IDENTIFICATION OF AGGRESSION OF JUNIOR PRIMARY LEARNERS

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by

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DEDICATION

This dissertation is dedicated to my wife Shameetha,
sons Yadhir and Sahil and
daughter Shriya Nivarya
for their patience and support during my study.

I declare that : ***" IDENTIFICATION OF AGGRESSION OF JUNIOR PRIMARY LEARNERS "*** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

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DR R. S. BUDHAL DATE

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" I shall pass through this world but once,
any good thing I can do or any kindness
that I can show to any human being,
let me do it now, let me not defer it or neglect it,
for I shall not pass this way again."

Mohandas Karamchand Gandhi

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by Rishichand Sookai Budhal

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SUMMARY

Identification of aggression in Junior Primary school learners often becomes a difficult task due to the lack of appropriate measuring instruments. The assessment instruments used presently are unable to identify the subtypes of aggression. In order to address this limitation in the field of aggression, the present investigation was undertaken.

A literature study was done where the concept aggression was defined and the relationship and differences between the subtypes of aggression (physical, verbal, reactive and proactive aggression) were examined. The factors that relate to aggression, namely, biological, personality, environmental and social, parental influence, frustration and media influences were identified. A reliable measuring instrument was developed to identify the four main subtypes of aggression in junior primary learners.

The results of the empirical investigation indicated that there were significant positive correlations between the subtypes of aggression. Gender and intellectual potential do not appear to have a significant bearing on childhood aggression.

The educational implications of the findings are discussed and guidelines regarding treatment of childhood aggression are given for both educators and parents.

Key words: childhood aggression, junior primary learners, identification, assessment, subtypes of aggression, physical aggression, verbal aggression, reactive aggression, proactive aggression, overt aggression, covert aggression, anger, provocation frustration, factors related to aggression, treatment of aggression.

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CHAPTER 1

ANALYSIS OF THE PROBLEM AND RESEARCH PROGRAMME

1.1 INTRODUCTION

Conduct disorders (which includes aggression) constitutes a heavy burden not only on those inflicted with the disorder, but on their families, schools and society at large. According to Petersen (1998:22) statistics strongly suggest that the percentage of children with conduct disorders in South Africa is alarmingly high and is multiplying each year.

Conduct disorders such as aggression has had fatal consequences in many South African schools this year. This year there have been fatal stabbings of learners by fellow learners. These stabbings, which made newspaper headlines, took place in three separate incidents in three different provinces (refer to appendix 4 for an article that appeared in the *Independent News* on 21 October 2006). In these incidents, it was noted that the learners involved could not control their anger and became so aggressive that they either seriously injured or killed fellow learners. In her address to parliament on 12 October 2006, the Minister of Education (Naledi Pandor) stressed the urgent need to take drastic measures to curb such levels of aggression and violence at schools (Daniels 2006:1). She proposed random searches for dangerous weapons, drug testing of learners at schools, and the removal of unruly learners from their classrooms and effectively placing them under temporary "house arrest". However, greater focus should be placed on identifying the problem at its initial stages of development and recommending ways of eliminating it. This type of intervention will be more effective if the root causes of aggression are addressed instead of the symptoms.

Various definitions of aggression exist, such as: "Aggression is a behaviour that is directed by an organism toward a target, resulting in damage" (Renfrew, 1997:6) and "Aggression is the delivery of an aversive stimulus from one person to another, with intent to harm and with an expectation of causing such harm, when the other person is motivated to escape or avoid the stimulus" (Geen 2001:2).

Taking these definitions into account, the following general description forms the basis of this research project: Aggression is “an observable behaviour where the aggressor either physically or verbally, overtly or covertly, tries to harm or cause pain to objects or persons within his/her environment. This aggressive action is most often an emotional response to provocation or frustration.”

Childhood aggression is often seen in a physical, verbal, reactive (overt) or proactive (covert) form. Brown and Parsons (1998:136) define reactive and proactive aggression as follow: reactive aggression is a defensive response to a perceived threat or provocation. Threats are most often viewed as a block to the learner’s goal achievement and as such elicit frustration, which serves as the root of the aggressive behaviour. Proactive aggresssion is defined as being a learned behaviour that is controlled by contingencies. Often the proactive behaviour is intended to harm, dominate or coerce another person; or to acquire a desired goal. Reactive aggression, on the other hand, appears to be an unmeditated response that is often spontaneous and explosive. Physical aggression refers to noxious stimuli that is delivered to the victim and causes him/her pain and injury; while in verbal aggression, noxious stimuli take the form of rejection and/or threat. For example, during physical aggression a person may forcefully push or kick his/her victim in order to get something; while during verbal aggression, the aggressor threatens or hurls abusive language at the victim in order to get his/her own way.

1.2 ANALYSIS OF THE PROBLEM

The identification of aggression often becomes very difficult, mainly for three reasons. The first reason is that because aggression can be displayed in varied and sometimes covert ways, it becomes difficult even for the skillful observer to make an accurate assessment. Secondly, there are limited assessment instruments to accurately identify the various subtypes of aggression. The third reason, with specific reference to Junior Primary learners, is that they cannot understand the terminology that is used in self-assessment instruments.

With regard to the first problem, it should be noted that the varied forms in which learners display aggression often leads to an inaccurate identification of the subtypes of aggression. According to Underwood (2003:373), learners behave aggressively for diverse reasons and with varying outcomes. They express anger or sometimes seek to meet their social goals by hitting, kicking, tripping, destroying property, yelling, name-calling, malicious gossip, social exclusion and manipulating friendship. Learners engage in these behaviours because they feel furious, they wish to gain access to a desired object or relationship, they desire to dominate others, and they might find entertainment value in hurting and manipulating their peers. Learners can behave badly in crude, immature, overt ways; or in ways that are so shrewd and sophisticated that the bad behaviour sometimes becomes difficult to detect. Taking cognisance of the varied ways in which aggression can be displayed, it becomes apparent that in order for any instrument to accurately measure aggression, it should include indicators of physical, verbal, reactive (overt) and proactive (covert) forms of aggression.

The second problem with regard to the identification of aggression is related to the first one. It would appear that a limited number of assessment instruments are available to measure childhood aggression accurately. Generally, aggressive behaviour is assessed mainly through outsider observation. However, this technique often does not allow one to distinguish between the subtypes of aggression. Currently the only aggression scale that is available through the Human Sciences and Research Council (HSRC) is the Factors of Aggressiveness Questionnaire (FFAQ). This questionnaire identifies the factors of adolescent aggression through family relationships. It focuses on factors such as family structure, affect, communication, behaviour control, value transmission and the role of external systems. However, this questionnaire does not distinguish between the various forms of aggression. Another scale that is commonly used by educators and therapists is the Child Behaviour Checklist (CBCL). Here again, this scale is not specifically designed for the sole purpose of assessing aggression but is used to identify a whole range of behaviours that include aggression.

The third problem that one encounters with the identification of aggression is the unsuitability of self-assessment instruments. With regard to these types of questionnaires, learners (especially at the Junior Primary phase) often tend to find it difficult to understand the terminology that is used. Also, there is a tendency among learners to give patterned responses to alternatives (for example, choosing the highest or lowest score for all items in the rating scales). An attempt to change the terminology of the items of a standardised aggression questionnaire to the level of understanding of junior primary learners may result in the entire questionnaire losing the essence of what it intended to measure, thereby reducing its validity.

Projection tests such as the Draw-A-Person (DAP) and Children's Apperception Test (CAT) are often used to identify aggression in children. These tests often provide the educator or therapist with some indication of aggressive behaviours that are inherent in the child; however, people who use these tests should be sensitive to aggressive indicators in the child's projections. For example, an overemphasised mouth in a child's drawing could be an indication of verbal aggression. Here the educator or therapist should use other aggression scales to determine if the learner is really inclined to be verbally aggressive or not. The implication of this is that projection tests should be used in conjunction with other assessment scales for an accurate identification and diagnosis of aggression in learners, especially during the Junior Primary phase.

Taking into account the above limitations, it becomes evident that there is a definite need to develop a scale to accurately measure childhood aggression and to distinguish between its subtypes (namely proactive, reactive, physical and verbal forms of aggression). It becomes evident that the development of such an instrument will require the use of both quantitative and qualitative procedures in order for it to be effective in the identification of aggression in Junior Primary learners. The selection of the items for the questionnaire, determining its reliability and formulating norms to interpret the intensity of aggression will require quantitative procedures. The validity of (criterion related to) such a questionnaire could be determined by using projective techniques. Responses to drawings (such as the DAP and CAT) could be qualitatively analysed in order to ascertain whether

aggressive indicators are present in the same participants who obtained high scores in the aggression questionnaire. This combination of both quantitative and qualitative procedures in the development of the aggression questionnaire will result in a more effective measuring instrument that will enhance the identification process.

Bukowski (2003:397-8) found that it is unlikely that the use of broad-based measures of aggression, especially those that do not distinguish between proactive and reactive forms, will inform us very much about the association between aggression and children's functioning. Such broad-based measures of aggression will not be able to give an indication of whether the learner's aggression is a response to provocation and frustration, or whether the level of aggression is controlled by certain contingencies. Broad-based measures of aggression reflect the total levels of a learner's aggression and do not give an indication of the intensity of the subtypes of aggression

According to Brown and Parsons (1998:135), a possible explanation for the ineffectiveness of some intervention programmes is that they fail to recognise the complex nature of aggressive behaviours or the factors that predispose children to display aggression. These researchers are of the opinion that an accurate identification of childhood aggression is the key to successful intervention. The need to design an accurate measuring instrument that will be able to distinguish between the subtypes of aggression is therefore further supported.

Many studies and investigations have been conducted on the factors that influence the development of childhood aggression. Wong and Cornell (1999:104) and Hill (2002:140) note that numerous studies have found evidence to support the idea that deliquents have relative deficits in their Verbal IQ (Intelligent Quotient) compared to their Performance IQ. Hill (2002:133) notes that individual factors (impaired verbal skills, deficits in executive functions, an imbalance between behavioural activation and inhibition systems), environmental disadvantages (such as hostile or intrusive parenting), attributional biases, unrealistic self-evaluation, insecure attachments and social environments (peers, neighbourhood and socio-economic conditions) can play a

significant role in childhood aggression. More research should be done in order to determine whether the above factors relate specifically to Junior Primary learners and whether they contribute to the identification process.

1.3 FORMAL STATEMENT OF THE PROBLEM

It becomes quite evident from the above research findings, that there are many and varied antecedents that contribute to childhood aggression and that effective intervention depends on the accurate identification of the types of aggression that are displayed. Taking this to its logical conclusion, it also becomes evident that in order to assist parents, therapists and educators in the identification of aggression, a measuring instrument that can assess the four main subtypes of aggression (physical. verbal, reactive and proactive) will have to be designed. Secondly, the relationship between the factors that influence the subtypes of aggression should be tested empirically in order to facilitate the indentfication process. Therefore, this investigation will revolve around the following questions:

- How can educators effectively identify learners with aggression by means of a standardised test?
- How do the various subtypes of aggression relate to one another during the primary school years?
- How can projection tests contribute to further identification of aggression in Junior Primary learners?
- What factors relate to childhood aggression during the Junior Primary school years that can help with the identification of aggression?

1.4 AIM OF THE RESEARCH

Firstly, a literature study was carried out with the following aims:

- Understand the concept of childhood aggression.
- Identify which variables predispose a child to become aggressive.
- Identify the different forms in which childhood aggression can be manifested.

- Identify the inter-relationship between the different forms of aggression.

Secondly, an empirical investigation was carried out with the aim of

- developing a measuring instrument to identify the relationship between the different forms of childhood aggression
- using projection tests as a means of validating the measuring instrument
- determining the relationship between the factors identified in the literature study and childhood aggression

1.5 THE RESEARCH PROGRAMME

Chapter 2 deals with an analyis of the phenomenon of aggression among primary school learners. The phemenon of aggression will be examined with respect to its definition, subtypes, theories and influencing factors. The chapter will focus on the measurement of aggression and the research done on the treatment thereof.

An empirical investigation into the measurement of aggression, the relationship between the subtypes of aggression and the factors that affect aggression will be discussed in chapter 3. The development of an observation questionnaire to identify the subtypes of aggression will also be discussed here. In the chapter the sample and the procedure that was followed during the empirical investigation will also be discussed.

In chapter 4, the results of the empirical investigation will be analysed. Conclusions will be drawn as to the kind of effect certain variables have on the developement of aggression in Junior Primary learners, and the inter-relationship among the subtypes of aggression.

Chapter 5 will deal with the educational implications of the research findings. Guidelines on the intervention and treatment of childhood aggression will be discussed. The limitations of the study will be highlighted and recommendations for future research will be made.

CHAPTER 2

LITERATURE REVIEW ON CHILDHOOD AGGRESSION

2.1 INTRODUCTION

This chapter contains a literature review on the phenomenon of aggression as it manifests itself during childhood. Firstly, a possible working definition of the multifaceted concept of aggression will be formulated. Secondly, the various forms and classification of aggression will be examined with the purpose of reducing these varied and multiple classifications into simpler and more succinct ones. Thereafter, the theories that explain the development of aggression will be discussed. These include the Adlerian Model, the Social Learning Model, the Social Information Processing Model and the General Affective Aggression Model. This will be followed by a discussion on the factors affecting aggression in learners. These factors will be broken down into six main categories, namely biological, personality, environmental and social, parental influences, frustration, and media influences.

The measuring of childhood aggression seems to be problematic. Therefore, the available forms and techniques that are presently used in measuring childhood aggression will be examined. Limitations in this regard will be identified with the aim of addressing it in the present research. Finally, the chapter will conclude with the research done on the treatment of aggression during the primary school years.

2.2 DESCRIPTION OF AGGRESSION

As noted in chapter 1, aggression can be classified as overt (or reactive) aggression and covert (or proactive) aggression. It can take a physical or verbal form. This multifaceted

conception of aggression often leads to difficulty in arriving at a concise definition of aggression (Tremblay 2000:129).

Renfrew (1997:6) is of the opinion that aggression is difficult to define, but agrees that a provisional or "working" definition is needed as a point of departure. His definition is as follows:

> Aggression is a behaviour that is directed by an organism toward a target, resulting in damage.

This definition of aggression can be criticised for being too general because it does not state whether the aggressive act occurs as a response to provocation or whether it is self-initiated. Furthermore, it fails to distinguish between aggression as covert/overt or physical/verbal.

Geen (2001:2) alludes to the difficulty in formulating a definition of aggression. According to him, aggression is not as simple as a purely behavioural definition would indicate. He provides a working definition of human aggression, but acknowledges that the definition is limited in the sense that it does not cover all examples of aggression and does not mention the role that emotions play in many aggressive actions. His definition of aggression is as follow:

> Aggression is the delivery of an aversive stimulus from one person to another, with intent to harm and with an expectation of causing such harm, when the other person is motivated to escape or avoid the stimulus.

It can be noted that the above definition is limited in the sense that it does not take into account that the target of aggression can also be an object. After considering the limitations of the working definitions of aggression offered by Renfrew (1997) and Geen (2001), the following definition is offered by the researcher:

> Aggression is an observable behaviour where the aggressor physically or verbally, overtly or covertly, tries to harm or cause pain to objects or persons within his/her environment. This aggressive action is most often an emotional response to provocation or frustration.

In view of the fact that there is no agreement on a definition of aggression, it would be informative to examine the various classifications of aggression in order to gain greater insight into this phenomenon. It is important to note that aggression is not only physical in nature, but can adopt a wide variety of forms.

The following are some of the possible forms of aggression as it appears in the literature.

2.2.1 Affective aggression

According to Geen (2001:4), affective aggressive behaviour is accompanied by a strong negative emotional state and is aimed primarily at injuring a person who stirs up some kind of provocation. It is regarded as a state of impulse, it disposes the person to action and it is often accompanied by bodily arousal.

Affective aggression often becomes a preoccupation that takes attention away from other matters. For example, a child who has been repeatedly disturbed by someone while concentrating on getting a high score on a video game, may become aggressive and injure the person who has broken his/her concentration. During the process, the child may experience increased blood flow to the musculature, heightened blood pressure and an increased pulse rate.

2.2.2 Instrumental aggression

According to Weisbrot and Ettinger (2002:650) and Geen (2001:5), instrumental aggression does not have a strong emotional basis and is simply a means to an end such as, for example, self-defence. Geen (2001:5) notes that the distinction between affective

aggression and instrumental aggression is not a rigorous one and that some acts of aggression have both affective and instrumental properties. As an example, he cites a mother who becomes exasperated at her child's behaviour and uses corporal punishment. She might be motivated to modify the child's behaviour (an instrumental use of aggression), while still reacting to that behaviour in anger.

2.2.3 Reactive and proactive aggression

As noted in chapter 1, Brown and Parsons (1998:136) and Weisbrot and Ettinger (2002:650) define reactive aggression as a defensive response to a perceived threat or provocation; while proactive aggression is intended to harm, dominate or coerce another person, or to acquire a desired goal.

According to Geen (2001:5), reactive aggression and proactive aggression are the equivalent of what early theorists called affective and instrumental aggression. In chapter 1, it was noted that overt and covert aggression are synonymous to reactive and proactive aggression respectively. Taking into account the various terms and the dichotomous nature of the same forms of aggression, it is possible to classify affective, reactive and overt aggression in one main category; while instrumental, proactive and covert aggression can be classified in another main category. For the purpose of this study, the term that will be used for the first category of aggression is *reactive aggression*, while the term *proactive aggression* will be used for the second category. An example of reactive aggression is aggressive behaviour that is enacted in response to provocation (such as an attack or insult). It is manifested in both self-defensive and angry actions. In the case of proactive aggression, such behaviour is not evoked by anger, hostility or the need to defend oneself; but by other motives that relate to obtaining goods, asserting power, assuring the approval of reference groups, etc.

2.2.4 Physical aggression and verbal aggression

Physical aggression refers to noxious stimuli that are delivered to the victim and cause pain and injury, while verbal aggression refers to noxious stimuli that take the form of a rejection and/or threat. For example, during physical aggression, a person may forcefully push or kick his/her victim in order to get something; while, during verbal aggression, the aggressor may verbally threaten or hurl abusive language at the victim in order to get his/her own way.

2.2.5 Direct and indirect aggression

In direct aggression the aggressor is easily identified by the victim; whereas in indirect aggression the aggressor is not easily identified by the victim. According to Archer (2001:267), indirect aggression is not directly attributable and therefore it runs a lower risk of retaliation (at least at the time when it is carried out). For example, the aggressor may secretly destroy a school project of his/her victim in order to attain some sort of pleasure by seeing his/her victim struggle to redo such a project. In such a situation, the aggressor may not evoke retaliation from the victim because he/she acted secretly.

Bjorkqvist, Osterman and Kaukiainen (2000:192) suggest a succinct developmental theory with regard to styles of aggressive behaviour. They see physical, direct verbal and indirect aggression not only as three different developmental phases, but also as partly following and partly overlapping each other during childhood and adolescence. Small children who have not yet developed verbal and social skills to a considerable degree will resort to physical aggression. In this respect, they are like members of a subhuman species who do not possess a language. When their verbal and social skills develop, these skills facilitate expression of aggression without them having to resort to physical force. When their social intelligence develops sufficiently, the individual is fully capable of indirect aggressive behaviour: he/she is able to induce psychological (sometimes even physical) harm to a target person by mere social manipulation, without putting himself/herself at the direct risk of retaliation.

2.2.6 Research findings on the relationship between some of the different forms of aggression

The relationship between proactive and reactive aggression is supported by a number of empirical studies. Crick and Dodge (1996:1001); Crick, Casas and Mosher (1997:585); and Schwartz, Dodge, Coie, Hubbard, Cillessen, Lemerise and Bateman (1998:431) found moderate positive correlations between reactive and proactive aggression. However, they noted that each subtype was associated differentially with children's behavioural and socio-cognitive attributes. Later studies by Camodeca, Goossens, Terwogt and Schuengel (2002:340) revealed that there was a clear distinction between reactive and proactive types of aggression in young children. Although children's reactive and proactive aggression scores were positively correlated, these researchers were able to distinguish between reactive and proactive types of aggressive children.

Research findings by Underwood, Golen and Paquette (2001:260) indicated that physical aggression is always highly correlated with proactive aggression. In another study involving the relationship between physical aggression and proactive aggression between boys and girls, McEvoy, Estrem, Rodriguez and Olson (2003:57) found that girls are more proactively aggressive, while boys are more physically aggressive.

Buss and Perry (1992:454), in their study on aggression, noted that there was a positive correlation (0, 45) between verbal and physical aggression.

2.3 THEORIES OF AGGRESSION

There are not many specific theories related to aggression; some of the widely quoted theories are the Adlerian Model, the Social Learning Model, the Social Information Processing Model and the General Affective Aggression Model. These theories can be criticised for their lack of strong theoretical frameworks. However, they do offer some kind of structure as to how aggressive behaviour develops in learners.

2.3.1 The Adlerian Model for the etiology of aggression

According to Adler's aggression theory, aggression begins with feelings of inferiority or anxiety within the family (Smith, Mullis, Kern & Brack 1999:135). When these feelings of anxiety increase, some may use anger as a safeguard for their self-esteem. According to Adler's theory, anger (which is feelings of intense displeasure) is a prerequisite for the occurrence of aggression (reaction to the feelings of displeasure). Adler described the use of anger as a compensatory movement and suggested that when anger is used to overcome feelings of inferiority, it results in aggression. This intense anger appears to direct attention, interests, perceptions and memory into paths of impulsive aggression.

There is no available research evidence to support or refute Adler's viewpoint; however, at face value his theory would seem logical to our understanding of the development of aggression.

2.3.2 The Social Learning Model

According to Snyder, Reid and Patterson (in Lahey, Moffitt & Caspit 2003:27), development trajectories for antisocial behaviour are the end result of multiple causes that change with age and are interrelated in complex ways. These causes operate at three levels, namely the ecological, individual and neighbourhood levels. At the ecological level, factors such as temperament and gender may have an influence on aggression; while at the individual level, factors such as rate of maturation and age may be important. At the neighbourhood level, social developmental factors may have an influence on a person becoming aggressive. According to the Social Learning Model, daily social interactions provide the proximal nexus at which these three levels converge to exert their influence. From this convergence, one can conclude that factors within these three levels (such as temperament, gender, rate of maturation, age and social developmental factors) may have a combined effect in predisposing a person to become aggressive.

Hops, Davis, Leve and Sheeber (2003:168) carried out studies on the cross-generational transmission of aggressive parent behaviour. They found that aggression can be learnt and can be passed on from one generation to the next, thus perpetuating the cycle of aggression across generations. Although these studies relate to the causes of aggression at the individual level of the Social Learning Model, one can deduce from the findings that aggression may have a hereditary basis (see section 2.4.1.2). Studies by Conger, Neppl, Kim and Scaramella (2003:143) also provide strong evidence that aggressive parenting styles instil aggressive behaviour patterns in children. This is usually passed on from one generation to the next.

Geen (2001:17) contends that social learning consists of the acquisition of responses through observation and the maintenance of behaviours through reinforcement. A normal child observes numerous instances of aggression in real-life situations at home, in school and on the streets; and in the fantasy world of television and motion pictures. By observing the consequences of aggression for the actors, the child gradually acquires a rudimentary knowledge of certain rules of conduct (eg that one may sometimes obtain something desirable by using force). In this way a repertoire of aggressive behaviour can be obtained.

2.3.3 The Social Information Processing Model

Dodge (in Hill 2002:143) proposes an information processing model for the genesis of aggressive behaviours within social interactions. He hypothesises that children who are prone to aggression focus on the threatening aspects of other people's actions, interpret hostile intent in the neutral actions of others, and are more likely to select and favour aggressive solutions to social challenges.

In order to react appropriately to social situations, social information has to be processed in an orderly fashion (DeCastro, Veerman, Koops, Bosch & Monshouwer 2002:916). The steps involved are as follow:

- The information has to be encoded appropriately. In the case of accurate encoding, the following thought pattern will be formed *("I need an object from a fellow learner.").*
- The encoded information has to be represented correctly. *("The object is important to my needs and I have to get it as soon as possible.")*
- An interaction goal has to be specified. *("I will have to approach the person to get the abject.")*
- Response alternatives have to be generated. *("I could ask the person for the object politely or I could forcefully pull it away.")*
- These response alternatives have to be evaluated and an optimal response has to be selected from the responses. *("If I ask for it in a polite manner, then the person may give it to me without a struggle or if I forcefully pull it away, it may lead to fight.")*
- The selected response has to be enacted. *("Ask the person for it in a polite way in order not to start an argument or fight.")*

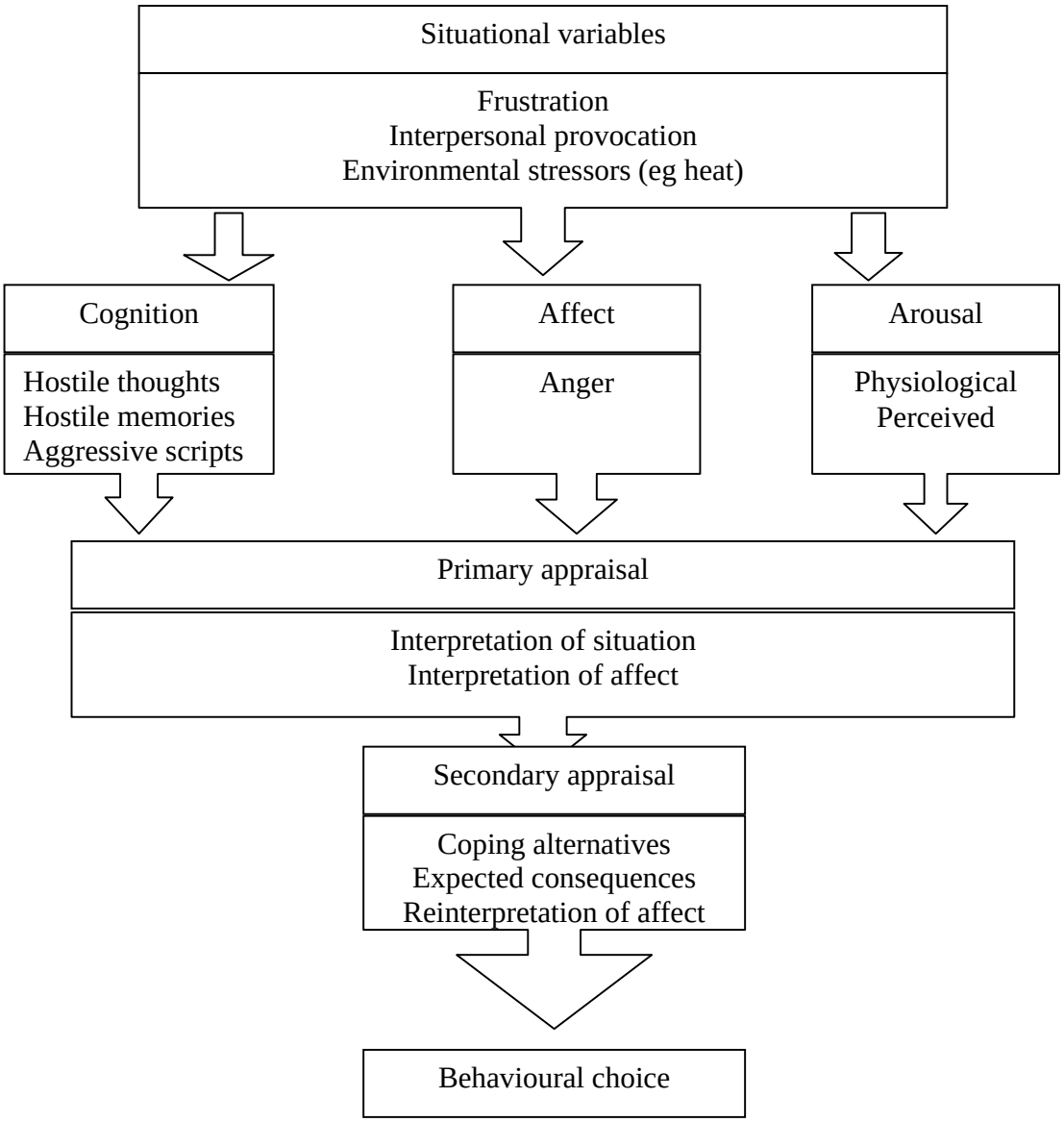
It has been shown that aggressive behaviour is associated with deviations in encoding, goals, response generation, response evaluation and enactment.

Crick and Dodge (in Archer 2001:269) explain childhood aggression in terms of deficits or biases in processing social information. For example, aggressive children may attribute more hostile intent to others than do non-aggressive children. Thus aggressive behaviour is explained as deficits or distortions in normal cognitive mechanisms, and therefore as deviant ways of coping with the social environment. Hawley (2003:215) alludes to the views of Crick and Dodge. According to her, aggressive children not only eschew accepted rules of behaviour, but also understand the perspectives of others poorly. They engage in faulty reasoning regarding social situations (hostile attribution bias) and accordingly repel peers.

2.3.4 The General Affective Aggression Model (GAAM)

This model was developed by Anderson, Deuser and DeNeve (Geen 2001:55) and applies to affective (reactive) aggression. The following flow diagram (fig 2.1) succinctly depicts Anderson's and his associate's conception of affective aggression.

Figure 2.1: The General Affective Aggression Model



Source: Anderson, Deuser and DeNeve. (in Geen 2001:56)

According to Anderson, affect, cognition and arousal are all parallel processes that are engendered by provoking situations (Geen 2001:57). Cognitions such as hostile thoughts, hostile memories and aggressive scripts are acquired in the social learning process. The activation of affective and cognitive pathways "primes" a person to behave aggressively if he/she is sufficiently provoked. This model suggests that physiological arousal can contribute to aggression by intensifying any response considered appropriate to the situation (eg attacking when provoked).

Geen (2001:57) notes that, for Anderson, the immediate outcome of the affective, cognitive and arousal reactions is a cognitive appraisal of the situation whereby the person makes a quick judgment of what happened, why it happened and how angry he/she feels. This rapid appraisal (primary appraisal) is influenced by the hostile thoughts, the negative affect and the arousal level that characterises the person at this time. The person may then make a second appraisal (secondary appraisal) which requires more time and cognitive resources. This may involve consideration of ways in which he/she can cope with the situation, the likely consequences of various courses of action and circumstances that might alter the intensity of his/her anger.

The flow diagram (fig 2.1) can further be explained by using the following example. A clumsy learner destroys another child's piece of art in class (situational variable). This action may activate cognitive and affective pathways in the child (victim). Hostile thoughts (cognitions) in the mind of the child (such as "punch him in the face") and anger (affect), together with deep breathing and clinching of fists (physiological arousal), may prompt the victim to react aggressively. These intentions of the victim are the result of his **primary appraisal** (a quick judgment of what happened, why it happened, and how angry he is). The victim may then make a second appraisal (**secondary appraisal**). He may reconsider his intended actions and employ other coping alternatives (such as complaining to the educator), evaluate the consequences of him injuring the other person or try to control his anger. This secondary appraisal may lead the child to either punish his perpetrator or to complain to the educator. This final step is referred to as the

behavioural choice stage. Constant provocation will, however, prevent a secondary appraisal and will lead to the elicitation of reactive (affective) aggression.

2.4 FACTORS AFFECTING AGGRESSION IN PRIMARY SCHOOL LEARNERS

Hill (2002:133) notes that the factors that affect childhood aggression are many and varied. These factors will be discussed under the following categories: biological bases, personality variables, environmental and social factors, parental influences, frustration and media influences.

2.4.1 Biological bases

According to Tremblay (in Lahey et al 2003:198), numerous studies have focused on the influence of gender, hormones, neuromodulators, brain structure and brain functioning on aggression.

2.4.1.1 Gender

There are numerous studies that indicate that certain subtypes of aggression are gender related. According to Akanda (2001:129), gender differences in aggression are present in our species throughout development.

Studies by Rys and Bear (1997:101); Carlo, Raffaelli, Laible and Meyer (1999:719); and Hill (2002:154) found that girls were more proactively aggressive, while boys were more physically aggressive.

According to Bjorkqvist et al (2000:194), a substantial body of research evidence indicates that females of different ages use proactive means of aggression to a significantly greater extent than males.

With regard to the differences in physical and verbal aggression between boys and girls, Buss and Perry (1992:455) note that there is a large difference for physical aggression while a moderate difference exists for verbal aggression. Hudley, Wakefield, Britsch, Cho, Smith and DeMorat (2001:52) had similar findings. According to these researchers, boys rated higher than girls on measures of verbal and physical aggression. The results of a study conducted by Hennington, Hughes, Cavell and Thompson (1998:462) indicated that boys exhibited more reactive and proactive aggression than girls.

From the foregoing research findings, it becomes evident that there are significant differences in the types of aggression displayed by boys and girls.

2.4.1.2 Hereditary aggression

DiLalla (2002:599) alludes to the fact that gene-environment interaction is an important factor which can have an influence on aggression. It is possible that children with genotypes that tend toward aggression will only express that aggression in certain aggression-enhancing environments, whereas children without such genotypes will not express aggression or will express it to a smaller extent even in an environment that provokes aggressive behaviour.

Studies conducted by Ruston, Fulker, Neale, Nias and Eysenck (in Geen 2001:9) indicate that aggression is inherited. Their findings were taken from studies with twins (monozygotic and dizygotic), in which aggressiveness was measured by means of personality inventories. It was found that aggressiveness correlated higher among monozygotic twins than among dizygotic pairs. However, Tremblay (in Lahey et al 2003:198) notes that making a causal demonstration of genetic effects on chronic physical aggression in humans will be extremely difficult, except if genetic manipulation

becomes relatively easy from a technical point of view -- and then the ethical problems still remain. According to Ruston and his associates, present twin and molecular genetic studies only provide correlational evidence of possible genetic effects.

In studies conducted by Conger, Neppl, Kim and Scaramella (2003:143) on angry and aggressive behaviour across three generations, the results were consistent with a social learning perspective on intergenerational continuities in angry and aggressive behaviours.

Krahe (2001:32) holds the strong viewpoint that available evidence suggests that genetic make-up should be considered as a potentially important source of individual variation in aggression in children.

2.4.1.3 Hormones and aggression

Geen (2001:13) notes that it seems that hormonal activity should best be regarded as a disposing or "background" variable in aggression that is elicited by aversive situational conditions such as interpersonal conflict and provocation.

Renfrew (1997:35) found that studies on the relationship between testosterone and aggression in humans have not yet yielded consistent results, possibly because of methodological difficulties. The act of injecting hormones into humans in order to watch for its resultant effects is regarded as unethical. Furthermore, Geen (2001:13) notes that some studies indicate that cause and effect may work in the opposite direction; and that the testosterone level may sometimes be increased by experiences related to aggression, specifically those in which competitive and assertive behaviour occurs. Taking into account that there could be a reciprocal effect between aggression and hormones, one cannot conclusively deduce that the hormone level is the antecedent variable and aggression the outcome.

2.4.1.4 Brain mechanisms

Geen (2001:14) notes that two structures of the brain (namely the limbic system and the cerebral cortex) may contribute to aggression. Firstly, it has been found that the limbic system is involved in serotonin regulation and that reactive aggression is activated by alterations in serotonin mediated impulse control. Thus, any lesions in the septal region would therefore interfere with serotonin regulation and would predispose a person to become more aggressively reactive to provocation. Secondly, it was found that a relationship exists between a person's cognitive processing and aggression. The cortex is the main area of the brain that has a mediating and modulating effect on a person's cognitive processes, which controls one's reaction to provocation. Therefore, any damage or dysfunction that occurs in the cerebral cortex could disrupt the normal flow of cognitive activity, hence interrupting the controlling and modulating effects of the cerebral cortex. From this, one can conclude that such a situation would lead a person to have very little control over provocation and he/she may easily become aggressive.

Renfrew (1997:86) and Weisbrot and Ettinger (2002:652) note that four of the well known neurotransmitters (namely acetylcholine, norepinephrine, dopamine and serotonin) contribute to aggression. The first two neurotransmitters are associated with increased aggression, while the latter two are known to have an inhibitory effect on aggression. There is still a need for further research evidence to either validate or refute this hypothesis. In order to establish the accuracy of these findings, laboratory experiments with human participants would be required and this might raise certain ethical issues.

2.4.1.5 The relationship between Tourette's Syndrome and childhood aggression

From the literature studies, it appears that Tourette's Syndrome and aggression are co-morbid behavioural disorders (Moe 2000:36). While the factors affecting childhood aggression can be seen to be varied and multifaceted, the etiology of Tourette's

Syndrome has a strong physiological basis. Both these disorders are considered to be co-occurring, with a display of similar behavioural patterns. However, aggression differs from Tourette's Syndrome with regard to motor and verbal tics. Before the similarities and differences in behaviour patterns between childhood aggression and Tourette's Syndrome are discussed, a short description of Tourette's syndrome is necessary.

Tourette's Syndrome is an extreme form of **Tic Disorder** in which the child has several motor and at least one vocal tic (Kronenberger & Meyer 1996:444). A tic is a sudden, rapid, recurrent, non-rhythmic, stereotyped motor movement or vocalisation such as eye blinking, grimacing, coughing, hitting one's self, vocalisations and verbalisations.

Children with Tourette's Syndrome display similar behaviour patterns to children who are classified as being aggressive (such as hitting, stamping feet, flaring nostrils, flexing the elbows and fingers, contracting the shoulders and abdominal muscles, grunting, coprolalia [use of socially unacceptable words] and screaming words) (Sue, Sue & Sue 2000:501).

Theories on the etiology of Tourette's Syndrome focus mainly on physiological factors. Psychopharmacological evidence suggests that problems in dopaminergic neurotransmission may underlie Tourette's Syndrome (Kronenberger & Meyer 1996:447). This is similar to the findings in section 2.4.1.4, which also suggests that the neurotransmitter dopamine plays a role in aggressive behaviour.

According to Riddle (in Cohen, Bruun & Leckman 1988:56), children with Tourette's Syndrome have a specific failure in inhibiting aggression. Such children are similar to other children in that they experience aggressive thoughts and express aggressive behaviour; but they are different in that their aggression is expressed more frequently and easily.

From the foregoing it becomes apparent that children who are classified as being aggressive and those with Tourette's Syndrome display common behavioural symptoms.

They do, however, differ in that the intensity of aggression in children with Tourette's Syndrome is more severe and pronounced.

2.4.2 Personality variables

2.4.2.1 Self-esteem

According to Krahe (2001:58), recent studies have argued that individuals with high self-esteem are more prone to aggressive behaviour, particularly in response to stimuli (negative feedback, provocation) that are perceived as a threat to their high self-esteem.

Geen (2001:71) notes that being provoked threatens or weakens self-esteem, and retaliation helps to restore it. He further notes that many researches have found that protection or restoration of self-esteem has been cited as a cause of aggression, but whether high or low self-esteem is most seriously affected by threats is yet to be verified. According to his findings, a person with high self-esteem may direct his/her anger towards others as a means of avoiding a downward revision of his/her self-concept.

Edens, Cavell and Hughes (1999:442) note that the literature on the relationship between the self-concept and aggression consists mainly of three viewpoints. The first view holds that negative self-concepts may predispose children to engage in aggression, while the second notes the opposite (namely that positive self-concepts may also predispose children to become aggressive). The bulk of the literature advocates the third view, which indicates that most aggressive children appear to report self-concepts that are similar or higher than non-aggressive children. According to Hill (2002:144), there is a need to consider the possible relationships between these different approaches and to integrate them into a broad model on aggression in young children.

2.4.2.2 Impulsivity

According to Geen (2001:72), people who are highly impulsive lack sufficient control over their expressive behaviours to suppress them to the extent that less impulsive people do. Studies done by Barratt (in Geen 2001:73) indicate that high impulsivity creates the most powerful antecedent for aggression.

2.4.2.3 General intelligence

There are a limited number of research findings on the relationship between intelligence and aggression. However, from the findings of a few studies, it would appear that there is a negative correlation between general intelligence and aggression. According to Sutton, Cowen, Crean, Wyman and Work (1999:50), low IQ (measure of intelligence), academic deficiencies and learning problems are related to the development of antisocial behaviours such as aggression. Hill (2002:140) also found that children with conduct problems, which included aggressiveness, usually had lower IQ scores. In a study carried out by Farmer and Bierman (2002:301), it was noted that low IQ may promote the escalation of aggressive behaviours.

2.4.2.4 Social intelligence

Bjorkqvist et al (2000:192) note that social intelligence carries a connotation that is closely related to notions such as social skills and competence. According to them, one should expect that social intelligence correlate more with indirect than with direct forms of aggression. In other words, the higher the person's level of social intelligence, the more likely it is that the person will hurt or cause displeasure to his/her victim indirectly (for example, conspiring to hurt the victim without it becoming noticeable).

Correlation studies done by Bjorkqvist et al (2000:197) between social intelligence and other variables revealed the following:

Social intelligence	*Correlation coefficient*
Indirect aggression	0,55
Verbal aggression	0,39
Physical aggression	0,22
Peaceful conflict resolution	0,80
Withdrawal	0,48

The findings clearly reveal that social intelligence has a significant relationship to the various forms of aggression. The most significant finding is that the more socially intelligent a child is, the lesser he/she will resort to physical aggression – and his/her inclination to resolve conflict peacefully is greater.

2.4.3 Environmental and social factors

According to Egan, Monson and Perry (1988:996), certain environmental conditions promote the development of aggression-encouraging cognitions. For example, observing that similar others are rewarded for aggressive behaviour causes children to infer that they too will be rewarded for such behaviour.

Both biological and social risk factors were found to significantly interact in the prediction of the early onset of aggression in both children and in adolescents (Brennan, Hall, Bor, Najman & Williams 2003:319).

Finzi, Ram, Har-Even, Shnit and Weizman (2001:169) found that physically abused children were significantly characterised by avoidant attachment style and manifested significantly higher levels of aggression. Avoidant attachment style is manifested by persons who avoid social contact and interaction. Such persons are seen to be socially isolated.

Although biological and environmental/social factors are discussed separately, they do function reciprocally (Renfrew 1997:101).

2.4.3.1 Pain

According to Renfrew (1997:104), noxious stimuli are stimuli whose onset are unpleasant (and in some ways harmful) to the individual. A common way of objectively defining noxious stimuli is to determine whether the individual will do something to terminate (escape) them or prevent (avoid) their occurrence, or whether a behaviour that results from them will be suppressed (punished). Aggression is a frequent behaviour that terminates noxious stimuli. Pain is an example of such noxious stimuli. From this, one can conclude that when children experience pain, they tend to become more aggressive as a means to alleviate their discomfort and pain.

2.4.3.2 Noise

Renfrew (1997:109) notes that noise is an auditory stimulus that is considered aversive at high intensities. He found that participants who were exposed to 90-dB noise were more aggressive than non-informed participants who were exposed to low noise. Geen (2001:37) notes that noise appears to be the single most important variable that mediates an induced form of aggression.

2.4.3.3 Heat and body temperature

According to Geen (2001:32), there is a belief that aggression is related to weather conditions. It seems as if aggression is more likely to occur when it is hot. Geen notes that Anderson and his associates (1996) produced data from archival studies that indicate a range of aggressive acts (from riots to assault crimes) where temperature was related to aggression in a direct way. However, there is a growing need for research evidence to validate this hypothesis.

Renfrew (1997:112) quotes studies that showed that exercise which demands much physical endurance may, because of its arousal effect, increase aggression. Contrary to

these studies, the psychodynamic view of exercise holds that aggression as a drive can be redirected and satisfied via substitute activities such as exercise.

2.4.3.4 Social rejection

Studies by Dodge, Lansford, Burks, Bates, Pettit, Fontaine and Price (2003:374) found that social rejection by peers acts as a social stressor that increases the tendency to react aggressively among children who are disposed to aggression. Chen, Wang, Chen and Liu (2002:225) emphasize that research has consistently revealed that aggressive children will likely have a negative social reputation and will be rejected in the peer group.

2.4.4 Parental influence

There is an abundant amount of research evidence available that clearly highlights the influence that parents and their parenting styles have on childhood aggression. Only a selected few will be highlighted in this chapter.

Studies by Haapasalo and Tremblay (1994:1044) found that the developmental pathways of physically aggressive boys in low socio-economic environments were related to familial adversity and poor parenting. Factors such as parental discord, marital disharmony, parental absence, separations and insecure parent-child attachments may play a crucial role in engendering aggressiveness in children.

Chen, Wu, Chen, Wang and Cen (2001:159) and Chen et al (2002:226) found that parental power assertion could be positively associated with aggression.

Studies by Smith et al (1999:142) found that children's feelings of weakness within their families could be seen as an antecedent to the development of aggression. Their findings also showed that a significant relationship exists between verbal aggression in children and parental rejection.

In another study conducted by Herrenkohl and Russo (2001:15), it was found that positively nurtured and protected children, especially those in more affluent circumstances, who are less likely to experience violent discipline are less likely to display aggressive and violent behaviour when provoked. Such children find more satisfaction in interacting with similarly non-aggressive others. Conversely, children from poverty level parents use aggressive behaviour as a way to exert control over others and their environment.

In a study that focuses on parental attachment style, Weisbrot and Ettinger (2002:652) note that insecure attachment between mother and child may be a significant factor in childhood aggression. This finding replicates the findings of Lewis, MacKinnon and Lofquist (1996:490). It was also found that mothers who reported being less warm and responsive in parenting experienced that their children were more aggressive, had more internalising behaviours and exhibited fewer pro-social behaviours (Onyskiw & Hayduk 2001:376).

Contrary to the above findings, studies conducted by Nock and Kazdin (2002:201) revealed that aggressive children were significantly more likely to come from a two-parent family where there was no parental disharmony.

From the foregoing, it becomes apparent that more research evidence indicates that parental disharmony and parenting styles (especially the relationship between the mother and child) play a role in the development of aggression in children. Children who perceive their mothers as cold and distant will more likely become aggressive than children who perceive their relationship with their mothers to be warm and protective.

2.4.5 Frustration

According to Krahe (2001:34), the original frustration-aggression hypothesis explained aggression as the result of a drive to end a state of frustration. The experience of frustration activates the desire to act aggressively towards the source of frustration and

this, in turn, precipitates the performance of aggressive behaviour. However, it is important to note that not every frustrating situation leads to an immediate aggressive response. For example, a learner who becomes frustrated because he/she fails an examination after several attempts may not immediately become outwardly aggressive. Such a learner may suppress his/her frustration and give vent to his/her feelings in the form of aggression at a later stage.

According to Dollard (in Geen 2001:22), frustration produces a condition of readiness or instigation to become aggressive. Virtually any event that interrupts a relatively effortless flow of activity qualifies as a frustration and is a potential antecedent of aggression. Disappointment, irritation, punitive intervention, annoyance and helplessness that arise from natural conditions and a loss of personal freedom can all be called frustrations which could lead to aggression.

Frustration does not always arise from the actions of others (Geen 2001:26). Sometimes people become frustrated because of their own inability to accomplish a desired end and the repeated failure that such inability produces. Continued failure could eventually lead to aggression.

Renfrew (1997:116) notes that frustration is thought by some to produce aggression not only in short-term interactions, but also in long-term situations. For example, economic hardships or chronic unemployment can be considered frustrating conditions that may result in increased aggression.

2.4.6 Media violence and aggression

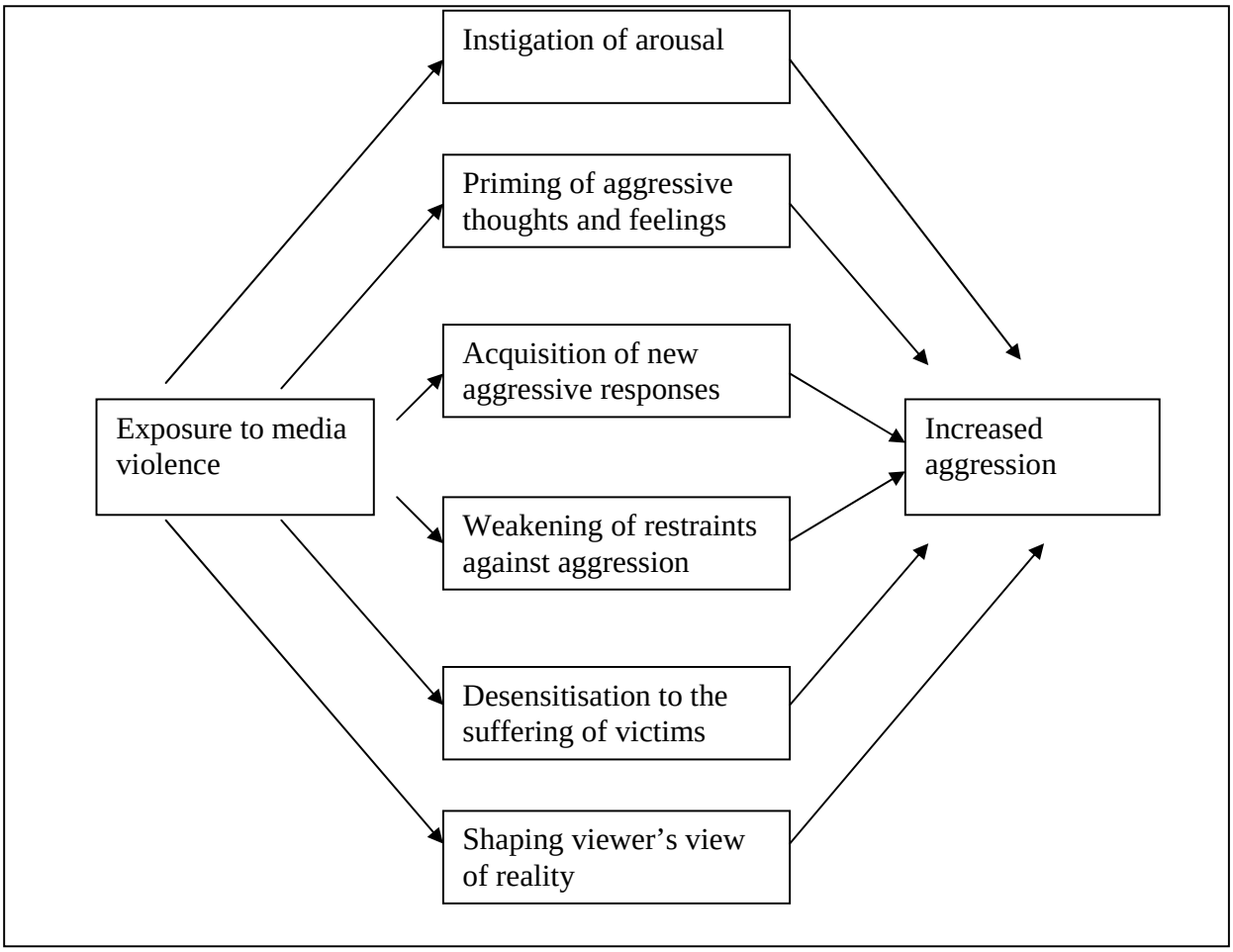
There has been growing concern over the past decades that television and video games have a detrimental effect on practically all aspects of children's development. Parents, school psychologists, educators and people from all walks of life have heavily criticised the detrimental effects that television has on the moral and social development of children.

Several explanations have been given for the relationship between television violence and aggression (Geen 2001:108). According to Geen, social learning theory states that violent action seen in the media provides both a basis for the acquisition of aggressive responses and information concerning the appropriateness of aggression as a means of settling interpersonal conflicts.

The above viewpoint is supported by Krahe (2001:108) who alludes to the fact that media-induced arousal has the effect of priming aggressive thoughts and feelings. According to her, watching media depictions of aggressive interactions increases the ease with which the observer can access his/her own aggressive thoughts and feelings.

On the basis of studies conducted by Baron and Byrne in 1991 (cf. Krahe, 2001:109) and Geen and Buchman in 1997 (cf. Krahe (2001:109), Krahe (2001:109) gives a succinct diagrammatic representation (fig 2.2) of the effect of media violence.

Figure 2.2: Psychological effects of media violence



Source: Krahe (2001:109)

According to figure 2.2, media violence affects a person in six different ways. The transformation of a timid person to one who becomes aggressive will be used as an example.

- *Instigation of arousal:* This involves the arousal of mild aggressive cognitions within a person who normally prefers to be passive. For example, a generally timid person may have hidden desires of standing up for his/her rights and beating up bullies who constantly harass him/her. After watching a violent movie that closely resembles his/her predicament (eg where a movie character changes

his/her approach of being passive to being more aggressive in order to survive) may influence this timid person psychologically to use force in order to protect himself/herself.

- *Priming of aggressive thoughts and feelings:* This person may now constantly become cognitively preoccupied with thoughts of using force (aggression) to protect himself/herself.
- *Acquisition of new aggressive responses:* The person may readily oppose anyone who tries to dominate him/her by using other aggressive responses such as shouting, yelling and clinching his/her fists.
- *Weakening restraints against aggression:* The person reaches a stage where he/she does not experience any restraints against become aggressive.
- *Desensitisation to the suffering of victims:* The person reaches a stage where he/she does not feel any sense of remorse in injuring others.
- *Shaping viewer's view of reality:* The person (who previously believed in non-violence) now believes that, in order to survive, one has to be aggressive.

2.5 MEASURING AGGRESSION

As mentioned in chapter 1, there are limited self-assessment instruments to measure childhood aggression. The only available self-assessment instrument that complies with current psychological standards is the Aggression Questionnaire, which was designed by Buss and Perry (1992). This questionnaire can enable one to identify four factors of aggression in adults (namely physical aggression, verbal aggression, anger and hostility). In terms of its internal consistency, the questionnaire has an alpha coefficient of 0,89. It also has a test-retest reliability correlation coefficient of 0,80. This questionnaire is restricted in that it does not distinguish between proactive and reactive types of aggression.

At present there are no South African scales or questionnaires available to measure aggression. The only aggression scale that is available through the HSRC is the Factors

of Aggressiveness Questionnaire (FAF), which is part of the Vienna Test System (Family Functioning in Adolescence Questionnaire – FFAQ). This questionnaire can identify factors affecting adolescent aggression through family relationships. It looks at factors such as family structure, affect, communication, behaviour control, value transmission and the role of external systems. However, the questionnaire does not distinguish between the various forms of aggression.

Many researchers on aggression use Achenbach and Edelbrock's Child Behaviour Checklist (CBCL) designed in 1983 (cf. Goldstein & Keller 1987:22). This is a rating scale and is scored by an observer while he/she is observing a person's behaviour (Goldstein & Keller 1987:22). According to Glaser, Calhoun and Horne (1999:111), the CBCL is well standardised and has considerable normative data. It has been shown to be a reliable and valid instrument. They hold that the average median test-retest correlation over a one-week interval for non-referred males and females of all ages across all scales is 0,89. Convergent and discriminant validity have been demonstrated in many studies.

According to Renfrew (1997:14), appropriate measuring procedures are essential for determining which independent variables affect aggression and for discovering the exact relationship between such independent variables and aggression.

The measuring of aggression in children is often done by means of subjective and indirect evaluations. An example of this type of evaluation is having a person (such as a parent, educator or peer) rate a child's aggressive behaviour.

According to Goldstein and Keller (1987:9), the assessment of aggression requires a multilevel approach. The more recent models incorporate person-oriented variables, along with situational and task variables, and the potential interactions among these sets of variables. According to these researchers, this more complex interactional model is a more appropriate way to measure aggression.

McEvoy, Estrem, Rodriguez and Olson (2003:61) are of the opinion that the development of accurate and practical measures of relational and physical aggression will help educators and families to provide better identification, prevention and intervention strategies for both boys and girls.

One of the main problems in measuring aggression in children is that it cannot be authentically done through self-reports. According to Underwood (2003:377), researchers who are studying childhood aggression have long been suspicious of self-report measures of aggression because children are highly unlikely to report accurately on their own bad behaviours. They prefer to present themselves positively for a variety of reasons. In order to obviate this problem, researchers prefer to observe aggressive behaviours in specific social contexts or use projective techniques.

From the foregoing, it becomes apparent that there is a definite need for an instrument to measure childhood aggression. Such an instrument should be able to distinguish between the different forms of aggression (such as reactive, proactive, verbal and physical aggression).

2.6 RESEARCH CONDUCTED ON THE TREATMENT OF AGGRESSION WITH SPECIFIC REFERENCE TO THE PRIMARY SCHOOL LEARNER

Weisbrot and Ettinger (2002:665) propose that the treatment of aggression should facilitate an understanding of the affective, physical and cognitive precursors of aggressive behaviour, and the use of appropriate skills to de-escalate pending aggressive responses. Training in social skills and parenting skills programmes are also believed to be helpful.

The prevention of aggression has to start with very young children, because it is in the earliest years that the seeds of violence are sown and germinate (Wallach 1996:115). It is also the time when inner controls begin to take root and young children begin to express feelings in socially acceptable ways.

The pattern of risk factors that are associated with the onset of aggression at an early age is different from the pattern of risk factors that are associated with the onset of aggression at a later age (Brennan et al 2003:321). It would therefore be advisable to obtain a complete physiological and social history of children who present aggressive behaviour at an early age so that many of the risk factors can be attended to and ameliorated.

Studies done by Martin-Causey and Hinkle (1995:305), using multimodal therapy with an aggressive pre-adolescent, demonstrated the effectiveness of such a programme in reducing aggression. Multimodal therapy is a comprehensive treatment approach that was developed by Lazarus (1976) and involves the use of many therapeutic interventions concurrently. The multimodal approach assumes a systematic holistic intervention with the intent of implementing long-term behavioural, cognitive and emotional change. Some of the techniques that were used over a 20-day period were:

- Role playing – creates frustrating situations for the child and teaches him/her new ways of dealing with frustration.
- Relaxation training or cognitive restructuring was used to teach him/her how to deal with uncontrollable anger.
- Empty chair techniques were used to reduce difficulties with visualising past traumatic experiences.
- Bibliotherapy and rational emotive therapy were used to increase positive self-statements.
- Involvement of the parent (mother) in parent-training classes in order to teach her more effective ways to personally engage her child.
- Prescription drugs to control behaviour problems.

Manning and Bear (2002:534) found that programmes aimed at teaching learners social problem-solving skills and other social competencies should involve moral reasoning components. For example, during problem-solving skills training -- when learners are generating solutions to a problem and are considering the consequences of each solution, -- they should be encouraged to focus on the consequences for others rather than simply for themselves.

Landy and Menna (2001:234) offer the following guidelines when using play therapy to eliminate aggressive behaviour in children. Their guidelines are based on the principles of social learning theory. This programme requires the assistance and involvement of the mother in order to be effective. The guidelines are as follow:

- Do not prohibit aggressive play as long as it does not escalate into physical or verbal aggression.
- Join in the play when possible, assuming the role of one of the characters.
- Contain and modulate the aggression by teaching about the character's feelings, assuring the children that everyone will be kept safe in their world.
- Move the play beyond repetitive destructive themes by elaborating the play themes, introducing new characters and expanding the time sequence.
- After a period, introduce more social and cooperative themes while still staying with the playing metaphor.

McKay and Stewart (1995:2) found group counselling to be effective. According to him, learners in group counselling can learn and practice social skills which help them to solve conflicts with their peers. Also, they are able to get immediate feedback from their peers on their appropriate use of coping skills.

Akanda (2001:133) emphasises the role of social learning principles in eliminating aggression. This approach includes reinforcing appropriate social behaviours in the child and teaching him/her new skills by using processes of modelling, imitation, social reinforcement and transfer learning. He found that these methods were effective and successful in reducing aggression among children.

The following are some of the more important treatment procedures which Akanda (2001:136) emphasises in working with aggressive children. These procedures are based on behaviouristic principles.

- ***Anger replacement training*** is a variation of systematic desensitisation. Children are asked to develop a relaxation scene that is based on a real event. In addition, several anger scenes are developed, also based on real events. Once the patient is proficient in relaxing and in imagining the relaxation scene, the first anger scene is presented. Once he/she experiences anger, the staff member guides the patient back to the imagined relaxation scene. The anger and relaxation scenes are repeatedly alternated until the child can imagine the most provoking anger scene with the least amount of aggressive arousal.
- ***Modelling*** is the process whereby the non-aggressive behaviours of the model act as a stimulus for similar thoughts, attitudes and behaviour of the angry child. By observing a model, the child can learn a response without actually performing it.
- ***Systematic desensitisation*** involves the therapist training the child to relax in the presence of anger producing stimuli that are arranged from the least provoking to the most provoking situations. The therapist starts by repeatedly presenting to the imagination of the deeply relaxed child the least anger evoking stimulus. Once the child is able to go through this anger evoking stimulus without feelings of aggression, the next anger evoking situation is presented. The therapist presents these anger evoking situations in a systematic manner until the child is able to go through the entire list of anger evoking situations without becoming anxious and experiencing feelings of aggression.

Akanda (2001:139) presents Keat's multimodal profile for **HELPING** children with anger/aggression, which is as follow:

- ***H****ealth*: helping the child to deal with angry feelings – explore ways in which the child can let out his/her angry feelings while being in a calm state.

- ***E****motions*: the child should be provided with physical, verbal and imagery outlets for his/her angry feelings.
- ***L****earning*: learning how to handle anger provoking situations.
- ***P****ersonal relationship*: learning to play and interact with other children.
- ***I****magery*: bringing insights from the unconscious mind to awareness.
- ***N****eed to know (cognition)*: it is believed that if children can realise that their expectations are not important and realistic to them, they could change their thinking.
- ***G****uidance of actions, behaviours and consequences*: use of the "turtle technique" -- while in the shell (withdrawal), the child is told to relax, to think about what the choices and consequences are of what can be done; and then to come out and act in a less impulsive and more appropriate way.

In a study conducted by Masilo (2000:36), it was found that non-directive play therapy was appropriate for Black township children who were acting out aggression. She found that children in her study were able to relate to principles of non-directive play therapy. They were able to play out their problems in the same way as adults talk out problems. However, she recommends that children should have toys that are appropriate to their culture and that the therapist should be able to converse in the child's mother tongue in order for the play therapy to be effective.

2.7 CONCLUSION

This chapter focused on a working definition of the multifaceted concept of aggression. From the literature that was examined, it became apparent that the existing definitions had some limitations. For this reason, the researcher tried to include all the salient features of aggression into a more comprehensive definition of his own, which is: *Aggression is an observable behaviour whereby the aggressor either physically or verbally, or overtly or covertly, tries to harm or cause pain to objects or persons within*

his/her environment. This aggressive action is most often an emotional response to provocation or frustration.

There are four main broad categories of aggression, namely, reactive, proactive, verbal and physical aggression.

Four theories (namely the Adlerian Model, the Social Learning Model, the Social Information Processing Model and the General Affective Aggression Model) were discussed in terms of the development of aggression. These theories can be criticised for being too simplistic because they do not explain the conception and development of aggression intensively. Taking into account this limitation, it becomes apparent that there is a need for a greater theorisation of the concept of aggression.

An analysis of the factors affecting aggression (such as biological, personality, environmental, social and parental factors, and frustration and media influences) revealed that these factors could have a single, combined, interactive or reciprocal effect on the development of aggression.

With regard to measuring aggression among primary school children, it was noted that this was an area of concern. At present there are no known measuring instruments designed in South Africa to measure aggression in children, adolescents or adults. One can therefore assert that there is a definite need for developing a measuring instrument to distinguish between the various forms of aggression (namely reactive, proactive, verbal and physical aggression). Cognisance should be taken of the fact that effective intervention and prevention of aggression depends on accurate identification. It is for this reason that the present study will focus on developing an instrument to measure aggression.

There are adequate literature studies on the treatment of aggression among primary school learners. The work of Akanda (2001), which approaches the treatment of aggression from a social learning perspective, seems very promising and useful. His

approach includes reinforcing appropriate social behaviours in the child and teaching him/her new skills by using the processes of modelling, imitation, social reinforcement and transfer learning.

The next chapter will look at the research design and empirical investigation involved in designing a measuring instrument to identify the four basic forms of aggression (namely proactive, reactive, verbal and physical aggression).

CHAPTER 3

RESEARCH DESIGN OF THE EMPIRICAL INVESTIGATION

3.1 INTRODUCTION

This chapter deals with the research design that was used in the empirical investigation. In order to identify the nature and levels of aggression of Junior Primary school learners, a new assessment scale had to be developed. The development of this aggression scale is discussed in this chapter.

From the literature study, it became evident that there were basically four subtypes of aggression, namely physical, verbal, reactive and proactive aggression. The relationship and differences between these subtypes of aggression will be investigated in this chapter. Variables such as gender and general intelligence were identified in the literature study as variables that may influence childhood aggression. The relationship between these variables and aggression will therefore also be investigated.

The chapter begins with the formulation of the hypotheses with reference to the relationship and differences between the subtypes of aggression, and the influence of general intelligence and gender on childhood aggression. It concludes with a brief description of the method used to test these hypotheses. This includes the selection of the sample, a description of the measuring instruments that were used and a description of the procedure that was used in the empirical investigation.

3.2. HYPOTHESES

The following hypotheses were formulated on the basis of the literature study.

3.2.1 Hypothesis 1

There is a significant negative correlation between the subtypes of aggression and the intelligence of Junior Primary learners.

Rationale

From the literature study, it was found that intelligence relates negatively to aggression in primary school learners. The lower the level of the intelligence of the learners, the greater their aggression will be. According to Sutton, et al (1999:50), a low level of intelligence can be related to the development of aggression. Hill (2002:140) also found that learners with conduct problems such as aggressiveness usually have lower IQ scores. Farmer and Bierman (2002:301) note that low levels of intelligence may promote the escalation of aggressive behaviours. Thus, from the foregoing research evidence, one can conclude that a relationship exists between the levels of aggression and intelligence. One would therefore expect that a relationship may also exist between the subtypes of aggression (physical, verbal, reactive and proactive) and the intelligence of Junior Primary learners.

3.2.2 Hypothesis 2

There is a positive correlation between the subtypes of aggression of Junior Primary learners.

Rationale

From the literature study, it has become evident that a relationship exists between reactive and proactive types of aggression (refer to item 2.2.6). Studies that were conducted by Crick and Dodge (1996:1001), Crick et al (1997:585) and Schwartz et al (1998:431) found that a positive correlation exists between reactive and proactive aggression.

It also became evident from the literature study (refer to item 2.2.6) that a relationship exists between physical and verbal aggression. Buss and Perry (1992:454) note that there is a positive correlation (0, 45) between verbal and physical aggression. They found that as the level of learners' verbal aggression increased, so did their physical aggression.

Research findings by Underwood et al (2001:260) indicate that physical aggression is always highly correlated with proactive aggression. From this, one can conclude that learners who are proactively aggressive may also display physical aggression.

The foregoing research evidence indicates that there are positive correlations between some of the subtypes of aggression (ie between physical and verbal aggression; physical and proactive aggression; and reactive and proactive aggression). One would therefore expect that there may be similar positive correlations between the other subtypes of aggression (ie between physical and reactive aggression; verbal and reactive aggression; and verbal and proactive aggression) of Junior Primary learners.

3.2.3 Hypothesis 3

There is a significant difference in the average level of aggression between Junior Primary boys and girls.

Rationale

The literature study indicated that differences exist between boys' and girls' levels of aggression (refer to item 2.4.1.1). Akanda (2001:129) and Hill (2002:154) note that gender differences in aggression are inherent in human beings throughout their stages of development. From the foregoing, it would appear that gender might therefore be a factor that affects the level of aggression of Junior Primary learners.

The literature study also revealed that there are differences in the levels of proactive aggression for boys and girls. McEvoy et al (2003:57) found that girls are more proactively aggressive than boys. Similarly, studies conducted by Bjorkqvist et al

(2000:194) and Hill (2002:154) indicate that females of different ages use proactive means of aggression to a significantly greater extent than males. Studies done by Hennington et al (1998:462) indicate that boys exhibit more reactive aggression than girls.

It was noted in the literature study (refer to item 2.4.1.1) that differences exist between the levels of verbal aggression between boys and girls. Buss and Perry (1992:454) indicate that a moderate difference exists in the levels of verbal aggression between boys and girls, while Hudley et al (2001:52) found that boys rated higher than girls on measures of verbal aggression. From the foregoing, it would appear that although both sets of findings contradict each other, they do show that differences exist in the levels of verbal aggression between boys and girls.

Rys and Bear (1997:101), Carlo et al (1999:719) and Hill (2002:154) note that boys are more physically aggressive than girls. Studies by Buss and Perry (1992:455) and McEvoy et al (2003:57) indicate that there are large differences in the levels of physical aggression between boys and girls.

From the foregoing, it becomes evident that differences exist between the total levels of aggression (and for the various subtypes of aggression) for boys and girls in general. From this conclusion, one would expect that this difference may also exist with regard to learners in the Junior Primary phase.

3.2.4 Hypothesis 4

There is a significant difference between the average levels of reactive and proactive aggression of Junior Primary learners.

Rationale

According to the literature study, a clear distinction exists between reactive and proactive types of aggression. Crick and Dodge (1996:1001), Crick et al (1997:585) and Schwartz

et al (1998:431) note that reactive and proactive aggression can be associated differentially with learners' behavioural and socio-cognitive attributes. Later studies by Camodeca et al (2002:340) revealed that there is a clear distinction between reactive and proactive types of aggression in learners. From the above findings, one can expect that such differences may also be prevalent among Junior Primary learners.

3.2.5 Hypothesis 5

There is a significance difference between the average levels of physical and verbal aggression of Junior Primary learners.

Rationale

The literature study revealed that a clear distinction exists between physical and verbal aggression (refer to paragraphs 2.2.4 and 2.2.6). Bjorkqvist et al (2000:192) note that learners who have not developed sufficient verbal skills usually resort to physical aggression and not to verbal aggression. From the foregoing, one may anticipate finding similar differences among learners in the Junior Primary phase.

3.3 RESEARCH DESIGN

3.3.1 Brief outline of the research plan

The research design had both a quantitative and a qualitative component. An Aggression Questionnaire was designed to assess the four main types of aggression that were identified in the literature study. The questionnaire was completed by the class teachers of each learner. The Group Readiness Test for seven and eight year olds was administered by the researcher in order to obtain an IQ score for each learner. Statistical procedures were used to test the hypotheses that were formulated in section 3.2. The qualitative aspect involved the validation (determining the concurrent validity) of the questionnaire by means of projective tests. These projective tests included the Draw a Person Test (DAP) and the Children's Apperception Test (CAT). The following

procedure was followed in determining the concurrent validity of the questionnaire: of the 132 participants from the sample, five who appeared to be very aggressive (those who obtained a stanine score of 9 in the Aggression Questionnaire) were given the DAP and the CAT tests. In order to determine whether any relationship existed between the observed responses of the questionnaire and the learner's responses to the projective media, a qualitative analysis of the projected responses was examined in relation to the results of the questionnaire.

3.3.2 Selection of sample

In terms of the hypotheses listed above, the sample had to include participants from the Junior Primary phase. In total, 132 learners from Grades 2 and 3 were selected from three schools in the Chatsworth District (Durban). The schools were randomly chosen by selecting the 10th school from each Ward list in the Chatsworth Circuit. The participants consisted of an equal number of male and female learners. The average age of the participants was seven years and nine months. A total of 10 male and 10 female learners from Grades 2 and 3 in each of the schools were randomly selected. The random selection of the participants was done by the researcher, who picked every 5th learner from the Grade 2 and Grade 3 class registers of the different schools. This was done in order to eliminate any bias that could result from the class teachers selecting the learners.

In order to ensure that the sample consisted of learners who were definitely aggressive, the Heads of Department from each school were asked to identify one male and one female learner from each grade whom they felt were aggressive and had to be included in the sample. Therefore, of the total number of learners who were selected for the research, 120 learners were randomly selected and 12 of them were pre-selected.

The distribution of learners in terms of grade and gender is given in Table 3.1; in terms of the type of parents with whom they were living is given in Table 3.2; and in terms of birth order status is given in Table 3.3.

Table 3.1: Distribution of learners in terms of grade and gender

GENDER/GRADE	GENDER		TOTAL
	MALE	FEMALE	
Grade 2	33	33	66
Grade 3	33	33	66
TOTAL	66	66	132

Table 3.2: Distribution of learners in terms of type of parents with whom they were living

TYPE OF PARENTS	NUMBER
1. Both biological parents	89
2. Divorced – living with mother	32
3. Divorced – living with father	3
4. Divorced living with grandparents/guardians	8
TOTAL	132

Table 3.3: Distribution of learners in terms of birth order status

BIRTH ORDER	NUMBER
1. Youngest child	53
2. Eldest child	31
3. Middle child	18
4. Only child	30
TOTAL	132

3.4 MEASURING INSTRUMENTS USED

3.4.1 The Aggression Questionnaire

The questionnaire (refer to appendix 1) consisted of 60 items that measured verbal, physical, reactive and proactive forms of aggression. The observers (class teachers) were required to respond on a six-point interval scale.

Example:

Rate the learner on a scale between 1 and 6. Write this number in the square provided. This is definitely the case……6 5 4 3 2 1 ……This is definitely not the case. Remember that this is how you see the child and not how others judge him/her.

1. Physically attacks other learners when they play. ☐

The higher the value, the more positive the item response will be. The questionnaires were completed by the class teachers. This approach was preferred since junior primary children do not have the necessary vocabulary to interpret the given questions accurately, and they tend to give patterned responses to questionnaires (such as indicating the highest score for each response). Therefore, in order to eliminate such problems, the questionnaire was designed for adults to complete.

Some of the items in the questionnaire that measured physical and verbal aggression were taken from Buss and Perry's (1992:454) Aggression Questionnaire. This questionnaire had nine items that measured physical aggression and five items that measured verbal aggression. This questionnaire had a reliability coefficient of 0,80 and an internal consistency coefficient of 0,89. The items taken from this questionnaire were reworded for the needs of the present research (for example, the item "*Given enough provocation, I*

may hit another person" was changed to *"The child, when provoked, may hit another child*."

With regard to the items that measured proactive and reactive aggression, Crick's (1996) CSBS-T (Children's Social Behaviour Scale -- Teacher Form) scale was used as a guideline. The scale had seven items that measured proactive aggression and four items that measured reactive aggression. The scale had an internal consistency coefficient of 0,94 for both its subscales. Examples of some of the items that were reworded and used are as follow:

- *The child hits or bullies peers with the least amount of hesitation. (reactive aggression)*
- *When the child is angry with a peer, he/she tries to get other children to stop playing with the peer or to stop liking the peer. (proactive aggression)*

Crick's CSBS-T scale and Buss and Perry's Aggression Questionnaire were used as guidelines to formulate further questions that measured physical, verbal, reactive and proactive aggression.

The items of the questionnaire that measured the four types of aggression are given in table 3.4.

Table 3.4: Items measuring the different types of aggression

TYPES OF AGGRESSION	ITEM NUMBER IN QUESTIONNAIRE	NO OF ITEMS
Physical aggression	1 5 9 13 17 21 25 30 34 38 42 46 50 54 58	15
Verbal aggression	2 6 12 16 18 26 28 32 35 39 43 45 49 52 56	15
Reactive aggression	3 7 10 14 20 22 23 24 29 33 36 40 44 48 59	15
Proactive aggression	4 8 11 15 19 27 31 37 41 47 51 53 55 57 60	15
	TOTAL NUMBER OF ITEMS	60

3.4.2 Group readiness for seven and eight year olds

The test is a standardised test which gives a rough indication of the general level of a person's intelligence. The reliability index of the test was calculated according to the Kuder-Richardson formula 21. A reliability coefficient of 0,86 was obtained (HSRC:1989). The test consists of six subtests and the maximum raw score which can be attained is 50. There is no fixed time within which the tests has to be completed, since separate instructions are given for each item. Apart from the intervals, the test takes approximately 50 to 60 minutes to administer.

The test begins with five practice examples, which gives the participants an opportunity to familiarise themselves with the type of questions they will encounter in the main part

of the test. Raw scores of the test can be converted to IQ scores, mental age scores and percentile ranks by using the relevant norm tables.

3.4.3 Projective media

The projective media included the DAP (Draw a Person Test) and the CAT (Children's Apperception Test). These projective media were used because they are not threatening to children.

3.4.3.1 Draw a Person Test (DAP)

Since learners like to draw and to talk about their drawings, the DAP was selected. It was hoped that, through this projective media, the learners would be able to project some of their thoughts and feelings onto paper.

After each drawing, a non-directive interview (qualitative analysis) was conducted in order to ascertain the meaning which the learner had assigned to his/her drawings. Some of the questions that were asked were as follow:

- Let's give the person a name. Would you like to look like him? Why?
- What is the person thinking?
- What makes the person most happy?
- What makes the person most angry?
- What is the worst thing the person ever did?
- Let's say that one Sunday the person went out with his family. What did they do? What did the person do?
- If no-one could see the person, what would the person like to do?
- If the person has another life, what sort of animal would he like to be? Why?
- Suppose the person could turn other people into animals. Who would he turn into what? Why?
- What would the person's three wishes be?

A further qualitative analysis of the drawings was carried out by looking at specific aggressive indicators. Some of the indicators of aggression (as discovered by Reynolds [1978], Oster and Gould [1987], and Van Niekerk [1986]) that served as guidelines were:

INDICATORS OF AGGRESSION

Line quality	Heavy, excessive shading
Fingers	Sharp and long Spike-like Drawn without hands
Toes	Drawn despite wearing shoes
Teeth	Large and protruding
Size	Large/covering entire page
Hands	Placed on hips Large and heavily shaded Bigger than face of figure
Mouth	Straight horizontal line representing mouth Presence of teeth Over-emphasised (verbal aggression)
Arms	Long and sticking out Shading Folded over chest
Eyes	Cross-eyed
Limbs	Gross asymmetry
Transparencies	Draws outline of a figure and then draws clothes around figure
Face	Deliberate shading of whole or part of face
Genitals	Realistic or unmistakable symbolic representation of genitals

Refer to appendix 2 for the assessment sheet that was used in the analysis of the DAP.

3.4.3.2 Children's Apperception Test (CAT)

The CAT is a projective test and allows the child to project that which is applicable to himself/herself onto the animals in the pictures. According to Bellak and Abrams (2002:1), the use of the CAT can be seen as an apperceptive method of investigating personality by studying the dynamic meaningfulness of individual differences in the perception of standard stimuli. It should be noted that in both research studies and in clinical studies, the CAT is useful in that it is culture free. Bellak and Abrams (2002:2) stress that since the child deals with animal pictures, the test can be used equally well with White, Black and other groups of children.

Card 2 – Animal Pictures (*one bear pulling a rope on one side, while another bear and a baby bear pull on the other side)* was used in the study. According to Bellak and Abrams (2002:2), this card may depict fulfilment of the child's own aggression. (Refer to appendix 3 for a sample of Card 2 and an assessment sheet.)

Instructions for the application of the CAT were as follow:

"*I want you to make up a story for me of the animals you see in the card. Tell me what is happening, what happened before and what will happen in the future. Finally, tell me what the animals are thinking, feeling and doing."*

Some of the possible responses that were seen as an indication of aggression are as follow:

- *The big bears were arguing with one another and they ended up fighting.*
- *The mother and baby bear want to attack this lonely bear and chase it away from its den.*
- *The baby bear asked the father bear to fight the other lonely bear.*
- *This big bear wants to attack this mother and baby bear.*

- *This big bear (stranger) hit the baby bear and now its father wants to attack this stranger bear.*
- *The bears are fighting for the rope.*
- *The father bear is fighting with the mother and baby bear.*

3.5. PROCEDURE USED IN ADMINISTERING THE QUESTIONNAIRE

3.5.1 Format of the questionnaire

The questionnaire consisted of two sections (refer to appendix 1). Section A consisted of the biographical data, while section B consisted of 60 statements that measured the four subtypes of aggression.

The variables that were taken from the biographical part of the questionnaire included the following:

1. Grade
2. Gender
3. Age
4. Marital status of parents (eg divorced/single parents)
5. Birth order
6. IQ score (filled in by researcher at a later stage)
7. Number of years repeating the grade

3.5.2 Permission to use learners in the research

The Kwa-Zulu Natal Department of Education (Research Section) was informed that the researcher intended to use learners in the research. The following assurances were given to the Director:

- The confidentiality of the learners would be ensured.
- No IQ scores would be revealed to anyone.

- Prior consent would be obtained from the relevant school principals in order to carry out the research.
- The learners would not be made aware that they were being observed.

3.5.3 Administering the questionnaire

The class teachers completed a questionnaire for each of the selected learners in each of the schools after they had observed the learners for approximately one week both in and out of the classroom. They were asked to make their observations very discretely, without the learners becoming aware that they were being observed. They were also asked to make their observations as honestly and accurately as possible.

All the learners were given the Group Readiness Test for seven and eight year olds in order to obtain their IQ scores before they were observed. These tests were administered and processed by the researcher. No names were written on either the Aggression Questionnaire or the Group Readiness Test. All forms were given an allotted number and only the researcher knew the identity of the learners and their IQ scores.

After the class teachers returned the questionnaires, the researcher filled in the IQ score of each learner. All observation sheets were then checked very carefully, and the information was read into the computer for analysis.

After the questionnaires were processed, five learners who obtained stanine scores of 9 were subjected to the DAP (Draw a Person Test). After they had completed their drawings, the researcher asked them certain questions (refer to item 3.4.3.1) that were based on their drawings. Their responses, together with other indicators of aggression as observed in the drawings, were noted on a separate data sheet (refer to appendix 2). The next day the researcher subjected the same five learners to the CAT (Children's Apperception Test). The participants' responses were recorded on another data sheet (refer to appendix 3).

Both the responses from the DAP and the CAT were then used for the validation of the Aggression Questionnaire.

Chapter 4 contains a detailed analysis of the results of the empirical investigation.

CHAPTER 4

RESULTS OF THE INVESTIGATION

4.1 INTRODUCTION

In chapter 3 the method of the empirical investigation was described. The investigation revolved around the development of an aggression assessment scale for junior primary learners. Various hypotheses relating to the relationship and differences between the subtypes of aggression and the factors that influence childhood aggression were formulated.

The Aggression Scale was first submitted to an item analysis and norms were then calculated for the subtypes of aggression and for the total scale. The hypotheses were then tested. The results of the item analysis, norms and the testing of the hypotheses will be discussed in this chapter.

4.2 ITEM ANALYSIS OF THE AGGRESSION SCALE

The Aggression Scale consists of four subtypes of aggression, namely physical, verbal, reactive and proactive aggression (refer to section 3.4.1). An item analysis was done for each of the subtypes and for the whole scale. The purpose of the item analysis was to establish whether each of the items made a contribution to the total of a particular section. In the case where an item contributed negatively to the total, that item could be left out.

An aspect of the item analysis which should be born in mind is the alpha reliability coefficient. The reliability coefficient is calculated for each of the sections in the event that all the items should be retained. The reliability coefficient is also calculated for the case where a specific item is left out. On the basis of the item-total correlation, and the reliability coefficient, it is then decided whether a specific item should be retained or left

out from the final scale. Tables 4.1 to 4.5 contain the results of the item analysis for this study:

Table 4.1 Item analysis of physical aggression

No of subjects	132
No of items	15
Alpha reliability coefficient	0,96
Mean	48,54
Standard deviation	17,54

ITEM	ITEM CORRELATION WITH TOTAL	ALPHA IF ITEM IS LEFT OUT
1	0,79	0,96
5	0,80	0,96
9	0,75	0,96
13	0,83	0,96
17	0.87	0,95
21	0,83	0,96
25	0,80	0,96
30	0,77	0,96
34	0,77	0,96
38	0,80	0,96
42	0,79	0,96
46	0,76	0,96
50	0,80	0,96
54	0,71	0,96
58	0,61	0,96

As can be seen from Table 4.1, no item correlated negatively with the total of the section (physical aggression). Therefore, all the items were retained in the final scale.

Table 4.2 Item analysis of verbal aggression

No of subjects	132
No of items	15
Alpha reliability coefficient	0,96
Mean	49,60
Standard deviation	18,16

ITEM	ITEM CORRELATION WITH TOTAL	ALPHA IF ITEM IS LEFT OUT
2	0,75	0,96
6	0,79	0,90
12	0,81	0,96
16	0,79	0,96
18	0,77	0,96
26	0,79	0,96
28	0,75	0,96
32	0,81	0,96
35	0,88	0,96
39	0,73	0,96
43	0,78	0,96
45	0,78	0,96
49	0,77	0,96
52	0,79	0,96
56	0,82	0,96

As can be seen from Table 4.2 , no item correlated negatively with the total of the section (verbal aggression). Therefore, all the items were retained in the final scale.

Table 4.3 Item analysis of reactive aggression

No of subjects	132
No of items	15
Alpha reliability coefficient	0,96
Mean	49,67
Standard deviation	17,57

ITEM	ITEM CORRELATION WITH TOTAL	ALPHA IF ITEM IS LEFT OUT
3	0,79	0.95
7	0,84	0,95
10	0,69	0,96
14	0,79	0,95
20	0,76	0,96
22	0,82	0,95
23	0,78	0,96
24	0,75	0,96
29	0,78	0,96
33	0.78	0,96
36	0,83	0,95
40	0,84	0,95
44	0,81	0,95
48	0,68	0,96
59	0,70	0,96

As can be seen from Table 4.3 , no item correlated negatively with the total of the section (reactive aggression). Therefore, all the items were retained in the final scale.

Table 4.4 Item analysis of proactive aggression

No of subjects	132
No of items	15
Alpha reliability coefficient	0,95
Mean	49,36
Standard deviation	16,29

ITEM	ITEM CORRELATION WITH TOTAL	ALPHA IF ITEM IS LEFT OUT
4	0,53	0,95
8	0,64	0,95
11	0,78	0,94
15	0,69	0,94
19	0,76	0,94
27	0,79	0,94
31	0,75	0,94
37	0,78	0,94
41	0,73	0,94
47	0,77	0,04
51	0,75	0,94
53	0,72	0,94
55	0,69	0,94
57	0,78	0,94
60	0,80	0,94

As can be seen from Table 4.4, no item correlated negatively with the total of the section (proactive aggression). Therefore, all the items were retained in the final scale.

Table 4.5 Item analysis of the total aggression scale

No of subjects	132
No of items	60
Alpha reliability coefficient	0,98
Mean	197,18
Standard deviation	66,09

ITEM	ITEM CORRELATION WITH TOTAL	ALPHA IF ITEM IS LEFT OUT
1	0,74	0,98
2	0,75	0,98
3	0,80	0,98
4	0,44	0,98
5	0,74	0,98
6	0,82	0,98
7	0,84	0,98
8	0,56	0,98
9	0,71	0,98
10	0,68	0,98
11	0,71	0,98
12	0,78	0,98
13	0,77	0,98
14	0,76	0,98
15	0,56	0,98
16	0,78	0,98

17	0,83	0,98
18	0,77	0,98
19	0,85	0,98
20	0,75	0,98
21	0,78	0,98
22	0,84	0,98
23	0,78	0,98
24	0,73	0,98
25	0,75	0,98
26	0,79	0,98
27	0,72	0,98
28	0,73	0,98
29	0,77	0,98
30	0,79	0,98
31	0,80	0,98
32	0,77	0,98
33	0,80	0,98
34	0,74	0,98
35	0,83	0,98
36	0,82	0,98
37	0,70	0,98
38	0,82	0,98
39	0,67	0,98
40	0,84	0,98
41	0,81	0,98
42	0,79	0,98
43	0,72	0,98
44	0,79	0,98
45	0,75	0,98

46	0,78	0,98
47	0,70	0,98
48	0,72	0,98
49	0,79	0,98
50	0,78	0,98
51	0,76	0,98
52	0,79	0,98
53	0,61	0,98
54	0,70	0,98
55	0,80	0,98
56	0,74	0,98
57	0,79	0,98
58	0,63	0,98
59	0,72	0,98
60	0,75	0,98

As can be seen from Table 4.5 above, no item correlated negatively with the total of the section (total aggression scale). Therefore, all 60 items were retained in the final scale.

4.3 RELIABILITY OF THE SCALE

Because the Aggression Scale could only be administered once for practical reasons, the test-retest method of determining reliability could not be used. In order to determine the reliability, the Cronbach alpha coefficient was used. The results are shown in Table 4.6.

Table 4.6

RELIABILITY COEFFICIENTS OF THE AGGRESSION SCALE		
SECTION	NO OF ITEMS	CRONBACH
Physical aggression	15	0,96
Verbal aggression	15	0,96
Reactive aggression	15	0,96
Proactive aggression	15	0,95
TOTAL	60	0,98

The reliability of each of the subtypes is relatively high. As can be seen in Table 4.6, the overall reliability of the Aggression Scale is 0,98.

4.4. VALIDITY OF THE SCALE

Validity refers to whether the items in the scale do in fact measure what they purport to measure.

The validity of the scale was evaluated in the following ways:

- *Construct validity***.** It often happens that a questionnaire measures different subtypes of a construct. The present questionnaire is an example of such a situation because it measures four subtypes of aggression, namely physical, verbal, reactive and proactive aggression. Although the test consists of different items that measure the four subtypes of aggression, they are related to one another and to the total construct of the test because all of them deal with aggressive behaviour. One would therefore expect to find significant positive correlations among the subtypes and between each subtype and the construct measured by the questionnaire in total (aggression). If such correlations exist, one can regard the questionnaire as construct valid. Therefore, in order to determine construct validity, correlation coefficients were calculated between the four different subtypes and between each subtype and the total of the test. The correlation coefficients appear in Table 4.15.

All correlations seem to be high positive correlations, significantly on the 1% level. The different subtypes therefore strongly relate to one another as expected and consequently the test can be considered construct valid.

- *Criterion-related validity*. Five of the participants who obtained stanine scores of 9 were subjected to projective tests. Firstly, the participants were given the DAP where they were asked to draw any person of their choice. After completion of the drawings, each participant was asked a set of common questions on the basis of their drawings (refer to section 3.4.3.1). Thereafter the subjects were given Card 2 of the Children's Apperception Test (CAT) and they were asked to relate a story that was based on the picture presented to them. After completion of the DAP and CAT, the responses were recorded and examined. A qualitative analysis was carried out to see if any indicators of aggression were present in the learners' projections. According to the results (section 4.8 and Table 4.19), all five participants displayed distinct indicators of aggression in their responses to both the DAP and CAT. The results of the projective tests for these five participants matched their results for the Aggression Questionnaire, thus implying that the Aggression Questionnaire has an acceptable level of criterion–related validity.

4.5 DETERMINING THE NORMS OF THE AGGRESSION SCALE

Stanines (standard scores divided into nine categories as in Table 4.7) were used to determine the norms. In order to calculate the stanines for each of the subtypes of aggression and for the total aggression scale, the cumulative percentages for each of the sections and for the total aggression scale were obtained. The stanines are reflected in Tables 4.8 to 4.12.

Table 4.7 Limits and areas of stanines

Stanines	Limits	% of area
9	+ ~ to +1,75z	4
8	+1,75z to +1,52z	7
7	+1,25z to +0,75z	12
6	+0,75z to +0,25z	17
5	+0,25z to -0,25z	20
4	-0,25z to -0,75z	17
3	-0,75z to -1,25z	12
2	-1,25z to -1,75z	7
1	-1,75z to - ~	4

(Mulder 1989:205)

Table 4.8 Transformation of raw scores into stanines : physical aggression

Raw score	Frequency	Cumulative %	Stanine
15	3	2,2	1
16	3	4,5	1
17	2	6,0	2
22	2	7,5	2
26	2	9,0	2
27	1	9,8	2
28	2	11,3	3
29	2	12,8	3
30	4	15,9	3
31	5	19,7	3
32	4	22,7	3

33	1	23,4	4
34	2	25,0	4
35	1	25,6	4
37	1	26,5	4
38	3	28,7	4
39	3	31,0	4
40	2	32,5	4
42	6	37,1	4
43	3	39,3	4
44	5	43,1	5
45	2	44,7	5
46	3	46,9	5
47	3	49,2	5
48	6	53,7	5
49	5	57,5	5
50	2	59,0	5
51	1	59,8	5
52	3	62,1	6
53	2	63,6	6
54	3	65,9	6
55	1	66,6	6
56	2	68,1	6
57	5	71,9	6
58	1	72,7	6
59	1	73,4	6
60	1	74,2	6
63	2	75,7	6
65	3	78,0	7
66	4	81,0	7

67	1	81,8	7
68	1	82,5	7
69	1	83,3	7
70	3	85,6	7
71	2	87,1	7
72	3	89,3	8
73	2	90,9	8
74	1	91,6	8
75	1	92,4	8
76	1	93,1	8
77	1	93,9	8
79	3	96,2	9
80	2	97,7	9
81	2	99,2	9
86	1	100,0	9

Table 4.9 Transformation of raw scores into stanines: verbal aggression

Raw score	Frequency	Cumulative %	Stanine
15	1	0.7	1
17	4	3,7	1
19	1	4,5	2
21	3	6,8	2
22	1	7,5	2
23	1	8,3	2
26	2	9,8	2
27	2	11,3	3
28	1	12,1	3

29	1	12,8	3
30	3	15,1	3
32	2	16,6	3
34	3	18,9	3
35	4	21,9	3
37	3	24,2	4
38	5	28,0	4
39	5	31,8	4
40	6	36,3	4
41	3	38,6	4
42	4	41,6	5
43	1	42,4	5
44	2	43,9	5
45	7	49,2	5
46	1	50,0	5
47	2	51,5	5
48	1	52,2	5
49	5	56,0	5
50	1	56,8	5
51	3	59,0	5
53	5	62,8	6
54	3	65,1	6
56	2	66,6	6
57	2	68,1	6
59	2	69,7	6
60	1	70,4	6
61	1	71,2	6
62	2	72,7	6
63	2	74,2	6

64	1	75,0	6
65	2	76,5	6
66	1	77,2	7
68	1	78,0	7
69	3	80,3	7
70	2	81,8	7
71	1	82,5	7
72	5	86,3	7
73	2	87,8	7
74	3	90,1	8
76	1	90,9	8
77	3	93,1	8
79	1	93,9	8
80	1	94,7	8
81	1	95,4	8
82	2	96,9	9
84	1	97,7	9
85	1	98,4	9
86	1	99,7	9
88	1	100,0	9

Table 4.10 Transformation of raw scores into stanines : reactive aggression

Raw score	Frequency	Cumulative %	Stanine
15	2	1,5	1
16	2	3,0	1
17	1	3,7	1

18	2	5,3	2
20	1	6,0	2
22	2	7,5	2
24	1	8,3	2
26	1	9,0	2
27	3	11,3	3
29	1	12,1	3
30	1	12,8	3
32	2	14,3	3
33	5	18,1	3
34	1	18,9	3
35	1	19,7	3
36	1	20,4	3
37	2	21,9	3
38	7	27,2	4
39	3	29,5	4
40	7	34,8	4
41	6	39,3	4
43	4	42,4	5
44	1	43,1	5
45	3	45,4	5
46	3	47,7	5
48	5	51,5	5
49	2	53,0	5
50	1	53,7	5
51	3	56,0	5
52	4	59,0	5
53	2	60,6	6
54	4	63,6	6

55	2	65,1	6
57	3	67,4	6
58	1	68,1	6
60	2	69,7	6
61	1	70,4	6
62	1	71,2	6
64	6	75,7	6
66	3	78,0	7
67	3	80,3	7
68	2	81,8	7
69	3	84,0	7
70	1	84,8	7
71	2	86,3	7
72	2	87,8	7
73	2	89,3	8
74	2	90,9	8
75	3	93,1	8
76	1	93,9	8
78	1	94,7	8
79	2	96,2	9
81	2	97,7	9
83	1	98,4	9
84	1	99,2	9
87	1	100,0	9

Table 4.11 Transformation of raw scores into stanines: proactive aggression

Raw score	Frequency	Cumulative %	Stanine
16	2	1,5	1
19	1	2,2	1
20	1	3,0	1
21	1	3,7	1
22	2	5,3	2
23	2	6,8	2
25	1	7,5	2
26	3	9,8	2
27	2	11,3	3
30	3	13,6	3
31	2	15,1	3
33	2	16,6	3
34	3	18,9	3
35	3	21,2	3
36	2	22,7	3
37	3	25,0	4
38	3	27,2	4
40	2	28,7	4
41	3	31,0	4
42	3	33,3	4
43	6	37,8	4
44	1	38,6	4
45	5	42,4	5
46	4	45,4	5
47	2	46,9	5

48	3	49,2	5
49	4	52,2	5
50	1	53,0	5
51	6	57,5	5
52	5	61,3	6
53	1	62,1	6
54	3	64,3	6
55	3	66,6	6
56	2	66,1	6
57	2	69,7	6
58	2	71,2	6
60	3	73,4	6
61	4	76,5	6
62	2	78,0	7
63	1	78,7	7
64	2	80,3	7
65	2	81,8	7
66	1	82,5	7
67	1	83,3	7
68	3	85,6	7
69	1	86,3	7
70	1	87,1	7
71	2	88,6	7
72	1	89,3	8
73	2	90,9	8
74	2	92,4	8
75	1	93,1	8
76	1	93,9	8
77	4	96,9	9

79	1	97,7	9
82	1	98,4	9
85	2	100,0	9

Table 4.12 Transformation of raw scores into stanines ; total aggression scale

Raw score	Frequency	Cumulative %	Stanine
62	1	0,7	1
66	1	1,5	1
69	1	2,2	1
71	1	3,0	1
72	1	3,7	1
74	1	4,5	2
76	1	5,3	2
85	1	6,0	2
89	1	6,8	2
94	1	7,5	2
104	1	8,3	2
110	1	9,0	2
111	1	9,8	2
113	2	11,3	3
127	1	12,1	3
130	2	13,6	3
131	1	14,3	3
132	2	15,9	3
133	1	16,6	3
136	1	17,4	3

137	1	18,1	3
142	2	19,7	3
145	1	20,4	3
146	1	21,2	3
151	2	22,7	3
153	1	23,4	4
155	2	25,0	4
156	1	25,7	4
157	1	26,5	4
159	1	27,2	4
160	2	28,7	4
161	1	29,5	4
162	3	31,8	4
163	1	32,5	4
164	1	33,3	4
165	2	34,8	4
168	1	35,6	4
169	2	37,1	4
171	1	37,8	4
173	2	39,3	4
175	1	40,1	5
176	2	41,6	5
178	1	42,4	5
179	1	43,1	5
181	2	44,7	5
182	1	45,4	5
184	2	46,9	5
185	1	47,7	5
188	1	48,4	5

189	1	49,2	5
190	1	50,0	5
191	1	50,7	5
192	1	51,5	5
193	1	52,2	5
195	1	53,0	5
197	3	55,3	5
198	2	56,8	5
199	1	57,5	5
200	1	58,3	5
203	1	59,0	5
206	1	59,8	5
208	1	60,6	6
210	1	61,3	6
211	2	62,8	6
212	1	63,6	6
213	2	65,1	6
216	1	65,9	6
219	1	66,6	6
221	1	67,4	6
224	1	68,1	6
226	1	68,9	6
227	1	69,7	6
231	1	70,4	6
234	1	71,2	6
239	1	71,9	6
240	1	72,7	6
247	1	73,4	6
248	2	75,0	6

253	1	75,7	6
258	2	77,2	7
261	1	78,0	7
262	2	79,5	7
263	2	81,0	7
270	3	83,3	7
272	1	84,0	7
274	1	84,8	7
277	1	85,6	7
278	1	86,3	7
281	1	87,1	7
282	1	87,8	7
283	1	88,6	7
284	1	89,3	8
287	1	90,1	8
289	1	90,9	8
297	2	92,4	8
299	1	93,1	8
307	1	93,9	8
309	1	95,4	8
310	1	96,2	9
311	1	96,9	9
322	1	97,7	9
331	1	98,4	9
332	1	99,2	9
340	1	100,0	9

It is possible to establish whether an individual's score for the Total Aggression Scale or its subtypes is below average, average or above average. As a general rule, it is understood that the bottom three stanines (1, 2 and 3) are regarded as below average, the next three stanines (4, 5 and 6) as average and the top three stanines (7, 8 and 9) as above average (Mulder 1989:205). The classification of all the scores is given in Table 4.13.

Table 4.13 Classification of scores of the aggression scale and its subtypes

SECTION	BELOW AVERAGE	AVERAGE	ABOVE AVERAGE
Physical aggression	15 - 32	33 - 63	64 - 90
Verbal aggression	15 - 35	36 - 65	66 - 90
Reactive aggression	15 - 37	38 - 64	65 - 90
Proactive aggression	15 - 36	37 - 61	62 - 90
TOTAL	60 - 151	152 - 253	254 - 360

4.6 TESTING OF HYPOTHESES

4.6.1 Testing of hypothesis 1

With regard to hypothesis 1 (stated in section 3.2.1), the following null hypothesis was tested:

THERE IS NO SIGNIFICANT NEGATIVE CORRELATION BETWEEN THE SUBTYPES OF AGGRESSION AND THE INTELLIGENCE OF JUNIOR PRIMARY LEARNERS.

This hypothesis was stated for each of the subtypes of aggression and for the total aggression score.

In order to test this hypothesis, a Pearson Product–Moment correlation was calculated between the score of each of the subtypes of aggression and the IQ score. It was also done between the total aggression score and the IQ score. The results appear in Table 4.14.

Table 4.14 Correlation between aggression scores and intellectual potential

VARIABLE	*NUMBER*	*CORRELATION WITH IQ*	*PROBABILITY*
Physical aggression	132	-0,09	p>0,05
Verbal aggression	132	-0,01	p>0,05
Reactive aggression	132	-0,03	p>0,05
Proactive aggression	132	-0,01	p>0,05
Total Aggression	132	-0,03	p>0,05

A correlation of -0,03 was obtained with p >0,05 between intellectual potential and total aggression. The null hypothesis could therefore not be rejected. The null hypothesis could also not be rejected for physical aggression, verbal aggression, reactive aggression and proactive aggression. This implies that intellectual potential is not related to aggression in general and to the subtypes of aggression with reference to junior primary learners. This finding is contrary to those of Sutton et al (1999:80), Hill (2002:140), and Farmer and Bierman (2002:301). According to the findings of these researchers, low levels of intelligence can promote the escalation of aggression. It was expected that similar findings would be found for junior primary learners, but the present investigation did not confirm this.

4.6.2 Testing of hypothesis 2

With regard to hypothesis 2 (stated in section 3.2.2), the following null hypothesis was tested:

THERE IS NO SIGNIFICANT POSITIVE CORRELATION BETWEEN THE SUBTYPES OF AGGRESSION OF JUNIOR PRIMARY LEARNERS.

In order to test this hypothesis, a Pearson Product–Moment correlation was calculated between the scores of each of the subtypes of aggression. All 132 participants were used to test this hypothesis. The results can be seen in Table 4.15.

Table 4.15 Correlation between the different subtypes of aggression

	PHYSICAL AGGRESSION	VERBAL AGGRESSION	REACTIVE AGGRESSION	PROACTIVE AGGRESSION	TOTAL AGGRESSION
PHYSICAL AGGRESSION	1,000				
VERBAL AGGRESION	0,85	1,000			
REACTIVE AGGRESSION	0,93	0,88	1,000		
PROACTIVE AGGRESSION	0,81	0,87	0,88	1,000	
TOTAL AGGRESSION	0,95	0,95	0,97	0,93	1,000

For all the correlation coefficients $p < 0,01$

According to the results obtained, the null hypothesis can be rejected at the 1% level of significance.

4.6.2.1 Comparison between physical and verbal aggression

There is a high positive correlation (r = 0,85) between physical aggression and verbal aggression. These findings are similar to that of Buss and Perry (1992:454) where it was noted that as the level of children's verbal aggression increased, so did their physical aggression.

4.6.2.2 Comparison between physical and reactive aggression

The highest positive correlation of the subtypes of aggression was obtained between physical and reactive aggression (r = 0,93). This implies that as the level of physical aggression increases, there is a likelihood of reactive aggression increasing as well. Since the findings of the present study and those in the literature study show a positive correlation between physical, verbal and proactive aggression, similar positive correlations between physical and reactive aggression for Junior Primary learners were expected.

4*.6.2.3 Comparison between physical and proactive aggression*

A high positive correlation of 0,81 was obtained for physical and proactive aggression. The results of this study are similar to that of Underwood et al (2001:200) who indicated that physical aggression is always highly correlated with proactive aggression.

4.6.2.4. Comparison between verbal and reactive aggression

A high positive correlation (r = 0,88) was obtained between verbal and reactive aggression. This implies that as the level of verbal aggression increases among Junior Primary learners, the likelihood of reactive aggression increasing is great. There are no known research findings in the literature study that are similar or contrary to the findings of the present study.

4.6.2.5. Comparison between verbal and proactive aggression

A high positive correlation of r = 0,87 was obtained for verbal and proactive aggression, which means that learners with high levels of verbal aggression also have a tendency for proactive aggression.

4.6.2.6 Comparison between reactive and proactive aggression

The findings revealed a high positive correlation (r = 0,88) between reactive and proactive aggression. These findings replicated those of Crick and Dodge (1996:1001) and Schwartz et al (1998:431) where it was noted that as the level of children's proactive aggression increased, so did their reactive aggression.

With reference to the findings in the literature study with regard to correlations between the subtypes of aggression, it was noted that positive correlations exists between some of the subtypes. The expectation was to find similar findings in the present study for junior primary learners. The present study did in fact support the findings in the literature study. Positive correlations were also found to exist between physical and reactive aggression; verbal and reactive aggression; and verbal and proactive aggression.

4.6.3 Testing of hypothesis 3

With regard to hypothesis 3 (stated in section 3.2.3), the following null hypothesis was tested.

> ***THERE IS NO SIGNIFICANT DIFFERENCE IN THE AVERAGE LEVEL OF AGGRESSION BETWEEN JUNIOR PRIMARY BOYS AND GIRLS.***

This hypothesis was stated for each of the subtypes of aggression and for the total aggression score.

In order to compare the difference between the total levels and also the subtypes of aggression of Junior Primary learners, the 132 participants were divided into two groups. Group A consisted of 66 girls, while group B consisted of 66 boys. In order to ascertain whether the levels of aggression of group A differed from those of group B, the means of the two groups were calculated. T-values were calculated in each case in order to determine if the means differed significantly. The results appear in table 4.16.

Table 4.16 Difference between the average scores of aggression of Junior Primary boys and girls

VARIABLE	GROUP	N	MEAN	S	T	df	PROBABILITY
Physical	A	66	49,97	17,40	0,93		
aggression	B	66	47,12	17,69		130	p > 0,05
Verbal	A	66	49,97	18,20	0,23		
aggression	B	66	49,24	18,26		130	P > 0,05
Reactive	A	66	50,66	17,71	0,65		
aggression	B	66	48,68	17,51		130	P > 0,05
Proactive	A	66	48,25	15,99	0,78		
aggression	B	66	50,47	16,64		130	P >0,05
Total aggression	A	66	198,86	65,32	0,29		
	B	66	195,52	67,31		130	P >0,05

Table 4.16 reveals that there are no significant differences between the mean aggression scores of boys and girls with regard to all the subtypes of aggression and the total level of aggression. In each of the cases the value of p was > 0.05; therefore the null hypothesis cannot be rejected. This means that in general Junior Primary boys and girls do not differ significantly with regard to their total levels of aggression and each of the subtypes of aggression.

The above findings with regard to the differences between the total levels of aggression and the subtypes of aggression of Junior Primary boys and girls are contrary to all the

other research findings noted in the literature study. The research done by Akanda (2001:129) and Hill (2002:154) showed that differences exist between the levels of aggression between boys and girls in general. Rys and Bear (1997:101) and McEvoy et al (2003:57) found that large differences exist in the levels of physical aggression for boys and girls, while the research findings of Buss and Perry (1992:454) and Hudley et al (2001:52) showed that differences exist in the levels of verbal aggression between boys and girls. According to Hennington et al (1998:462) boys tend to exhibit more reactive aggression than girls.

According to the above research findings, boys and girls differ with regard to the total levels of aggression and each subtype of aggression. The expectation was to find similar differences among Junior Primary learners. However, the results of this investigation seem to indicate that Junior Primary boys and girls display similar levels of total, physical, verbal, reactive and proactive aggression.

4.6.4 Testing of hypothesis 4

With regard to hypothesis 4 (stated in section 3.2.4), the following null hypothesis was tested:

> ***THERE IS NO SIGNIFICANT DIFFERENCE BETWEEN THE AVERAGE LEVELS OF REACTIVE AND PROACTIVE AGGRESSION OF JUNIOR PRIMARY LEARNERS.***

All 132 participants were used to test this hypothesis. In order to determine whether the means between the levels of reactive and proactive aggression of Junior Primary learners differed significantly, a t–test for dependent sample was carried out. The results appear in Table 4.17.

Table 4.17 Difference between the average scores of reactive and proactive aggression of Junior Primary learners

VARIABLE	N	MEAN	S	T	df	PROBABILITY
Reactive aggression	132	49,674	17,573	0,41	131	p > 0,05
Proactive aggression		49,363	16,295			

According to the results, a t-value of 0,41 with p>0,05 was obtained. The findings reveal that the difference between the means is not significant. The null hypothesis can therefore not be rejected. This implies that there is no significant difference between the levels of proactive and reactive aggression of junior primary learners. These findings are contrary to all the other research findings noted in the literature study. Studies conducted by Crick and Dodge (1996:1001), Schwartz et al (1998:431) and Camodeca et al (2002:340) revealed that there is a clear distinction between reactive and proactive aggression in learners. However, the present research could not replicate these findings.

4.6.5 Testing of hypothesis 5

With regard to hypothesis 5 (stated in section 3.2.5), the following null hypothesis was tested:

THERE IS NO SIGNIFICANT DIFFERENCE BETWEEN THE AVERAGE LEVELS OF PHYSICAL AND VERBAL AGGRESSION OF JUNIOR PRIMARY LEARNERS.

In order to test the above hypothesis, all 132 participants were used. The t-test for dependent sample was carried out in order to determine whether the means between the levels of physical and verbal aggression of junior primary learners differed significantly. The results appear in Table 4.18.

Table 4.18 Difference between the average scores of physical and verbal aggression of boys and girls

VARIABLE	N	MEAN	S	T	df	PROBABILITY
Physical aggression	132	48,545	17,542	1,26	131	p > 0,05
Verbal aggression		49,606	18,168			

A t-value of 1,26 with p>0,05 was obtained. According to these findings, the null hypothesis cannot be rejected because the difference between the means is not significant. This implies that the difference between the levels of physical and verbal aggression of junior primary learners is negligible. The findings of this investigation could not support those of Bjorkqvist et al (2000:192) that differences exist between the physical and verbal aggression of boys and girls in general.

4.7 CONCLUSION WITH REGARD TO THE QUANTITATIVE ANALYSIS

An item analysis was done for each subtype of aggression and for the total aggression score of the questionnaire. No items were excluded from the final questionnaire.

The reliability of the questionnaire was measured by calculating the alpha coefficient. This was found to be 0,98 for the total questionnaire and therefore it can be considered a reliable measuring instrument.

The validity of the questionnaire was evaluated by determining its criterion-related validity and construct validity. The questionnaire was found to have a high degree of criterion-related validity and is also construct valid.

The norms for the aggression questionnaire were arrived at by converting raw scores to stanines.

The following findings were arrived at after testing the hypotheses:

- There is no significant correlation between the aggression and intelligence of junior primary learners. This applied to all the subtypes of aggression and to the total aggression score.
- There is a significant positive correlation between the subtypes of aggression.
- There is no significant difference in the level of aggression between junior primary boys and girls. This applied to each of the subtypes of aggression and to the total aggression score.
- There is no significant difference between the average levels of reactive and proactive aggression of junior primary learners.
- There is no significant difference between the average levels of verbal and physical aggression of junior primary learners.

4.8 QUALITATIVE ANALYSIS

The subjects that had the highest scores (stanine score of 9) in the Aggression Questionnaire were given the DAP (Draw-A-Person) test. After completion of their drawings, they were asked a set of prepared questions based on these drawings. Thereafter, they were asked to respond to Card 2 of the CAT (Children's Apperception Test). Refer to paragraph 3.4.3. for more details on the procedure followed in the qualitative analysis. The responses for each of the subjects is given below.

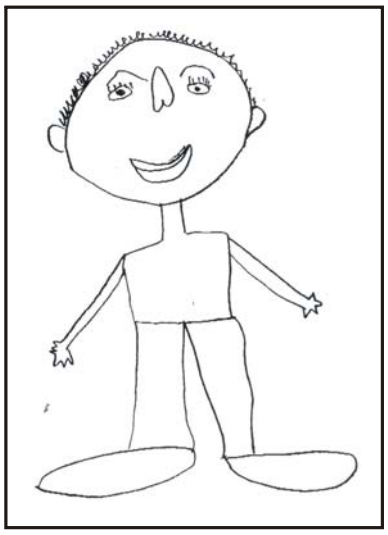
SUBJECT 1

Background Information

Subject 1 was 8 years and 5 months old and in Grade 3. He came from a single parent family and was of average intelligence (IQ score of 90). His total aggression score was 340. This score is equivalent to a stanine score of 9 which indicates an above average level of aggression.

Analysis

[A] DAP



[B] INDICATORS OF AGGRESSION PRESENT IN THE DRAWING

- Over emphasized mouth (indication of verbal aggression).
- Arms - long and sticking out.

(Refer 3.4.3.1 - Indicators of aggression)

[C] QUESTIONS BASED ON THE DRAWING

- **Let's give the person a name. Would you like to look like him? Why?** *Bradley (Classboy)…No...because he fights with everyone at school……yesterday he hurt a boy.*

- **What is Bradley thinking?** *He is thinking that I like him…but I don't.*

- **What makes Bradley most happy?** *His friends……when someone brings him something…when he hits somebody and he laughs.*

- **What makes Bradley most angry?** *When someone hits him.*

- **What is the worst thing Bradley ever did?** *He hurt someone very badly.*

- **Let's say that on one Sunday Bradley went out with his family. What did they do? What did he do?** *They went shopping….they bought stuff. He broke things inside the shop.*

- **If no one could see Bradley, what would he like to do?** *He will swear….he will become wild.*

- **If Bradley has another life, what sort of animal would he like to be? Why?** *He would like to be a cat so he could move around freely and he can scrape people.*

- **Suppose Bradley could turn other people into animals. Who would he turn into what? Why?** *He would turn all his friends into cats because he will be a cat.*

- **What would Bradley's three wishes be**?
  - *i) Become the President.*
  - *ii) Be a genius.*
  - *iii) To be the richest man in the world.*

[D] RESPONSES TO CARD 2 OF THE CAT

STORY

These are wild animals…….they live in the jungle…….they can kill people……These bears are fighting with each other. …They are thinking of how they can kill their enemy.

THEME	*Images of destruction, fighting and killings evident in the projections.*
HYPOTHESIS	▪ Subject would appear to be preoccupied with aggressive and destructive thoughts. ▪ Subject is likely to engage in physical aggression.

Conclusion with regard to SUBJECT 1

There were distinct indicators of aggression present in the learner's DAP test. It would appear that the learner tends to be more verbally aggressive. From the questions based on the DAP, there is further evidence of verbal aggression (swearing) and physical aggression (fighting and breaking things). An analysis of the responses to card 2 of the CAT revealed that the learner was inclined to be preoccupied with aggressive and destructive thoughts and was likely to engage in physical aggression.

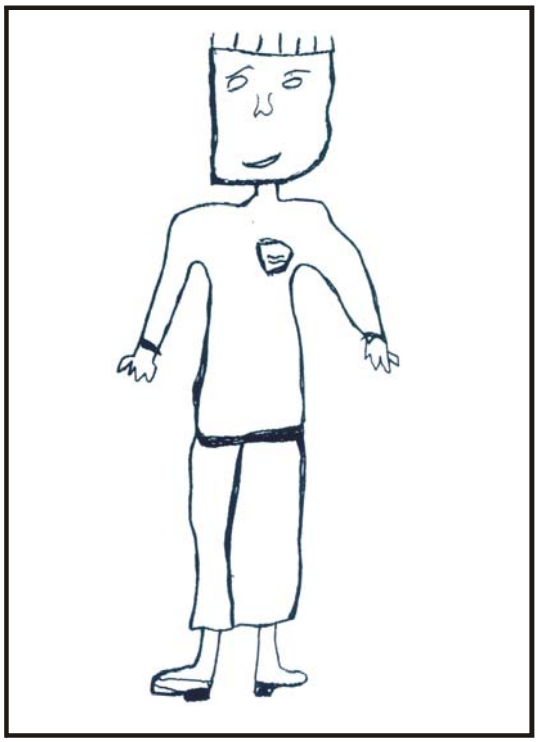
SUBJECT 2

Background information

In the case of subject 2, his total aggression score was 331. He was a learner in grade 3 and was 8 years and 3 months old. He had an IQ score of 102 (average intelligence). The learner's total aggression score fell within the category of above average level of aggression.

Analysis

[A] DAP



[B] INDICATORS OF AGGRESSION PRESENT IN THE DRAWING

- Line quality – heavy and excessive shading.
- Fingers – spike like.
- Long and slender arms. (Refer 3.4.3.1 – Indicators of Aggression)

[C] QUESTIONS BASED ON THE DRAWING

- **Let's give the person a name. Would you like to look like him? Why?** *Kiru. Yes ….he is my father. He is a policeman.*

- **What is Kiru thinking?** *How he can catch the thieves and rogues.*
- **What makes Kiru most happy?** *When he catches the thieves and puts them in jail.*
- **What makes Kiru most angry?** *When the thieves shoot at them.*
- **What is the worst thing Kiru ever did?** *He shot a thief and the thief died.*
- **Let's say that on one Sunday Kiru went out with the family. What did you all do? What did Kiru do?** *We went to the park. We had a braai. My dad played ball with us.*
- **If no one could see Kiru, what would he like to do?** *He would like to catch all the thieves and lock them up in jail.*
- **If Kiru has another life, what sort of animal would he like to be? Why?** *He would like to be a lion. He could kill all the other animals.*
- **Suppose Kiru could turn other people into animals. Who would he turn into what? Why?** *He would turn all the thieves into rats so that all the people and cats will be able to kill them.*
- **What would Kiru's three wishes be?**
  i) To be a Captain in the police force.
  ii) To own a BMW.
  iii) To own a big house.

[D] RESPONSE TO CARD 2 OF THE CAT

STORY

The mother bear, father bear and baby bear went to the forest to look for food. They found a rope and they started fighting for it. ….the mother bear and the baby bear was trying to pull the rope away from the father bear……The father bear is very angry…..the father bear will scold the mother bear and baby bear when they go home. The bears are thinking what they are going to eat for supper because they did not find any food.

THEME	*Indications of Physical and Verbal forms of aggression in the projections.*
HYPOTHESIS	▪ *The subject is likely to associate with physical and verbal forms of aggression.*

Conclusion with regard to SUBJECT 2

An analysis of the DAP test of the learner revealed signs of aggression (heavy line quality and excessive shading, long and sticking out arms). This is further supported by the learner's responses to questions based on the DAP. The learner's responses indicated an inclination to injure other people. His response to Card 2 of the CAT suggested that he was most likely to associate with physical and verbal types of aggression.

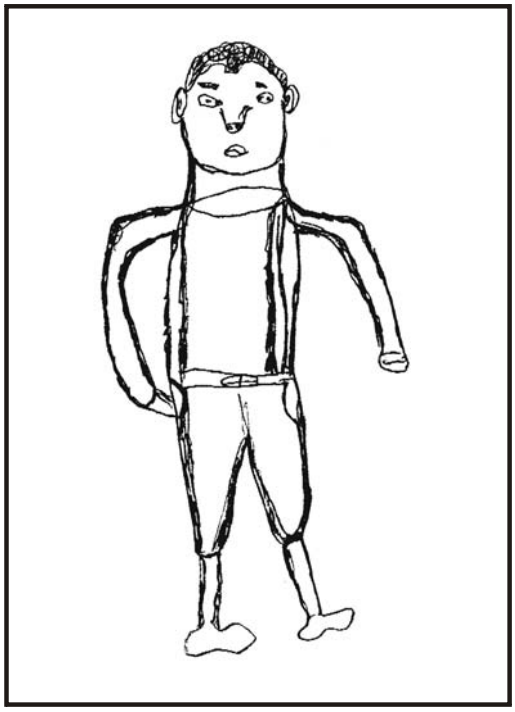
SUBJECT 3

Background information

Subject 3 was an 8 year and 6 months old male learner in grade 3 who lived with both his biological parents. He had a IQ score of 106 (average intelligence) and a total aggression score of 322 (which equates to a stanine score of 9 - above average level of aggression).

Analysis

[A] DAP



[B] INDICATORS OF AGGRESSION PRESENT IN THE DRAWING

- Line quality - heavy and excessive.
- One hand placed on hip.
- Arms - long, sticking out.
- Cross-eyed. (Refer 3.4.3.1 - Indicators of Aggression)

[C] QUESTIONS BASED ON THE DRAWING

- **Let's give the person a name. Would you like to look like him? Why?** *Brandon….Yes……he is very strong and he is my best friend.*

- **What is Brandon thinking?** *He is thinking what game they should play***.**
- **What makes Brandon most happy?** *Playing soccer and his team wins.*

- **What makes Brandon most angry?** *When anyone teases him or calls him funny names.*

- **What is the worst thing that Brandon ever did?** *He stole the teacher's money and blamed another boy.*

- **Let's say that on one Sunday Brandon went out with his family. What did they do? What did he do?** *They went on a camp with the church. They had service and games for the children. Brandon started fighting with the other children because his team was losing the soccer game. The pastor scolded him.*

- **If no one could see Brandon, what would he like to do?** *He would like to steal the people's things.*

- **If Brandon has another life, what sort of animal would he like to be? Why?** *He would like to be a shark so that he could be the king of the sea.*

- **Suppose Brandon could turn other people into animals. Who would he turn into what? Why?** *He would turn me into a shark …so that we could be still best friends.*

- **What would Brandon's three wishes be?**
  i) To have a motor-cycle.
  ii) To be a wrestler in Smackdown (TV wrestling programme).
  iii) To come out first in his class.

[D] RESPONSE TO CARD 2 OF THE CAT

STORY
Three bears was playing a game……One big bear hit the small bear and took the rope from him……The small bear started crying….then the other big bear came to help…They started fighting for the rope. The bears are thinking of how they can win the fight.

THEME	*Evidence of bullying and physical aggression present.*
HYPOTHESIS	▪ *The subject is likely to engage in physical and proactive types of aggression. Engagement of proactive aggression can be deduced from the fact that the boy is "thinking of how" to win the fight.*

Conclusion with regard to SUBJECT 3

There were clear indicators of aggression evident in the DAP test of the subject, such as long and sticking out arms and the figure being cross-eyed. These indicators of aggression were supported by responses to questions based on the DAP. It became evident that the subject liked to get involved in aggressive types of games such as wrestling. His response to the CAT card revealed signs of engaging in physical and proactive forms of aggression.

SUBJECT 4

Background information

Subject 4 was a female learner with an average level of intelligence (IQ score of 104). She was 8 years old and had a total aggression score of 310 (above average level of aggression). The learner was in grade 3 and lived with her biological father and step-mother.

Analysis

[A] DAP

[B] INDICATORS OF AGGRESSION PRESENT IN THE DRAWING

- Line quality - heavy and excessive.
- Presence of large teeth.
- Over emphasized mouth (verbal aggression).
- Arms-long and sticking out. (Refer 3.4.3.1 - Indicators Aggression)

[C] QUESTIONS BASED ON THE DRAWING

- **Let's give the person a name. Would you like to look like her? Why?** *Sandra….No….she is my step-mother and I don't like her.*

- **What is she thinking?** *She is thinking of what to tell my father……of how she broke the iron.*

- **What makes her most happy?** *When my father punishes or scolds me.*

- **What makes her most angry?** *When I don't listen to her.*

- **What is the worst thing she ever did?** *She was fighting with my father and she broke all the things in the house.*

- **Let's say that on one Sunday she went out with the family. What did you all do? What did Sandra do?** *We went to U-Shaka for the whole day. She was looking after me and my baby brother while we were playing in the water. She took us to the café and bought us food.*

- **If no one could see Sandra, what would she like to do?** *She would steal all our things and run away.*

- **If she has another life, what sort of animal would she like to be? Why?** *She would like to be a tiger so she could kill the people she does not like.*

- **Suppose Sandra could turn other people into animals. Who would she turn into what? Why?** *She would turn our neighbours into sheep so that she could kill them and eat them up.*

- **What would Sandra's three wishes be?**
  I) *To have a big house.*
  II) *To have lots of money.*
  III) *To find a job.*

[D] RESPONSE TO CARD 2 OF THE CAT

STORY

The three bears are naughty. Their parents went to look for food. They are pulling tug-of-war. The bear who will lose will be angry and start to fight. Their parents will scold them when they come back. The bears are thinking what they will tell their parents.

THEME	*A type of game ending up in a fight and aggressive behaviour*.
HYPOTHESIS	▪ *Subject will probably become aggressive when she loses a game.*

Conclusion with regard to SUBJECT 4

The DAP test of the learner portrayed distinct indicators of verbal and physical aggression. The responses to questions based on the DAP indicated intentions of the subject getting involved in physical types of aggression. From an analysis of the responses to the CAT, it would appear that the learner showed a tendency to become aggressive when experiencing defeat.

SUBJECT 5

Background information

Subject 5 came from a single parent family. He was 8 years and 2 months old and lived with his divorced mum. He was in grade 3 and had an IQ score of 100 (average intelligence) and a total aggression score of 311 (above average level of aggression).

Analysis

[A] DAP

[B] INDICATORS OF AGGRESSION PRESENT IN THE DRAWING

- Large limbs
- Arms - sticking out

(Refer 3.4.3.1 - Indicators of Aggression)

[C] QUESTIONS BASED ON THE DRAWING

- **Let's give the person a name. Would you like to look like him? Why?** *Jerome…Yes. …I like to look like him. He is big and strong and the other children like to play with him.*

- **What is Jerome thinking?** *He is thinking what to tell his parents when he goes home. The headmaster phoned his father…he was fighting in school.*

- **What makes Jerome most happy?** *When the teacher does not come to school and the other teachers make him the monitor.*

- **What makes Jerome most angry?** *When the teacher scolds him and telephones his father.*

- **What is the worst thing Jerome ever did?** *He was swearing some boys after school one day.*

- **Let's say that on one Sunday, Jerome went out with his family. What did they do? What did he do?** *They went to the beach. They were having a picnic and was swimming in the beach….Jerome did not listen to his parents and went deep into the water. He almost drowned.*

- **If no one could see Jerome, what would he like to do?** *He would steal all the other people's things.*

- **If Jerome has another life, what sort of animal would he like to be? Why?** *He would like to be a big and strong lion so that he could hit all the other animals.*

- **Suppose Jerome could turn other people into animals. Who would he turn into what? Why?** *He would turn Justin into a dog because he does not like him.*

- **What would Jerome's three wishes be?**
  i) To be a pilot.
  ii) To have lots of money.
  iii) To own a Porsche car.

[D] RESPONSE TO CARD 2 OF THE CAT

STORY *The baby bear stole food from the neighbour's house. The owner caught the bear and wanted to tie it up with a rope. …The mother bear saw this and she ran to help her baby….the two big bears are fighting for the rope. The baby bear is helping the mother bear to pull the rope….the bears are thinking of how to beat each other.*	
THEME	Display of unacceptable behaviours such as stealing and aggression
HYPOTHESIS	▪ The subject may be inclined to display reactive, proactive and physical types of aggression.

Conclusion with regard to SUBJECT 5

An interpretation of the learner's DAP test and analysis of responses to questions based on the DAP revealed a tendency of the learner to become aggressive. This is further supported by his responses to the CAT where indications of displaying socially unacceptable behaviour such as stealing became evident. Also evident in the responses to the CAT, were indications of the learner displaying reactive, proactive and physical types of aggression.

Overall conclusion of the qualitative analysis for the five subjects are summarized in Table 4.19

Table 4.19 Overall conclusion of the qualitative analysis

SUBJECTS	INDICATORS OF AGGRESSION BASED ON DAP	DEDUCTIONS MADE FROM QUESTIONS BASED ON DAP	RESPONSES TO CARD 1 OF THE CAT
1	• Overemphasised mouth (indication of verbal aggression) • Arms – long and sticking out	• Evidence of physical aggression (fighting and breaking things) • Verbal aggression (swearing)	• Subject would appear to be preoccupied with aggressive and destructive thoughts • Subject likely to engage in physical aggression
2	• Line quality – heavy and excessive shading • Fingers – spike-like • Arms – long and sticking out	• Indications of wanting to injure other people	• Implications of engaging in physical and proactive forms of aggression
3	• Line quality – heavy and excessive shading • One hand placed on hip • Arms – long and sticking out • Cross-eyed	• Indications of need to get involved in aggressive type of games (wrestling)	• Implications of engaging in physical and proactive forms of aggression
4	• Line quality – heavy and excessive shading • Presence of large teeth • Overemphasised mouth (verbal aggression)	• Indication to get involved in physical aggression	• Subject shows tendency to become aggressive when experiencing defeat
5	• Large limbs • Arms – sticking out	• Signs of disobedience	• Display of socially unacceptable behaviour such as stealing; also inclined to display reactive, proactive and physical types of aggression

4.9 GENERAL CONCLUSION

The results of the projective tests (qualitative analysis) indicated that all five participants had an inclination to be aggressive. Because this correlates with their high levels of aggression that were noted in the Aggression Questionnaire (quantitative analysis), it implies that the Aggression Questionnaire has an acceptable level of criterion-related validity.

The findings of both the quantitative and qualitative investigations help to provide answers to two important problems stated in section 1.3, namely: *"How can educators effectively identify learners with aggression by means of a standardised test?" and "How can projection tests contribute to further identification of aggression in Junior Primary learners?"* The newly designed Aggression Questionnaire with its high reliability and validity will now be able to help educators identify the intensity of the total levels of aggression and also the subtypes of aggression. Equally important to educators and therapists is that when they are in doubt while trying to ascertain a learner's level of aggression from his/her drawings, they can use the Aggression Questionnaire as an additional instrument to clarify their doubts. The implication of this is that, although projective tests can be used to identify levels of aggression in learners, the results of such tests should be validated by other standardised instruments such as the Aggression Questionnaire. Conversely, results from standardised tests should be supplemented with findings from projective tests, especially among Junior Primary learners.

Finally, it can be stated with a high level of confidence that the newly designed Aggression Questionnaire will serve as a beneficial instrument to educators and therapists in the identification of aggression in Junior Primary learners.

CHAPTER 5

EDUCATIONAL IMPLICATIONS OF THE STUDY AND SUGGESTIONS FOR FUTURE RESEARCH

5.1 INTRODUCTION

As stated in chapter 1, the identification of children who are most vulnerable to engage in aggressive behaviour patterns from an early age is of the utmost importance so that appropriate intervention techniques can be used to prevent such children from becoming aggressive later on in life. Furthermore, effective treatment and remediation require an accurate identification of the type of aggressive behaviour that is displayed. It was therefore the purpose of this study to, firstly, develop an assessment instrument to identify the different subtypes of aggression and, secondly, to identify factors that relate to aggression in Junior Primary school learners in order to facilitate the identification process.

From the literature study, it became evident that the factors that influence aggression in primary school learners can be classified into six main categories: biological, personality, environmental and social, parental influences, frustration and media influences. The display of aggression can also be categorised into four main subtypes, namely physical, verbal, reactive and proactive aggression.

An empirical investigation was carried out with the following goals:

- to develop a measuring instrument (Aggression Questionnaire) to identify the relationship and differences between the different subtypes of childhood aggression (namely, physical, verbal, reactive and proactive aggression)
- to use projective tests to validate the Aggression Questionnaire (criterion-related validity)

- to determine the relationship between some of the factors identified in the literature study (intelligence and gender) and childhood aggression

The results of the empirical investigation revealed that there were significant positive correlations between the subtypes of aggression. The investigation also revealed that intelligence and gender did not play a significant role with regard to the nature and intensity of aggression.

The educational implications of the findings of the literature study and the empirical investigation will be discussed. Suggestions for the treatment of aggression will also be provided. The contributions and limitations of the present research study will be discussed and recommendations for future research will be given at the end of this chapter.

5.2 EDUCATIONAL IMPLICATIONS OF THE MAIN FINDINGS OF THE LITERATURE STUDY AND EMPIRICAL INVESTIGATION

5.2.1 The relationship between the various subtypes of aggression and its implications for treatment

Crick and Dodge (1996:1001), Crick et al (1997:585) and Schwartz et al (1998:431) agree that a positive correlation exists between reactive and proactive aggression. In their study, Buss and Perry (1992:454) found a positive correlation exists between verbal and physical aggression, while Underwood et al. (2001:260) found that physical aggression is correlated with proactive aggression. The results of this investigation confirmed the above findings. Positive correlations also exist between physical and reactive aggression, verbal and reactive aggression, and verbal and proactive aggression. These findings are very significant for both parents and educators. Since high positive inter-correlations exist between the various subtypes of aggression, one can deduce that when learners display predominantly one type of aggression (physical, verbal, proactive or reactive), the

likelihood of them displaying the other types of aggression can also be expected. This implies that educators and parents should be cognizant of the varied indicators of each subtype of aggression so that treatment can be offered immediately. The following indicators of each subtype of aggression will help with the identification process.

Indicators of physical aggression

The learner

- physically attacks other children during play
- sometimes gets into fist fights with other children
- finds that hitting is acceptable when everything goes wrong
- is tempted to hit someone who disagrees with him/her
- occasionally cannot control the urge to strike or kick another person
- likes to bash wrongdoers in order to teach them a lesson
- will resort to violence to protect his/her rights
- destroys or damages the property around him/her when he/she is very angry
- often pushes or shoves other children
- gets into fights a little more than the average child
- will use an object or instrument to injure another child during a conflict
- clenches his/her fists, or stamps and bangs on things around him/her, when things go wrong
- tends to hit and push others to get what he/she wants
- often resorts to biting, pinching and scratching others when he/she is angry
- takes other children's belongings (such as lunches and snacks) with force or by threat

Indicators of verbal aggression

The learner

- screams or yells at other children who irritate him/her

- often verbally threatens that he/she is going to hit others
- constantly retaliates with nasty comments when working with others during class activities
- calls people nasty names when he/she is angry
- feels that it is acceptable to shout at someone when he/she is angry
- is fond of arguing with friends
- is tempted to shout at other people when he/she disagrees with them
- often insults other children in the presence of a crowd
- shouts, insults or threatens others if things do not go his/her way while working in a group
- often writes and circulates nasty letters or notes about fellow learners whom he/she does not like
- will yell or use obscene language when engaged in outdoor games or when loosing
- verbally intimidates his/her opponents during play/games/activities
- raises his/her voice or becomes agitated when he/she does not get his/her way during activities
- constantly brings down other children by stating that they are useless or by insulting their family members
- uses obscene language, especially when he/she is engaged in group activities or in the presence of others

Indicators of reactive aggression

The learner

- throws a tantrum very quickly during minor disagreements with other children
- hits other children without any warning when they do not adhere to his/her requests
- hits or bullies his/her siblings or peers with the least amount of hesitation
- may hit other children who harm him/her in the slightest way
- does not hesitate to hit or injure other children when provoked

- starts a fight for no apparent reason after an incident where he/she is ridiculed or belittled
- becomes immediately spiteful and vindictive towards other children after a conflict
- pinches and pokes the people around him/her in order to curb his/her anger
- forcefully takes other children's belongings without any warning when he/she is angry
- throws other children's belongings with the intention to damage it when he/she has lost a challenge
- will hurt another child without thinking about the consequences of such action when he/she is provoked
- is often the first to inflict pain/injury on an opponent during an argument
- feels that getting revenge is acceptable when someone hurts him/her
- often damages his/her educator's (charts and books) when nobody is around if he/she had been reprimanded in class
- when feeling aggrieved by someone who is not in close proximity, resorts to making obscene gestures to the person from a distance

Indicators of proactive aggression

The learner

- ignores other children when he/she is angry with them
- gets even with other children by excluding them from his/her group of friends
- sometimes spreads rumours or gossip about his/her peers in order to provoke them to retaliate
- tries to get other children to stop playing with children whom he/she dislikes
- often ruins other children's things when he/she is upset
- implicates fellow learners in wrongdoing in order to get them punished
- uses embarrassing gestures to provoke other children
- sometimes gets other learners to dislike certain children by telling lies about them

- often tries to rationalise as to why he/she disobeyed his/her educator/parent
- threatens to stop being a friend to someone in order to get something from him/her
- intimidates other children by staring at them or giving them dirty looks
- sometimes tries to exclude certain children whom he/she does not like from group games through malicious gossip
- always thinks of ways in which he/she can harm his/her enemy
- uses intimidation to extort goods from another child
- tells lies in order to get other children in trouble

It is important to note that of the four subtypes of aggression, the proactive type is more difficult to identify because the learner engages in a lot of manipulative and covert strategies. Greater monitoring and observation is required to identify a learner who displays this type of aggression.

5.2.2 Practical implications regarding the identification of aggression

As noted in the literature study, identifying aggressive behaviour in its initial stages is of the utmost importance in order to prevent such behaviour from becoming part of the learner's personality. The implication of this is that educators and parents should take the necessary corrective measures as soon as indicators of aggression become evident in the behaviour of Junior Primary learners. The following factors should be noted:

- Both educators and parents should address the problem. A holistic approach is recommended where educators and parents discuss the nature and cause of the learner's aggressive behaviour and decide on common measures to implement in order to eradicate such undesirable behaviour at school and at home.
- When a learner displays any indicator of the subtypes of aggression, his/her parents should immediately be called to the school to discuss the problem. Deferring this to a later date may exacerbate the problem. The learner's parents may be able to contribute to an understanding of the problem by providing information on factors outside the school environment that could be regarded as antecedents to the child's

aggression. Such factors can include environmental factors (such as living conditions), biological factors (such as head injuries) or parental influences (such as single parent family/divorce/parenting styles).

- Once the learner's problem has been discussed by both his/her parents and educators, he/she should be subjected to a proper assessment. Educators can complete the Aggression Questionnaire in order to determine the intensity of the learner's level of aggression. These findings can be validated by using projective tests (drawings) which should be interpreted by a person who is qualified in interpreting children's drawings (such as an educational psychologist or counselor).
- Parents and educators can use some of the techniques discussed in the following section of this chapter for the treatment of the learner's aggression. Expert advice and help should be sought if the problem is not resolved.

5.2.3 *Educational implications of the most important factors of childhood aggression*

5.2.3.1 Anger and frustration

From the literature study, it became evident that anger and frustration are the main antecedents for the onset of aggression. The following guidelines will help educators to deal with learner's levels of anger and frustration, and to obtain some degree of success in eliminating aggression.

(1) Anger control training for aggressive learners

According to Goldstein and Keller (1987:39), anger is an antecedent in most cases of aggressive behaviour. If one can help a learner to control his/her anger, this will prevent him/her from becoming aggressive. Meichenbaum (in Goldstein and Keller 1987:41) proposes a model of *Self-Instructional Training.* The underlying aim of this model is "*to stop, look and listen*" before reacting impulsively. An example of how aggressive children can be taught to comprehend a task; spontaneously produce mediators and

strategies; and use such mediators to guide, monitor and control their performances is given below.

A learner who is angry because he/she has to do something that he/she does not like can be taken through the following steps:

i) The therapist/educator models task performance and self-instructions out loud while the learner observes.
ii) The learner performs the task, instructing himself/herself out loud as he/she does so.
iii) The therapist models task performance and whispers self-instruction while the learner observes.
iv) The learner performs the task, instructing himself/herself in a whisper as he/she does so.
v) The therapist performs the task by using covert self-instructions, with pauses and behavioural signs of thinking (for example, raising one's eyes toward the ceiling and stroking one's chin).
vi) The learner performs the task by using covert self-instructions.

The above method can be seen as a behaviour modification technique that is used by behavioural psychologists.

With regard to anger control training, Goldstein and Keller (1987:52) also propose *deep relaxation* as a technique to reduce tension and arousal levels that so often function as immediate precursors to overt aggression. The following exercise can be done when it becomes evident that a learner is becoming angry and agitated. The learner could be instructed to do the following:

> *Let your entire body relax as you focus on a pleasant scene. It sometimes helps to imagine yourself lying on a beach on a warm sunny day, drifting peacefully on a raft in a pool or lying under a shady tree in the cool grass on a warm day. Think of a scene that makes you feel good and imagine it as you relax. Let the rubber bands unwind all the way. Sink deeply into your chair or bed. Breathe deeply, slowly and*

evenly. Tune out the outside world completely. Continue this final phase for about three minutes or so, then gradually open your eyes. You should feel refreshed and very relaxed.

This deep relaxation technique can be used with individual learners on a one-to-one basis or with the whole class.

(2) Training in the accurate processing of social information

DeCastro et al (2002:916) offer a model that can be useful here. This model teaches learners to generate alternative responses to anger or a frustrating situation before reacting impulsively. It offers them an opportunity to evaluate the consequences of several responses before choosing the most appropriate one. Refer to section 2.3.3 for a detailed discussion on the application of this model.

(3) Contracting

A contract is basically an exchange agreement that spells out who should do what, for whom and under what circumstances (Goldstein & Keller 1987:71). Contracts can be used as a behaviour modification technique whereby aggressive learners are encouraged to draw up contracts to improve their behaviour and receive rewards. An example of a contract can be the following:

BEHAVIOUR CHANGE CONTRACT
Behaviour change goal : To speak in a normal, conversational level tone to my friends at all times. I will not shout, scream or use foul words inside and outside the classroom. ***Reward:*** Receive time off at the end of the day to play a game of my choice. ***Penalty:*** Serve detention during breaks. Beginning date:…….. Signature:……

The learner should be given a reward when he/she honours the contract. It is important to have a list of rewards or a "reward menu" from which the learners can choose a reward. This will help to maintain the learner's interest in the reward system. If he/she is given the same reward repeatedly, he/she may loose interest in keeping to his/her contract.

(4) Social skills training

Social skills training should be incorporated into Life Orientation lessons at schools. Educators can read short plays depicting how people who react aggressively when angry or frustrated usually have to face serious negative consequences. The learners could get into groups and discuss alternate ways in which the characters in the plays could have reacted in socially approved ways. In order to consolidate the socially acceptable responses, the learners could be asked to role-play similar scenes in which they adopt appropriate and socially acceptable response patterns to stimuli that provoke anger.

(5) Showing understanding by paraphrasing the feelings of the learner

This technique involves empathising with angry learners by restating their words while simultaneously reflecting on their feelings, for example:

> Aggressive learner: *"You shouldn't have left!"*
> Restatement*: "You think that I was wrong to leave."*
> Reflection of feeling: *"You are really upset that I left"*
>
> Aggressive learner: *"Why the hell did you stop before the end?"*
> Restatement: *"You believe that they gave up too easily."*
> Reflection of feeling: *"You feel let down because they didn't try hard enough!"*

This has the effect of calming the aggressive person and can be seen as a form of non-directive psychotherapy (Goldstein & Keller 1987:57).

(6) Play therapy

Play therapy involves different approaches such as clay therapy, puppet therapy, art therapy, monster busting, sand play and humour therapy. It can be useful in decreasing levels of aggressiveness in young children by helping them to re-channel their aggressive behaviours into more desirable ones. Continued sessions with intermittent interventions from the educator/therapist to get aggressive learners to reflect on their undesirable behaviours and to modify them can gradually help to reduce the levels of aggression in the learners.

Play is one of the best ways young learners have of expressing themselves and of communicating with others. Because they are not ready to use complex language to express their thoughts or feelings, and because play comes naturally to them, it should be central to any programme. In addition to providing an avenue for expression, play allows children to communicate with one another. It is often the beginning of the kind of social interactions that we hope to achieve. Learning to get along with one another in play can form the basis for cooperative behaviour in life.

(7) Anger replacement training, modelling and systematic desensitisation

These techniques have been noted to be very successful in the treatment of childhood aggression (Akanda 2001:130). They have already been discussed (refer to section 2.6) and will not be repeated here.

Another technique (called the "turtle technique") that is a form of anger replacement will be included here. According to Schneider and his associates (in Goldstein and Keller 1987:53), this technique should be introduced after narrating the following story:

> *Little turtle was a handsome young turtle who was very upset about going to school. He always got into trouble at school because he got into fights. Other kids would tease, bump or hit him; he would get very angry and start big fights. The*

teacher would have to punish him. Then, one day, he met a big old tortoise who told him that his shell was the secret answer to all his problems. The tortoise told Little Turtle to withdraw into his shell when he felt angry and to rest until he was no longer angry. So he tried it the next day…and it worked. Then the teacher smiled at him and he no longer got into big fights.

The idea here is to teach the learner to imitate the *turtle response* by pulling his/her arms and legs close to his/her body, putting his/her head down on his/her desk and imagining that he/she is a turtle that is withdrawing into the shell. The learner should be taught to use this response when

- he/she notices that an aggressive interchange with a peer is about to take place
- he/she becomes frustrated or angry and is about to throw a tantrum
- the educator calls out the word "turtle" in order to avoid an incipient fight

Reinforcement for correct responses can take the form of rewards.

(8) Developing more interesting school programmes

According to Wallach (1996:117), schools should have programmes for young learners that are interesting, challenging and fun. Although children need consistency in their lives, they also need variety and should be challenged intellectually, linguistically and physically. If the challenge is within their developmental purview, it will provide an outlet for aggressive energy. Exercising their minds and bodies is a good way of letting off steam and, more importantly, it enables children to feel good about themselves because it builds self-confidence and self-esteem.

School programmes should include many opportunities for self-expression. This is done in part through the arts. Drawing, painting, singing, dancing, storytelling and drama all provide children with chances to express themselves. It gives them a chance to tell us how they feel. It enables them to tell their stories and to express their hopes and fears.

Educators should therefore ensure that their lesson plans include these aesthetic activities throughout the academic year.

5.2.3.2 Parental influence

According to the findings in section 2.4.4, parental style, parental neglect and the type of relationship that exists between the parents (especially the mother) and the child play an important role in the development of aggression in children. Children who perceive their mothers as cold and distant will more likely become aggressive than children who perceive their mothers as warm and protective. The following guidelines can be used to resolve the above problems.

(1) Play

According to Landy and Menna (2001:224), aggressive children find it difficult to play imaginatively and instead physically act out their aggression by hitting, biting and fighting with other children. They often have difficulty engaging in rich or complex play themes and in coordinating a number of symbolic play representations. The main reason for this limitation is that parenting style is often intrusive, directive and didactic; and does no allow time for "pretend play". The implication of this for parents is to allocate at least one hour of "pretend play" time with young children because this will allow for the development of a variety of developmental capacities (such as the ability to delay gratification; to resolve anxiety and fear; to reduce the physical expression of aggression; and to improve problem solving, language comprehension and social maturity). Refer to section 2.6 for further guidelines on how parents can engage in play therapy when working with aggressive children.

(2) Filial play therapy

This therapy is a combination of family therapy and play therapy that helps to improve parent-child relationship and strengthen the family system as a whole. This form of therapy teaches the parent a new way of interacting with his/her child by breaking previous patterns of parent-child interaction (for example, anxiety that was learned through parental influence can be reduced or unlearned, and miscommunication can be clarified by the parent). The four most important filial play therapy skills are as follow:

- *Structuring skill.* Parents should structure a 30-minute play session once a week. The structure helps the child to understand the format of the time spend together and contributes to cooperation. These play sessions should be different to other times spent together and should have different rules.
- *Empathetic listening skill.* The parent should focus attention on the child and should show acceptance by reflecting the feelings and themes he/she expresses. Parents should not question the child and should not tell him/her what to do.
- *Imaginary play skill.* The parent should follow the child in imaginary play, taking on imaginary "roles" when requested to do so by the child.
- *Limit setting skills.* Limits are set to create a safe atmosphere for the child. The parents should establish firm boundaries of acceptable play. They should communicate the consequences of bad behaviour to the child and should enforce them when necessary.

5.2.3.3 Media violence

The literature study (see section 2.4.6) revealed that media-induced arousal has the effect of priming aggressive thoughts and feelings. Watching media depictions of aggressive interactions increases the ease with which the observer can access his/her own aggressive thoughts and feelings. In order to prevent this from occurring, the following recommendations are made:

- Parents should monitor more closely what type of programmes children watch. Children should be prohibited from watching films and television shows that display aggression.
- Parents should note the age restriction of movies before sending their children to watch films at the cinemas.
- Sometimes children wait for opportunities when their parents leave home and, in their absence, watch age-restricted films. In this case, parents should be aware of such possibilities and should devise ways to prevent this taking place.

5.2.4 General strategies to consider when dealing with other factors that influence childhood aggression

5.2.4.1 Environmental factors

In section 2.4.3 it was noted that certain environmental factors such as heat, pain and noise precipitate the onset of aggression. The following recommendations are made in this regard:

(1) Temperature

Because aggression can increase in high temperatures (when children feel extremely hot), fans should be used in the classrooms on extremely hot days. In cases where this is not possible, lessons should be moved to other areas (shady places) outside the classroom where the learners can feel more comfortable. Learners who are most vulnerable to become aggressive should be seated near windows or close to doors in the classroom, so that they can get more fresh air and feel the breeze from outside. This will help them to maintain a normal body temperature.

(2) Pain

Learners who are constantly subjected to physical pain through bullying and physical abuse by other learners at school are most vulnerable to become angry, frustrated and aggressive. In this regard, educators should identify such learners and help to eliminate their source of pain. Such learners should also be encouraged to immediately report any infliction of pain and injury to their educators so that action can be taken against the perpetrators.

(3) Noise

According to Renfrew (1997:109) and Geen (2001:37), noise appears to be the single most important variable that mediates an induced form of aggression. In order to curtail noise in the learning environment, strict rules should be put in place in classrooms. Educators should ensure that noise from the environment (for example, traffic, noise from use of machinery and equipment) is controlled. Learners should not be allowed to bang the lids of their desks or to stamp on the floor while they are in the classrooms because this increases the frustration and aggression levels of learners who have a low tolerance to noise.

5.2.4.2 Medical conditions

Weisbrot and Ettinger (2002:652) notes that neurotransmitters (acetylcholine, norepinephrine, dopamine and serotonin) contribute to levels of aggression. It is therefore important for parents of aggressive learners to have blood tests done in order to check the levels of these neurotransmitters and to seek medical assistance for the management of aggression in their children. Learners with Tourette's syndrome are also very aggressive. If parents suspect that their children have this disorder, they should seek medical advice with regard to its treatment.

5.3 CONTRIBUTIONS OF THE STUDY

The first contribution of this study is that it provides clarity with regard to the definition and nature of childhood aggression. Secondly, the study helps to reduce the many and varied terms used to describe the various forms of aggression to four basic subtypes, namely physical, verbal, reactive and proactive aggression. Thirdly, a reliable and valid measuring instrument was developed to identify the four main subtypes of aggression in junior primary learners. Factors which may affect the development of aggression were identified in the literature study and two of them (intelligence and gender) were tested empirically.

5.4 LIMITATION OF THE STUDY AND RECOMMENDATIONS FOR FUTURE RESEARCH

Although much was achieved through this study, there are always areas that require further attention.

Firstly, many factors that were identified in the literature study as affecting the development of aggression in learners could not be tested empirically because of ethical reasons. These factors include the effect of noise, pain, temperature and the media on children. Although it would be interesting to note the effect of these factors on aggression, special laboratory settings would have to be devised to test it. The factors that were taken into consideration (namely, level of intelligence and gender) did not relate strongly to aggression in the junior primary school.

Secondly, the norms for the aggression questionnaire were determined for Junior Primary learners. Future research should focus on the development of a similar questionnaire for senior primary and secondary school learners.

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APPENDIX 1

TEACHER QUESTIONNAIRE ON CHILDREN'S BEHAVIOUR

Kindly note that this questionnaire has no right or wrong answers. It would be appreciated if you could indicate your responses as honestly as possible. Your response should be an indication of your actual observation of the child and not of what you have heard or been told about the child.

THANK YOU FOR YOUR CO-OPERATION.

SECTION A

Supply the following information by filling in the appropriate number in the relevant square (only one number per square).

NAME OF SCHOOL:…… ALLOTED NO: [ ][ ][ ] [1-3]

1. ***GRADE :*** TWO = 1 THREE = 2 [ ] [4]

2. ***GENDER*** : MALE = 1 FEMALE = 2 [ ] [5]

3. ***AGE IN YEARS AND MONTHS*** (eg. 08:05 or 08:11)

YEARS		MONTHS	
[ ]	[ ]	[ ]	[ ]
6	7	8	9

4. ***I Q*** (Leave Blank)

[ ]	[ ]	[ ]
10	11	12

5. ***TYPE OF PARENTS***:
   1 = LIVING WITH BOTH BIOLOGICAL PARENTS
   2 = DIVORCED PARENTS – LIVING WITH MOTHER
   3 = DIVORCED PARENTS - LIVING WITH FATHER
   4 = DIVORCED PARENTS – LIVING WITH GRAND PARENTS/GUARDIANS
   [ ] [13]

6. ***BIRTH ORDER*** 1 = YOUNGEST
   2 = ELDEST
   3 = MIDDLE
   4 = ONLY CHILD [ ] [14]

7. ***NUMBER OF YEARS REPEATED IN THE PHASE***
   [0 = NONE 1 = 1 YEAR] [ ] [15]

SECTION B

Rate the child on a scale between 1 and 6. Write this number in the square provided.

This is definitely the case …….. 6 5 4 3 2 1 …… This is in no way the case

Remember that this is how you see the child and not how others judge him/her.

1. Physically attacks other children during their play. ☐ [16]

2. Screams or yells at other children who irritate him/her. ☐ [17]

3. Throws a tantrum very quickly for minor disagreements with other children ☐ [18]

4. When angry with another child, ignores him or her. ☐ [19]

5. Sometimes gets into fist fights with other children. ☐ [20]

6. Often verbally threatens that he /she is going to hit others. ☐ [21]

7. Takes revenge against other children when they don't adhere to his/her requests. ☐ [22]

8. When angry with another child, gets even by excluding that child from his/her group of friends. ☐ [23]

9. Finds hitting is acceptable when everything goes wrong. ☐ [24]

This is definitely the case….6 5 4 3 2 1 ….. this is not at all the case

10. Puts on defensive postures in response to even minor threats. ☐ [25]

11. Sometimes spreads rumours or gossips about peers in order to provoke them to retaliate. ☐ [26]

12. Constantly retaliates with nasty comments when working with others in class activities. ☐ [27]

13. Is tempted to hit someone who disagrees with him/her. ☐ [28]

14 . When harmed in the slightest way, readily confronts those children associated with such harm. ☐ [29]

15. When dislikes another child, tries to get other children to stop playing with that child. ☐ [30]

16. Calls people by nasty names when angry. ☐ [31]

17. Occasionally, can't control the urge to strike another person using his/her hands. ☐ [32]

18. Feels it is acceptable to shout at someone when he/she is angry. ☐ [33]

19. On many occasions threatens to ruin other children's things when he/she is upset. ☐ [34]

20. Does not hesitate to retaliate against other children when provoked. ☐ [35]

This is definitely the case……..6 5 4 3 2 1 … This is not at all the case.

21. Likes to bash wrongdoers to teach them a lesson. ☐ [36]

22 . Starts a fight for no apparent reason after an incident where he/she is ridiculed or belittled. ☐ [37]

23. Becomes immediately spiteful and vindictive with other children after a conflict with them. ☐ [38]

24. When angry, pinches and pokes the people around him/her in order to curb his/her anger. ☐ [39]

25. Will resort to violence to protect his/her right. ☐ [40]

26. Is fond of arguing with friends. ☐ [41]

27. Implicates a fellow pupil of wrong doings in order to get them punished. ☐ [42]

28. When disagrees with someone, is tempted to shout at them. ☐ [43]

29. When angry, forcefully takes other children's belongings without any warning. ☐ [44]

30. When very angry, destroys or damages the property around him/her. ☐ [45]

31. Teases other children in order to coerce them into a fight. ☐ [46]

This is definitely the case….6 5 4 3 2 1…..This is not at all the case

32. Often insults other children in the presence of a crowd. ☐ [47]

33. Throws other children's belongings with the intention to damage it when he/she has lost a challenge. ☐ [48]

34. Often pushes or shoves other children. ☐ [49]

35. When working in groups, shouts, insults or threatens others if things do not go his/her way. ☐ [50]

36. When provoked , will hurt another child without thinking about the consequences of such action. ☐ [51]

37. Sometimes gets others to dislike certain children by telling lies about them. ☐ [52]

38. Gets into fights a little more than the average child. ☐ [53]

39. Often writes and circulates nasty letters or notes about fellow class pupils whom he/she does not like. ☐ [54]

40. During an argument, is often the first to inflict pain /injury onto the opponent. ☐ [55]

41. Purposefully plans dangerous tricks/traps in order to injure pupils whom she/he dislikes. ☐ [56]

42. Would use an object or instrument to injure another child during a conflict. ☐ [57]

This is definitely the case…..6 5 4 3 2 1. ….This is not at all the case

43. When engaged in outdoor games and when losing, will yell or use obscene language. [58]

44. Feels getting revenge is acceptable when someone hurts him/her. [59]

45. Verbally intimidates opponents in play/games /activities. [60]

46. Clenches fists or stamps and bangs on things around him/her when things go wrong. [61]

47. Threatens to stop being a friend to someone in order to get something from them. [62]

48. Often damages teacher's belongings (charts and books) when nobody is around, after being reprimanded in class. [63]

49. Raises his/her voice or becomes agitated when not getting his/her way in activities. [64]

50. Sometimes tends to hit and push others to get what he/she wants. [65]

51. Intimidates other children by staring at them or making dirty looks. [66]

52. Constantly brings down other children by stating that they are useless. [67]

This is definitely the case ….6 5 4 3 2 1 …This is not at all the case

53. Sometimes tries to exclude certain children he/she doesn't like from group games through malicious gossip. ☐ [68]

54. Often resorts to biting, pinching, scratching others when angry. ☐ [69]

55. Always thinks of ways in which he/she can harm his/her enemy. ☐ [70]

56. Use of obscene language especially when engaging in group activities or in presence of others. ☐ [71]

57. Uses intimidation to extort goods from another child. ☐ [72]

58. Takes other's belongings (such as lunches and snacks) with force or threat. ☐ [73]

59. When feels aggrieved by someone who is not in close proximity, resorts to showing obscene gestures to such a person from a distance. ☐ [74]

60. Tells lies to get other children into trouble. ☐ [75]

THANK YOU FOR YOUR CO-OPERATION

FOR OFFICE USE

1 = PRE-SELECTED SUBJECT

2 = RANDOMLY SELECTED ☐ ***[76]***

APPENDIX 2

FORMAT FOR THE DRAW-A-PERSON ANALYSIS

1. SIGNIFICANT FEATURES IN THE DRAWING

……

……

……

……

……

2. QUESTIONS BASED ON THE DRAWINGS

2.1. Let's give the person a name. Would you like to look like him/her? Why?

.....

……

……

…….

2.2. What is the person thinking?.....

……

……

2.3. What makes the person most happy?.....

……

2.4. What makes the person most sad?.....

……

2.5. What is the worst thing the person ever did?.....

……..……

…….…….

2.6 Lets say on one Sunday the person went out with his/her family. What did they do? What did the person do?.....

……..……

……..……..……..

2.7. If no one could see the person, what would the person like to do?.....
……
……

2.8. If the person has another life, what sort of animal would he like to be? Why?.....
……...
……..
..…….

2.9. Suppose the person could turn other people into animals, who would he turn into what ? Why?.....
…….
…….

2.10. What would the person's three wishes be? ……....
..……..
……
……
……
……
…….

QUALITATIVE ANALYSIS OF THE RESPONSES

……
……
……
……

C**ONCLUSION IN TERMS OF AGGRESSION**

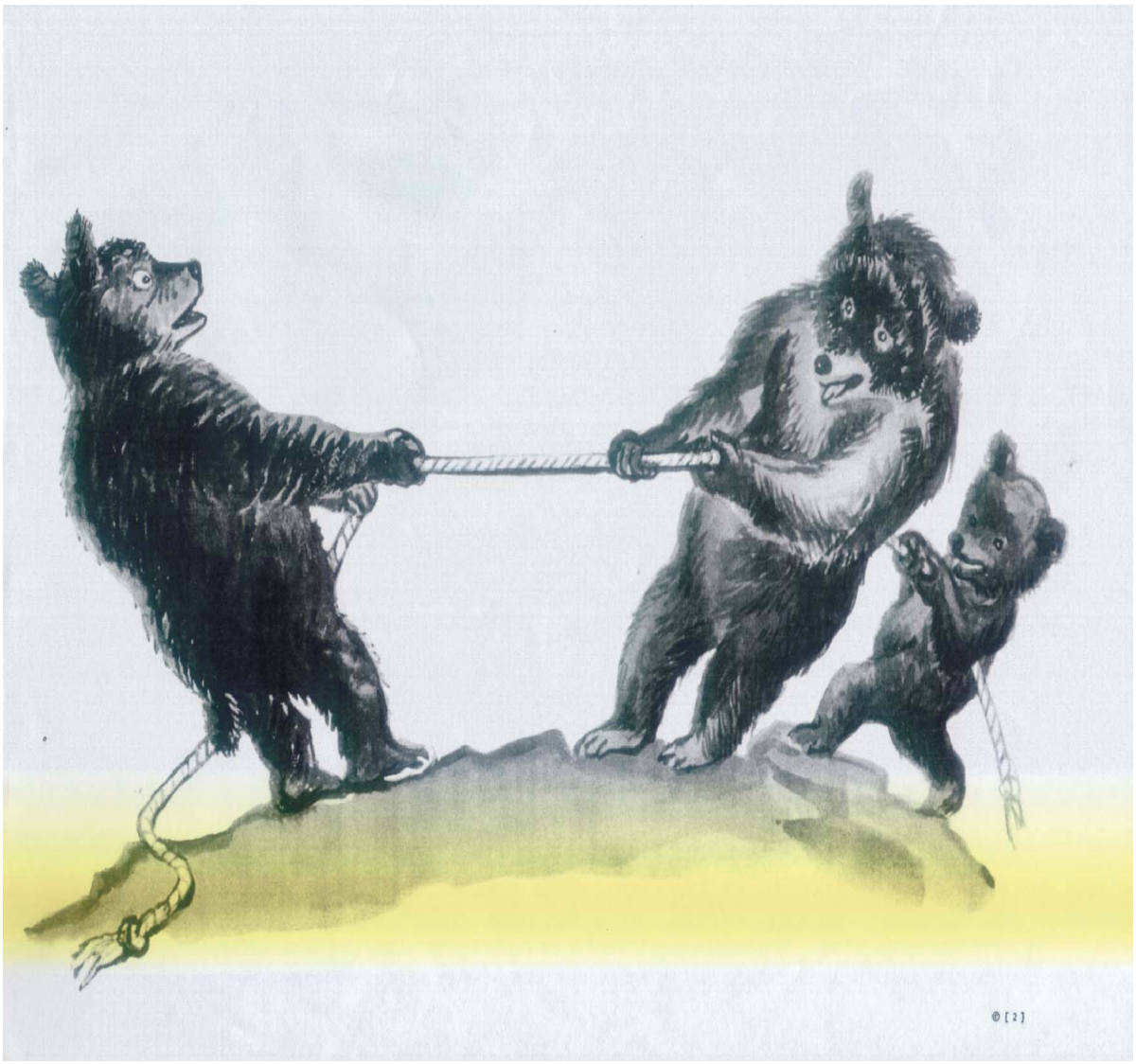
...…….....……..
…….....….
…….....
…….....

APPENDIX 3

FORMAT FOR QUALITATIVE ANALYSIS OF CAT CARD

CARD 2 *: THREE BEARS PULLING A ROPE*

INSTRUCTIONS: *I want you to make up a story for me of the animals you see in the card. Tell me what is happening, what happe*	
STORY:	
THEME:	....
HYPOTHESIS:	....



APPENDIX 4

ARTICLE FROM " ***THE INDEPENDENT ON SATURDAY*** "

(KZN INDEPENDENT NEWSPAPERS : OCTOBER 21:2006)

Bad pupils be warned

Minister's house arrest threat

By LINDA DANIELS

TEACHERS may soon have the power to remove unruly pupils from their classrooms and effectively place them under temporary "house arrest" at home.

This is included in changes to school laws that Education Minister Naledi Pandor is considering to combat school violence and disruptive behaviour.

The minister has also promised to act on problem schools in the next few weeks.

Other measures include speeding up a framework for random drug testing in schools and reinforcing the authority that teachers have the power to search pupils for weapons and drugs.

In a statement yesterday, Pandor said: "I am also considering amending the legislation for schools insofar as discipline is concerned, to make provision for severely disruptive children.

"In addition to guidance and support, schools should be allowed to surrender really troublesome children into the care of their parents and or guardians for a short period of time."

Pandor said that if learners were sent back into their parents' care, schools would have to ensure that the children were provided with school work, "but the behaviour of the children will be the responsibility of the parent or guardian for that period".

She added that while it was important to protect the right of children to education, they should not be allowed to disrupt the running of schools.

The safety of pupils and teachers has become a national concern lately, given the spate of violence and deaths in schools.

In the past two weeks, three teenage boys have been stabbed – two fatally – while at school.

In the latest incident, 20-year-old Zimisele Sithole from KwaZulu-Natal was stabbed to death, allegedly by a fellow pupil, on Wednesday.

An Eastern Cape schoolboy was hospitalised earlier this week after he too was stabbed by a fellow pupil during a class break, while a 14-year-old Johannesburg pupil appeared in court last week for allegedly stabbing to death fellow pupil, Simon Nkosana Mbhele, 19.

Pandor said most principals and parents were seemingly unaware of the powers available to schools to insti l discipline and good behaviour.

She reminded teachers and principals that random searches for weapons and drugs without a warrant were allowed.

"School principals are also permitted to request a police or security official within the school to carry out such a search," she said.

"The regulations also oblige schools to put in place measures to ensure the safety of learners, staff and parents during school activities. If principals or pupils see weapons in schools, they are under an obligation to report their presence to an officer of the law."

She admitted that in some cases greater intervention was required by the department and that problem schools would be acted upon in the next few weeks.

Pandor said she would accelerate the establishment of a framework for random drug testing.