location of his or her answers. These were marked by all participants in the present study.

To score using the hand scoring answer sheet, the top stub was torn off and the top page was removed. The first row of items are located and the values of the circled responses to these eight items are summed. This sum is entered in the space labelled "N1" located to the right of the row. This number is the raw score for facet N1. An analogous procedure is used to calculate the remaining facet raw scores.

After all facet scores have been calculated, the scores for facets N1, N2, N3, N4, N5 and N6 are added. The space labelled "DOMAIN RAW SCORES" at the bottom of the answer sheet is located and this sum entered in the box labelled "N". This number is the raw score for the N domain. An analogous procedure is used to calculate the remaining domain raw scores.

When the hand-scoring answer sheet is used, NEO PI-R results may be presented on a profile form to facilitate raw score to standard score conversion. Profile forms provide T-scores

based on different normative samples. Separate profile forms are available for adults and college-age individuals for Form-S. The adult profile forms are appropriate for use with individuals ages 21 and up. Profiles are plotted separately for men and women.

Researchers who hand-score the NEO PI-R can use the formulas to calculate factor scales. These formulas must be applied to T scores, not raw scores and yield factor scores expressed as T scores. The factor score weights are based on analyses of the Form S sample, which is the largest and most representative. The respondent's T score is examined for the N domain or factor. T scores of 56 or higher are considered high, T scores ranging from 55 to 45 are considered average and T scores of 44 or lower are considered low. The first row of descriptive terms on the NEO summary form is located. This row corresponds to descriptions for the Neuroticism domain. If the participant's score is high, a mark is placed in the left-hand box. If the participant's score is low, a check is placed in the right hand box. An analogous procedure is used to complete the remainder of the form. The second through fifth rows of

descriptive terms correspond to the E, O, A and C domains respectively.

Sixteen Personality Factor Fifth Edition (Cattell, 1993).

Since the first edition of the Sixteen Personality Factor was published in 1949, four revisions have followed, with scale refinements distinguishing each (1956, 1962, 1967-69, 1993). The 1993 revision of the Sixteen Personality Factor (16PF) produced the fifth edition (see Appendix K), which reflects improved psychometric qualities and provides attention to cultural changes and advances within the profession. Initially, items were amassed from the existing editions on the basis of the following factors: if they correlated highly with their own factor items, were reviewed for content issues, obsolete, indistinct, or imprecise items were rewritten or replaced. Items were also shortened and simplified and were reviewed for race or gender bias (Cattell, 1994). Twenty-four percent of the 185 items are completely new items and 27% of them involved significant changes, whereas minor changes were made in 27% of the items, leaving only 22% of the original items in tact.

Then, experimental testing was carried out, the questionnaires were administered and test-taker data evaluated. At every evaluation stage, items were reduced in number based on

reviews of item correlations, scale internal consistencies, and intercorrelations among the scales. The final experimental form included 14 items for each of the factor scales except for Reasoning (Factor B), which has 15 items.

The 16PF5 includes certain improvements over previous editions. Firstly, item content has been revised to reflect modern language and usage and to remove ambiguity and has also been reviewed for race, gender and cultural bias. The resultant items are more contemporary than previous editions. Secondly, response choices are constantly controlled for all personality items, with the middle response choice always being a question mark (?). Thirdly, normative data have been updated to reflect the population of the UK in 1993 and sub-sample data is reported for different age bands, gender groups and working groups. This normative data is also relevant to Irish society in the new millennium. Fourthly, a new administrative index has been produced to examine response bias. An Impression Management (IM) index, which is comprised of items not found on the 16 primary personality factor scales, replaces the "Faking Good" and "Faking Bad" scales of the fourth edition. The fifth edition also contains

indices of Acquiescence (ACQ) and Infrequency (INF). Personality scores are no longer adjusted on the basis of validity indices. Finally, the psychometric properties have improved. UK internal consistency reliabilities average .72, with a range from .60 to .87. US test-retest reliabilities average about .80 for a two-week interval and .70 for a two month interval. Criterion scores such as Adjustment and Creativity have been updated, and new ones such as Empathy and Self–Esteem have been added.

The Sixteen Personality Factor Questionnaire Edition Five (16PF5) provides normed references to each of the primary scales. Four additional factor scores, second-order scales (Cattell, Eber and Tatsuoka, 1970) are also computable–based on linear combinations of the 16 primary scales. Unlike such instrumentation as the Minnesota Multiphasic Personality Inventory (MMPI), the 16PF attempts to measure personality attributes and behavioural styles of a more "normal" rather than a "pathological" population, although a more clinical use of the 16PF may be appropriate (Karson and O'Dell, 1976).

The target population for administration is high school senior through to adults; the test is objective, forced-option and composed of 6-13 items per each of the surveyed 16 personality attributes. Most items are declarative elicitors requiring the subject to give only a short, reactive response to a generally described situation. According to Lanyon and Goodstein (1982) the quantity of references for the 16PF is second only to the MMPI. Over 2,000 research citations exist today concerning the formal application of the 16PF as a personality assessment instrument. One of the strengths of the 16PF is its ease of usage for structuring the interpretive interview with the client or subject. The fact that it is a questionnaire allowed deeper personality analysis by post. Furthermore, the 16PF is very easy to read and the instructions simple to follow.

The recommended strategy for 16PF5 profile interpretation involves evaluating the following sequence indicated:

1. Response style indices
2. Primary factor scales.
3. Global Factor scales

The fifth edition has three response style indices: Impression Management (IM), Infrequency (INF) and Acquiescence (ACQ).

Impression Management (IM) Scale.

This bipolar scale consists of 12 items. The items are scored only on the IM scale and do not contribute to any of the primary personality scales. IM is in essence a social desirability scale, with high scores reflecting socially desirable responses and low scores reflecting willingness to divulge undesirable attributes or behaviours. The item content reflects both socially desirable and undesirable behaviour or virtues. Social desirability response sets include elements of self-deception as well as elements of other-deception (Conn and Rieke, 1994e). Therefore high scores can reflect impression management or they can reflect an examinee's self-image as a person who behaves in desirable ways. In each case, there exists a possibility that the socially desirable responses might be more positive than the examinee's actual behaviour or that the examinee really might behave in socially desirable ways. Cattell attempted to introduce a motivation distortion scale in Forms C and D, the previous editions of the 16PF. Well aware of the

limitations of his scales, Cattell termed his Motivational Distortion (MD) as a temporary compromise. Karson (1967) reported a study by Schanberger and Ciotola in which a scale of 15 items for MD was developed for the 16PF (1962) on responses of hospitalised psychopaths. Studies by Karson (1967, 1969) and Karson and O'Dell (1974) have clearly shown the strong relationship of the MD scale to the second-order anxiety factor. Furthermore, norms were obtained on a nationally representative sample of 4830 adult men and women for two empirically developed faking indices for Cattell's 16 Personality Factor Questionnaire by Winder and O' Dell (1975). These data provided convincing evidence that the cut-off suggested in the original work for the faking good scale was far too liberal and would routinely classify more than half of all 16PF protocols as invalid. The faking bad cut-off appeared to be approximately correct. The correlations of the faking scales with the 16PF primary factors were highly congruent with those reported in the development study and provided additional validity evidence for the two indices. Both indices were found to be sufficiently reliable to permit adjustments to be made in the primary trait scales when distortion is above average. Cattell's temporary compromise has been replaced with a more

permanent measure of dissimulation in the form of Impression Management in the fifth edition.

The IM scale correlates with several fifth edition primary personality scales (Conn and Rieke, 1994e). Its main relationships are to primary scales that contribute to the Anxiety and Extraversion global factors. IM correlates highly with Emotional Stability (C+) and Relaxedness (Q4-). In fact, high IM scorers may tend to score in the non-anxious direction on all scales related to the Anxiety global factor, including Trust (L-) and Self-Assurance (O-). Also, high IM scorers also may tend to score in the extraverted direction on scales related to this global factor. The highest correlations are with Warmth (A+), Social Boldness (H+) and Group-Orientation (Q2-) and the correlation Forthrightness (N-) is also significant. Finally, high IM scorers may tend to score in the controlled direction on Seriousness (F), Rule-Consciousness (G+), Groundedness (M-) and Perfectionism (Q3+), the primary scales related to the Self-Control global factor. Conversely, low scorers on the IM tend to correlate with the same primaries, but in the direction of admitting Anxiety, Introversion, and less Self-control.

Infrequency (INF) Scale: The INF scale consists of 32 items taken from the full set of personality items in the fifth edition. Item selection was based on analyses of statistical frequencies of item response choices within a large US sample (N= 4346), with the criterion being that a given response choice for an item should be selected infrequently, falling at or below a 6.5% endorsement rate. Regardless of the fact that the 16PF has a three-choice response format (a, b, or c) all infrequently chosen response choices were b responses. Therefore, when an 'a' or 'c' response is chosen for an INF scale item that response does not contribute to the INF scale. High scorers on the INF scale designate that an examinee answered a comparatively large number of items in a way dissimilar to most people. Possible justifications for high INF scale scores include arbitrary responding, inability to decide, and reactions to specific item content, reading or comprehension difficulties, or trying to avoid making the "wrong impression".

Acquiescence (ACQ) Scale: The Acquiescence (ACQ) scale measures the tendency to answer "true" to an item, no matter what it contains. This scale, which consists of 103 true-or-false items, is unique to the 16PF5. All items on the ACQ are true-

false items. Therefore, a high score indicates an overall pattern of tending to respond "true" to items rather than choosing answers based on item content.

Sixteen Primary Factor Scales exist, these include:

Factor A (Warmth): Warm Vs Reserved.

Factor B (Reasoning): Abstract Vs Concrete.

Factor C (Emotional Stability): Emotional stability Vs Reactive.

Factor E (Dominance): Dominant Vs Deferential.

Factor F (Liveliness): Lively Vs Serious.

Factor G (Rule–Consciousness): Rule–Conscious Vs Expedient.

Factor H (Social Boldness): Socially Bold Vs Shy.

Factor I (Sensitivity): Sensitive Vs Utilitarian.

Factor L (Vigilance): Vigilant Vs Trusting.

Factor M (Abstractedness): Abstracted Vs Grounded.

Factor N (Privateness): Private Vs Forthright.

Factor O (Apprehension): Apprehensive Vs Self-Assured.

Factor Q1(Openness to Change):Open to Change Vs Traditional.

Factor Q2 (Self-Reliance): Self-Reliant Vs Group-Oriented.

Factor Q3 (Perfectionism):Perfectionistic Vs Tolerates Disorder.

Factor Q4 (Tension): Tense versus Relaxed.

(see 16PF5 Technical Manual for further details).

Global Factor Scales: For each global factor, a set of primary scales "load on" the global construct, that is, the scale set contributes to, or makes up the global construct.

Extraversion (Extraverted versus introverted).

Principally accounted for by the four primary factors of warmth (high A), a stimulation-seeking type of sociability called liveliness (high F), social boldness (high H) and the need to affiliate with other people, especially in groups, called Group-Orientation (Q2). A strong relationship exists between social desirability and the Extraversion global factor; several of the extraversion-related primary factors are correlated with the fifth edition IM scale.

Anxiety (Anxious versus Unperturbed).

Like extraversion, anxiety has been described since early studies of personality and continues to be described in studies of the "big five" dimensions of personality (Goldberg, 1992). Anxiety includes a tendency to be reactive (low C), rather than adaptive, distrustful and vigilant (high L), worrying and apprehensive (high O) and Tense (high Q4).

Tough–Mindedness (Tough–Minded versus Receptive).

Tough-minded people tend to be Reserved (A-), Utilitarian (I-), Grounded, (M), and Traditional (Q1-). Tough–minded people may portray a sense of being established possibly to the degree of being set or fixed. That is, they may not be open to other points of view, to unusual people, or to new experiences. Receptive people, on the other hand are Warm (A+), Sensitive (I+), Abstracted (M+) and Open to Change (Q1+). While they may be more open than their Tough–minded counterparts, receptive people may overlook the practical or objective aspects of a situation.

Independence (Independent versus Accommodating).

The global factor includes the tendencies to be Dominant (E+), Socially Bold (H+), Vigilant (L+) and Open to Change (Q1+). In contrast to Independent people, Accommodating people tend to be Deferential (E-), Shy (H-), Trusting (L-) and Traditional (Q1-).

Self-Control (Self-Controlled Versus Unrestrained).

Self-controlled people can be Serious (F-), Rule-Conscious (G+), Practical and Grounded (M-) and/or Perfectionistic (Q3+)

as a means to Self-control. In comparison to Self-controlled people, Unrestrained people tend to give in to their urges a great deal more. This Unrestrainedness can be seen in different situations, through spontaneity and Liveliness (F+), in Expedience (G-), in Abstractedness (M+) and/or in a Tolerance of Disorder (Q3-).

Factor structure of the 16PF5 was investigated by Byravan and Ramanaiah (1995) from the perspective of the five-factor model, using Goldberg's 1992 scales for five factors of personality factors. The three inventories were completed by 96 male and 92 female undergraduates. For the 16PF Fifth Edition scales, Cronbach alpha coefficients ranged from .55 to .85 with a median of .68. The alpha coefficients ranged from .83 to .89 with a median of .88 for the Revised NEO Personality Inventory scales, and from .84 to .92 with a median of .90 for the Goldberg scales. Factor I labelled as Neuroticism had a high positive loading on the Revised NEO Personality Inventory Neuroticism factor and a high negative loading on the Goldberg Emotional Stability factor. This factor had high positive loadings on the 16PF Privateness and Perfectionism scales and high negative loadings on the Emotional Stability Scale. Factor II had high positive loadings on the NEO Personality Inventory Extraversion factor and the Goldberg Surgency factor along with the 16PF Social Boldness, Warmth, Liveliness and Dominance scales and had high negative loadings on the 16PF Openness to Change and Abstractedness scales. This factor was called Extraversion. Factor III, which was interpreted as Conscientiousness, had high positive loadings on the Revised

NEO Personality Inventory Conscientiousness factor, the Goldberg factor and the 16PF Self-Reliance and Rule-Conscientious scales and a negative loading on the 16PF Vigilance scale. Factor IV, identified as Openness, had a high positive loading on the NEO Personality Inventory Openness factor and moderately high positive loadings on the Goldberg Intellect factor as well as the 16PF Apprehension, Vigilance and Tension scales. High scorers on this 16PF may be described as vigilant, sceptical, hard to fool, driven and energetic. Finally, Factor V, which was called Agreeableness, had high positive loadings on the NEO Personality Inventory Agreeableness and the Goldberg Agreeableness factor and a moderately high negative loading on the 16PF Dominance scale. However, Cattell (1995) responded to the results of this study. Cattell stated that the factor analysis of the 16PF and the NEO Personality Inventory presented in the 16PF Fifth Edition Technical Manual shows the global factors from the two tests lining up quite well. 16PF global Anxiety loads .85 on a factor whose main components are the six NEO Neuroticism facets, 16PF Extraversion loads .67 on a factor that contains mainly NEO Openness facets; 16PF Independence loaded .73 on a factor containing five out of six Agreeableness facets; and

16PF Self-Control loaded .72 on a factor made up mainly of the six Conscientiousness facets. Cattell conducted a factor analysis of the two tests based on a sample of 630 subjects, of which 188 were the same subjects used in the Byravan and Ramanaiah's study. The results show the two sets of global factors aligning quite well. Furthermore, inspection of the correlations between the two sets of factors in both studies indicated that the five NEO factors correlate as well with the five 16PF globals as they do with Goldberg's markers which were developed specifically to measure the big-five model. There appears to be a strong relationship between these two sets of factors and it is unclear why these appear so completely unaligned in Byravan and Ramanaiah's results. Cattell states that their results may have been distorted by having two sets of big-five variables, both based on varimax factors, combined with the one set of oblique 16PF variables. Cattell also states that while badly needed, Byravan and Ramanaiah's factor analysis of the 16PF and the NEO seems to conflict with other results and to raise some questions about method. Byravan and Ramanaiah (1996) replied to Cattell's (1995) article by saying that the results of their study were different from those of Cattell's 1995 factor analyses mainly

due to the fact that the former involved the factor analysis of the 16PF primary scales from the perspective of the five factor model using Revised NEO Personality Inventory domain scales and Goldberg's 1992 scales as markers for the five major factors whereas the latter investigated the structure of the Revised NEO Personality Inventory facet scales from the perspective of the 16PF global scales.

Test-retest coefficients offer evidence of the stability over time of the different traits of the 16PF. Pearson Product Correlations were calculated for two-week and two month test-retest intervals (see Appendix J Table 4). Participants for the two-week interval were 204 (77 male, 127 female) US university undergraduate and graduate students. Reliability coefficients for the primary factors ranged from .69 (Reasoning, Factor B) to .86 (Self-Reliance, Factor Q2), with a mean of .80. Test–retest coefficients for the global factors were higher, ranging from .84 to .91, with a mean of .87. For the Two–month interval, the sample consisted of 159 US university undergraduates (34 male, 125 female). For the primary factors, reliability coefficients ranged from .56 (Vigilance, Factor L) to .79 (Social Boldness, Factor H), with a

mean of .70. Test–Retest coefficients for the global factors ranged from .70 to .82 with a mean of .78.

As a measure of scale internal consistency, Cronbach's coefficient alpha essentially calculates the average value of all possible split-half reliabilities (Cronbach, 1951). Cronbach alpha coefficients for the 16PF were calculated on the US general population norm sample of 2500 adults. Values ranged from .64 (Openness to Change, Factor Q1) to .85 (Social Boldness, Factor H) with an average of .74 (see Table 5 Appendix J).

Construct validity of the 16PF5 demonstrates that the test measures 16 distinct personality traits. Criterion validity of the 16PF5 demonstrates its ability to predict various criterion scores, such as Self–Esteem and Creative Potential.

The 16PF scales are based on factor analytic methods, and the results of these methods provide evidence about the construct validity of the fifth edition and about its place in the development of the 16PF as a test. For the 16PF, factor analysis was used to identify 16 primary factors that explain

the larger domain of personality descriptors in the English language. Factor analysis also was used to identify a set of global factors that explain the 16 primary factor scales at a broad level.

Cattell anticipated that distinct personality traits might be related to one another. Rather than extracting factors forced to be independent of one another and consequently uncorrelated (orthogonal factors), Cattell choose to use oblique factors which are allowed to inter-correlate. Cattell's assumption is reflected at the global factor level, where related primary factors cluster along the five global scales. See Technical Manual for the results of factor analysis of the broad domain of items in the final experimental form (Form S). The results show that, with few exceptions, parcels of items from a given primary factor scale load on their particular factor scale but not on other factor scales. This pattern provides evidence about factor structure on which the fifth edition is based.

Although the factor pattern shows that fifth edition items tend to associate with their own scale and not with others, the primary factor scales do evince a predictable pattern of

intercorrelations because the factors are oblique. The Technical Manual presents the results of the factor analysis of the primary factor domain, as measured in the fifth edition. Five global factors were identified. These five also have appeared with great consistency in factor analyses of previous forms of the 16PF (Cattell et al, 1970; Krug and Johns, 1986).

Criterion Validity:

Self-Esteem: To determine how personality traits relate to self-esteem, the 16PF and the Coopersmith Self-Esteem Inventory (SEI–Adult form) were administered to a sample of 318 US adults (176 males, 142 females) from a variety of personal counselling, vocational counselling and school settings. Most of the 16 primary factors bear some relationship with Self-Esteem as measured by the SEI. High Self-Esteem scores correlate with Emotional Stability (Factor C, $r=0.64$), low Vigilance (Factor L, $r=0.35$), low Apprehension (Factor O, $r=0.58$) and low Tension (Factor Q4, $r= 0.33$), all primary components of the Anxiety global factor. Self-Esteem also relates to Dominance (Factor E, $r=0.46$), Social Boldness (Factor H, $r=0.54$), and Openness to Change (Factor Q1, $r=0.28$) from the Independence global factor. A negative correlation exists between Self-Esteem and

Abstractedness (Factor M, r=-0.44), suggesting that persons high in self-esteem focus on practical solutions rather than imaginative notions. When Self-Esteem was regressed on the 16 primary factors, the most significant predictors were Emotional Stability (C+), Social Boldness (H+), low Apprehension (O-) and low Abstractedness (M-).

Social Skill: The ability to communicate with other people has far-reaching consequences for personal adjustment, vocation prospects and in general, for most areas of life. For example, lack of assertiveness, poor interpersonal relationships and loneliness can all stem from inadequate social skills (Riggio, 1989). The Social Skills Inventory (Riggio, 1989) is a 90-item self-report measure of basic social communication skills. Although primarily used in research on social processes, the SSI also can be used to help individuals develop social skills or in applied settings for training and development.

To determine how personality traits relate to social skills, the 16PF5 and SSI were administered to 254 US individuals, 222 of whom were university students and 32 of whom were retired persons. There were 110 males and 146 females with ages

ranging from 18 to 92 (mean = 26.8). Scores for the 16PF5 primary and global factors were correlated with SSI scales (see Technical Manual). The results found that the total SSI score is strongly related to Extraversion at the global factor level. Correlations with the primary factors comprising Extraversion are all high. Correspondingly, overall social skill is predicted by Extraversion components of Warmth (A+), Liveliness (F+), and Social Boldness (H+), plus good Reasoning Ability (B+). In general, being socially skilled seems to entail an orientation towards other people, a willingness to initiate such interaction, and good problem-solving abilities.

Empathy: This is the capacity to identify with another individual's situation or feelings. The California Psychological Inventory (CPI) contains a 38-item Empathy folk scale based on the Hogan Empathy scale. The empathy scale has an estimated coefficient alpha reliability of .58 based on 400 US college students (Gough, 1988). High empathy scores are characterised by Extraversion and low Anxiety. Empathy correlated with the primary factors comprising Extraversion: Warmth (A+), Liveliness (F+), and Social Boldness (H+) predicted empathy. It was also predicted by Emotional Stability (C+), low Vigilance

(L-) and low Tension (Q4), components of the Anxiety global factor. Empathy was predicted by Openness to Change (Q1+).

Leadership Potential: To obtain a Leadership Equation for the 16PF, 462 US subjects (208 males, 254 females) complete both the 16PF fourth Edition (form a) and the 16PF5. Using the fourth edition Leadership Potential (LP) equation, a LP score was obtained from the fourth edition primary scale scores. Next, this fourth edition LP score was predicted from fifth edition primary scale scores by using multiple regressions. That is the fourth edition LP score was regressed on the fifth edition primary scales. The resulting regression equation was scaled on the norm sample of the fifth edition and became the Leadership Potential equation for the fifth edition. Regression results are shown in Technical Manual.

The new equation is very similar to the original equation, and the correlation between the two is 0.81. Mean LP scores for men and women did not differ significantly for either the fourth or fifth edition equation. Even though the original Leadership Potential equation was developed on males, the equation can be applied to females. High leadership potential is

characterised by extraversion and in particular, Social Boldness (H+), Liveliness (F+) and Group-Orientation (Q2-). High scorers also show minimal anxiety. They are characterised by high Emotional Stability (C+) and low Tension (Q4-). High scorers tend to have a Utilitarian, objective outlook (I-) and are solution-oriented and practical (M-). They also indicate Perfectionistic tendencies that suggest a need for order (Q3+). As has been shown in previous research (Cattell and Stice, 1954, 1960), leaders are characterised by good abstract Reasoning skill (B+) and Dominance (E+).

The Sixteen Personality Factor Fifth Edition was distributed with the General Health Questionnaire. Testing materials include the fifth edition Questionnaire booklet, the corresponding answer sheet and separate Administration and Scoring instructions. Simple and clear instructions for participants are printed in the Questionnaire booklet. The researcher requested the participants to read the instructions, responding to their questions as necessary. The participants were instructed not to make any marks in the questionnaire booklet, which is re-usable. Participants were advised to avoid skipping any questions and to choose the first response that came to mind rather than spending too much time on any single question. Name and personal details should be completed. It is a self-administered questionnaire that can be administered individually or in-group form. Completion time varies from 35 to 50 minutes. Reading level is aimed at the average 11-year old. The 16PF5 can be hand scored using the self scoring answer sheets.

Prior to scoring, each answer sheet should be verified for completeness. The materials needed for scoring the 16PF5 are an answer sheet, administration and scoring instructions and a

copy of The UK Standardization of the 16PF5: A Supplement of Norms and Technical Data. All 185 items should be answered. An answer sheet which has 13 or more unanswered items must be completed before it can be scored. Although completion of all items is desirable, an answer sheet is still scorable if 12 or fewer items remain unanswered. In this situation, the full scale score can be estimated for any affected scale by averaging item scores on the scale. The procedures are as follows:

1. Obtain the total raw score of the items in the scale that have been completed.
2. Divide the total raw score by the number of items completed.
3. Multiply the quotient obtained by the total number of items in the scale.
4. Round the product obtained to the nearest whole number, which becomes the estimated full scale score.

Step 1: Scoring.

1. Tear the perforated strip from the bottom edge of the Answer Sheet. Separate the top answer sheet from the bottom. Scoring sheets have transferred through to the Scoring Key.

2. Count the marks visible in the band labelled A on the Scoring Key, allowing 1 or 2 points per mark as indicated by the number in each window. Total the points and enter the total in the TOTAL RAW SCORE box for band A.
3. Continue scoring the other factors in the same way.

There is no key for scoring the response style indices of Infrequency (INF) and Acquiescence (ACQ).

Step 2: Convert Raw Scores to Sten Scores.

Raw scores are converted into standardised (sten) scores by using the norm tables. These were Table 7 and Table 10 respectively in the "Supplement of Norms and Technicial Data" manual. Stens are based on a 10-point scale with a mean 5.5 and a standard deviation of 2. The raw scores are printed in the body of the table and their corresponding sten scores are located at the top of each column.

The procedures used for converting raw scores into stens are as follows:

1. Determine which norms are more appropriate for the testing application.

2. Locate the participants raw score for a Factor in the norms selected.
3. Draw your finger up the column in which the raw score appears. The score at the top of the column is the sten for Factor A. Sten scores for the remaining factors are determined in the preceding manner.
4. The norm table also is used in converting the raw score for the Impression Management (IM) index into a sten.

Step 3: Calculate Global Factor Sten Scores.

This involves calculating sten scores for the five global factors of personality Extraversion, Anxiety, Tough-Mindedness, Independence and Self-Control. Since these global factors are comprised of combinations of related primary factors, they describe personality in broader, more general terms than do the primary factors.

Global factor sten scores can be calculated by following the instructions at the top of the Global Factor Worksheet. The instructions that follow correspond to those printed on the Global Factor Worksheet:

1. Transfer the participant's primary factor sten scores from the answer sheet to the left-hand column labelled 'Sten' on the Global Factor Worksheet.
2. Begin by scoring Factor A, which is the first row. Follow the dashed lie to the right and each time a decimal in a black box is reached, multiply the participant's Factor A sten score by that decimal. Enter the resultant product in the empty box adjacent to the black box.
3. Repeat for each factor. Calculate and record only one product in some factor rows and two in others and that some boxes are clear whereas others are shaded.
4. Once the products for all 16 factors are calculated and recorded, add the numbers in each pair of vertical columns (clear and shaded) separately. When the decimals are totalled, include any given constant appearing in the first empty box at the base of the column pair. Enter the sum of the decimals from the shaded column in the shaded box at the base of the column pair.
5. Once the columns are totalled, subtract each sum in a shaded box from the sum in a clear box. The remainder is entered in the empty box that follows. This decimal

represents the sten score to the nearest tenth of a sten for the global factor indicated.

Step 4: Profile Sten Scores.

Sten scores for the five global factors and the 16 primary factors can be graphed to achieve a pictorial representation, or profile, of the participant's overall personality pattern.

The grid for developing the profile is on the Profile Sheet. The procedures are followed:

1. Write the participant's primary raw and sten scores and global factor sten scores in the Raw and Sten columns at the left of the profile sheet. Round the participant's decimal sten score for each global factor to the nearest whole number.
2. In the appropriate spaces on the grid, mark a dot that corresponds to each rounded global factors sten scores and to each personality factor sten scores.
3. Finally, connect the dots using a series of short straight lines.

General Health Questionnaire (Goldberg and Williams, 1988).

The General Health Questionnaire (GHQ) was designed to be a self-administered screening test (see appendix L) aimed at detecting psychiatric disorders among respondents in community setting and non-psychiatric clinical settings. It identifies short-term changes in mental health (depression, anxiety, insomnia, social dysfunction and somatic symptoms). It is a pure state measure, responding to how much a subject feels that their "present" state over the past few weeks is unlike their "usual" state. It does not make clinical diagnoses and should not be used to measure long-standing attributes. The GHQ focuses on the person's ability to carry out "normal" functions and the appearance of any new disturbing phenomena. Designed for use by doctors, psychiatrists and researchers, the GHQ is ideal for use in the community and non-psychiatric settings. There are four different versions available: GHQ 12 which is a quick screener for survey use, the GHQ 28 which is used to examine a profile of scores. The scaled GHQ or GHQ 28 is derived by factor analysis and consists of four sub-scales for somatic symptoms, anxiety and insomnia, social dysfunction and severe depression. It is

almost equal to the GHQ 30 as a case detector. The GHQ 30 which is used in this research is a screener with "physical" element items removed and the GHQ 60 which is used to identify cases for more intensive examination. The questionnaire was designed for ease of administration acceptable to participants, fairly short and objective, meaning that it did not require the persons administering it to make subjective assessments about the participant. The GHQ (Goldberg and Williams, 1988) is based on experience gained with the Cornell Medical Inventory (Brodman et al, 1949). Other older scales include Macmillan's Health Opinion survey (Macmillan, 1959) and the Gurin Mental Status Index (Gurin, Veroff and Feld, 1960). Among more recent tests which aim to provide a single score indicating the degree of psychiatric disorder is the Self-Reporting Questionnaire (Harding et al, 1980).

The GHQ 30 contains 30 items and is excellent as a quick screener to help detect caseness. It produces an overall score that can be compared with a prescribed cut-off score. The GHQ 30 is the most widely validated version. It was developed from the GHQ 60 and involved removing all questions related to

physical symptoms. As a result, the GHQ 30 could be regarded as a measure of more purely psychological of psychosocial symptoms. An advantage of the GHQ 30 over the GHQ 60 is that it can be completed more quickly (3-4 minutes compared with 6-8 minutes). Shorter versions of the GHQ were prepared, this was done by first excluding from the GHQ 60 the items endorsed by physically ill respondents and then dividing the items into those where agreement indicated health and those where agreement indicated illness. Within each group, items were selected that had the highest slopes in the original item analysis. Veroff, Feld and Gurin (1962) studied a sample of 542 Americans who were thought to be representative of the non-hospitalised population. Their extensive interview covered 19 areas which comprehensively covered all possible aspects of adjustment and "felt distress". A factor analysis yielded four factors for both sexes:

1. "Felt psychological disturbance";
2. "Unhappiness";
3. "Social inadequacy";
4. "Lack of identity".

As a result of this investigation it was possible to extract which items were suitable for inclusion in the present questionnaire

and which had high saturation on these factors, especially the first three mentioned. Consequent upon the distinction between symptoms and signs of illness and personality traits, items were selected which would stress the changing aspects of psychological functioning. The area of depression was included covering the items "unhappiness" in Veroff and his co-workers' sense, as well as items adapted from the "N" scale of the CMI. The second area is anxiety and "felt psychological" disturbance". Some items concerned with anxiety and "paranoid irritability" were suggested by items in the CMI while the notion of "felt psychological disturbance" not only included items suggested by Veroff and his co-workers' study, but was extended to embrace the notion of a lack of "role satisfaction" (Fried and Lindemann, 1961). The third area was objectively observable behaviour, and consisted of items that could be reported on either by the respondent or by another informant. Items bearing on social impairment and Veroff and his associates' "social inadequacy" were included. The fourth area was "hypochondriasis" and consisted of a wide variety of superficially "organic" items complained of by those who are somatizing their psychological distress. Many of these items

were adapted from the Cornell Medical Index which is very heavily loaded with such items.

Having decided upon the areas, an extensive search was made for as many items as possible. In addition to the scales and investigations already mentioned, ideas for items were obtained from Taylor's Manifest Anxiety Scale, Eysenck's Personality Inventory and the Minnesota Multiphasic Personality Inventory. All the items were rewritten in the form already described.

Three calibration groups were adopted for the questionnaire. There was no overlap between the groups. The three groups were "normals" and "mildly ill" and "severely ill" psychiatric patients. There were 100 participants in each group. To be included in "severely ill" group, patients had to satisfy two criteria: first, they had to be patients on the disturbed admission ward of a mental hospital; and second, the doctor looking after them had to rate them as "severely ill-in-patient psychiatric care essential on grounds of mental state". To be included in the "Mildly-Ill Group" patients had to be both attending the out-patient department of the Maudsley Hospital

and rated as "mildly ill needs some psychiatric help" and 'quite all right as an out-patient' by the psychiatrist looking after them. As far as possible the questionnaire was administered to consecutive attenders of the Department who were diagnosed as other than schizophrenia, hypomania or dementia. For the "normal" group five professional interviewers were employed to carry out a door-to-door survey in the community to obtain "normal" respondents. The task of the interviewers was to administer a structured interview to the individuals they approached, and if they were suitable on various criteria set out below, to persuade them to complete the questionnaire. The aim of the interview was to establish on six criteria whether the individual could be accepted as a respondent. It was considered important to do this without using criteria which were themselves similar to items in the questionnaire.

The six criteria were as follows:

1. Each individual was asked to rate his "general health" as "good", "fair" or "poor". Those rating it as "poor" were rejected.

2. Individuals who had been to their own doctor for more than one spell of sickness in the past three months were rejected.
3. Those who were on "nerve tablets" or who were on regular tablet treatment prescribed by their doctor were rejected.
4. Those who had lost more than two weeks' work in the past three months were rejected.
5. The answer to the question "Does your health stop you from doing anything?" was recorded.
6. Those who admitted "any kind of nerve trouble" or said they suffered from persistent insomnia were rejected. Moreover, after the interviewer had asked them if they suffered from nerve trouble or persistent insomnia, he then asked "or anything like that?" and recorded their reply to this "open-ended" question.

In order to obtain a group of 100 respondents matched to the other groups for age, sex and social class, the interviewers approached 162 subjects by door-to-door survey in the London area in January 1967. Of the 140 items, 30 were excluded, because there was a difference of less than 40% between the

proportion of normals and severes endorsing them and a further eight because more than 10% of normals did endorse them. The remaining 93 items were subject to a principal components analysis.

The 30-item version of the GHQ is the version that has been most widely been validated. The Technical Manual lists 29 studies, conducted in a variety of ways in a range of settings. It can be seen that the lowest value for the sensitivity (48%) was obtained in the study by Newman et al (1988). This arose in a comparison of the GHQ against the Diagnostic Interview Schedule. A sensitivity of 48% was obtained from a comparison of the GHQ 30 with "any core DIS/DSM-III disorder". Inspection of diagnosis-specific coefficients shows this low value to be largely due to the GHQ failing to identify substance use disorders, antisocial personality and phobias. Sensitivities against major depression and panic disorder were much higher (88% and 76% respectively). The median value for the sensitivity of the GHQ 30 was 81% and 21 of the 29 studies yielded values within 10% of this figure. Specificity of the GHQ 30 has ranged from 51% (Fontanesi et al, 1985, in a somewhat unusual study in primary care in Italy, in which the patients'

own GP also acted as the research interviewer) to 94%. Twenty-four of the studies have yielded specificity values within plus or minus 10% of the median of 80%.

Three studies examining the validity of the 30 item GHQ are presented. Goldberg (1972) originally interviewed 200 general practice patients and 91 medical out-patients with diseases of the small intestine. Each patient was allocated to a position on a 5-point scale of psychiatric case severity based on material collected in a standardised clinical interview (Goldberg et al, 1970). The scale was later collapsed to yield a case/non-case dichotomy. Each patient completed the 60 item GHQ and their answers to those questions making up the shorter version extracted. Using the criterion of five or more positive responses to indicate a case, the 30 item GHQ correctly identified 89% of the general practice patients as cases or non-cases. The misclassification rate was a little higher in the medical out-patients, mainly because of a marked drop (from 91% to 65%) in the proportion of cases that were correctly identified by the GHQ (Goldberg, 1972).

The 30 item GHQ was later administered to 244 general practice patients in Philadelphia (Goldberg et al, 1976). In contrast to the original validity study, a score of four or more was used to predict potential cases. The instrument correctly identified 80% of the patients diagnosed as cases or non-cases by a psychiatrist using the same standardised clinical interview. Nearly all of the false positives i.e. those scoring four or more on the GHQ but not considered as a case by a psychiatrist were nevertheless rated as "subclinically disturbed". All of the false negatives i.e. those scoring less than four but considered by the psychiatrist to be a case had mild conditions, the symptoms of which had not changed for many years.

A third test of the validity of the GHQ was carried out by Tennant (1977) who interviewed 120 Australian general practice patients, using the same standardised interview as Goldberg. He extracted the appropriate 30 answers that the patients had made to the 60 item GHQ. He applied the original criterion of five or more responses to indicate a case and found that the GHQ correctly identified 92% of the patients. The false negatives were described as defensive individuals who did

not readily admit to symptoms in the clinical interview or in the questionnaire responses. All of the false positives had substantial physical illness.

Split-Half Reliability Study:

The questionnaire was divided into two equal halves and the score of one half compared with the other half. This was done by pairing the items on the basis of their content and the gradients of response to each item found in the item analysis. When this had been done, the first question in each pair was randomly assigned to either the first or the second half of the questionnaire, while the second question was assigned to the other half. This produced two halves which were comparable to one another in terms of both ideational content and the discriminatory power of the questions. The split-half reliability was computed on the 853 completed questionnaires that were used in other studies and was shown to be 0.95.

Internal Consistency:

The coefficient most commonly used has been alpha (Cronbach, 1951). Studies reporting this coefficient have been listed in the Technical Manual where the values range from +0.82 to +0.93.

The results shown on this table are all derived from Likert scoring of the questionnaire. Banks et al (1980) also give results for GHQ scoring. They were 0.90, 0.82 and 0.87 for samples A to C respectively. Shek (1987) found the split-half reliability of the GHQ 30 to be +0.77.

The questionnaires for the original study of test-retest reliability were issued to 120 patients at the Bethlem Royal and Maudsley Hospitals, excluding patients with schizophrenia, hypomania or dementia, between August and December 1967. Six months after the first questionnaires had been given out; the questionnaires were distributed again at their out-patients appointment. The patients were asked to compare how they felt on the second occasion with how they felt on the first, using a simple five-point scale.

1: Much worse

2: Slightly worse

3: About the same

4: Slightly better

5: Much better.

In 114 patients for whom pairs of GHQs were collected, 65 thought that they had remained about the same. The doctors were asked to rate the patients on the same five-point scale that the patients themselves had used. Of 114 who filled in pairs of questionnaires, it was possible to collect doctors' ratings on only 87 of them and of these, 51 were rated "about the same" (see Technical Manual).

It was realised that the previous experiments had some flaws, since the ratings by the doctors were being made retrospectively rather than at the same time the patients were seen and the ratings were both being made on the basis of standardised psychiatric assessments. The validity study in general practice involved seeing a group of 200 surgery attendees who included 96 psychiatric cases; 87 of these psychiatric cases agreed to come up and be seen on a follow up visit six months later and of these 87 cases 20 were assessed as having the same degree of disturbance on each occasion that they were seen, using a standardised psychiatric assessment on each occasion.

One would expect the test-retest reliability figures to be higher in this study than in the larger study in the out-patients' department, since not only was a standardised assessment made of the degree of disturbance on each occasion that the questionnaire was completed but the assessment was made on the same occasion that the questionnaire was filled in, rather than retrospectively. The results are shown in the Technical Manual.

Generally speaking, test-retest correlations are higher when measured in clinically defined group with a high prevalence of disorder. For example, DePaulo and Folstein (1978) found a test–retest reliability of +0.85 for the GHQ 30 in a small sample of neurological patients over a five to seven day period. Robinson and Price (1982) administered the GHQ 28 to 103 patients who had had strokes some eight months apart: the test-retest correlation was a high as +0.90.

When measured in samples drawn from the general population there is considerably more movement between "caseness" and "non-caseness" resulting in lower coefficients. Thus, Layton (1986) administered the GHQ 60 to 186 school-leavers and 101

men facing redundancy some 11 to 12 months apart: the test-retest correlations were +0.58 and +0.51 respectively, while Firth-Cozens (1987) administered the GHQ 30 to 195 housemen who had previously completed it two years earlier as fourth year medical students: the test-retest correlation was 0.36, significant beyond the 0.001 level. It may be that the practical and conceptual problems of measuring test-retest reliability have deterred other workers, since as indicated previously the problem is one of distinguishing between true change and unreliability. Users of the GHQ are not alone in having ignored this problem: as Bhornstedt, Mohler and Muller (1987) point out "we know of no study using a general population survey that has attempted to estimate the reliabilities of items of the types usually used in survey research". It is, in fact possible to distinguish between true change and unreliability, providing that three waves are used and certain assumptions are made, as Bohrnstedt and colleagues point out. Statistical techniques to do this with continuous variable have been available for some time (Heise, 1969; Wiley and Wiley, 1970). A technique for categorical variable has also been described by Bye and Schechter (1986). Therefore it appears that the definitive test-retest reliability study of the GHQ remains to be done. Huppert

et al (1989) demonstrated the reliability of a qualitative approach to analysing GHQ data, which yields information not only on the number of symptoms, but also the nature of these symptoms. They clearly identified five distinct and robust factors in the GHQ 30. These factors can be labelled anxiety, feelings of incompetence, depression, difficulty in coping and social dysfunction.

Factor Analysis: The 30 item General Health Questionnaire (GHQ), the 24 item Self Report Questionnaire (SRQ) and a Chinese version of the Minnesota Multiphasic Personality Inventory (MMPI) were administered to 225 English speaking Chinese (Chan and Chan, 1983). The GHQ was found to have high internal consistency as a scale and to assess 5 dimensions of psychopathology: anxiety, inadequate coping, depression and insomnia and social dysfunction. As a brief screening instrument, it correlated 0.49 with the SRQ. Using the MMPI modal profiles derived from classification research as criterion measures, sensitivity, specificity and correct classification rates were above 70%. The findings in this study are consistent with previous findings relating to the use of the GHQ in community settings. Psychometrically the GHQ has been

found to be internally consistent as a brief symptom scale and the multidimensionality of the GHQ was substantiated in the Chinese sample. The findings showed that the GHQ was equally sensitive in detecting both the "Neurotic" and the "psychotic" cases.

In the construction of the General Health Questionnaire, items were selected so as to cover four main areas. These were depression, anxiety, social performance and somatic complaints. Factor analyses of the GHQ 60 and GHQ 30 have yielded a factor labelled as depression. While in many studies the depression factor accounted for less than 5% of the variance, it was the first factor, accounting for 29% in the Cleary et al (1982) study in the primary care in the USA, and accounted for 16 and 14% in the analyses of D'Arcy (1982) and Benjamin, Decalmer and Haran (1982) respectively. The Technical Manual shows the items with loadings >0.5 on the depression factor. It is obvious that there is a reasonable degree of consistency among the studies. For the GHQ 60 some of the items 56-60 are represented in the depression component and the same are true for items 50-56 as they are contained within the GHQ 30.

In a minority of the studies, anxiety and/or sleep related items are included in the depression factor. The most notable example of this is the Goldberg et al (1976) study using the GHQ 30 in primary care attenders in the USA, the authors noted that "both rotated and unrotated solutions have been examined up to the 7 factor solution...there is no solution which produces anxiety items on one dimension and depression items on the another". The General Health Questionnaire was designed to detect non-psychotic disturbances. There are a number of studies providing confirmatory evidence that the GHQ assesses a number of dimensions of psychopathology. Goldberg et al (1976) performed separate principal-component analyses for each race on the responses of 1310 Caucasian and African-American patients to the 30 item GHQ. In the Caucasian sample 52% of the total variance was accounted for by 4 varimax rotated factors, interpreted as Depression and Anxiety, Insomnia and Anergia, Social Functioning and Anhedonia a scaled version of the GHQ from which more information could be provided as a single severity score. In the African-American sample 4 similar factors emerged, accounting for 48% of the total variance and interpreted as Depression and Anxiety, Anhedonia, Anergia and Insomnia. In

another study Goldberg and Hillier (1979) reported that a principal axis factor analysis of 60 item responses from 523 patients yielded a four factor solution accounting for 48% of the total variance. The 4 varimax rotated factors were interpreted as Somatic Symptoms, Anxiety and Insomnia, Social Dysfunction and Severe Depression. Be selecting the 28 items loading saliently on the 4 factors they assembled.

In many of the studies, several items representing a dimension of anxiety are included within the first factor. Some authors however have isolated subsidiary factors to which they have attached an anxiety label. These are listed in the Technical Manual, together with items loading >0.5. It can be seen that six of the analyses of the GHQ 60 yielded such a factor, but only the analysis of Burvill and Knuiman (1983) found a specific anxiety factor in the GHQ 30. Table 19 demonstrates considerable similarity between the anxiety factors isolated in the various studies, with items 45 (been getting scared or panicky for no good reason) and 47 (found everything getting on top of you) loading on the factor in most of the studies. Where a specific anxiety factor has been isolated, it accounts for a small proportion of the variance, or appears low in the

hierarchy of factors. Furthermore, it is of interest that items 49, 50 and 51 load on the specific anxiety factor, whereas these can also be found as part of the depression factor (see Technical Manual).

Few of the principal components analyses of the GHQ 60 have isolated specific components of somatic complaints. Worsley, Walters and Wood (1978) and Benjamin, Decalmer and Haran (1982) isolated a "headache" factor, the items of which (items 5 and 6) were included in the somatic symptoms factor of Goldberg and Hillier's (1979) six-factor solution.

Items reflecting social performance (21-30 in the GHQ 60) load on the first factor in only three studies of the GHQ 60. In one of these (Worsley, Walters and Wood's (1978) study in Australian gynaecology patients) the first factor consisted exclusively of these and was named "poor performance". Otherwise, a specific factor reflecting social performance/social functioning/coping has been isolated in all principal components analyses of the GHQ 60 except those by Hobbs and his colleagues and in all analyses of the GHQ 30 except that by Galloway et al (1984a and b) and in each of the studies of the

GHQ 12. In some studies, more than one social functioning factor has been isolated (e.g. Chan and Chan, 1983). The social factors account for between 4% and 13% of the variance on the studies in which this information has been reported.

Huppert et al (1989) carried out a reliability study on 6317 community residents. An individual's responses to Goldberg's 30 item GHQ are usually represented as a single score which provides a measure of the number of psychiatric symptoms reported. No account is taken for the nature of the symptoms. Factor analyses of the GHQ 30 were undertaken in ten randomly selected samples of 600 adults each and also on 12 age-sex groupings covering the age range of 18-98. The results indicate an impressive degree of consistency of the factor structure and the identification of five distinct factors corresponding to anxiety, feelings of incompetence, depression, and difficulty in coping and social dysfunction.

The General Health Questionnaire 30 yields only an overall total score (max=90), therefore the most straightforward way of scoring would be to assign weights of 0, 1, 2 and 3 to each column, and this is shown as "Likert Scoring". The wording of the items mean that they can all be scored in the same direction (no need to reverse) so the higher the score the more severe the condition.

The instructions for administration were included in a letter accompanying the questionnaire. Information on the questionnaire informed the participant that the questionnaire was investigating any medical complaints and how their health had been in general over the past few weeks. They were asked to answer all the questions by underlining the answer which they felt most nearly applies to them. The questionnaire was investigating about present and recent complaints only and not those they had in the past. There was no time limit as the participants completed the questionnaire in their own homes.

3.5 STATISTICAL PROCEDURES.

The Statistical Packages for the Social Sciences (SPSS) Version 10 and Version 11 were used in the statistical analysis of this research. Three statistical procedures were carried out, a Pearson product-moment Correlation, an independent samples t-test and a One-Way Analysis of Variance.

Correlation analysis is used to describe the strength and direction of the linear relationship between two variables. Pearson product-moment coefficient is designed for interval level variables. It is used when there is one continuous variable and one dichotomous variable. The Pearson product-moment coefficient provides both the strength and the direction of the relationship. In this research the Pearson product-moment coefficient was used to investigate an inverse relationship between the Anxiety Levels and the Self-Esteem Levels of all the groups. Secondly, it was used to examine the relationship between N1 of the Revised NEO Personality Inventory and Anxiety of the Manifest Anxiety Scale. They were analysed at the 0.05 significance level (2-tailed).

An independent-samples t-test is used to compare the mean score, on some continuous variable, for two different groups of subjects. It will inform the researcher as to any statistically significant difference in the means of two groups. In statistical terms, this is testing the probability that the two sets of scores came from the same population. The independent t-test was used in this research at the 0.05 significance level (2-tailed). Each of the groups, the School Victim Group, the Life-Long Victim Group, the Adult Victim Group, the Child Bully Group, the Child Bully/Victim Group, the Periodical Bully/Victim Group, Victim Group (combined), Bully/Victim Group (combined) and the Control Group were compared with one another across anxiety levels, self-esteem levels and the five factors of Personality of the Revised NEO Personality Inventory (Costa and McCrae, 1992) using the independent-samples t-test.

Analysis of variance compares the variance between the different groups with the variability within each of the groups. An F ratio is calculated which represents the variance between the groups, divided by the variance within the groups. Within this research, a One Way Analysis of Variance was used at the 0.05 significance level to examine gender across Anxiety, Self-

esteem, Neuroticism, Extraversion, Openness, Agreeableness and Conscientiousness for the victim group (combined), bully group, bully/victim group (combined) and control group.