

**PSYCHOLOGICAL FACTORS
CONTRIBUTING TO AGGRESSIVE OR
VIOLENT BEHAVIOUR OF ADOLESCENTS
IN SECONDARY SCHOOLS**

ELZANÉ VAN BOSCH

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**NORTH-WEST UNIVERSITY
VAAL TRIANGLE CAMPUS**

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in the School of Behavioural Sciences at
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I can do all things through Christ who strengthens me!

Philippians 4:13

SUMMARY

South African schools are quickly, and progressively, becoming arenas for violent behaviour. These days, schools are no longer considered safe and protected environments where children can go to learn, develop, enjoy themselves, and feel secure. Rather, schools are being defined as unsafe and dangerous settings for teaching and learning, plagued by various forms of school violence (Van Jaarsveld, 2008). According to De Wet (2003), the causes of school violence are numerous and exceptional to each violent incident. Research indicates that most perpetrators of school violence are in the adolescent stage of development (O'Toole, 2000). Adolescence as a transition stage implies severe changes on both an anatomical and a psychological level, presenting psycho-social adjustment demands that could be too much for certain adolescents and end in dysfunctional adaptive behaviour such as aggression (Louw & Louw, 2007; Sigelman & Rider, 2006). According to Meece and Daniels (2008), there seems to be no single cause for aggression and it is seen as an interaction of the adolescent's own characteristics, family environment, culture, peer relations and community.

The purpose of this study was to investigate whether intra- and inter-psychological factors such as self related well-being, coping self-efficacy, general health and inter-personal relations contribute to manifested anger/hostility/aggression of learners in secondary schools. A quantitative research design of the cross sectional survey type was used to reach the aims of this study. The population included grade nine learners of four secondary schools who fitted the selection criteria. The size of the research group was N=512, which included male (N=217) and female (N=295), African (N=311) and White (N=201) adolescent learners. Quantitative data collection was done by means of the Personal, Home, Social and Formal Relations Questionnaire (PHSF) of Fouché and Grobbelaar (1971), the Coping Self-Efficacy Scale (CSE) of Chesney, Neilands, Chambers, Taylor, and Folkman (2006), the General Health Questionnaire (GHQ-12) of Goldberg and Hillier (1979) and the Aggression Questionnaire (AQ) of Buss and Perry (1992). A biographical questionnaire was also included to collect the participants' socio-demographic information. The empirical research was described and results reported in two manuscripts intended for publication. Descriptive statistics, reliability and validity of the measuring instruments used, correlations among the operationalized constructs,

significance of differences on the scales for subgroups and regression analyses to identify predictors of aggression and moderating variables, were calculated.

The results of the study indicated that although means and standard deviations correspond to those reported in literature for the same scales, the participants in this study manifested only moderate levels of the phenomena measured. The reliability and validity of the measuring instruments were mostly acceptable, with a few exceptions. Correlational results indicated that psychological factors have significantly negative relationships with aspects of aggressive behaviour, suggesting that the more psychological wellness and adjustment youth experience, the less they will experience or express aggressive behaviour. Significance of differences on several of the variables investigated was found between the gender and racial sub-groups with moderate to large practical effect. Furthermore, aspects of personal and social adjustment and of coping self-efficacy and mental health, significantly predicted features of aggression in youth who participated. Intra- and inter-personal aspects of psychological adjustment significantly moderated the strength of the relationships between coping self-efficacy and aggression as well as general mental health and aggression. These findings were theoretically expected and could be explained by means of research findings reported in literature and relevant theories. Conclusions and recommendations were discussed.

Keywords: Adolescence; secondary school; aggression; anger; violence; psychological factors; coping; general health.

OPSOMMING

Leerders in Suid-Afrikaanse skole toon toenemend gewelddadige gedrag. Skole word deesdae as onveilig beskou en die beskermde omgewing van ouds, waarheen kinders gegaan het om te leer, te ontwikkel, hulself te geniet en sekuriteit te ervaar, is tot niet. Intendeel word skole bestempel as onveilige en gevaarlike onderwysomgewings wat geteister word deur geweld in 'n verskeidenheid vorme (Van Jaarsveld, 2008). Volgens De Wet (2003) is die oorsake vir skolegeweld legio en uitsonderlik vir elke gewelddadige insident terwyl navorsing toon dat meeste geweldenaars op skoolvlak hulleself bevind in die adolessente fase (O'Toole, 2000). As 'n oorgangsfase impliseer adolessensie merkwaardige veranderinge op beide fisiese, en sielkundige vlak. Hierdie veranderings hou dikwels psigo-sosiale aanpassings en eise vir adolessente in – aanpassings en eise wat daartoe mag lei dat sommige adolessente disfunksionele wangedrag soos aggressie toon (Louw & Louw, 2007; Sigelman & Rider, 2006). Volgens Meece en Daniels (2008) is daar nie 'n enkele oorsaak vir aggressie nie, maar word aggressie eerder gesien as 'n interaksie tussen die adolessent se persoonlikheid, huislike omstandighede, kultuur, verhouding met sy/haar portuurgroep, en gemeenskap.

Die doel van hierdie studie was om te bepaal of intra- en inter-persoonlike psigologiese faktore soos selfverwante welsyn, selfbevoegdheid, algemene gesondheidstoestand en inter-persoonlike verhoudings bydra tot gemanifesteerde woede/vyandigheid/aggressie onder leerders in hoërskole. 'n Kwantitatiewe navorsingsontwerp van 'n deursnee-opname-tipe was vir die doel van hierdie navorsing gebruik. Die teikengroep vir hierdie studie was N=512 leerders, waarvan N=217 manlik en N=295 vroulik was. Verder was N=311 Swart en N=201 Wit adolessente leerders. Kwantitatiewe data-insameling was deur middel van Fouché en Grobbelaar (1971) se Persoonlike, Huishoudelike, Sosiale en Formele Verhoudingsvraelys (PHSF), Chesney, Neilands, Chambers, Taylor, en Folkman (2006) se Coping Self Efficacy skaal (CSE), Goldberg en Hillier (1979) se General Health Questionnaire (GHQ-12), en Buss en Perry (1992) se Aggression Questionnaire (AQ), gedoen. 'n Biografiese vraelys is ook ingesluit ten einde die deelnemers se sosio-demografiese inligting te verkry. Die literatuuroorsig en empiriese navorsing is beskryf terwyl die navorsingsresultate in twee manuskripte vir publikasiedoeleindes aangebied is. Beskrywende statistiek, betroubaarheid en geldigheid van die meetinstrumente wat gebruik is, korrelasies tussen die

geoperasionaliseerde konstrunkte, die beduidendheid van verskille van sub-groepe op die skale en regressie-analise om voorspellers en modererende veranderlikes te identifiseer, is bereken.

Die resultate van hierdie studie toon dat, al stem gemiddeldes en standaard afwykings ooreen met dié in literatuur met dieselfde skale, het die deelnemers in hierdie studie slegs matige tellings op die skale behaal. Die betroubaarheid en geldigheid van die meetinstrumente was meestal aanvaarbaar met enkele uitsonderings. Korrelasies tussen skale toon dat psigologiese faktore 'n negatiewe verhouding het met aggressiewe gedrag, wat impliseer dat hoe hoër psigologiese welstand en positiewe aanpassing by jeugdiges hoe minder sal hulle aggressiewe gedrag openbaar. Beduidende verskille van gemiddeld tot hoë praktiese effek was gevind vir geslag- en ras subgroepe. Verder kon aspekte van persoonlike en sosiale aanpassing, asook van coping selfbevoegdheid en algemene gesondheid aggressiewe gedrag onder deelnemers aan hierdie navorsing voorspel. Intra- en inter-persoonlike aspekte van psigologiese aanpassing het die krag van die verhoudings tussen coping selfbevoegdheid en aggressie, asook tussen algemene gesondheid en aggressie gemodereer – iets wat teoreties te wagte was en ook deur middel van relevante teorieë, en bestaande navorsing verklaar is. Gevolgtrekkings en aanbevelings was ook bespreek.

Sleutelwoorde: Adolessensie; hoërskool; aggressie; woede; geweld; psigologiese faktore; aanpasbaarheid; algemene gesondheid.

LETTER OF PERMISSION



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3 December 2012

Letter of permission.

Permission is hereby granted that the following two manuscripts:

1. Psychological factors and aggressive or violent behaviour of adolescents;
2. Psychological factors that predict or moderate aggression in youth.

may be submitted by Elzané van Bosch for the purpose of obtaining a MA-degree in Psychology. This is in accordance with academic rule A.8, and specifically rule A.8.2.b of the North-West University.

C. van Eeden.

Study Leader: Prof. C. van Eeden

Date: 3rd December 2012

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**CHAPTER 1:
OVERVIEW OF THE STUDY**

1.1 TITLE OF THE STUDY

Psychological factors contributing to aggressive or violent behaviour of adolescents in secondary schools.

1.2 INTRODUCTION

The present study seeks to identify intra- and inter-personal psychological factors contributing to aggressive or violent behaviour in adolescents by examining secondary school learners' experiences in specific domains, which include self-related well-being, coping self-efficacy, general health, inter-personal relationships and manifested aggression. By establishing a link between these psychological factors and aggressive or violent behaviour of participants in this research, the study could contribute to a deeper understanding of the role of certain psychological dynamics in aggressive or violent aspects of adolescent behaviour. The approach of this research study is from theoretical conceptualisations, and/or perspectives from fields of psychology, such as developmental and social psychology.

This overview of literature serves to describe, broadly and in some detail, the phenomenon of school violence and psychological aspects related to it.

1.3 BACKGROUND TO, AND RATIONALE FOR, THE STUDY

In the following pages, the origins of violence, and in particular school violence, will be discussed. The profile of a violent or aggressive adolescent will receive attention and various causes of violent behaviour in youth will be examined.

1.3.1 Violence.

The understanding of human violence is complicated. According to O'Toole (2000), thinkers, historians and scientists have explored and studied the topic for many centuries, but

the reasons/causes for violence in humans' remains vague. The causes of a violent act are usually multiple, complex, and entangled; the different mix of contributing factors varies according to the person perpetuating the violence, and the surrounding circumstances. It is difficult enough to understand violence after it has happened, but trying to assess a threat and keep it from being carried out, is even more of a challenge (O'Toole, 2000). Violence experienced at a young age could impact damagingly on the development of certain cognitive abilities and also on pro-social behaviours of the adolescent and thus, adversely influence scholastic development and performance, as well as impede the ability to function in a healthy way, both inside and outside the school environment (Burton, 2008). According to YU and SHI (2009) early aggressive behaviour could predict violent crimes and relentless aggression, which seems to be a crucial characteristic of later-onset violent crimes.

1.3.2 School violence.

South African schools have become arenas for violent behaviour, quickly and progressively. These days, schools are no longer considered safe and protected environments where children go to learn and develop, enjoy themselves and feel secure. Rather, schools have become unsafe and dangerous settings for teaching and learning (Van Jaarsveld, 2008). Gunfights have replaced fistfights, and fire drills have replaced crisis drills (Goldstein & Conoley, 1997). Principals and educators all over South Africa have reported increasing levels of violence, both learner-on-educator and learner-on-learner (Burton, 2008). According to O'Toole (2000), relevant questions asked when looking at school violence could be: Why a learner would bring a weapon to school and without any sensible reason, harm a fellow learner or a teacher? How did the learner come to the decision that violence towards a fellow learner or teacher would provide an answer to his/her problems or emotional needs? Were there signs along the way? What were the major influences from both family and friends?

What is the impact on the community? In other words, what were the psycho-social factors contributing to the violent act?

When describing the concept, Furlong and Morrison (2000, p.71) proposed that school violence is “a multifaceted construct that involves both criminal acts and aggression in schools, which inhibits development and learning, as well as harming the school’s climate”, while Hagan and Foster (2000, p. 5) stated that “school violence is the exercise of power over others in school-related settings by some individual, agency, or social process”. The World Health Organization (2002, p. 4) provided the following more general but comprehensive definition: “Violence is the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation”. Violence and crime in the school situation thus have across-the-board harmful consequences for education and these negatives could lead to the downfall of a learning culture. Furthermore, the occurrences of school violence could lead to serious physical, emotional and psychological problems, such as stress, depression, suicide, a decline in self-confidence, poor concentration and less frequent school attendance by both educators and learners (De Wet, 2003).

A recent study by Naidu (2008), based on prior studies of crimes against adolescents, indicated that secondary schools in both Gauteng and Limpopo have the highest rate of violence and that 15,3 percent of all learners between grades three and twelve in South Africa, had experienced violence at school. According to Burton (2008), at secondary schools, 14.5 percent of adolescents reported being threatened while at school; 4.3 percent of adolescents reported being assaulted at school; 5.9 percent of adolescents reported being robbed at school; and 3.1 percent of adolescents reported that they have experienced some form of sexual violence at school. Also at secondary schools, girls have been more likely to

be sexually assaulted or raped while boys have been found to be significantly more likely to be threatened, robbed or assaulted (Burton, 2008). School violence has been making news headlines, as this is a growing problem. The following are some incidents that were reported in the press:

- In 2008, a grade eleven learner, Sihle Msomi, from Mqhele Secondary in Clermont, passed away after being stabbed by a grade nine learner during their lunch break (Sookha, 2008).
- Also in 2008, two adolescent suspects handed themselves over to police after a grade nine learner from Bishop Lavis Secondary School in Cape Town was stabbed (Sookha, 2008).
- On 18 August 2008, in Krugersdorp, an 18-year-old killed a 16-year-old fellow school learner and wounded three other people at his school in a ninja-style samurai sword attack (Eliseev & Foss, 2008).
- A grade ten learner lost his eye during a fight with a classmate, when she stabbed him with a pen. This happened at Mncube High School in Mofolo, Soweto in 2008 (Dlamini, 2008).
- A grade ten learner was stabbed three times outside Hoër Tegniëse Skool Carel de Wet in 2009. Four boys waited for him after school and then stabbed him (Steenkamp, 2009).
- A teacher, Tania Jacobs' life fell apart eight years ago at Rhodes High School in Mowbray, Cape Town, when a 13-year-old learner mercilessly bludgeoned her on the head with a hammer – this in front of the learner's horrified grade eight classmates (Makwabe, 2009).

Not all violent acts occurring in schools have made news headlines and the school often deals with most of the incidents internally. Thus, the incident rate could likely be much higher than indicated by national statistics.

As far as probable risk factors in schools are concerned, high levels of arbitrary management and harsh disciplinary actions tend to characterise schools experiencing elevated levels of aggression (Goldstein & Conoley, 1997). School size also showed a relationship to violence; the larger the school, the higher the violence rate is likely to be. According to Goldstein and Conoley (1997), crowding is a problem, since aggressive behaviour occurs more often in crowded school locations such as bathrooms, stairways, locker rooms, hallways and entrance and exit areas, and not so frequently in the classrooms themselves. Elevated levels of aggression seem to be increased by low-level disorders such as bunking classes, late-coming, writing graffiti on the walls, wandering the halls, and littering in the classes and on the school grounds. Low-level disorder also invites adolescents to test the restrictions of acceptable behaviour more and more. When they succeed in getting away with the low-level disorder, they feel confident to challenge other stricter rules, like assaulting teachers or other learners (Goldstein & Conoley, 1997). Corporal punishment at both home and school could play a significant role in violent behaviour of youth. Corporal punishment at schools constitutes an assault on learners according to new educational laws, while educators feel that the lack of ability to control learners by using corporal punishment is one of the most important reasons for the increased levels of violence and the disrespect within schools (Burton, 2008). Burton (2008) further found that one in two secondary school learners report that their teachers still use corporal punishment when they had done something wrong at school, and one in five learners report that they are caned or spanked at home (Burton, 2008).

According to De Wet (2003), the causes of school violence are numerous and each violent incident unique. A large array of historical, educational, social, socio-economic,

juridical and political factors plays a role in school violence. Adolescents in South Africa frequently grow up in a culture that sees violence as a normal expression of negative feelings toward others. Such a culture of violence has resulted in some adolescents showing signs of intolerant and aggressive attitudes towards teachers, other learners and people in general.

O'Toole (2000) proposed that the profile of a typical violent or aggressive adolescent would include a variety of types of behaviour, personality traits and circumstances in the family, school and community setting. Some personality and behavioural characteristics could consist of lack of resiliency, poor coping skills, signs of depression, low self-esteem, alienation, need for attention, anger management problems, being a victim of violence, intolerance and an interest in violence-filled entertainment. O'Toole (2000) further proposed that there are various dynamics, which could add to violent behaviour in schools. *Family dynamic factors* that play a part in aggressive or violent behaviour may include a turbulent parent-child relationship, no limits set by the parents, a lack of intimacy and access to weapons. According to Burton (2008), more than one-third of adolescents in secondary schools, who have experienced violence at home, have also been victims of violence at school. When looking at *school dynamic factors* we may include the learner's attitude towards the school, fellow learners and authority, poor academic performance, disrespectful behaviour, lack of discipline and low school interest. *Social dynamic factors* could include the influence of peer groups, the role that media, social networking media, entertainment and technology play, social withdrawal, using drugs and alcohol, crime, poverty and being affiliated to gangs. Burton (2008) found a significant relationship between those learners who report living in an area characterised by a lot of fighting and crime, and those who have been victims of violence in school.

According to Klewin, Tillmann, and Weingart (2003), there are three noticeable categories of aggressive or violent behaviour by adolescents:

- a. *Physical injury and physical compulsion.* This includes conflict between two or more people in which at least one side uses physical ways (bodily force or weapons) to cause deliberate harm, or at least threaten such harm, to the other side. Assault is one of the most common forms of violence happening in schools, while robbery combines theft with the use of threat of violence and according to Burton (2008), robberies are also of the most widespread forms of violence in schools.
- b. *Verbal aggression and mental cruelty.* This category involves the degradation and embarrassment of an individual by making use of insults, humiliation, or emotional blackmail.
- c. *Bullying.* This category refers to a special kind of violence, including both mental and physical factors. It involves a victim/perpetrator association, in which the weaker individual is frequently oppressed and taunted. According to Sullivan (2011), bullying that starts at the beginning of childhood is a crucial factor for the development of future problems with violence and delinquency. Bullying takes various forms in which physical and verbal attacks, as well as indirect strategies, play a part (Klewin et al., 2003). The different types of bullying according to Sullivan (2011), are as follows:
- Physical bullying: includes hitting, punching, pushing, pinching, kicking, biting, scratching, hair pulling, choking, spitting, locking in a room, stalking, or any other form of physical attack and intimidation. This also includes damaging another person's property.
 - Psychological bullying: is an attack 'inside' the targeted person. The purpose is to harm the person with no evidence of any physical marks. There are two types of psychological bullying, namely verbal and non-verbal.
 - Verbal bullying includes insulting telephone calls, making cruel remarks, spiteful teasing, name-calling, spreading malicious and false

rumours, using sexually suggestive or abusive language, sending abusive messages or notes, and extorting money

- Non-verbal bullying can be direct or indirect. Direct non-verbal bullying frequently accompanies physical or verbal bullying, and includes offensive gestures and mean faces. Although this behaviour may not seem important, it can be part of a process and strengthen bullying that is already going on. Indirect non-verbal bullying is subtle and sneaky, and includes manipulating relationships and ruining friendships; and deliberately and often systematically excluding, ignoring and isolating someone.

Sullivan (2011) found that boys use more verbal and physical aggression than girls do, while girls use more indirect forms of bullying such as destruction of friendships and exclusion. Adolescents who bully can pretend that fights and teasing are fun. They make them appear to be conflicts between equals. In doing so, they shame the victim, emphasise their own power and uphold the secrecy of the bullying (Sullivan, 2011).

Sullivan (2011) furthermore stated that bullying contains the following elements:

- Bullying is abusive and cowardly
- Harm is intentional
- It is recurring and can occur over a short or long period
- The bully has more power than the victim
- It is often concealed from people in authority (school management)
- Bullies do not anticipate getting caught, or to bear any consequences
- Bullies are feared for their bullying behaviour
- Bullying can undermine and harm the physical and mental well-being of the victim
- Bullying can be planned, organised and systematic, or it can be opportunistic

- It may communicate a sense of menace to those who are witnesses of the bullying but not contributors to it
- All bullying causes psychological harm

Bullies have certain features, which include having parents that are more likely to be authoritarian, rejecting, or permissive about their child's aggression (Meece & Daniels, 2008). Sullivan (2011) found that an adolescent who is prone to developing feelings of inferiority and resentment, and who has a need to dominate others, often comes from a dysfunctional family where relationships are poor and communication is minimal or non-existent. Sullivan also suggests that most self-reported male bullies come from a dysfunctional family, typically lacking in love, support and a sense of belonging. Families that do not provide limits and monitoring are prone to increase antisocial behaviour and poor relationship skills in adolescent family members (Sullivan, 2011).

Sullivan (2011) reported that adolescents who displayed antisocial behaviour, such as aggression or delinquency, were more likely to be bullies than other adolescents were. Confident, anxious and passive are different forms of bullies. Confident bullies are regarded as aggressive, impulsive, domineering, having a positive view of violence, and lacking empathy with their victims. Anxious bullies are usually adolescents who are academically weak and often unpopular. Their bullying evokes a reaction from the victim and gives them a brief sense of power. Passive bullies typically live in a socially and emotionally chaotic environment in which they are unruly, hostile and disturbed. They are likely to victimise some adolescents and to be victimised by others (Sullivan, 2011).

Bullying behaviour has lasting consequences for both the bully and the victim (Meece & Daniels, 2008). Those who are bullied state that they find it difficult to make friends and they are generally lonely, whereas those who do the bullying often have low grades, smoke, and drink alcohol (Santrock, 2008). Adolescents, who are known to be bullies, are more

inclined to be implicated in other forms of antisocial behaviour such as shoplifting, writing graffiti on walls, truancy, and getting into trouble with the police (Sullivan, 2011). According to Santrock (2008), bullies usually have a higher prevalence of sleeping problems, feeling tired, headaches, and abdominal pain. They are inclined to experience post-traumatic stress disorder (PTSD), depression, suicide ideation, and attempt to commit suicide more than other adolescents who are not involved in bullying (Santrock, 2008).

In the above discussion, the concept of violence in youth and in particular school violence received attention. The profile of a typical violent or aggressive adolescent was also discussed. It seems clear that most perpetrators of school violence are in the adolescent stage of development (O'Toole, 2000), which will be briefly discussed in the following section.

1.3.3 Adolescence.

Adolescence is a developmental stage of transition and is complex and demanding, while including biological, psychological, social and economic challenges for the adolescent. Adolescence is one of the most difficult developmental periods, as adolescents must go through various physical and psychological transformations in preparation for adulthood (Steinberg, 1993). In most societies, adolescence is a period of growing up; of moving from the immaturity of childhood into the maturity of adulthood. Adolescence is the crossing from infancy to adulthood, where the picture of 'I' ultimately emerges (Steinberg, 1993), and therefore, the development of self-awareness and identity formation starts in infancy and continues throughout adolescence (Heaven, 2001). The development of an integrated self-concept and a functional identity take place during adolescence and thus, the adolescent has the challenge to integrate his/her psychological, physical and sexual identity (Heaven, 2001). An essential task during identity formation for adolescents is to develop ego identity, which is a sense of who they are and what they stand for (Rathus, 2011).

As stated above, all adolescents experience intricate developmental challenges throughout this period. Their sexual organs become functional (they produce hormones and are prepared for reproduction) and the difference between males and females is more visible, as well as in emotional and personal development. Laursen and Bukowski (1997, p. 763) succinctly described the adolescent as moving from “a state of being dependent, passive, and relatively asexual to a state of being responsible, assertive, and capable of sexuality”. As a transition stage, adolescence thus implies severe changes on both an anatomical, and a psychological level, presenting psycho-social adjustment demands that could be too much for certain adolescents, and end in dysfunctional adaptive behaviour such as aggression (Louw & Louw, 2007; Sigelman & Rider, 2006).

According to Michael and Ben-Zur (2007), risk-taking behaviours, often of an aggressive or violent nature, for example delinquency, careless driving, homicidal and suicidal behaviours, substance use, premature and unprotected sexual behaviour, eating disorders, and dangerous sports, increase in the period of adolescence. Adolescents, in the transition stage to finding their own identity, have added courage, are more optimistic and excited, and are in pursuit of sensation and adventure, leading to the taking of more risks (YAĞCI & ÇAĞLAR, 2010). Risk-taking behaviour is often the result of an, as yet, incomplete cognitive maturation of the adolescent’s neurological functions that guide complex cognitive processes such as self-regulation, impulsivity control, and cognitions involved with complex moral-, emotional-, motivational- and social regulation of behaviour (Parritz & Troy, 2011). Such cognitive immaturity could lead to behaviour often characterised by violent and/or aggressive acts, that is based on a self-perception of invincibility and immortality, which seriously detracts from good judgement and the ability to understand the consequences of such risk-taking behaviour (Patterson, 2008).

As mentioned previously, authors like O'Toole (2000) have identified psychological indicators associated with aggressive or violent behaviour in adolescents (learners in secondary schools). For the purpose of this study, intra-personal psychological aspects such as self-related well-being, coping self-efficacy, general health, and anger/hostility/aggression will be researched, as well as inter-personal psychological aspects such as family and social relationships. A brief discussion of these concepts, in relation to aggressive or violent behaviour of youth, follows.

1.3.4 Intra-personal psychological aspects.

1.3.4.1 Self related well-being.

Self related well-being or a coherent sense of self refers to intra-personal psychological components of an adolescent, such as self-concept, self-esteem and self-efficacy.

Self-concept implies the knowledge, beliefs, attitudes, and ideas individuals have about themselves. This self-knowledge is hierarchically organised into categories and dimensions that define the self and serve to guide behaviour as seen in Figure 1.1 (Meece & Daniels, 2008, p. 360).

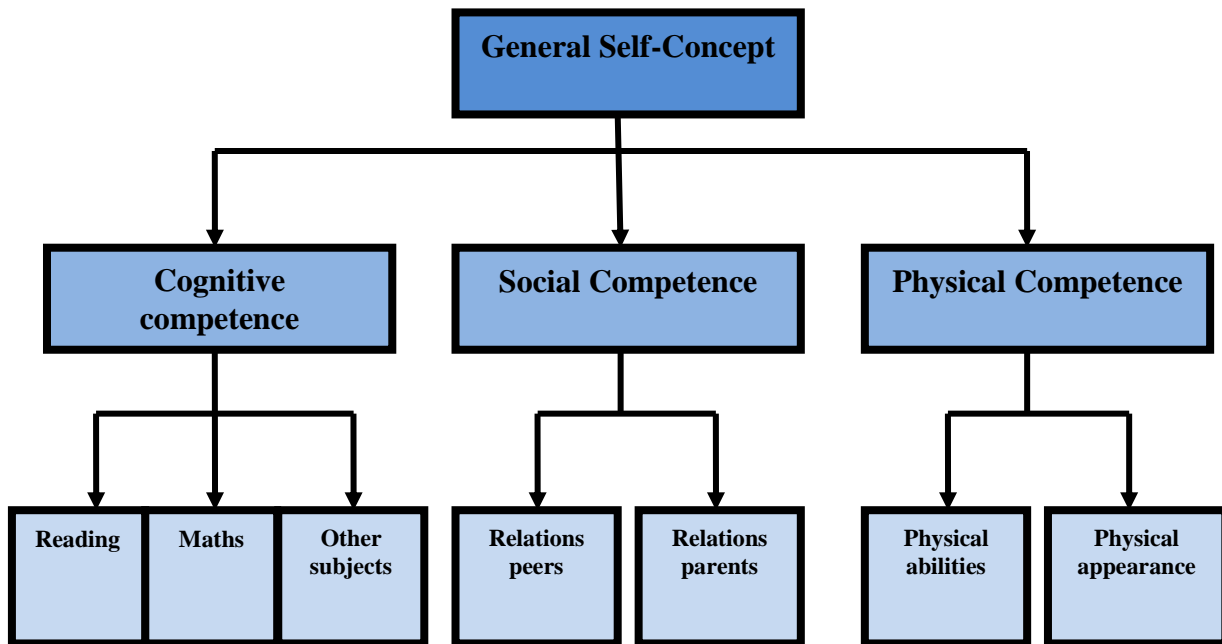


Figure 1.1: Hierarchical structure of self-concept

(Meece & Daniels, 2008, p. 360)

In line with their cognitive development, adolescents' conceptions of self become abstract and complex. They begin to realise that they could have an actual self (the real me) and a possible self, and the latter could be distinguished as an ideal self (what I would like to be) and a feared self (what I dread to be). These selves exist as ideas or images of self in the adolescent's mind, and a large discrepancy between these concepts of self (real versus ideal) may result in feelings of failure, inadequacy, depression and even self-anger that could manifest in aggressive behaviour (Louw & Louw, 2007).

Self-esteem involves an evaluation of one's traits, abilities, and characteristics; in essence, a global perception of one's overall worth as a person characterised by self-acceptance and respect for oneself (Meece & Daniels, 2008). According to Rice (1990), self-esteem is thought of as the survival of the soul and is the element that gives dignity to human existence. It grows out of human contact, in which the self is considered significant to

someone, and thus individuals whose identities are weak, or whose self-esteem has never adequately developed, manifest various symptoms of emotional ill-being.

Tiggemann (2005) stated that self-worth becomes most important when the key developmental task is the establishment of identity and a coherent sense of self. Thus, self-consciousness, self-awareness and introspectiveness all evidently increase, and adolescents often become preoccupied with how they appear in the eyes of others. Adolescence is also the period when there is a prominent dip in self-esteem (Carr, 2004).

A common thought is that there are many benefits to having a positive view of the self (Heatherton & Wyland, 2003). Allegedly, people who have high self-esteem are psychologically healthy and happy, whereas people with low self-esteem are psychologically anxious, and even depressed. Those with positive self-value feel good about themselves are able to deal with negative criticism and challenges successfully, and live in a social world in which they trust that people value and respect them. By contrast, individuals with low self-esteem see the world through a negative filter, and their dislike for themselves affects their perceptions of everything around them. Substantial evidence, according to Heatherton and Wyland (2003), shows a link between low self-esteem and depression, loneliness, shyness, alienation and ultimately anger/hostility/aggression.

In Figure 1.2, behavioural indicators of positive and negative self-esteem are identified, as researched by Santrock (2008).

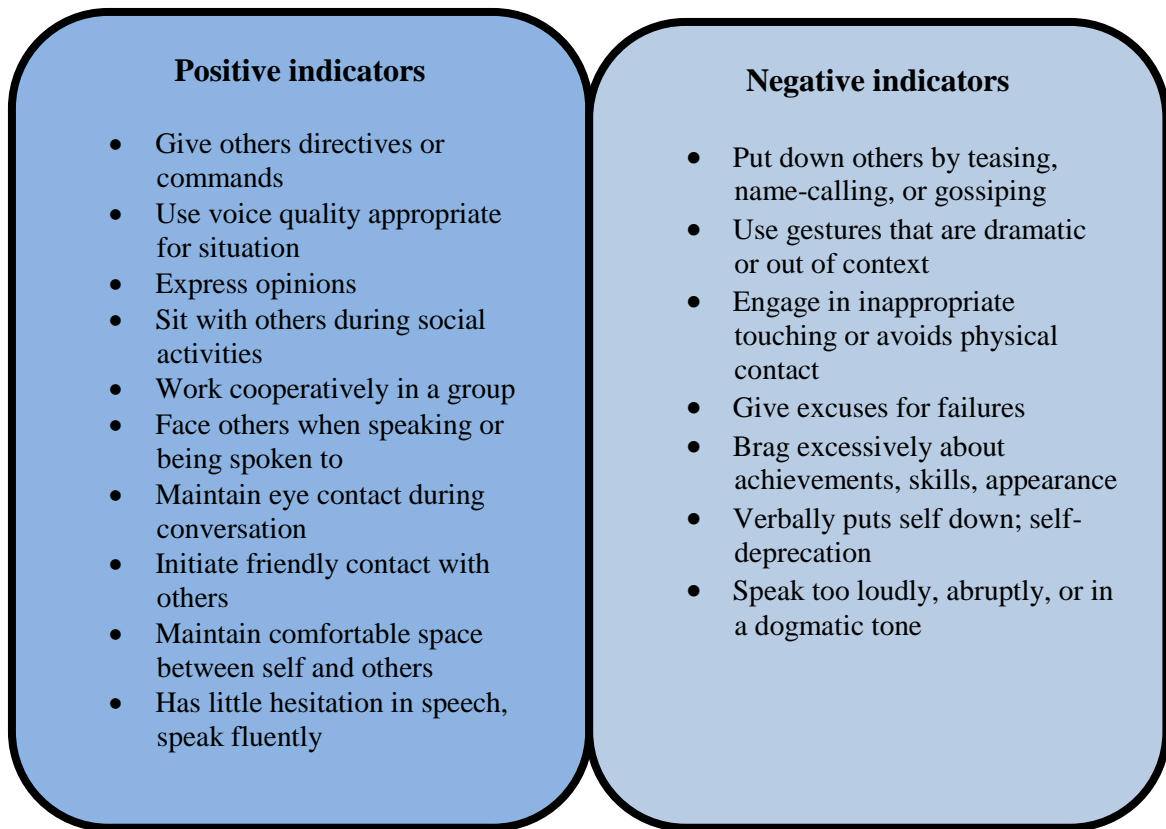


Figure 1.2: Behavioural indicators of self-esteem

(Santrock, 2008, p. 141)

Adolescents who have low self-esteem are exceedingly vulnerable to rejection, criticism, or any other proof in their daily lives that testifies to their worthlessness, incompetence, inadequacy, or poor social adjustment (Rice, 1990). In addition, an adolescent with low self-esteem may describe himself/herself as a bad person (Santrock, 2008). Low self-esteem has been linked with aggressive or violent behaviour and there is a particularly negative relationship between delinquency and self-esteem (Santrock, 2008).

Self-efficacy is a concept closely linked to self-esteem, and it refers to the beliefs a person holds about his/her potential of initiating and performing life tasks that successfully lead to achieving one's goals. These efficacy beliefs establish one's life expectations; and therefore, guide behavioural performance that in turn determines the outcomes of one's

actions (Carr, 2004; Chesney, Neilands, Chambers, Taylor, & Folkman, 2006). According to Chesney et al. (2006), self-efficacy leads to the knowledge of personal competence to master life's challenges; and therefore, to adaptive coping, which decreases psychological distress and dysfunctional behaviour. A low sense of self-efficacy is linked to emotional, cognitive and motivational incompetence in dealing with demands and stress, and often to dysfunctional attempts to compensate for the lack of mastery of experiences (Carr, 2004).

For the purposes of this study the self related well-being aspects of self-concept and self-esteem are combined in the measuring instrument of Fouché and Grobbelaar (1971); the Personal, Home, Social and Formal Relations Questionnaire (PHSF).

1.3.4.2 Coping.

Coping according to Santrock (2008), can be defined as controlling challenging circumstances, expending effort to work out life's problems, and seeking to master or reduce stress. A sense of personal control, personal resources and positive emotions can be linked with success in coping (Santrock, 2008). Ways or strategies of coping play a vital role in adolescents' individual reaction to stress, and coping styles that deal with problems are more accountable for well-being, than coping styles that are problem ignorant or avoidant (Carr, 2004). According to Ebersöhn and Eloff (2003), the effectiveness of a coping style depends on a mixture of variables such as, personality factors, values, the phases of intensity and controllability of the stressful events, accessible support systems, and cognitive evaluations. Coping strategies can, however, also be destructive or dysfunctional and lead to futile, unsatisfying processes, relationships and outcomes, and such destructive coping strategies often alter conflict processes in harmful ways, that lead to a rise in conflict, and eventually, to aggression and violence (Frydenberg, 1999). In contrast, adolescents who use positive coping strategies do not usually become involved in aggressive or violent behaviour. They make use

of their coping strategies to deal with the harmful or stressful situations they are confronted with (Carr, 2004).

For the purposes of this study the coping and self-efficacy constructs are combined in the measuring instrument, the Coping Self-Efficacy Scale (CSE), of Chesney et al. (2006) that measures coping self-efficacy, or a person's confidence that their coping behaviours will be effective in dealing with life's challenges.

1.3.4.3 *General health.*

Goldberg and Hillier (1979) described general health as the capability of a person to carry out his/her normal healthy functions. According to the World Health Organization's Ottawa Charter (1986, p. 1), "good health is a major resource for social, economic and personal development and an important dimension of quality of life". The construct of general health, introduced by Goldberg and Hillier (1979), indicated that certain aspects of physical health, sleeplessness and anxiety, depressed affect and social dysfunction are important precursors of health problems that may manifest in behaviour such as aggression.

The Health Minister in 2002, Dr. Manto Tshabalala-Msimang stated in a SAPA press release on 12 December 2002, that South Africa had long documented violence as a health concern and that the health department was running various programmes to combat the problem (Anonymous, 2002). Furthermore, a multitude of South African adolescents are malnourished (either under-, over- or misfed), show symptoms of depression, post traumatic stress, anxiety, are physically or sexually abused and/or are experimenting with substances (Hook, Watts, & Cockcroft, 2002; Louw & Louw, 2007). All these factors, and others not mentioned here, may influence an adolescent's mental and physical health status and may lead to aggressive behaviour.

Anxiety particularly, can lead adolescents to act aggressively or become violent towards others. According to Robinson and Clay (2005), adolescents with elevated levels of

anxiety have been found to react less to positive information; they also experience a restriction in cognitive processes that leads to hypersensitivity of potentially intimidating interpretations of vague information. Anxious adolescents are thought to have trouble processing information due to the over analysis of threat and bias for negative information. Allegedly, this difficulty results in either the need to better reappraise information, failure to process information in a tactical fashion, or a defensive reaction such as aggression or violence (Robinson & Clay, 2005). In contrast, adolescents with low levels of anxiety are better able to handle their feelings of aggression and to avoid being violent towards others.

Crime and violence in secondary schools threaten the well-being of adolescents (Eliasov & Frank, 2000), and experiences of aggression and violence may cause them to become aggressive or disturb their normal functioning, thereby affecting their mental and/or physical health (Newman & Newman, 2003). Poor school performance and dropping out of school are linked to a multitude of health and social problems, including violence (Anonymous, 2001). Adolescents display unique responses when they are under too much pressure. When their coping efforts are unsuccessful in reducing stress, an adolescent may display other symptoms, such as temper tantrums, elevated irritability, inflicting pain on themselves, agitation, defying authority and eventually, aggressive or violent behaviour (Vogel, 2002).

It thus appears that impaired physical or mental health in an adolescent may be linked to aggressive behaviour, or result from the experience of such behaviour. For the purpose of this study a short form of the operationalised construct of Goldberg and Hillier (1979), the General Health Questionnaire (GHQ-12) will determine the levels of general health of participating adolescents.

1.3.4.4 *Anger, hostility and aggression.*

Anger is a state of arousal that results from social experiences and conditions, which involves threat or frustration (Kerr & Schneider, 2008). Anger is a momentary thought or a feeling that needs to get out of one's system, while the reasons that make people angry are, amongst others, being put down, obstructions, unfairness, not being taken seriously, facing a disbelieving attitude and facing an attack (YAĞCI & ÇAĞLAR, 2010). The expression of anger may be directed inward or away from the self and onto others, and be manifested by aggressive or violent actions. Although anger may be a normal feeling, it is often something that is hard to control and may lead to negative behaviour. According to YAĞCI and ÇAĞLAR (2010), anger has behavioural, physical and psychological dimensions, which can be revealed through physical gestures and physical appearances, *inter alia* sweating, tense muscles, a red face, having a dry mouth, feeling of suffocation, feeling cold, numbness and frowning.

Hostile aggression according to Baron and Byrne (2003, p. 436), can be defined as “aggression in which the prime objective is inflicting some kind of harm on the victim”, while YAĞCI and ÇAĞLAR (2010) defined a hostile individual as someone who has feelings of dislike towards others.

Research indicates that antisocial behaviour, including **aggression**, appears to be a developmental characteristic that starts early in life and often continues into adolescence and adulthood, but is more prominent in high-risk behaviour during adolescence (Newman & Newman, 2003; Zirpoli, 2008). Lacan (1977, 1979) described such a developmental trait as aggressivity, as compared to aggression. The latter specifically denotes violent behaviour, whereas aggressivity points to a wide range of aggressive, rivalrous and hateful emotions, which may manifest in covert and overt behaviours (Hook et al., 2002).

Aggression often has serious consequences for both the perpetrator and those in his or her surroundings, and aggression is often seen as inappropriate behaviour. Meece and Daniels (2008, p. 424) defined aggression as “behaviour that is intentionally aimed at harming or injuring another person”, and stated that verbal abuse, destruction of property, harassment, derogatory racial, gender or antigay remarks, obscene gestures, and even vicious gossip are also forms of aggression. According to Meece and Daniels, there appears to be no single cause for aggression, and it is seen as an interaction of the adolescent’s own characteristics, family environment, culture, peer relations and community. Aggression and the inter-personal violence that results from it, may lead to illnesses, injuries and deaths (Michael & Ben-Zur, 2007).

Medina, Margolin, and Gordis (2002), found that childhood contact with violence is associated with a range of aggressive and other maladaptive behaviours that can upset adolescents’ academic competence and school adjustment. Increased aggression, ‘meanness’, fighting and generally disruptive behaviour have been connected with exposure to intra-familial violence. The development of delinquency, aggressive behaviours and suicide attempts are all strongly linked to having experienced early physical abuse, being a victim of violence, and harsh corporal punishment (DuRant, Getts, Cadenhead, & Woods, 1995). Medina et al. (2002) further reported that adolescents who have been exposed to intra-familial violence have more problems that are disciplinary at school than their non-exposed peers, and are more likely to be suspended. As reported by teachers and parents, increases in antisocial behaviour and aggression have been linked with exposure to community violence. Adolescents exposed to adult violence, mostly intrafamilial adult violence, may see and learn from these adults that aggressive behaviour is a practical problem-solving option, and that physical aggression in close relationships is normal.

According to Medina et al. (2002), researchers have observed that exposure to violence is connected to problems in regulating frustration, anger, and other negative feelings, as well as deficits in understanding and experiencing empathy for the feelings of others. These difficulties can cause significant social and behavioural problems for adolescents. As a result, it seems that one way in which adolescents cope with overwhelming negative feelings is through behavioural distraction, which may be aggression. As soon as aggression becomes a major part of an adolescent's life, it can increase in intensity and become self-reinforcing because it offers a way to ease tension and to control and manipulate others (Meece & Daniels, 2008).

Conduct disorder, which is one of the most troubling adolescent problems, is characterised by antisocial and/or disruptive behaviour and overt aggression (Meece & Daniels, 2008). According to the American Psychological Association (cited by Meece & Daniels, 2008), to be diagnosed with conduct disorder an adolescent must manifest at least three of fifteen symptoms within the preceding twelve months, with at least one occurring within the preceding six months. The following are four such manifestations of conduct disorder:

- a. Aggression – Starts physical fights, bullies others, threatens, intimidates, uses a weapon, has been physically cruel to people or animals, has stolen while confronting a victim, forced sex on someone.
- b. Destruction of property – Deliberately sets fires to cause serious damage, and intentionally destroys property.
- c. Lying or theft – Lies to avoid responsibility or to get things, cons others, breaks into private property and often steals valuables without confrontation.

- d. Serious violation of rules– Starting before the age of 13, often stays out late at night without permission, has run away from home overnight at least twice, and often stays away from school.

For the purposes of this study, anger, hostility and aggression constructs are combined in the measuring instrument, the Aggression Questionnaire (AQ) of Buss and Perry (1992).

In the preceding pages, intra-personal psychological aspects that could lead to violent or aggressive behaviour in youth have been briefly described. Inter-personal psychological or psycho-social factors that could play a role in such behaviour will be explored briefly in the next section.

1.3.5 Inter-personal psychological aspects.

According to Garbarino (2001), the build up of exposure to violence across several settings, including home, school and community, coupled with being a victim of aggression and with low parental monitoring, all create a situation in which adolescents may show serious aggressive behaviours.

1.3.5.1 Home relations.

Research showed that aggression seems to be a developmental trait that starts early in life and usually continues into adolescence and adulthood (Zirpoli, 2008). According to Zirpoli, aggressive or violent behaviour develops as a consequence of the adolescent's behaviour in interaction with the social environment and the adolescent's parents. Aggressive behaviour may start because of family factors, such as poor adult supervision and/or harsh parental discipline, which may result in the adolescent being 'taught' to engage in aggressive behaviour. Ineffective or inconsistent parental discipline can lead to a coercive family process, which is one of the strongest predictors of aggressive behaviour (Meece & Daniels, 2008). Meece and Daniels further stated that parents, who frequently use physical power to control other people, offer an aggressive model to adolescents, and those aggressive

adolescents often receive little positive reinforcement when they do demonstrate nonviolent behaviour. Without direction from parents, the adolescent may become impulsive, aggressive and noncompliant, and if the parents give in to such behaviour, it increases the probability that the adolescent will react to future requests for compliance with resistance, hostility and negativity (Meece & Daniels, 2008). Aggressive behaviour may also be positively reinforced by parents' approval, attention and laughter, pertaining to such aggressive acts, which serves to perpetuate the behaviour (Zirpoli, 2008).

According to Medina et al. (2002), exposure to violence goes hand-in-hand with several other adverse life experiences. Adolescents living with violence normally experience other stressors, such as parents' psychopathology and unemployment, poverty, poor nutrition, neglect, lack of medical care, substance abuse and overcrowding. These factors can exacerbate and broaden the negative effects of violence exposure in adolescents (Medina et al., 2002).

1.3.5.1.1 Parenting styles.

According to Boulter (2004), child-rearing styles are patterns of parenting behaviour that form a pervasive family climate and determine the level to which the adolescent will develop self-control, effective social skills and the ability to comply with rules. There are four different types of child-rearing styles:

- a. Authoritarian child rearing is characterised by parents who set many rules without explaining them and who demand respect and obedience through coercive ways, such as commanding, yelling and criticising. Boulter (2004) stated that adolescents raised in authoritarian homes are more inclined to be poor decision-makers and withdrawn, and they could be in danger of developing violent behaviour due to aggressive thoughts and feelings, that they harbour.

- b. In permissive child rearing, parents make hardly any demands for respect or obedience, or set a small number of, if any, rules. Adolescents raised by permissive parents often defy authority, have difficulty with impulse control and are at a higher risk for antisocial and aggressive behaviour (Boulter, 2004).
- c. Uninvolved parents are emotionally withdrawn and detached and make few demands for respect or obedience. According to Boulter (2004), they are indifferent to the adolescent's decisions and are not interested in the adolescent's opinions. Adolescents raised in these homes are at a considerably higher risk of adjustment problems, *inter alia* violent and antisocial behaviour.
- d. In contrast to the abovementioned parenting styles, authoritative parenting can help adolescents internalise standards that may open them to positive influences and possibly protect them against negative peer influences (Papalia, Olds, & Feldman, 2009). Authoritative parents make reasonable demands and set up reasonable rules and consistently enforce the rules and explain them. At the same time, they are warm, responsive, attentive and sensitively connected to the child's needs. Boulter (2004) was of the opinion that adolescents raised in homes with authoritative parents, are mainly effective in a variety of social situations, they are independent, morally-mature, self-controlled, and perform well in school. Improved parenting during adolescence can lessen aggression and violence by discouraging friendship with deviant peers and violence-related acts (Boulter, 2004).

According to Medina et al. (2002), there are high rates of co-occurrence between intra-familial violence and exposure to community violence, and co-occurrence has been detected between parent-to-child violence and inter-parental violence. These different forms of violence are regularly recurring events in dysfunctional families. Even though adolescents exposed to such forms of violence frequently have a greater need for protection and

nurturance than adolescents with no such stressors do, they may in fact have less access to social support from their parents (Medina et al., 2002).

1.3.5.1.2 Poverty.

According to Papalia et al. (2009), the development of antisocial behaviour may be influenced by family economic circumstances. Poor adolescents are more prone than other adolescents are to commit aggressive or violent acts. Studies conducted in the United States of America show that one of the strongest predictors of youth violence is the socio-economic status of the family (Collings & Magojo, 2003).

1.3.5.2 Social relations.

Social relations play an important part in aggression and violence in adolescents. Situations within a school and the relationships and norms that exist there may be a cause of school violence (Van Jaarsveld, 2008). The school is the most common social setting for adolescents and is the place where adolescents act out socially; consequently, it is the most general place where inter-personal rivalries take place.

1.3.5.2.1 Social adjustment.

Social adjustment is about the quality of relationships with other people, the neighbourhood and the community, that the adolescent experiences and maintains (Papalia et al., 2009). Beliefs of an adolescent, that his/her world is logical, understandable, predictable; positive attitudes toward other people; a sense of being part of a supportive community; and beliefs that he/she has an important role to play in society, are significant building blocks of the mental well-being of adolescents (Keyes & Shapiro, 2004).

However, the social adjustment of an adolescent can also be compromised. During adolescence, there are noticeable changes in attachment to family, peers and school. Insecurity and disruption in any of these relationships carries a threat of emotional, social and behavioural problems (Patton, Bond, Butler, & Glover, 2003). Adolescents' views of

themselves and the world, their ideas about the purpose of life and meaning, their expectations for future happiness, and their moral development, would most likely be affected by exposure to aggression and violence (Medina et al., 2002).

1.3.5.2.2 Peer group.

The relationship with the peer group functions as a basis of temptation and endangerment, and as an important source of social support (Michael & Ben-Zur, 2007). Social identity theory concerns the consequences of perceiving the self as a member of a social group, and identifying with it. Adolescents want to feel optimistic about the peer groups to which they belong, and some of their self-esteem depends on identifying with social groups (Baron, Byrne, & Branscombe, 2006). According to Michael and Ben-Zur (2007), peer pressure often encourages involvement in risky behaviour involving dangerous acts and therefore, peers often play a significant role in the development of aggression in adolescents.

As adolescents witness their peers carrying weapons and using them to resolve conflicts, substantial attitude changes toward the acceptability of carrying weapons are likely to occur (DuRant et al., 1995). Aggressive adolescents tend to have less well-behaved peers who can stand as positive role models, and relations with aggressive or delinquent peers tend to strengthen and uphold existing problem behaviour (Meece & Daniels, 2008).

1.3.5.2.3 Juvenile delinquency.

According to Santrock (2008), juvenile delinquency refers to a broad variety of behaviours from criminal acts (such as burglary) to socially unacceptable behaviour (such as acting out in school) and to status offenses (such as running away).

Rice (1990) noted that delinquent adolescents often have low self-esteem and therefore, they take up deviant patterns of behaviour to decrease self-rejecting feelings. They seek to restore their self-respect by associating themselves with deviant adolescent groups

that give them the approval denied by the rest of society. Throughout adolescence, they are preoccupied with attempting to reconcile their negative self-esteem with what they perceive to be their ideal selves (Rice, 1990).

Table 1.1 below, presents various antecedents of delinquency, a short description of each antecedent, and also the association with delinquency (Santrock, 2008). The information gives a clear indication of how delinquent adolescents are influenced by various factors and their surroundings, and how this can contribute to their aggressivity and violent behaviours.

Table 1.1

Antecedents of delinquency

ANTECEDENT	ASSOCIATION WITH DELINQUENCY	DESCRIPTION
Authority conflict	High degree	Youth show stubbornness prior to age 12, then become defiant of authority
Covert acts	Frequent	Minor covert acts, such as lying, are followed by property damage and moderately serious delinquency, then serious delinquency
Overt acts of aggression	Frequent	Minor aggression is followed by fighting and violence
Identity	Negative identity	Erikson argues that delinquency occurs because the adolescent fails to resolve a role identity
Cognitive distortions	High degree	The thinking of delinquents is frequently characterized by a variety of cognitive distortions (such as egocentric bias, externalizing of blame, and mislabelling) that contribute to inappropriate behaviour and lack of self-control
Self-control	Low degree	Some adolescents fail to acquire the essential controls that others have acquired during the process of growing up
Age	Early initiation	Early appearance of antisocial behaviour is associated with serious offenses later in adolescence.
Sex	Male	Boys engage in more antisocial behaviour than girls do, although girls are more likely to run away. Boys engage in more violent acts
Expectations for education and school grades	Low expectations and low grades	Adolescents who become delinquents often have low educational expectations and low grades. Their verbal abilities are often weak
Parental influences	Monitoring (low), support (low), discipline (ineffective)	Delinquents often come from families in which parents rarely monitor their adolescents, provide them with little support, and ineffectively discipline them
Sibling relations	Older delinquent sibling	Individual with an older delinquent sibling are more likely to become delinquent
Peer influences	Heavy influence, low resistance	Having delinquent peers greatly increases the risk of becoming delinquent
Socio-economic status	Low	Serious offenses are committed more frequently by low-socio-economic status
Neighborhood quality	Urban, high crime, high mobility	Communities often breed crime. Living in a high-crime area, which also is characterised by poverty and dense living conditions, increases the probability that a child will become a delinquent. These communities often have grossly inadequate schools.

Source: (Santrock, 2008, p. 491)

1.3.5.3 *Community relations.*

According to Van Jaarsveld (2008), sudden social changes inside communities have been found to produce instability, which in turn could create acts of aggression and violence in adolescents. There is a common belief that violence in schools is caused by societal cultures, which tolerate, encourage and demand violence. In South Africa, this occurrence has become known as the ‘culture of violence’. This is because of the increased incidence of violence in our country, which South Africans have come to accept and see as a normal part of everyday life.

Social learning theory, according to Kaplan (2000), is the process of learning through imitation and observation. Adolescents may thus learn to be aggressive or violent through observing other, usually significant, people displaying or engaging in aggressive or violent behaviours. Social learning theory thus, provides a theoretical relation between exposure to community violence and the development of aggressive or violent behaviour in adolescents (Collings & Magojo, 2003). According to De Wet (2003), adolescents who are raised in socially confused townships with high levels of violence and crime, high residential mobility, physical deterioration and a lack of pride in their community, exhibit a significantly greater tendency for aggression and violence, than adolescents who live in stable communities. Observing or taking part in violence may add to an adolescent’s tendency to engage in it, and some adolescents may see aggression as a form of entertainment. Aggressive music and media violence may further encourage or raise emotional responses possibly leading to aggression or violence (Gentile, 2003).

Furthermore, many societal influences may motivate adolescents to engage in aggressive or violent acts. According to Papalia et al. (2009), these societal influences could include the presence of gangs at schools, ready access to guns, having been exposed to media violence, having witnessed or been victims of neighbourhood violence, and living in unstable

inner-city neighbourhoods with little community involvement and support. In the following paragraphs, these societal influences will be discussed in some depth.

1.3.5.3.1 Weapons.

More recently, there has been a prevalence of weapons, drugs and alcohol at many schools. Research showed that up to three in ten learners at secondary schools report that it is easy to access a knife at school and that they are aware of fellow learners who have brought weapons to school (Burton, 2008). Even though the occurrence of students bringing guns to school is fairly recent, it has become so widespread that some information is known about such behaviour (Goldstein & Conoley, 1997). Although the cited information refers to the American context, it is my opinion based on recent newspaper reports, that the trends are similar in South Africa.

From Table 1.2 below, it is evident that most adolescents, who are gaining access to guns, obtain them from friends or family members. The majority of adolescents indicated that they wanted a gun for protection, or because their ‘enemies’ had guns. The previously referred to culture of violence, becomes evident in these statistics, and the levels of threat that these youth experience, as well as their resulting aggressive response to the sense of insecurity they experience.

Table 1.2

Gun sources, reasons for acquiring guns, and reasons for using guns

<u>GUN SOURCES</u>	
Friend	38%
Family member	23%
The street	14%
Gun/pawn shop	11%
Drug addict	6%
Drug dealer	2%
Stolen	2%
Other	4%

<u>REASONS FOR ACQUIRING A GUN</u>	
Wanted for protection	53%
Enemies has guns	21%
Wanted to get someone	10%
Wanted to impress someone	8%
Friends had one	5%
Wanted to sell the gun	3%

<u>REASONS FOR USING THE GUN</u>	
Drugs/gangs	18%
Long-standing disagreements	15%
Playing with or cleaning it	13%
Romantic disagreements	12%
Fights over material possessions	10%
Depression	9%
Vendetta (against other peers)	6%
Racial slurs	5%
Name calling	4%
Vendetta (against school employee)	4%
Undetermined	4%

Source: (Goldstein & Conoley, 1997, p. 12)

Table 1.3 presents the school locations at which guns were used, and during which school activities (Goldstein & Conoley, 1997).

Table 1.3

School locations where, and activities during which guns were used

<u>LOCATIONS</u>	
Hallways	25%
Classrooms	19%
School grounds	15%
Adjacent property	9%
Athletic facilities	8%
School buses/taxi's	7%
School parking lot	5%
Cafeteria	4%
Restrooms	2%
Auditorium	1%
Undetermined	5%

<u>ACTIVITIES</u>	
Between classes	32%
During classes	22%
After school	16%
At lunchtime	8%
During athletic events	8%
During transportation to and from school	7%
Before school	5%

Source: (Goldstein & Conoley, 1997, p. 13)

From Table 1.3, it is clear that most incidents of gun-related activities at school happen in the hallways when learners are moving between classes and classrooms during school time, which creates the impression that firearms may have assumed social value or status, as well as being a show of personal power in the adolescent context.

1.3.5.3.2 *Alcohol and substance abuse.*

Substance abuse is linked to many different problems, and the consequences become more severe with greater use. Adolescents who use alcohol or drugs are often more prone to

have depression or other psychological problems, experience problems in school, and are aggressive or violent (Meece & Daniels, 2008).

1.3.5.3.3 Media violence.

How strongly does media violence influence an adolescent's behaviour? According to Meece and Daniels (2008), a large amount of television violence early in childhood can have long-term effects on later development, and exposure to such violence increases the acceptance and probability of aggression. There is an augmented concern regarding adolescents who play aggressive and violent video games, especially those that are very realistic (Santrock, 2008). According to Santrock (2008), adolescents who play such games extensively are more likely to be aggressive, to engage in delinquent acts, be less sensitive to real-life violence and achieve lower grades in school. The difference between violent games and violent television is that the games can engage adolescents so strongly that they experience an altered state of awareness in which logical thought is suspended, and highly arousing aggressive scripts are increasingly likely to be learned. Another distinction is that game players receive immediate rewards (winning points) for their behaviour (Santrock, 2008).

1.3.5.3.4 Vandalism.

Vandalism not only costs money, it has social costs as well. According to Goldstein and Conoley (1997), the social cost of vandalism is summarised in three factors, namely its psychological impact on both teachers and students such as fear, its impact on the school's educational program, and the degree of unruliness that it causes in group or intergroup relations.

1.3.5.3.5 Gangs.

Gangs are often made up of adolescents from low-income and ethnic minority backgrounds (Santrock, 2008). Gangs regularly engage in violent and criminal activities and

use these activities as a sign of gang identity and loyalty. According to Santrock (2008), the risk factors that increase the likelihood that an adolescent will become a gang member are lack of family support, having other family members involved in a gang, drug use, peer pressure from gang members to join their gang, and disorganised neighbourhoods characterised by economic hardship. Gang members are more likely to be male than female and according to Santrock (2008), recruits are mostly adolescents.

In the above section, inter-personal psychological and psycho-social factors that could contribute to violent or aggressive behaviour in adolescents were described. The following section will focus on the psychological effects of school violence on adolescents.

1.3.6 Psychological effects of school violence.

According to Flannery, Singer, Van Dulmen, Kretschmar, and Belliston (2007), studies have shown that in recent times, the high rates of child and adolescent exposure to violence has led to a rise in attention to the consequences of such experiences on child development. Flannery and colleagues further stated that research over the past 15 years has consistently revealed a strong association of exposure to violence with mental ill-health symptoms and aggressive, violent behaviour. Exposure to violence, as a victim or a witness, is linked to a number of emotional and behaviour problem outcomes, including mental ill-health symptoms such as anger, depression, anxiety, dissociation, and aggressive, delinquent and violent behaviour (Flannery et al., 2007). Barlow and Durand (2002) indicated that adverse life events, such as frequent exposure to violence, are strongly related to the onset of mood disorders, and mood disorders in adolescents often have serious consequences, such as attempted suicide.

The discussion will now look at five psychological effects that have been associated with exposure to violence in adolescents.

1.3.6.1 Anxiety.

Anxiety is a negative mood state characterised by physical symptoms of apprehension about the future and physical tension (Barlow & Durand, 2002). Barlow and Durand, further stated that anxiety can be a set of behaviours, a subjective sense of nervousness, or a physiological response, starting in the brain and reflected in an elevated heart rate and muscle tension. Anxiety is closely related to depression. According to Barlow and Durand (2002), stressful life events, such as exposure to violence amongst others, could activate biological and psychological vulnerabilities to anxiety.

1.3.6.2 Fear.

Barlow and Durand (2002), stated that the emotion of fear is a subjective sense of terror, a powerful motivation for behaviour (escaping or fighting), and a multifaceted physiological or arousal response. In other words, fear is an instant emotional reaction to current danger such as school violence, characterised by strong escapist action tendencies (Barlow & Durand, 2002). Intense fear may cause an adolescent to have a panic attack, which is a sudden experience of intense fear or severe discomfort, accompanied by physical symptoms that usually include shortness of breath, heart palpitations, chest pain and possibly dizziness (Barlow & Durand, 2002).

1.3.6.3 Post Traumatic Stress Disorder (PTSD).

PTSD is a consequence of exposure to a traumatic incident, such as an experience of violence during which one feels helplessness, fear, or horror (Barlow & Durand, 2002). After the event, victims re-experience it through memories and nightmares, and they avoid anything that reminds them of the trauma, which could explain refusing to go to school by some adolescents (Rathus, 2011). Victims are usually easily startled, over-aroused, and quick to anger (Barlow & Durand, 2002).

1.3.6.4 Hopelessness and depression.

Parritz and Troy (2011) referred to extensive research findings that indicate environmental factors, such as school violence, as precursors of the cognitive-stress model of depression in adolescence. In this model, negative life events such as violent experiences, lead to a negative attributional style that results in depression and strong feelings of hopelessness.

According to Heaven (2001, p. 125), a definition of hopelessness is “negative expectancies toward oneself and toward the future”. Hopelessness has a strong cognitive element and thus, adolescents who have feelings of hopelessness have a cognitive set or a pre-existing expectation that failure is unavoidable, that the future is likely to be disappointing, and that things may not work out for them (Heaven, 2001).

Persistent feelings of irritability, sadness and low self-esteem characterise an adolescent with depression (Kail & Cavanaugh, 2000). Depression can be explained in terms of the negative relationship between feelings of self-esteem and personal competencies such as knowledge and skills (Rathus, 2011). Depression is an affective disorder characterised by disturbances in behavioural and cognitive functioning (Meece & Daniels, 2008) and; therefore, the general symptoms of depression are feelings of hopelessness, slowed thinking, the inability to concentrate, lack of motivation, inability to have fun, sleep problems, weight changes, inactivity or over activity, low energy and fatigue, and thoughts of death. Depression has serious consequences in adolescence and is associated with anxiety, substance abuse, eating disorders, poor school achievement, juvenile delinquency and ultimately suicidal ideation (Meece & Daniels, 2008). Depressed adolescents are mostly prone to low self-esteem and self-consciousness and could become aggressive, and even destructive, during depressive episodes (Barlow & Durand, 2002).

1.3.6.5 Suicide.

Feelings of depression and hopelessness are linked to most suicides among adolescents. Suicide attempts seem to be more common after a stressful life event (Rathus, 2011). In addition to actual suicide, two other significant indices of suicidal behaviour are suicidal attempts (the person survives) and suicidal ideation (thinking about suicide) (Barlow & Durand, 2002). According to Portzky, Audenaert, and Van Heeringen (2009), adolescent suicide victims would be more prone to have had familial psychopathology, adverse parent-child relationships, relationship difficulties, adverse life events and living situations, educational difficulties, a lack of psychiatric treatment and co-morbidity of psychiatric disorders, with a significant likelihood that aggression or violence were experienced in these adversities.

In conclusion, according to Flannery et al. (2007), there has been a considerable increase in research into the occurrence of violence exposure and its association with various problematic mental and behavioural outcomes. Some short-term, longitudinal studies have shown that prior exposure to violence over one's lifetime has a slight impact on risk for later aggression and delinquency. On the other hand, many other studies have shown that recent exposure to violence (such as in the preceding year) is the strongest predictor of concurrent mental health symptomatology and risk for perpetrating violence (Singer et al., 1999).

Overall, from the above discussion, a tentative conclusion can be reached that according to existing literature, certain psychological factors may serve as precursors of aggressive feelings and/or behaviour in adolescents. More work is however required to study the issue of developmental processes as they relate to behaviour outcomes like violence, particularly given the influence of contextual and demographic factors (Flannery et al., 2007). According to Flannery et al. (2007), we know little about what makes some adolescents

resilient and able to cope with violence, compared to adolescents who are vulnerable, both emotionally and behaviourally.

For the purpose of this study, a research question that could be asked is: How would certain identified psychological factors (both intra- and inter-personal) contribute to manifested anger/hostility/aggression of adolescents, represented by a group of secondary school learners?

The general research question in this study is: Do psychological factors such as self-related well-being, coping self-efficacy, general health and inter-personal relationships contribute to anger, hostility and/or aggressive behaviour of learners in secondary schools?

In the preceding section, an overview of literature pertaining to the psycho-social factors that could influence the phenomenon of school violence or other aggressive/violent behaviour in youth, was presented. The following section will describe the research endeavours that were used to investigate the phenomenon, as guided by the stated research question.

1.4 RESEARCH AIMS AND OBJECTIVES

The general aim of this study is to investigate whether psychological factors such as self-related well-being, coping self-efficacy, general health and inter-personal relations contribute to manifested anger/hostility/aggression of learners in secondary schools.

The specific aims of this study are to determine:

1. How adolescent anger/hostility/aggression, and the identified psychological factors, are conceptualised in literature.
2. The levels of self-related well-being, coping self-efficacy, general health, and inter-personal relations and anger/hostility/aggression in a group of secondary school learners, by means of descriptive statistics.

3. The psychometric properties (reliability and validity indices) of the measurements used in this research.
4. The Pearson-12 correlations between the scales measuring psychological factors and those measuring anger/hostility/aggression in the group of participants.
5. Significance of differences between gender and cultural subgroups of participants in the factors measured, by means of ANOVA, t-tests and effect size indices.
6. Whether psychological factors can predict anger/hostility/aggression in this group of participants, as found with regression analysis.
7. Whether intra- and inter- personal psychological factors moderate the relationship between general health and aggression, and between coping self-efficacy and aggression.

1.5 RESEARCH METHODOLOGY

1.5.1 Research Design.

A research design is a plan or blueprint for conducting the research (Mouton, 2001). For this study, a quantitative research design was used to reach the various aims. Validated psychological measuring instruments were used to gather information, and included the following questionnaires to measure the psychological factors and anger/hostility/aggression of participants: the Personal, Home, Social and Formal Relations Questionnaire (PHSF) of Fouché and Grobbelaar (1971); the Coping Self-Efficacy Scale (CSE) of Chesney et al. (2006); the General Health Questionnaire (GHQ-12) of Goldberg and Hillier (1979); and the Aggression Questionnaire (AQ) of Buss and Perry (1992). A biographical questionnaire was also included to collect the participants' socio-demographic information.

1.5.2 Research method.

1.5.2.1 Sampling.

Sampling refers to taking a portion of the population and considering it to be representative (Kerlinger & Lee, 2000), while according to De Vos, Strydom, Fouché, and Delport (2002), a sample is a small portion of the total set of objects, events or persons that together comprise the subject of the study. De Vos et al. further stated that we study the sample in an effort to understand the population from which it was drawn. A convenience sample was used in this research.

1.5.2.2 Sample size.

How samples are drawn and the size of the sample controls the total amount of relevant information contained in a sample (Kerlinger & Lee, 2000). Kerlinger and Lee further stated that a sample size that is too large is a waste of resources, while a sample that is too small is a wasted effort since it will not be large enough to detect a significant effect (difference). The expected size of the sample for this study was between 450 – 600 participants, in order to ensure the validity of the research.

1.5.2.3 Population and setting.

A population is the totality of persons, events, organisation units, case records or other sampling units with which the research problem is concerned (De Vos et al., 2002). The population of this study included grade nine learners from four secondary schools in Vanderbijlpark, Gauteng, who agreed to participate in the research. The setting for the completion of the questionnaires was at the school that the participating learners were attending.

Participants had to meet the following criteria:

- Were grade nine learners
- Ranged between the ages of 14 and 16 years

- Gave voluntary assent to participate in this study
- Parents gave written consent
- English language proficiency, in order to answer the questionnaires

Permission for the participation of learners in this research was obtained from the Department of Education as well as the school principals, parents and the learners.

Participation was voluntary and non-discriminatory.

1.5.2.4 Procedure of data gathering.

Validated questionnaires bound in booklet form was given to N=512 participants. Testing was done at the different schools during school hours as arranged with the different school principals. The researcher, who is a registered psychological counsellor and psychometrist with the Health Professions Council of South Africa (HPCSA), handled the test administration at all four schools. A psychometric intern student assisted at all four schools with the testing activities, while professional teaching staff assisted in distributing, monitoring and collecting the questionnaires, after having been thoroughly briefed by the researcher. The testing took approximately one hour per school. The purpose of the research and nature of the questionnaires was explained to all learners, as well as the right to voluntary participation and withdrawal at any stage without penalty. The testing was conducted in exactly the same manner at all four schools.

1.5.2.5 Data analysis.

Data analysis entails that the analyst breaks data down into constituent parts to obtain answers to research questions and to test research hypotheses where applicable (De Vos et al., 2002). In this study, the researcher electronically captured raw data from the completed questionnaires. Descriptive statistics, Cronbach alpha reliability coefficients and correlations between scales, were computed for all four measuring instruments using the IBM-Statistical Product and Service Solutions (SPSS), (Version 19) (SPSS, 2010) software package. Validity

of the measuring instruments was determined with the Structural Equation Model of SEPATH. T-tests, Cohen's effect size, multiple regression analyses and structural equation modelling were also performed on the data. A statistical consultant did statistical analyses.

1.5.2.6 Ethical approval.

The researcher planned and conducted research in a manner consistent with the law, internationally acceptable standards governing the conduct of research, and particularly those national and international standards governing research with human participants (Health Professions Council of South Africa, 2004). The researcher made use of various international ethical principles, as described in the International Guidelines for Test Use (International Test Commission, 2000).

Participation in the research by the learners was voluntary and anonymous. Permission for the study was obtained from the Department of Education and the principals of the various secondary schools where the research was conducted and informed assent and consent was obtained in written form from the participants and their parents/guardians. Permission was also obtained from the Ethical Committee of the North-West University (NWU-00054-10-AI).

1.6 RESEARCH REPORT

The research report of this study will include the following sections:

CHAPTER 1: Overview of the study

CHAPTER 2: Manuscript one: Psychological factors and aggressive or violent behaviour of adolescents – prepared for possible publication in the South African Journal of Psychology

CHAPTER 3: Manuscript two: Psychological factors that predict or moderate aggression

in youth – prepared for possible publication in the South African Journal of Psychology

CHAPTER 4: Conclusions, limitations and recommendations of the study

In the above overview, the theoretical background of this research into psychological aspects that could contribute to aggressive behaviour in youth was presented. Thereafter, the research design and method was briefly described. The literature overview serves as the theoretical framework for the two manuscripts that will follow, in which the research that was conducted will be discussed. Thus, duplication of literature could be expected. The manuscripts were written according to the instructions for authors of the South African Journal of Psychology, however for examination purposes the North-West University allows small deviations from the instructions, specifically for the title pages and for the length of the articles. In the next chapter, the first research article will be presented.

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**CHAPTER 2:
ARTICLE ONE**

**Psychological factors and aggressive or violent
behaviour of adolescents**

**For publication in the
South African Journal of Psychology**

Guidelines for authors

South African Journal of Psychology

SAJP is a peer-reviewed journal publishing empirical, theoretical, and review articles on all aspects of psychology. Articles may focus on South African, African, or international issues. Manuscripts to be considered for publication should be e-mailed to sajp@up.ac.za. A covering letter with postal address, e-mail address, and telephone number should be included. The covering letter should indicate that the manuscript has not been published elsewhere and is not under consideration for publication in another journal. An acknowledgement of receipt will be e-mailed to the author (within seven days, if possible) and the manuscript will be sent for review by three independent reviewers. The manuscript number must always be quoted in ALL correspondence to the editor. Only one article per author will be published per calendar year. Exceptions to this rule will be at the sole discretion of the editor (with the associate editors) in the case of an exceptional article that needs to be published, a special issue where the specific article will make a significant contribution, or a written response to a *riposte*, etc. Where authors are invited to revise their manuscripts for re-submission, the editor must be notified (by e-mail) of the author's intention to resubmit and the revised manuscript re-submitted within six weeks. After a longer period, it will be treated as a completely new submission.

Manuscript structure

Manuscripts (including references and tables) should be no longer than 20 pages (5 000 words), and must include the full title of the manuscript, the name(s) of the author(s) and their affiliations, and the name, postal address, and e-mail address of the corresponding author. An abstract, no longer than 300 words, and an alphabetical list of at least six keywords should be provided. The introduction to the article does not require a heading. Tables and figures, with suitable headings/captions and numbered consecutively, should follow the reference list, with their approximate positions in the text indicated. The manuscript should be an MS Word document in 12-point Times Roman font with 1.5 line spacing. The American Psychological Association (APA, ver. 5) style guidelines and referencing format should be adhered to.

Short submissions

SAJP invites short reports on any aspect of theory and practice in psychology. We encourage manuscripts which either showcase preliminary findings of research in progress or focus on larger studies. Reports (of no more than 2 500 words) should be presented in a manner that will make the research accessible to our readership.

Language

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Ethics

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Psychological factors and aggressive or violent behaviour of adolescents

ABSTRACT

The present study aimed to identify intra- and inter-personal psychological factors contributing to aggressive or violent behaviour in adolescents by examining secondary school learner's experiences in specific domains, which included self-related well-being, coping self-efficacy, general health, inter-personal relationships and manifested aggression. The population of this study included grade nine learners of four secondary schools in Vanderbijlpark, Gauteng, who gave consent to participate in the research and who fitted the selection criteria. Quantitative data collection took place by means of the Personal, Home, Social and Formal Relations Questionnaire (PHSF) of Fouché and Grobbelaar (1971), the Coping Self-Efficacy Scale (CSE) of Chesney, Neilands, Chambers, Taylor, and Folkman (2006), the General Health Questionnaire (GHQ-12) of Goldberg and Hillier (1979) and the Aggression Questionnaire (AQ) of Buss and Perry (1992). A biographical questionnaire was also included to collect the participants' socio-demographic information. Descriptive statistics compared well with those found in literature on the measuring instruments used. Psychometric properties of the scales used were mostly acceptable, and theoretically expected significant positive and negative correlations between the intra- and inter-personal psychological aspects and aggressive features measured, were found. Significance of differences between genders was found on nine of the psychological factor subscales, and on three of the aggression subscales. Significance of differences between race groups was found on seven psychological factor subscales, and on three of the aggression subscales. Recommendation for further research was done.

Keywords: Adolescence; psychological factors; secondary school; aggression; anger; violence; coping; health.

PROBLEM STATEMENT

South African schools are quickly, and progressively, becoming arenas for violent behaviour. These days, schools are no longer considered safe and protected environments where children can go to learn, develop, enjoy themselves, and feel secure. Rather, schools are being defined as unsafe and dangerous settings for teaching and learning, plagued by various forms of school violence (Van Jaarsveld, 2008).

When describing the concept, Furlong and Morrison (2000, p. 71) proposed that school violence is “a multifaceted construct that involves both criminal acts and aggression in schools, which inhibits development and learning, as well as harming the school’s climate”. The World Health Organization (2002, p. 4) have provided the following more general but comprehensive definition of violence, “Violence is the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation.”

According to De Wet (2003), the causes of school violence are numerous and exceptional to each violent incident and O’Toole (2000) was of the opinion that the profile of a typical violent or aggressive adolescent will include a variety of types of behaviour, personality traits and circumstances in the family, school and community setting.

Most perpetrators of school violence are in the adolescent stage of development (O’Toole, 2000). Adolescence is a phase of transition and all transition processes are complex and demanding, including biological-, psychological-, social- and economic challenges and adjustments (Steinberg, 1993; Patterson, 2008). As a transition stage, adolescence thus implies severe changes on both an anatomical and a psychological level, presenting psycho-social adjustment demands that could be too much for certain adolescents and end in dysfunctional adaptive behaviour such as aggression (Louw & Louw, 2007; Sigelman & Rider, 2006). According to Michael and Ben-Zur (2007), risk-taking behaviours, for example, delinquency, careless driving, homicidal and suicidal behaviours, substance abuse, premature and unprotected sexual behaviour, eating disorders, and dangerous sports also increase in the period of adolescence.

As mentioned previously, authors like O’Toole (2000) have identified psychological indicators associated with aggressive or violent behaviour in adolescents. For the purpose of this study, intra-personal psychological aspects such as self-related well-being, coping self-efficacy, general health, as well as inter-personal psychological aspects such as family and

social relationships, were considered as possible contributing factors to aggressive or violent behaviour of youth. These factors will briefly be discussed below.

Intra-personal psychological aspects:

Self related well-being

Self-concept refers to the knowledge, beliefs, attitudes, and ideas individuals have about themselves (Meece & Daniels, 2008), while self-esteem involves an evaluation of our traits, abilities, and characteristics, in essence, a global perception of one's overall worth as a person, characterised by self-acceptance and respect for oneself (Meece & Daniels, 2008). Self-efficacy closely relates to self worth and implies a person's belief that he/she can perform behaviours that will lead to a desired outcome (Carr, 2011).

Tiggemann (2005) stated that self-worth becomes most important when the key developmental task is the establishment of identity and a coherent sense of self. Thus self-consciousness, self-awareness and introspectiveness all evidently increase in adolescents, who often become preoccupied with how they appear in the eyes of others. Adolescence is also the period when there is a prominent dip in self-esteem (Carr, 2004). Adolescents with low self-esteem are overly vulnerable to criticism, rejection, or any other evidence in their daily lives that testifies to their inadequacy, incompetence, worthlessness, or poor social adjustment and this leads to feelings of hopelessness and depression, and ultimately in some cases, suicide (Rice, 1990; Rathus, 2011). In addition, an adolescent with low self-esteem may describe himself as a bad person (Santrock, 2008). Youth with low self-esteem are believed to be psychologically anxious, they often have behaviour problems, may abuse substances, and have poor performance in school. Such youth have been associated with aggressive or violent behaviour, and there is a close relationship between delinquency and self-esteem (Rice, 1990; Lefrancois, 2001).

Coping

Coping according to Santrock (2008), can be defined as actions aimed at controlling challenging circumstances, expending effort to work out life's problems, and seeking to master or reduce stress. Coping employs various strategies in an attempt to deal with stress, of which problem focused coping, emotion focused coping, and seeking of social support are the most salient (Carr, 2011). A sense of personal control, personal resources and positive emotions are associated with success in coping (Santrock, 2008). Adolescent coping strategies can be destructive or dysfunctional and lead to futile, unsatisfying processes, relationships and outcomes. Such destructive coping strategies could alter conflict processes

in harmful ways that lead to a rise in conflict, and eventually to aggression and violence (Frydenberg, 1999).

General health

The construct of general health, introduced by Goldberg and Hillier (1979), indicated that certain aspects of physical health, sleeplessness and anxiety, depressed affect and social dysfunction are important precursors of health problems that may manifest in behaviour such as aggression. On the other hand, according to the World Health Organization's Ottawa Charter (1986, p. 1), "good health is a major resource for social, economic and personal development and an important dimension of quality of life".

Various health issues may influence an adolescent's mental and physical health status and may lead to aggressive behaviour. According to research, a multitude of South African adolescents are malnourished (either under-, over- or misfed), show symptoms of depression, post traumatic stress and anxiety, are physically or sexually abused and/or are experimenting with substances (Hook, Watts, & Cockcroft, 2002; Louw & Louw, 2007). Adolescents also display unique responses when they are under too much pressure. When their coping efforts to reduce the stress are unsuccessful, an adolescent may show other symptoms, such as temper tantrums, elevated irritability, inflicting pain on themselves, agitation, defying authority, and eventually aggressive or violent behaviour (Vogel, 2002). Anxiety can also lead to adolescents acting aggressively or becoming violent towards others. According to Robinson and Clay (2005), adolescents with elevated levels of anxiety have been found to react less to positive information and they may experience a restriction in cognitive processes that leads to potentially intimidating interpretations of vague information, which may result in behavioural problems attempting to deal with such perceptions of intimidation.

Furthermore, exposure to violence, as a victim or a witness, is linked to a number of emotional and behavioural problem outcomes, including mental ill-health symptoms such as anger, depression, anxiety, dissociation, and often aggressive, delinquent and violent behaviour (Flannery, Singer, Van Dulmen, Kretschmar, & Belliston, 2007).

Inter-personal psychological aspects:

Social adjustment

Social adjustment concerns the quality of relationships with other people, the neighbourhood and the community that the adolescent experiences and maintains (Papalia, Olds, & Feldman, 2009) and during adolescence, there are noticeable changes in attachment to family, peers and school. Insecurity and disruption in any of these relationships carries a

threat of emotional, social and behavioural problems (Patton, Bond, Butler, & Glover, 2003). An adolescent's belief that his/her world is logical, understandable, predictable, as well as having positive attitudes toward other people, a sense of being part of a supportive community, and believing that he/she has an important role to play in society, are significant building blocks for his/her mental well-being (Keyes & Shapiro, 2004). According to Garbarino (2001), the accumulation of exposure to violence across several settings, including community, school and home, coupled with low parental monitoring and the likelihood of being a victim of aggression, create a context in which adolescents exhibit serious aggressive behaviours.

Social identity theory refers to the dynamics of perceiving the self as a member of a social group and identifying with it. Adolescents want to feel optimistic about the peer groups to which they belong, and some of their self-esteem depends on identifying with such social groups (Baron, Byrne, & Branscombe, 2006). Relationships with peer groups, functions both as a basis of temptation and endangerment, and as an important source of social support (Michael & Ben-Zur, 2007).

Home relations

According to Boulter (2004), child-rearing styles are patterns of parenting behaviour that ideally form a pervasive family climate, and determine the level to which the adolescent will develop self-control, effective social skills, and the ability to comply with rules. Aggressive or violent behaviour in youth often develops as a consequence of the adolescent's behaviour in interaction with the social environment created by parenting styles (Zirpoli, 2008). Aggressive behaviour in adolescence may start because of family factors, such as poor adult supervision and/or harsh parental discipline, which may result in the adolescent being "taught" to engage in aggressive behaviour (Meece & Daniels, 2008). Without direction from parents, the adolescent may develop impulsive, aggressive and noncompliant tendencies. Meece and Daniels (2008) further stated that parents who frequently use physical power to control other people offer an aggressive model to adolescents. Parents may also positively reinforce aggressive behaviour through approval, attention and laughter, which end in maintenance of the behaviours (Zirpoli, 2008).

According to Medina, Margolin, and Gordis (2002), there are high rates of co-occurrence between intra-familial violence and exposure to community violence, and co-occurrence has been detected between parent-to-child violence and inter-parental violence. Adolescents living with family violence normally experience other stressors such as parents' psychopathology and unemployment, poverty, poor nutrition, neglect, lack of medical care,

substance abuse and overcrowding. Such factors can worsen and broaden the negative effects of violence exposure in adolescents (Medina et al., 2002).

Community relations

According to Van Jaarsveld (2008), sudden social changes inside communities have been found to produce instability, which in turn could create acts of aggression and violence in adolescents. There is a common belief that societal cultures cause violence in schools, which tolerate, encourage and demand violence. According to De Wet (2003), adolescents who are raised in socially confused townships with high levels of violence and crime, high residential mobility, physical deterioration, and a lack of pride in their community, exhibit a significantly greater tendency for aggression and violence than adolescents who live in stable communities. Finally, social learning theory, according to Kaplan (2000), explains the process of imitation and observation learning. Adolescents learn to be aggressive or violent through observing other, usually respected, people displaying or engaging in aggressive or violent behaviours. Social learning theory thus provides a theoretical relation between exposure to family, peer group or community violence and the development of aggressive or violent behaviour in adolescents (Collings & Magojo, 2003).

In the preceding discussion, psychological factors that could play a role in adolescent aggressive or violent behaviour have been considered. Below a brief overview of anger, hostility and aggression, is given.

Anger, hostility and aggression

Anger is a state of arousal that results from social experiences and conditions, which involve threat or frustration (Kerr & Schneider, 2008). Anger is a momentary thought or a feeling that needs to get out of one's system, while the reasons that make people angry are amongst others, being put down, obstructions, unfairness, not being taken seriously, facing a disbelieving attitude and facing an attack (YAĞCI & ÇAĞLAR, 2010). According to YAĞCI and ÇAĞLAR (2010), anger has behavioural, physical and psychological dimensions, which can be manifested through physical gestures and appearances such as aggressive attitudes and actions. Hostile aggression, according to Baron and Byrne (2003, p. 436), can be defined as "aggression in which the prime objective is inflicting some kind of harm on the victim". A milder but equally serious form of aggression is aggressivity (Lacan, 1977, 1979), that describes a wide range of aggressive, rivalrous and hateful emotions that may manifest in overt or covert aggressive activities. According to Medina et al. (2002), researchers have found that exposure to violence is connected to problems in regulating frustration, anger, and other negative feelings, as well as deficits in understanding and experiencing empathy for the

feelings of others. These difficulties can cause significant social and behavioural problems for adolescents.

From the above discussion, it is apparent that certain psychological factors, both intra- and inter-personal in nature, may contribute to aggressive feelings and/or behaviour in adolescents. Prompted by this assumption, the following research question was asked: How would certain identified intra-personal and inter-personal psychological factors relate to manifested anger/hostility/aggression of adolescents, represented in this research by a group of secondary school learners?

METHOD

Aims

The general aim of this study was to investigate whether psychological factors such as self related well-being, coping self-efficacy, general health and inter-personal relations would relate to manifested anger/hostility/aggression of learners in secondary schools.

The specific aims of this study were to determine:

- How adolescent anger/hostility/aggression, and the identified psychological factors, are conceptualised in literature.
- The levels of self related well-being, coping self-efficacy, general health, inter-personal relations and anger/hostility/aggression in a group of secondary school learners, by means of descriptive statistics.
- The psychometric properties (reliability and validity indices) of the measurements used in this research.
- The Pearson-12 correlations between the measures of psychological factors and anger/hostility/aggression in the group of participants.
- Significance of differences between gender and racial or cultural subgroups of participants in the factors measured, by means of ANOVA, t-tests and effect size indices.

Research design and method

A quantitative research design of the cross sectional survey type was used to reach the aims of this study. Validated psychological measuring instruments were used to gather information. Four schools in the Vanderbijlpark area were approached for participation,

based on convenience. The schools served as sources of learners to participate and as settings for the data collection.

Participants and procedure

The researcher made use of various international ethical principles as described in the International Guidelines for Test Use (International Test Commission, 2000). Ethical clearance for this research was obtained from the North-West University Ethical Committee. (NWU-00054-10-AI). Permission for the study was obtained from the Department of Education and the various secondary schools where the research was conducted. Informed assent and consent was obtained in written form from the participants and their parents/guardians. The purpose of the research and the questionnaire testing was explained to all learners, as well as their right to voluntary and anonymous participation and withdrawal at any stage. The testing was conducted in exactly the same manner at all four schools.

The population included grade nine learners of four secondary schools. Validated questionnaires, bound in booklet form, were given to N=512 participants. Testing was done at the different schools during available school hours, as arranged with the different school principals, by the researcher who is a registered psychological counsellor and psychometrist with the Health Professions Council of South Africa (HPCSA). A psychometric intern student assisted, and professional teaching staff helped in distributing, monitoring and collecting the questionnaires, after being thoroughly briefed by the researcher. The testing took approximately one hour per group.

Participants had to meet the following criteria:

- Were grade nine learners
- Ranged between the ages of 14 and 16 years
- Gave voluntary assent to participate in this study
- Parents gave written consent
- English language proficiency, in order to answer the questionnaires.

The size of the research group was N=512, which included male (N=217) and female (N=295), African (N=311) and White (N=201) adolescent learners.

Data gathering

The measuring instruments included the following questionnaires to measure the psychological factors in and anger/hostility/aggression of participants:

- A biographical questionnaire to obtain the participants socio-demographic information.
- The Personal, Home, Social and Formal Relations Questionnaire (PHSF) of Fouché and Grobbelaar (1971), measures the personal, home, social and formal relations of high school pupils to determine their level of adjustment. The frequency with which his/her response, in relations within the self or with the environment, are mature or immature, efficient or inefficient, determines the level of adjustment of a person, for each of the various components of adjustment (Fouché & Grobbelaar, 1971). The PHSF measures 11 components of adjustment, which are divided into four main adjustment areas. The first main adjustment area is Personal Relations and this refers to the intra-personal relations, which are of primary importance in adjustment, and include self-confidence, self-esteem, self-control, nervousness and health. The next adjustment area is Home Relations and this refers to the relations experienced by the person as a dependant within the family and home environment, and include family influence and personal freedom. The third adjustment area is Social Relations and this refers to the manner in which a person engages in harmonious and informal relations within the social environment, and includes sociability-group, sociability-sex related and moral sense. The last adjustment area is Formal Relations that refers to the relations occurring in formal situations in the school. The PHSF possesses a high degree of construct validity, and reliability coefficients range between 0.50 and 0.80. The PHSF has been used in South African studies such as “Finding statistical models using psychometric tests, matric results, and biographical data to predict academic success at a South African University” (Breytenbach, 2008), which found Cronbach alpha scores of 0.66 to 0.89 in the different subscales. Other studies included “The biopsychosocial coping and adjustment of female medical professionals” (Brown-Baatjies, Fouché, Watson, & Povey, 2006) and “A cross-cultural investigation of the inter-personal relations and social milieu of Indian and White children” (Beinart, 1985). The current study found Cronbach alpha scores of 0.27 to 0.80 for the different PHSF subscales. The PHSF questionnaire is classified as a psychological test and can only be administered by a registered psychometrist or psychologist.

- The Coping Self-Efficacy Scale (CSE) of Chesney et al. (2006) is a 13-item scale that measures an individual's evaluations of their confidence with respect to carrying out coping strategies in dealing with challenges or threats, and is a short form of the original 26-item questionnaire. The scale has three subscales, namely problem focused coping (CSE-PFC), stopping unpleasant emotions and thoughts (CSE-SUE), and support from friends and family (CSE-SFF), on which the higher the score of the individual, the higher the confidence in coping of that particular individual. Research done by Chesney et al. (2006), showed reliability indices of 0.40-0.80 for the subscales. The CSE has been used in South African research studies such as "The prevalence of resilience in a group of professional nurses" (Koen, Van Eeden, & Wissing, 2011), and "Validation of a coping self-efficacy scale in an African context" (Van Wyk, 2010), which found a Cronbach alpha coefficient of 0.87 for the total CSE. The current study showed a Cronbach alpha coefficient 0.70 for the total CSE. The CSE is in the public domain for usage in research.
- The General Health Questionnaire (GHQ-12) of Goldberg and Hillier (1979) assessed symptoms of a lack of mental well-being or non-pathological mental ill-being. The short form of the scale consists of 12 items and a low score is indicative of mental well-being. In this study, the GHQ-12 researched by Martin (1999) was used, in which three subscales were identified by factor analyses, namely low self-esteem/depression, successful coping and stress. Cronbach alpha coefficients found for these factors were 0.83, 0.67 and 0.71, respectively. The GHQ-12 has been used in South African studies such as "Validation of a coping self-efficacy scale in an African context" (Van Wyk, 2010), and "The Parent Adolescent Relationship and the Emotional Well-Being of Adolescents" (Koen, 2009), which found a Cronbach alpha of 0.78 for the total scale. The current study obtained a Cronbach alpha coefficient of 0.73 for the total scale. The GHQ-12 is in the public domain for usage in research.
- The Aggression Questionnaire (AQ) of Buss and Perry (1992) is a 29-item questionnaire, which contains brief statements that measure different dimensions of the hostility/anger/aggression construct. The four subscales measure physical aggression, verbal aggression, anger and hostility. The internal consistency coefficients of subscales range from 0.57 to 0.77 and 0.82 for the total scale (Buss & Perry, 1992). The AQ scales show consistent differences between males and females, with men showing significantly higher levels of verbal and physical aggression

(Archer, Kilpatrick, & Bramwell, 1995; Buss & Perry, 1992; Williams, Boyd, Cascardi, & Poythress, 1996). The AQ has been standardised for school children between the ages of 9 – 18, and is thus appropriate for the sample population (Buss & Perry, 1992). The AQ has been used in South African research studies, such as “Exploring the relationship between self-efficacy and aggression in a group of adolescents in the peri-urban town of Worcester” (Willemse, 2008), which found a Cronbach alpha score of 0.89. The current study found Cronbach alpha coefficients of 0.71 for physical aggression, 0.50 for verbal aggression, 0.50 for anger and 0.59 for hostility. The AQ is in the public domain for usage in research.

Data analysis

The researcher electronically captured raw data from the questionnaires. Descriptive statistics, Cronbach alpha reliability coefficients and correlations of scales for the total group of N=512 participants were computed using the IBM-Statistical Product and Service Solutions (SPSS), (Version 19) software package. Validity of the measuring instruments was determined with the Structural Equation Model (SEM) of SEPATH. T-tests, ANOVA and Cohen’s effect size were also calculated, using the same software as mentioned above. A statistical consultant did statistical analyses.

RESULTS AND DISCUSSION

The following will be reported on below: The descriptive statistics of this total group of participants; the psychometric properties of the scales used; relationships found between scales or subscales; and significant differences found between subgroups of participants.

Descriptive statistics for the total group on all measuring instruments

Stangor (2011, p. 118) defines descriptive statistics as “the numbers that summarize the pattern of scores observed on a measured variable. This pattern is called the distribution of the variable”.

Table 1 displays the descriptive statistics of the total group of participants on the Personal, Home, Social and Formal Relations Questionnaire (PHSF), the Coping Self-Efficacy Scale (CSE), the General Health Questionnaire (GHQ-12) and the Aggression Questionnaire (AQ).

[Table 1 approximately here]

For the total group (N=512) the mean scores obtained on the scales and subscales used, indicate that moderate levels of the variables measured were reported by these participants. The standard deviations were rather large, indicating that there was a scatter of scores (variance), which could perhaps be ascribed to the fact that participants were from different cultures and genders.

Mean scores for the total group of participants found for the 11 subscales of the PHSF used in this research ranged from 22.8 (PHSF 11) to 25.4 (PHSF 1). Compared to mean scores of students on the PHSF found by Breytenbach (2008) ranging from 25.66 to 34.87, the learners in this study scored lower, and apparently reported less intra- and inter-personal wellness as measured by this scale.

On the CSE subscales, the mean scores of the total group in this study differ from those found by Koen (2010). For the CSE-PFC, the mean score of these learners was 35.3, which was lower than the 41.2 found by Koen; the current CSE-SUE mean score of 22.2 was also lower than that found by Koen (26.0) but the CSE-SFF mean score of these participants was slightly higher (21.0) than that found by Koen (20.5). Also for the CSE total score, the mean of 78.5 of these participants is lower than the 87.5 reported by Koen (2010), indicating lower levels of coping self-efficacy in this group of participants.

Concerning the GHQ-12, the mean scores of this total group of participants on all three the subscales were lower than those found by Martin (1999), indicating better mental health. The GHQ-12 total mean score of 3.6 obtained by the current participants, is higher than the mean score of 0.80 found by Koen (2010) but compares fairly well with the mean score of 2.78 found by Koen (2009), also with a group of learners.

On the four AQ subscales, the mean scores of this total group showed interesting differences when compared to those found in a validation study of the AQ by García-León et al. (2002). For the AQ-Phys, a mean score of 25.6 for this total group was much higher than the 12.9 mean score found by Garcia-Leon et al.(2002); the mean score for AQ-Verb in this total group was 16.6, much lower than the 21.5 found by García-León et al. (2002); the AQ-Ang mean score of 20.8 was also much lower than the 25.9 found by García-León et al. (2002); and the AQ-Host mean score of 26.5 was much higher than the 10.0 found by García-León et al. (2002). These variations in levels of aggression and in the diverse manifestations of aggression between groups, support the viewpoint of O'Toole (2000) that aggression is both person- and context- related and therefore, such between-group differences could be expected.

From the above, it appears that the mean scores found in this study on the measurements used (PHSF, CSE, GHQ-12, AQ), are comparable to those found in literature, albeit with interesting differences.

Reliability and validity of measuring instruments

From Table 2, it is evident that the Cronbach alpha coefficients of the scales and subscales used in this research, range from poor (0.27) to acceptable (0.80) according to the criteria of Nunnally and Bernstein (1994).

[Table 2 approximately here]

The reliability indices of PHSF subscales 3 (self-control), 4 (nervousness) and 6 (family influences) are low (0.27-0.34) and indicate poor internal consistency of these subscales, based on the scores of this total group of participants. These subscales will thus be discarded and not considered in the statistical analyses further performed.

The Cronbach alpha coefficients obtained for PHSF subscales 1, 2, 5, 7, 8, 9, 10 and 11, range from 0.50 to 0.80 and although moderate, compare fairly well with the reliability coefficients reported by Breytenbach (2008).

The reliability coefficients of the CSE obtained by this total group of 0.70 compares well with the 0.79 found by Koen (2010).

The Cronbach alpha coefficient of 0.73 for the GHQ-12 obtained by the total group of participants compares well with the 0.78 found by Koen (2009) in a comparable sample.

The reliability indices for the AQ obtained by the total group of participants range from 0.50 to 0.71 and are low to moderate compared to the coefficient of 0.82 reported in the study of García-León et al. (2002).

Validity indices of the measuring instruments were determined with the Structural Equation Model (SEM) of SEPATH and are depicted in Table 2. It is interesting to note that despite the low to moderate reliability coefficients found on the scales and subscales used in this research, the RMSEA points and parameter estimates were acceptable and pointed to a good fit for each of the underlying models of the constructs used ($RMSEA = < 0.10$, with 90% confidence interval of 0 to 10). The construct validity of the PHSF, CSE, GHQ-12 and AQ was supported and it could be assumed that these scales were valid for use in this group of participants (N=512).

Correlations between measuring instruments

Table 3 displays the correlations obtained by the total group of participants on the scales and subscales used.

[Table 3 approximately here]

The significant positive correlations of the PHSF subscales for self-confidence, self-esteem, health, personal autonomy, sociability in general, moral sense and formal relations, with the CSE subscales for problem solving, control of thoughts and feelings and social support, were theoretically expected. These positive correlations indicate a positive relationship between intra- and inter-personal well-being as represented by the PHSF subscales, and coping self-efficacy as represented by the CSE, in this research. Such correlations seem to support the opinion of Compton (2005) and Compton and Hoffman (2013) that coping resources exist, which individuals draw upon when facing challenges. These resources may be internal or external (intra- or inter-personal) and the PHSF subscales represent such resources which could enable coping self-efficacy in these participants.

The significant negative correlations of the PHSF subscales (except for subscale 9: sociability with opposite sex) and the CSE subscales with the GHQ-12 subscales of ability to cope, stress symptoms and depression, indicate that the higher the levels of intra- and inter-personal well-being and coping self-efficacy are, the lower would be symptoms of mental distress in these participants. These correlations also correspond theoretically, and with much research done in the field of health psychology, that focus on psychological factors that might affect a person's health; both mental and physical (Compton & Hoffman, 2013). Compton and Hoffman cite extensive research indicating the beneficial influence of self-related well-being (intra-personal) and inter-personal well-being (in the form of social support) on mental health aspects such as *inter alia* stress management, depression, dealing with negative emotions (Compton & Hoffman, 2013). Furthermore, as far as coping self-efficacy is concerned, Brannon and Feist (2000) indicated that self-efficacy influences people's beliefs about their control over, and management, of health matters. Heppner and Lee (2009) indicate that self-efficacy influences people's beliefs about their problem-solving abilities, while positive problem-solving appraisals (as measured by the CSE) are associated with improved health status and management of health challenges.

For the purpose of this study however, the interest lies in the correlations between psychological factors (the PHSF, CSE and GHQ- 12) and aspects of aggression (the AQ and subscales).

AQ-Phys is indicative of the tendency to use physical force when expressing aggression or anger. The significantly negative correlations of the AQ-Phys with four PHSF (5, 7, 10 & 11) subscales, as well as the CSE subscales, indicate that exposure to, and expressing of physical anger, could negatively impact on adolescents' intra- and inter-personal adjustment to various areas in their life and compromise their ability to cope with confidence. According to the GHQ-12, a low score is indicative of mental well-being, and in this study AQ-Phys had a significant positive correlation with all the GHQ-12 subscales, thus implying that the more physical aggression experienced and expressed by adolescents, the lower their overall mental well-being would be. These findings seem to support the opinion of Vogel (2002) who indicated that when coping efforts are unsuccessful to reduce stress, an adolescent may show other dysfunctional ways of coping, such as aggressive or violent behaviour, as well as the large volume of research that reported on the association between mental distress and aggression or violence (Flannery et al., 2007).

AQ-Verb is indicative of the tendency to be verbally abusive. In this study, AQ-Verb has significant negative correlations with two subscales of the PHSF, namely personal freedom and moral sense, as well as with the CSE-SUE (stopping unpleasant emotions) subscale. This seems to imply that transgressing the inter-personal boundaries of communication through verbal aggression could compromise, or even indicate, a lack of self-control and moral/ethical values (Dodge, Coie, & Lynam, 2006).

AQ-Ang score is indicative of the tendency to anger-related arousal and a sense of control. Significant negative correlations of the AQ-Ang subscale were found with PHSF subscales (1, 2, 5, 7, 10 & 11) as well as the CSE-SUE. This indicates that the more anger an adolescent experiences, the lower their adjustment in areas such as self-esteem and self-confidence, health, personal freedom, moral sense and of coping by stopping unpleasant emotions. This corresponds with YAĞCI and ÇAĞLAR (2010), who found that anger has negative consequences in behavioural, physical and psychological dimensions. Significant positive correlations were also found with all three GHQ-12 subscales, indicating that anger experienced and expressed by adolescents increases their levels of mental ill-being or distress.

AQ-Host measured suspicion, feelings of resentment and alienation. The AQ-Host had significant negative correlations with the PHSF subscales of self-confidence, self-esteem,

health, personal freedom, sociability-group and moral sense as well as with two subscales of the CSE, namely CSE-PFC and CSE-SUE. Hostile aggression, according to Baron and Byrne (2003, p. 436), can be defined as “aggression in which the prime objective is inflicting some kind of harm on the victim”, thus as hostile aggression increases, almost all areas of adjustment and coping decreases. Hostile attribution regarding the causes ascribed to other’s behaviour plays a significant role in aggression in general (Baron, Byrne, & Branscombe, 2006), but more so in hostile behaviour, and is associated with an overall decrease in psychosocial well-being (Dodge et al., 2006). Positive correlations of the AQ-Host with all three GHQ-12 subscales were found in this study, which also indicates that as hostile aggression increases, so does mental dysphoria. It is interesting to note that most of the correlations of the AQ with other measures were found with AQ-Host.

The significant, but low, positive correlations between GHQ-12 subscales and the PHSF-9 subscale for sex-related sociability in this group of participants, indicate their experience of mental discomfort or dysphoria when interacting with the opposite sex. The underlying dynamic of this finding is unclear and could be further researched.

However, the practical significance of all the correlations discussed above are small to medium, which may indicate that the chances of these relationships manifesting in practice, are only moderate.

Significant differences between subgroups

Table 4A displays the significance of differences between male (N=217) and female (N=295) participants.

[Table 4A approximately here]

Male participants scored significantly higher on the PHSF subscales for self-esteem, health, personal freedom and sociability-sex related, while females scored higher on moral sense and formal relations. The higher self-esteem of adolescent males was reported by Kaplan (2000), who also found that girls often report low self-esteem during adolescence and that depressive symptoms were more widespread amongst girls, which somewhat supports the current findings that on the GHQ-Stress and the GHQ-Depr, females scored higher than males, indicating their lower levels of experienced mental well-being. Significant differences were found on the CSE-SFF subscale, where females scored higher than male participants, a fairly traditional finding due to general and universal patterns in developmental psychology

that girls both negotiate and receive more social support in adolescence than boys (Koen, 2009; Nolen-Hoeksema & Rusting, 1999). Male participants scored significantly higher on the subscale of AQ-Phys, while females scored higher on AQ-Ang and AQ-Host. Research findings by Baron et al. (2006) indicated that males are more likely than females to engage in forms of direct (physical) aggression, while females are more likely to engage in forms of indirect aggression. Sullivan (2011) found that boys are more inclined toward verbal and physical aggression, while girls use more subtle and passive forms such as destruction of friendships and exclusion. Social norms further more have a strong influence on the experience and expression of anger and aggression by men and women in society (Underwood, 2003). According to the criteria of Cohen (1977), the practical effect size of the significant differences between male and female participants range between 0.20 and 0.60, with a tendency toward moderate practical effect for most of the differences.

Table 4B displays the significant differences between African (N=311) and White (N=201) participants.

[Table 4B approximately here]

White participants in this study scored significantly higher on the PHSF subscales of personal freedom, sociability-group and moral sense, while African participants had a higher score on formal relations. White participants obtained higher scores on the CSE-PFC and the CSE-SFF than African participants, while African participants received a higher score on the GHQ-Cope. African participants obtained significantly higher scores on the AQ subscales of AQ-Phys, AQ-Verb and AQ-Host, than White participants.

It is interesting to note that significance of differences between the ethnic African groups of participants (Sotho, Tswana and Zulu) were calculated, but no significant differences were found. The significance of differences between the White and African groups found in this study show a large practical effect size (< 0.50) for the PHSF 7 and 8, CSE-PFC, AQ-Phys and AQ-Host. These findings seem to suggest that the White participants manifested better social adjustment in group-context and in sex-related relationships, as well as better problem focused coping confidence than the African participants did. The African participants seemed to manifest more physical aggression and hostility than the White group. In understanding or explaining the essence of the significant differences between the White and African participants in this study, one can consider the biopsychosocial model's explanation of aggressive behaviour in adolescents (Dodge & Pettit, 2003). This model

suggests that biological predispositions, sociocultural contexts, parenting and peer experiences are considered as determinants of social cognitive processes mediating aggressive behaviour. In the South African context, despite the changed political arena, the factors impacting on the biopsychosocial realities of African youth still differ significantly from that of White youth (Duncan & Rock, 1997; Ferreira & Ebersöhn, 2012; Holborn & Eddy, 2011), thus indicating lower relational wellness and coping confidence on the one hand, and higher tendencies toward the experience and expression of aggression, anger and hostility in African youth, on the other hand.

CONCLUSION

The aim of this study was to investigate whether psychological factors such as self-related well-being, coping self-efficacy, general health and inter-personal relationships could influence manifested anger/hostility/aggression of learners in secondary schools. Grade nine learners from four different high schools participated in the research and they represented both genders and various culture groups of South Africa. The main finding was that psychological factors have significantly negative relationships with aspects of aggressive behaviour, suggesting that the more psychological wellness youth experience, the less they will experience or express aggressive behaviour. However, no causal inferences could be made and the practical significance of these findings was moderate. Furthermore, significance of differences on several of the variables investigated was found between the gender and racial subgroups in this study, with moderate to large practical effect.

The first aim of the study was met in the brief literature overview. The second aim was met in the descriptive results that indicated the correspondence of the means and standard deviations found, with those mentioned in literature. The third aim was met in the findings showing that the reliability indices for the measuring instruments used were mostly acceptable, except for three subscales of the PHSF. The validity of the scales was indicated by the fit parameters for the underlying models, and validity for use in this group of participants could be assumed for all scales. The fourth aim was met in the correlation analyses indicating significant positive correlations among scales and subscales measuring intra- and inter-personal aspects of well-being, and significant negative correlations of these variables with features of aggression. The last aim was met in the finding of significant differences between gender and racial subgroups on aspects of psychological adjustment, coping and general health and on aspects of aggression, anger and hostility.

LIMITATIONS AND RECOMMENDATIONS

Limitations of this study could be the use of the PHSF to measure aspects of intra- and inter-personal functioning or adjustment. The PHSF is a very old and a lengthy questionnaire. Various shorter and more recent scales could have measured the same psychological features. It is recommended that more research on the contribution of psychological variables to aggression, anger and hostility in youth be conducted, using different scales and with the questionnaires translated into the languages of the participants. Research explaining the causes and qualitative research would also shed more light on the phenomenon of anger, aggression and hostility in South African youth.

It can be concluded that this research was successful in achieving the aims set in order to answer the research question and based on the findings of this investigation, it can be assumed that intra- and inter-personal psychological factors significantly contribute to the aggressive or violent behaviour of adolescents.

In the next chapter, the second research article will be presented.

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Table 1: Descriptive statistics of the total group (N=512).

Scale	Minimum	Maximum	Mean	Median	Std. Deviation
PHSF1	12	43	25.4	25	4.4
PHSF2	5	41	23.1	24	5.4
PHSF3	12	34	24.2	24	4.0
PHSF4	13	35	24.7	25	4.2
PHSF5	7	40	25.7	26	5.3
PHSF6	10	39	23.0	23	4.5
PHSF7	3	44	25.0	25	7.2
PHSF8	6	42	24.1	24	6.6
PHSF9	9	36	23.8	24	5.4
PHSF10	6	44	25.0	25	5.9
PHSF11	1	42	22.8	23	5.7
CSE-PFC	9	60	35.3	35	8.7
CSE-SUE	0	40	22.2	22	8.5
CSE-SFF	0	30	21.0	22	6.6
CSE Total	27	126	78.5	79	17.1
GHQ-Cope	0	4	1.05	1	1.05
GHQ-Stress	0	3	0.9	1	1.0
GHQ-Depr	0	5	1.6	1	1.5
GHQ-12 Total	0	12	3.6	3	2.7
AQ-Phys	9	45	25.6	26	7.5
AQ-Verb	6	25	16.6	17	4.0
AQ-Ang	10	34	20.8	21	5.0
AQ-Host	10	40	26.5	27	5.8

Note: PHSF: Personal, Home, Social and Formal Relations Questionnaire: PHSF1 (self-confidence); PHSF2 (self-esteem); PHSF3 (self-control); PHSF4 (nervousness); PHSF5 (health); PHSF6 (family influences); PHSF7 (personal freedom); PHSF8 (sociability–group); PHSF9 (sociability–sex related); PHSF10 (moral sense); PHSF11 (formal relations). CSE: Coping Self-Efficacy Scale: CSE-PFC (problem focused coping); CSE-SUE (stopping unpleasant emotions); CSE-SFF (thoughts and support from friends and family). GHQ-12: General Health Questionnaire. AQ: Aggression Questionnaire.

Table 2: Cronbach alpha coefficients and SEPATH indices of scales/subscales for the total group (N = 512).

	Alpha
PHSF1	0.54
PHSF2	0.65
PHSF3	0.27
PHSF4	0.27
PHSF5	0.64
PHSF6	0.34
PHSF7	0.80
PHSF8	0.75
PHSF9	0.50
PHSF10	0.71
PHSF11	0.72
CSE Total	0.70
GHQ-12 Total	0.73
AQ-Phys	0.71
AQ-Verb	0.50
AQ-Ang	0.50
AQ-Host	0.59

SEPATH		Lower 90%	Point	Upper 90%
Steiger-Lind RMSEA Index	PHSF 1-5	0.049	0.051	0.053
Steiger-Lind RMSEA Index	PHSF 6-7	0.058	0.062	0.066
Steiger-Lind RMSEA Index	PHSF 8-10	0.049	0.052	0.055
Steiger-Lind RMSEA Index	PHSF 11	0.057	0.065	0.074
Steiger-Lind RMSEA Index	CSE	0.080	0.090	0.099
Steiger-Lind RMSEA Index	GHQ-12	0.052	0.063	0.075
Steiger-Lind RMSEA Index	AQ	0.066	0.070	0.075

Table 3: Pearson R correlations of scales/subscales for the total group (N=512).

	PHSF1	PHSF2	PHSF5	PHSF7	PHSF8	PHSF9	PHSF10	PHSF11	CSE-PFC	CSE-SUE	GHQ-Cope	GHQ-Stress	GHQ-Depr
CSE-PFC	0.33	0.19	0.16	0.26	0.17		0.24	0.26					
CSE-SUE	0.25	0.28	0.15	0.20	0.13		0.21	0.22					
CSE-SFF	0.19	0.15		0.16	0.27		0.13	0.21					
GHQ-Cope	-0.19	-0.23	-0.19	-0.20	-0.19				-0.19	-0.18			
GHQ-Stress	-0.19	-0.26	-0.35	-0.24	-0.14	0.11		-0.14	-0.16	-0.20			
GHQ-Depr	-0.34	-0.49	-0.40	-0.32	-0.21		-0.12	-0.16	-0.20	-0.32			
AQ-Phys			-0.27	-0.27		0.18	-0.43	-0.24	-0.19	-0.23	.019	0.19	0.20
AQ-Verb				-0.12			-0.25			-0.11			
AQ-Ang	-0.10	-0.21	-0.24	-0.22		0.14	-0.23	-0.20		-0.20	0.12	0.22	0.27
AQ-Host	-0.24	-0.32	-0.26	-0.33	-0.17	0.12	-0.22		-0.14	-0.22	0.11	0.24	0.36

Note: All correlations are significant at $p < 0.05$
 Practical significance: $R < |0.20| \rightarrow$ Small effect
 $R = |0.20|$ to $|0.50| \rightarrow$ Medium effect
 $R > |0.50| \rightarrow$ Large effect

Table 4A: T-tests for significance of differences between Male (N=217) and Female (N=295) participants.

	Means		Mean Diff	t	df	Sig. (2-tailed)	D
	Male	Female					
PHSF1	25.8	25.1	0.61	1.56	510	0.12	-
PHSF2	24.5	22.0	2.50	5.35	510	0.00	0.46
PHSF5	27.0	24.8	2.23	4.78	510	0.00	0.42
PHSF7	26.5	23.8	2.64	4.18	510	0.00	0.38
PHSF8	24.8	23.7	1.11	1.87	510	0.06	-
PHSF9	25.3	22.6	2.70	5.78	510	0.00	0.50
PHSF10	23.0	26.5	-3.51	-6.89	510	0.00	0.60
PHSF11	22.0	23.4	-1.41	-2.79	510	0.00	0.25
CSE-PFC	35.6	35.2	0.42	0.54	510	0.59	-
CSE-SUE	22.3	22.0	0.29	0.38	510	0.70	-
CSE-SFF	19.9	21.9	-1.98	-3.39	510	0.00	0.30
GHQ-Cope	1.0	1.1	-0.04	-0.39	510	0.69	-
GHQ-Stress	0.8	1.0	-0.24	-2.74	510	0.01	0.20
GHQ-Depr	1.4	1.8	-0.43	-3.21	510	0.00	0.27
AQ-Phys	26.5	24.9	1.60	2.41	510	0.02	0.21
AQ-Verb	16.4	16.7	-0.26	-0.72	510	0.47	-
AQ-Ang	19.8	21.5	-1.76	-3.98	510	0.00	0.34
AQ-Host	25.6	27.2	-1.55	-3.04	510	0.00	0.28

Note:

Significant differences are in bold print.

Practical effect D (Cohen, 1977) indicated as follows:

Small effect: $D < 0.30$; Medium effect: $0.30 < D < 0.50$; Large effect: $D > 0.50$.

The t-test results above were confirmed with an Anova analyses, which yielded the same conclusions.

Table 4B: T-tests for significance of differences between African (N=311) and White (N=201) participants.

	Means		Mean Diff	t	df	Sig. (2-tailed)	D
	Black	White					
PHSF1	25.3	25.5	-0.17	-0.43	510	0.67	-
PHSF2	23.3	22.7	0.58	1.20	510	0.23	-
PHSF5	25.6	25.9	-0.26	-0.54	510	0.59	-
PHSF7	23.0	28.0	-5.04	-8.25	510	0.00	0.70
PHSF8	22.5	26.6	-4.11	-7.17	510	0.00	0.62
PHSF9	23.9	23.6	0.25	0.50	510	0.61	-
PHSF10	24.6	25.7	-1.15	-2.14	510	0.03	0.20
PHSF11	23.8	21.3	2.54	5.05	510	0.00	0.45
CSE-PFC	33.4	38.3	-4.81	-6.38	510	0.00	0.55
CSE-SUE	21.6	22.9	-1.31	-1.70	510	0.09	-
CSE-SFF	20.4	22.0	-1.53	-2.58	510	0.01	0.23
GHQ-Cope	1.2	0.9	0.29	3.01	510	0.00	0.27
GHQ-Stress	1.0	0.8	0.15	1.75	510	0.08	-
GHQ-Depr	1.7	1.6	0.14	1.04	510	0.30	-
AQ-Phys	27.1	23.2	3.93	6.01	510	0.00	0.52
AQ-Verb	17.2	15.7	1.46	4.09	510	0.00	0.37
AQ-Ang	20.8	20.8	0.02	0.04	510	0.97	-
AQ-Host	28.1	24.1	4.02	8.21	510	0.00	0.70

Note:

Significant differences are in bold print.

Practical effect D (Cohen, 1977) indicated as follows:

Small effect: $D < 0.30$; Medium effect: $0.30 < D < 0.50$; Large effect: $D > 0.50$.

The t-test results above were confirmed with an Anova analyses, which yielded the same conclusions.

**CHAPTER 3:
ARTICLE TWO**

**Psychological factors that predict or moderate
aggression in youth**

**For publication in the
South African Journal of Psychology**

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South African Journal of Psychology

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Manuscript

Psychological factors that predict or moderate aggression in youth

ABSTRACT

The present study aimed to identify psychological factors that predict or moderate anger, hostile and aggressive or violent behaviour in a group of adolescents. The research group of this study included grade nine learners of four secondary schools in Vanderbijlpark, Gauteng, who volunteered to participate in the research and who fitted the selection criteria. Quantitative data collection was done by means of the Personal, Home, Social and Formal Relations Questionnaire (PHSF) of Fouché and Grobbelaar (1971), the Coping Self-Efficacy Scale (CSE) of Chesney, Neilands, Chambers, Taylor, and Folkman (2006), the General Health Questionnaire (GHQ-12) of Goldberg and Hillier (1979) and the Aggression Questionnaire (AQ) of Buss and Perry (1992). A biographical questionnaire was also included to collect the participants' socio-demographic information. Descriptive statistics compared well with those found in literature for the same measuring instruments. Psychometric properties of the scales used were mostly acceptable for use in this study. Multiple regression analyses indicated that PHSF subscales 1, 2, 5, 7, 8, 10 and 11 as well as CSE-SUE, CSE-SFF, GHQ-Cope and GHQ-Depr subscales significantly predicted aspects of aggressive behaviour in these participants. The PHSF subscales 2, 5, 7, 9, 10 and 11 representing intra- and inter-personal adjustment, had a moderating effect on the relationships between CSE and AQ, as well as between GHQ-12 and AQ, in this research. Limitations of the study were indicated and recommendations for future research were done.

Keywords: Adolescence; psychological factors; aggression; anger; hostility; verbal aggression; physical aggression; violence; coping; general health.

PROBLEM STATEMENT

Adolescence is a stage in which the individual is confronted by physical growth and other developmental challenges such as the forming of an identity, fitting into a peer group and staying connected to the family while achieving independence. There are also many transitions during adolescence, which include cognitive development as well as physiological changes in the body. The adolescent is further required to fulfil various social roles with persons of the opposite sex and peers; they must complete their education through schooling, and make a decision regarding their future career. Adolescence is the period between childhood and adulthood and is often characterised as a period of stress, storms and various transitions (Jackson & Goossens, 2006).

The development of self-awareness and identity formation is perhaps the most prominent psychological developmental task of adolescence, because psychological, physical and sexual identities can be integrated in the sense of self (Heaven, 2001). Ego identity is a sense of who a person is and what he/she stands for, and is associated with adaptive behaviour, resilience and psychological well-being (Carr, 2011; Rathus, 2011). The inability to develop an integrated sense of self (ego identity) in adolescence could manifest in conduct- and mood disorders, in which aggression often features (Parritz & Troy, 2011).

Research indicates that antisocial behaviour, including aggression, appears to be a developmental characteristic that starts early in life and often continues into adolescence and adulthood, but is more prominent in high-risk behaviour during adolescence (Newman & Newman, 2003; Zirpoli, 2008). Lacan (1977, 1979) described such a developmental trait as aggressivity compared to aggression. Whereas the latter specifically denotes violent behaviour, aggressivity points to a wide range of aggressive, rivalrous and hateful emotions that may manifest in covert and overt behaviours (Hook, Watts, & Cockcroft, 2002).

Violence experienced at a youthful age could impact damagingly on the development of certain cognitive abilities, and also on pro-social behaviours of the adolescent and thus, adversely influence scholastic development and performance, as well as the ability to function in a healthy way, both within and outside of the school setting (Burton, 2008). According to YU and SHI (2009), violent crimes and relentless aggression in adolescents could be predicted by early aggressive experiences and/or behaviours, and this seems to be a crucial characteristic of later-onset violent crimes.

Increased aggression, 'meanness', fighting and generally disruptive behaviour in youth have been connected with exposure to intrafamilial violence. The development of delinquency, aggressive behaviours and suicidal attempts of adolescents, are all strongly

linked to having experienced early physical abuse, being a victim of violence and harsh corporal punishment (DuRant, Getts, Cadenhead, & Woods, 1995). Medina, Margolin, and Gordis (2002) further reported that adolescents who have been exposed to intrafamilial violence have more disciplinary problems at school than their non-exposed peers, and are more likely to be suspended. Adolescents exposed to adult violence, mostly intrafamilial adult violence, may see and learn from these adults that aggressive behaviour is a practical problem-solving option, and that physical aggression in close relationships is normal. Aggression can also be learned from peers. Adolescents who have a predisposition to act aggressively may see aggressive peers as role models, and such peers may thus elicit aggression from these adolescents (Heaven, 2001).

Meece and Daniels (2008, p. 424) defined aggression as “behaviour that is intentionally aimed at harming or injuring another person” and state that verbal abuse, destruction of property, harassment, derogatory racial, gender or antigay remarks, obscene gestures, and even vicious gossip, are forms of aggression. According to Meece and Daniels, there seems to be no single cause for aggression and it is seen as an interaction of the adolescent’s own characteristics, family environment, culture, peer relations and community.

There are various theories attempting to explain aggression. One such theory of aggression is the social learning perspective, which suggests that whether an individual will aggress in a specific situation depends on various factors. These factors include values and attitudes that shape an individual’s thoughts concerning the appropriateness and potential effects of aggressive behaviour, the individual’s past experience with aggression, and the current rewards associated with past or present aggression (Baron, Byrne, & Branscombe, 2006). According to another theory called the general aggression model, two types of input variables, namely variables relating to the individual involved, and factors relating to the current situation (Baron et al., 2006) can start a sequence of events that may lead to aggression. These two variables can lead to aggression through their impact on three basic processes, namely arousal, affective states and cognitions. Arousal includes physiological arousal or excitement, affective states include arousing hostile feelings and outward bodily signs of these feelings, while cognitions include hostile thoughts and beliefs or attitudes about aggression. Baron et al. (2006) further stated that depending on the individual’s interpretations of restraining factors and the current situation, he/she may engage in either thoughtful action (restraining their anger) or impulsive action (overt aggressive actions).

According to Medina et al. (2002), researchers have observed that exposure to violence is connected to problems in regulating frustration, anger and other negative feelings,

as well as deficits in understanding and experiencing empathy for the feelings of others. One way in which adolescents attempt to cope with overwhelming negative feelings is through behavioural distraction, which may be aggressive. As soon as aggression becomes a major part of an adolescent's life, it can increase in intensity and become self-reinforcing because it gives a way to ease tension and to control and manipulate others (Meece & Daniels, 2008). Frequent exposure to aggression stimuli strengthens knowledge structures (attitudes, scripts, beliefs and schemas) relating to aggression. As these structures develop stronger, it is easier for them to be activated by person and situational variables (Baron et al., 2006). The words and deeds of other persons often trigger aggression, as well as cultural factors such as norms, beliefs and expectations (Baron et al., 2006).

Types of Aggression

For the purpose of this study, the following types of aggression are considered:

Physical aggression

According to Klewin, Tillman, and Weingart (2003), physical aggression refers to conflict between two or more people in which at least one side uses physical ways to cause deliberate harm, or at least threaten such harm, to the other side. Lockwood (1997) indicated that physical aggression includes behaviours of physical violence or force such as pushing, shoving, kicking, slapping, punching, grabbing, hitting with an object or fist, threatening with a gun or knife or using a gun or knife.

Verbal aggression

Verbal provocation from other people is one of the main triggers for aggression (Baron et al., 2006). Humans tend to reciprocate aggression when they are on the receiving end of some form of aggression such as sarcastic remarks, criticism or unfair treatment. Baron et al. further stated that condescension and expressions of disdain or arrogance on the part of others are powerful provocations towards aggression.

Anger aggression

Anger is a state of arousal that results from social experiences and conditions, which involves threat or frustration (Kerr & Schneider, 2008). Anger is a momentary thought or a feeling that needs to get out of one's system, while the reasons for people's anger are amongst others, being put down, obstructions, unfairness, not being taken seriously, facing a disbelieving attitude and facing an attack (YAĞCI & ÇAĞLAR, 2010). The expression of anger may be directed inward or away from the self and onto others, and be manifested by aggressive or violent actions. Although anger may be a normal feeling, it is often something

that is hard to control and may lead to negative behaviours. According to YAĞCI and ÇAĞLAR (2010), anger has behavioural, physical and psychological dimensions, which can be manifested through physical gestures and appearances such as aggressive attitudes and actions.

Hostility aggression

Hostile aggression according to Baron and Byrne (2003, p. 436), can be defined as “aggression in which the prime objective is inflicting some kind of harm on the victim”, while YAĞCI and ÇAĞLAR (2010) define a hostile individual as someone who has feelings of dislike towards others.

Psychological factors contributing to aggression

O’Toole (2000) was of the opinion that the profile of a typically violent or aggressive adolescent will include a variety of types of behaviour, personality traits, and circumstances in the family, school and community setting. Some of these personality and behavioural characteristics could be a lack of resiliency, poor coping skills, signs of depression, low self-esteem, alienation, need for attention, anger management problems, being a victim of violence, intolerance and an interest in violence-filled entertainment.

For the purposes of this study intra- and inter-personal psychological factors will be considered, such as those discussed below.

Self-relations

Self related well-being, or a coherent sense of self, refers to intra-personal psychological components of an adolescent such as self-concept, self-esteem and self-efficacy. Self-concept implies the knowledge, beliefs, attitudes, and ideas individuals have about themselves (Meece & Daniels, 2008). In line with their cognitive development, adolescents’ conceptions of self become abstract and complex. They begin to realise that they could have an actual self (the real me) and a possible self, and the latter could be distinguished as an ideal self (what I would like to be) and a feared self (what I dread to be). These selves exist as ideas or images of self in the adolescent’s mind and a large discrepancy between these concepts of self (real vs. ideal) may result in feelings of failure, inadequacy, depression and even self-anger, that could manifest in aggressive behaviour (Louw & Louw, 2007).

Adolescence is also the period when there is a prominent dip in self-esteem (Carr, 2004). Self-esteem is seen as the adolescent’s overall attitude toward the self (Baron et al., 2006). Self-esteem involves an evaluation of one’s traits, abilities, and characteristics; in

essence, a global perception of one's overall worth as a person characterised by self-acceptance and respect for oneself (Meece & Daniels, 2008). Adolescents who have low self-esteem are exceedingly vulnerable to rejection, criticism, or any other proof in their daily lives that testifies to their worthlessness, incompetence, inadequacy, or poor social adjustment (Rice, 1990). In addition, an adolescent with low self-esteem may describe himself as a bad person (Santrock, 2008). Low self-esteem has been linked with aggressive or violent behaviour and there is a particularly negative relationship between delinquency and self-esteem (Santrock, 2008). According to Heatherton and Wyland (2003), adolescents with low self-esteem are believed to be psychologically anxious and even depressed, they see the world through a negative filter, and their dislike for themselves affects their perceptions of everything around them. Substantial evidence, according to Heatherton and Wyland (2003), shows a link between self-esteem and depression, loneliness, shyness, alienation and ultimately anger/hostility/aggression

Self-efficacy is a concept closely linked to self-esteem, and it refers to the beliefs a person holds about his/her potential for initiating and performing life tasks that successfully lead to achieving one's goals. These efficacy beliefs establish one's life expectations and therefore guide behavioural performance; this in turn determines the outcomes of one's actions (Carr, 2004; Chesney et al., 2006). According to Chesney et al. (2006), self-efficacy leads to the knowledge of personal competence to master life's challenges; and therefore, to adaptive coping, which decreases psychological distress and dysfunctional behaviour. A low sense of self-efficacy is linked to a sense of emotional, cognitive and motivational incompetence in dealing with demands and stress, and often to dysfunctional attempts to compensate for the lack of mastery experiences (Carr, 2004).

General health

Goldberg and Hillier (1979) described general health as the capability of a person to carry out his/her normal healthy functions. According to the World Health Organization's Ottawa Charter (1986, p. 1), "good health is a major resource for social, economic and personal development and an important dimension of quality of life". The construct of general health, introduced by Goldberg and Hillier (1979), indicated that certain aspects of physical health, sleeplessness and anxiety, depressed affect and social dysfunction are important precursors of health problems that may manifest in behaviour such as aggression. Anxiety particularly, can lead adolescents to act aggressively or become violent towards others (Robinson & Clay, 2005).

Crime and violence in secondary schools threaten the well-being of adolescents (Eliasov & Frank, 2000), and experiences of aggression and violence may cause them to become aggressive or disturb their normal functioning, thereby affecting their mental and/or physical health (Newman & Newman, 2003). Adolescents display unique responses when they are under too much pressure. When the coping efforts to reduce stress are unsuccessful, an adolescent may display other symptoms such as temper tantrums, elevated irritability, inflicting pain on themselves, agitation, defying authority, and eventually, aggressive or violent behaviour (Vogel, 2002). Thus, it appears that impaired physical or mental health in an adolescent may be linked to aggressive behaviour, or result from the experience of such behaviour from others.

Coping

Coping includes responses based on thoughts, feelings and actions. These responses are used to deal with problematic situations that an individual faces in particular circumstances and everyday life (Frydenberg, 1997). According to Santrock (2008), coping, can be defined as attempts at controlling challenging circumstances, expending effort to work out life's problems, and seeking to master or reduce stress. Ways or strategies of coping play a vital role in adolescents' individual reactions to stress, and coping styles that deal with problems contribute more to physical and mental well-being, than coping styles that are problem ignorant or avoidant. According to Ebersöhn and Eloff (2003), the effectiveness of a coping style depends on a mixture of variables such as personality factors, values, the phases, intensity and controllability of the stressful events, accessible support systems and cognitive evaluations. Coping strategies can be destructive or dysfunctional and lead to futile, unsatisfying processes, relationships and outcomes. Such destructive coping strategies often alter conflict processes in harmful ways that lead to a rise in conflict and eventually to aggression and violence (Frydenberg, 1999).

Family relations

Research showed that aggression seems to be a developmental trait that starts early in life and usually continues into adolescence and adulthood (Zirpoli, 2008). According to Zirpoli, aggressive or violent behaviour develops as a consequence of the adolescent's behaviour in interaction with the social environment and the adolescent's parents. Aggressive behaviour may start because of family factors, such as poor adult supervision and/or harsh parental discipline, which may result in the adolescent being 'taught' to engage in aggressive behaviour. Ineffective or inconsistent parental discipline can put in action coercive family processes, which are one of the strongest predictors of aggressive behaviour (Meece &

Daniels, 2008). Meece and Daniels (2008) further stated that parents who frequently use physical power to control other people offer an aggressive model to adolescents, and those aggressive adolescents often receive little positive reinforcement when they demonstrate nonviolent behaviour. Without direction from the parents, the adolescent may become impulsive, aggressive and noncompliant and if the parents give in to such behaviour, it increases the probability that the adolescent will react to future requests for compliance with resistance, hostility, negativity (Meece & Daniels, 2008). Parents may also positively reinforce aggressive behaviour through approval, attention and laughter pertaining to such aggressive acts, which results in maintenance of the behaviours (Zirpoli, 2008).

According to Medina et al. (2002), there are high rates of co-occurrence between intrafamilial violence and exposure to community violence, and co-occurrence has been detected between parent-to-child violence and inter-parental violence. These different forms of violence are regularly recurring events in dysfunctional families. Even though adolescents exposed to such forms of violence frequently have a greater need for protection and nurturance than adolescents with no such stressors do, they may in fact have less access to social support from their parents (Medina et al., 2002).

Social relations

Social relations apparently play an important part in aggression and violence of adolescents, and Van Jaarsveld (2008) indicated that situations within a school, and the relationships and norms that exist there, may be a cause of school violence. The school is the most common social setting for adolescents and is the place where adolescents act out socially; consequently, it is the most general place where interpersonal rivalries take place.

Social adjustment is about the quality of relationships with other people, the neighbourhood, and the community, that the adolescent experiences and maintains (Papalia, Olds, & Feldman, 2009). However, the social adjustment of an adolescent can also be compromised. During adolescence, there are noticeable changes in attachment to family, peers and school. Insecurity and disruption in any of these relationships carries a threat of emotional, social and behavioural problems (Patton, Bond, Butler, & Glover, 2003). Adolescents' views of themselves and the world, their ideas about the purpose of life and meaning, their expectations for future happiness, and their moral development, could be affected by exposure to aggression and violence (Medina et al., 2002).

Adolescents want to feel optimistic about the peer groups to which they belong, and some of their self-esteem depends on identifying with social groups (Baron et al., 2006). The peer group relationships function, both as a basis of temptation and endangerment, and as an

important source of social support (Michael & Ben-Zur, 2007). According to Michael and Ben-Zur, peer pressure often encourages involvement in risky behaviour involving dangerous acts, and therefore, peers often play a significant role in the development of aggression in adolescents. Aggressive adolescents tend to have less well-behaving peers who can stand as positive role models, and relations with aggressive or delinquent peers tend to strengthen and maintain existing problem behaviour (Meece & Daniels, 2008). Adolescents, who are aggressive, frequently find themselves either challenged to conform to the demands of, or rejected by their peer group (Collings & Magojo, 2003).

Based on the above theoretical explanations about the phenomenon of aggression in youth and the contextual influences thereon, the research question that comes to mind is: Would certain psychological factors predict aggressive behaviour in youth and can certain psychological aspects act as moderating variables?

METHOD

Aims

The general aim of this study was to investigate whether psychological factors predict anger, hostile and/or aggressive or violent behaviour in a group of adolescents, and to determine the moderating effect of certain psychological variables.

The specific aims of this study were to determine:

- How adolescent anger/hostility/aggression, and the identified psychological factors, are conceptualised in literature.
- The psychometric properties (reliability and validity indices) of the measurements used in this research.
- Whether psychological factors can predict anger/hostility/aggression in this group of participants, as found with regression analysis.
- Whether intra- and inter-personal psychological factors can moderate the relationship between general health and aggression, and between coping self-efficacy and aggression.

Research design and method

A quantitative research design of the cross-sectional survey type was used to reach the aims of this study. Validated psychological measuring instruments were used to gather

information. Four schools in the Vanderbijlpark area were approached for participation, on the basis of convenience. The schools served as sources of learners to participate and as settings for the data collection.

Participants and procedure

The researcher made use of various international ethical principles, as described in the International Guidelines for Test Use (International Test Commission, 2000). Ethical clearance for this research was obtained from the North-West University Ethical Committee. (NWU-00054-10-AI). Permission for the study was obtained from the Department of Education and the various secondary schools where the research was conducted. Informed assent and consent was obtained, in written form, from the participants and their parents/guardians. The purpose of the research and the questionnaire testing was explained to all learners, as well as their right to voluntary and anonymous participation and to withdrawal at any stage. The testing was conducted in exactly the same manner at all four schools.

The population included grade nine learners of four secondary schools. Validated questionnaires, bound in booklet form, were given to N=512 participants. Testing was done at the different schools during available school hours as arranged with the different school principals by the researcher, who is a registered psychological counsellor and psychometrist with the Health Professions Council of South Africa (HPCSA). A psychometric intern student assisted, and professional teaching staff helped in distributing, monitoring and collecting the questionnaires, after being thoroughly briefed by the researcher. The testing took approximately one hour per group.

Participants had to meet the following criteria:

- Were grade nine learners
- Ranged between the ages of 14 and 16 years
- Gave voluntary assent to participate in this study
- Parents gave written consent
- Had language proficiency in English, in order to answer the questionnaires

The size of the research group was N=512, which included male (N=217) and female (N=295), African (N=311) and White (N=201) adolescent learners.

Data gathering

The measuring instruments included the following questionnaires to measure the psychological factors in and anger/hostility/aggression of participants:

- A biographical questionnaire to obtain the participants socio-demographic information.
- The Personal, Home, Social and Formal Relations Questionnaire (PHSF) of Fouché and Grobbelaar (1971), measures the personal, home, social and formal relations of high school pupils to determine their level of adjustment. The frequency with which his/her response, in relations within the self or with the environment, are mature or immature, efficient or inefficient, determines the level of adjustment of a person, for each of the various components of adjustment (Fouché & Grobbelaar, 1971). The PHSF measures 11 components of adjustment, which are divided into four main adjustment areas. The first main adjustment area is Personal Relations, and this refers to the intra-personal relations, which are of primary importance in adjustment, and include self-confidence, self-esteem, self-control, nervousness and health. The next adjustment area is Home Relations, and this refers to the relations experienced by the person as a dependant within the family and home environment, and includes family influence and personal freedom. The third adjustment area is Social Relations, and this refers to the manner in which a person engages in harmonious and informal relations within the social environment, and includes sociability-group, sociability-sex related and moral sense. The last adjustment area is Formal Relations that refers to the relations occurring in formal situations in the school. The PHSF possesses a high degree of construct validity, and reliability coefficients range between 0.50 and 0.80. The PHSF has been used in South African studies such as “Finding statistical models using psychometric tests, matric results, and biographical data to predict academic success at a South African University” (Breytenbach, 2008), which found Cronbach alpha scores of 0.66 to 0.89 in the different subscales. Other studies included “The biopsychosocial coping and adjustment of female medical professionals (Brown-Baatjies, Fouché, Watson, & Povey, 2006) and “A cross-cultural investigation of the interpersonal relations and social milieu of Indian and White children” (Beinart, 1985). The current study showed Cronbach alpha scores of 0.27 to 0.80 for the different PHSF subscales. The PHSF questionnaire is classified as a psychological test and can only be administered by a registered psychometrist or psychologist.

- The Coping Self-Efficacy Scale (CSE) of Chesney et al. (2006) is a 13-item scale that measures an individual's evaluations of their confidence with respect to carrying out coping strategies in dealing with challenges or threats, and is a short form of the original 26-item questionnaire. The scale has three subscales, namely problem focused coping (CSE-PFC), stopping unpleasant emotions and thoughts (CSE-SUE), and support from friends and family (CSE-SFF), on which the higher the score of the individual, the higher the confidence in coping of that particular individual. Research done by Chesney et al. (2006) showed reliability indices of 0.40-0.80 for the subscales. The CSE has been used in South African research studies such as "The prevalence of resilience in a group of professional nurses" (Koen, Van Eeden, & Wissing, 2011), and "Validation of a coping self-efficacy scale in an African context" (Van Wyk, 2010), which found a Cronbach alpha coefficient of 0.87 for the total CSE. The current study showed a Cronbach alpha coefficient 0.70 for the total CSE. The CSE is in the public domain for usage in research.
- The General Health Questionnaire (GHQ-12) of Goldberg and Hillier (1979) assessed symptoms of a lack of mental well-being or non-pathological mental ill-being. The short form of the scale consists of 12 items and a low score is indicative of mental well-being. In this study, the GHQ-12 researched by Martin (1999) was used, in which three subscales were identified by factor analyses, namely low self-esteem/depression, successful coping and stress. Cronbach alpha coefficients found for these factors were 0.83, 0.67 and 0.71, respectively. The GHQ-12 has been used in South African studies such as "Validation of a coping self-efficacy scale in an African context" (Van Wyk, 2010), and "The Parent Adolescent Relationship and the Emotional Well-Being of Adolescents" (Koen, 2009), which found a Cronbach alpha of 0.78 for the total scale. The current study obtained a Cronbach alpha coefficient of 0.73 for the total scale. The GHQ-12 is in the public domain for usage in research.
- The Aggression Questionnaire (AQ) of Buss and Perry (1992) is a 29-item questionnaire, which contains brief statements that measure different dimensions of the hostility/anger/aggression construct. The four subscales measure physical aggression, verbal aggression, anger and hostility. The internal consistency coefficients of subscales range from 0.57 to 0.77 and 0.82 for the total scale (Buss & Perry, 1992). The AQ scales show consistent differences between males and females, with men showing significantly higher levels of verbal and physical aggression

(Archer, Kilpatrick, & Bramwell, 1995; Buss & Perry, 1992; Williams, Boyd, Cascardi, & Poythress, 1996). The AQ has been standardised for school children between the ages of 9 – 18, and is thus appropriate for the sample population (Buss & Perry, 1992). The AQ has been used in South African research studies, such as “Exploring the relationship between self-efficacy and aggression in a group of adolescents in the peri-urban town of Worcester” (Willemsse, 2008), which found a Cronbach alpha score of 0.89. The current study obtained Cronbach alpha coefficients of 0.71 for physical aggression, 0.50 for verbal aggression, 0.50 for anger and 0.59 for hostility. The AQ is in the public domain for usage in research.

Data analysis

The researcher electronically captured raw data. Descriptive statistics, Cronbach alpha reliability coefficients of scales for the total group of N=512 participants were computed using the IBM-Statistical Product and Service Solutions (SPSS) (Version 19) software package. Validity of the measuring instruments was determined with the Structural Equation Model (SEM) of SEPATH. Multiple regression analyses were performed by means of the Predictive Analytics SoftWare (PASW) programme (SPSS, 2010). A statistical consultant did statistical analyses.

RESULTS AND DISCUSSION

The following is reported below: The descriptive statistics of this total group of participants; reliability and validity of the measuring instruments; predictors of aggression and the moderating effect of certain psychological variables.

Descriptive statistics for the total group on all measuring instruments

Table 1 displays the descriptive statistics of the total group of participants on the Personal, Home, Social and Formal Relations Questionnaire (PHSF), the Coping Self-Efficacy Scale (CSE), the General Health Questionnaire (GHQ-12) and the Aggression Questionnaire (AQ). These findings are briefly indicated here, since they have been discussed in detail in a previous article by these authors (Van Bosch & Van Eeden, in preparation).

[Table 1 approximately here]

For the total group (N=512) the mean scores obtained on the scales and subscales used, indicate that moderate levels of the variables measured were reported by these participants. The standard deviations were rather large, indicating that there was a scatter of scores (variance), which could perhaps be ascribed to the fact that participants were from different cultures and genders. The means and standard deviations found are comparable to those reported in literature on the same measuring instruments.

Reliability and validity of measuring instruments

From Table 2 it is evident that the Cronbach alpha coefficients of the scales and subscales used in this research, range from poor (0.27) to acceptable (0.80) according to the criteria of Nunnally and Bernstein (1994).

[Table 2 approximately here]

The reliability indices of the PHSF subscales 3 (self-control), 4 (nervousness) and 6 (family influences) are low and indicate poor internal consistency based on the scores of this total group of participants. These subscales will thus be discarded and not considered in the statistical analyses further performed. The remaining reliability coefficients for the measuring instruments used range from moderate to good and show fair correspondence to those reported in literature for these scales.

The validity of the measuring instruments used in this study is, surprisingly, indicated by the SEM model of SEPATH as acceptable, despite some of the low to moderate reliability indices of some subscales. The RMSEA point estimates ranged from 0.05 to 0.09 and the 90 percent confidence intervals from 0.050 to 0.099. These parameter estimates were statistically significant, and the Steiger-Lind RMSEA index for each scale indicated a good fit of the underlying model, although the CSE parameters were borderline. The construct validity of the PHSF, CSE, GHQ-12 and AQ could thus be assumed for use in this group of participants.

Predictors of Aggression

Predictors of four aspects of aggression will be discussed, namely physical aggression (Table 3A), verbal aggression (Table 3B), anger aggression (Table 3C) and hostility aggression (Table 3D).

Table 3A shows the multiple regression analyses with PHSF, CSE and GHQ-12 subscales as independent variables and AQ-Phys as dependent variable.

[Table 3A approximately here]

Table 3A indicates that the independent variables explain 31 percent of the variance in AQ-Phys. The R^2 of 0.31 is statistically significant and is confirmed by $F = 15.8$ ($p < 0.05$). The major contributors towards the prediction of AQ-Phys are PHSF 1 (self-confidence), 5 (health), 7 (personal freedom) and 10 (moral sense), CSE-SUE and GHQ-Cope as indicated by their β -values ranging from +0.10 to -0.33 ($p < 0.05$).

Table 3B shows the multiple regression analyses with PHSF, CSE and GHQ-12 subscales as independent variables and AQ-Verb as dependent variable.

[Table 3B approximately here]

Table 3B shows that the independent variables explain 10 percent of the variance in AQ-Verb. The R^2 of 0.10 is statistically significant and is confirmed by $F = 3.86$ ($p < 0.05$). The major contributors as predictors of AQ-Verb are PHSF 1 (self-confidence), 7 (personal freedom) and 10 (moral sense), as indicated by their β -values ranging from -0.10 to -0.25 ($p < 0.05$).

Table 3C shows the multiple regression analyses with PHSF, CSE and GHQ-12 subscales as independent variables and AQ-Anger as dependent variable.

[Table 3C approximately here]

Table 3C indicates that the independent variables explain 18 percent of the variance in AQ-Anger. The R^2 (0.18) is statistically significant ($F = 7.97$, $p < 0.05$). The major contributors towards predicting AQ-Anger are PHSF 5 (health), 7 (personal freedom), 8 (sociability-group) and 10 (moral sense), CSE-SUE and GHQ-Depr, with β -values ranging from +0.10 to -0.14 ($p < 0.05$).

Table 3D shows the multiple regression analyses with PHSF, CSE and GHQ-12 subscales as independent variables and AQ-Host as dependent variable.

[Table 3D approximately here]

Table 3D shows that the independent variables explain 25 percent of the variance in AQ-Host. The R^2 of 0.25 is statistically significant ($R = 12.05$, $p < 0.05$). The major

contributing subscales towards predicting AQ-Host are PHSF 2 (self-esteem), 7 (personal freedom), 10 (moral sense) and 11 (formal relations), CSE-SFF and GHQ-Depr, confirmed by β -values ranging from +0.17 to -0.20 ($p < 0.05$).

The above findings show that low levels of adjustment or distress experienced in intra- and inter-personal psychological aspects, coupled with difficulties to cope with self-efficacy and with experiencing mental stress or dysphoria, could serve as precursors for aggressive behaviour in youth, manifested either physically, verbally, through anger and/or hostility. These results correspond with those reported by Meece and Daniels (2008), Medina et al. (2002) and O'Toole (2000), all indicating the influence of intra- or self related and inter- or relational psychological factors, on the experience and expression of aggression in youth. Furthermore, the findings seem to indicate a buffering effect that intra- and inter-personal features of psychological adjustment could have for adolescents, against experiencing or expressing aggression. The buffering hypothesis of Cohen and Wills (1985) explained how supportive inter-personal relationships could alter the individual's perception of situations so that they lose their threatening or stressful impact and such relations could, furthermore, equip individuals to better handle (cope with) threats or stressors (Gable & Gosnell, 2011). Gable and Gosnell cite other research findings indicating that the buffering hypothesis applies even outside the context of stressful experiences. Thus, stretching the buffering hypothesis somewhat, one can assume that sound intra- and inter-personal psychological characteristics and coping self-efficacy could buffer youth against aggression and predict low experience or expression of aggressive behaviour. The opposite is, however, equally true, in which poor intra- and inter-personal psychological adjustment, with deficient coping abilities and increased mental distress, would expose youth and increase (or predict) their vulnerability to aggression and violence.

The above given results and discussion meet the fourth specific aim for this research, stated before on page 97.

Moderating effect of psychological factors

Stangor (2011, p. 262) described a moderator variable as “a variable that produces an interaction of the relationship between two other variables such that the relationship between them is different at different levels of the moderator variable”.

In Table 4A, the moderating effect of PHSF subscales on Coping Self-Efficacy (CSE) in relation to aggression (AQ) is portrayed.

[Table 4A approximately here]

In Table 4A, it is evident that PHSF subscales 2, 5, 7, 9, 10 and 11 linked to CSE significantly explain more of the variance in AQ than CSE on its own. The percentages of variance ($R^2 \times 100$), explained by PHSF subscales and CSE, vary from 7 percent to 17 percent, while CSE alone explained a variance of 5 percent. The moderating effect of the PHSF subscales on the CSE - AQ relationship is thus indicated, and PHSF subscales 5 (health), 7 (personal freedom) and 10 (moral sense) seem to have the stronger effect.

In Table 4B, the moderating effect of PHSF subscales on general health (GHQ-12) in relation to aggression (AQ), is shown.

[Table 4B approximately here]

In Table 4B, it is seen that PHSF subscales 2, 5, 7, 9, 10 and 11, associated with GHQ-12, significantly explain more of the variance in AQ than GHQ-12 on its own. The percentages of variance ($R^2 \times 100$), explained by PHSF subscales and GHQ-12, vary from 11 percent to 23 percent, while the GHQ-12 alone explained a variance of 10 percent. The moderating effect of the PHSF subscales on the GHQ-12 – AQ relationship is indicated by these results, and PHSF subscales 7 (personal freedom) and 10 (moral sense) seem to have the stronger effect.

The results portrayed in Tables 4A and 4B imply that aspects of self-esteem (PHSF 2), autonomy (PHSF 7) and social competence (PHSF 9-11) interact with coping self-efficacy and with mental health features in relation to the experience and expression of aggression. The moderating effect of the PHSF variables on the strength of the relationships of coping self-efficacy with aggression, and of mental health with aggression in this group of adolescents, can possibly be understood from the following research done in the field of positive psychology.

Self-esteem has been found as the most important predictor of subjective well-being, and positive self-esteem is powerful in defending against negative emotions such as aggression, anger and hostility (Robinson & Compton, 2008). Self-esteem is also closely related to social competence and to self-efficacy in relationships (Hewitt, 2009). Autonomy, the ability to make independent decisions; competence, the mastery of skills with which to deal with one's environment and relatedness, the ability to build meaningful social connections, are constructs of the self-determination theory of Ryan and Deci (2000). These

authors found the three components described above as essential for social development and personal well-being (Ryan & Deci, 2000, p. 68) and as predictors of adaptive functioning under challenging circumstance (Ryan & Deci, 2008). These abilities underpin self-regulation of behaviour and the ability to resist coercion, pressure and external control (Hefferon & Boniwell, 2011), aspects known to evoke aggressive behaviour in youth.

The above given results and discussion meet the fifth specific aim for this research, stated before on page 97.

CONCLUSION

The aim of this study was to determine whether intra- and inter-personal psychological factors could predict aggression and have a moderating effect on coping with- and mental health symptoms relating to, aggression, anger and hostility of youth. The participants in this research were grade nine learners in secondary schools in the Vaal Triangle of South Africa (N=512).

The main findings were that aspects of personal and social adjustment (PHSF variables) and of coping self-efficacy (CSE) and mental health (GHQ-12), significantly predicted features of aggression (AQ) in youth who participated. Furthermore, intra- and inter-personal aspects of psychological adjustment (PHSF subscales) significantly moderated the strength of the relationships between coping self-efficacy (CSE) and aggression (AQ), as well as general mental health (GHQ-12) and aggression (AQ). These findings were theoretically expected and could be explained by means of existing research findings and with the help of theories such as the buffering hypothesis (Cohen & Wills, 1985) and the self-determination theory (Ryan & Deci, 2000).

LIMITATIONS AND RECOMMENDATIONS

Limitations of the study were the use of the PHSF, which is an old and a lengthy questionnaire, and the fact that the measuring instruments were not available in the first languages of the respondents. For future research, it is recommended that more recent and shortened measures of the various constructs identified for this study be utilised, and that these questionnaires be translated into the languages of the respondents. It is further recommended that a measurement model be statistically identified from the data of this research for use in further investigations, and even in intervention programmes for youth, aimed at dealing with aspects of aggression.

It can be concluded that this research project successfully answered the research question and achieved the four specific objectives employed to meet the general aim of the study.

In the last chapter of this dissertation, the conclusions, limitations and recommendations of this research as well as a personal narrative, is presented.

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Table 1: Descriptive statistics of the total group (N=512)

Scale	Minimum	Maximum	Mean	Median	Std. Deviation
PHSF1	12	43	25.4	25	4.4
PHSF2	5	41	23.1	24	5.4
PHSF3	12	34	24.2	24	4.0
PHSF4	13	35	24.7	25	4.2
PHSF5	7	40	25.7	26	5.3
PHSF6	10	39	23.0	23	4.5
PHSF7	3	44	25.0	25	7.2
PHSF8	6	42	24.1	24	6.6
PHSF9	9	36	23.8	24	5.4
PHSF10	6	44	25.0	25	5.9
PHSF11	1	42	22.8	23	5.7
CSE-PFC	9	60	35.3	35	8.7
CSE-SUE	0	40	22.2	22	8.5
CSE-SFF	0	30	21.0	22	6.6
CSE Total	27	126	78.5	79	17.1
GHQ-Cope	0	4	1.05	1	1.05
GHQ-Stress	0	3	0.9	1	1.0
GHQ-Depr	0	5	1.6	1	1.5
GHQ-12 Total	0	12	3.6	3	2.7
AQ-Phys	9	45	25.6	26	7.5
AQ-Verb	6	25	16.6	17	4.0
AQ-Ang	10	34	20.8	21	5.0
AQ-Host	10	40	26.5	27	5.8

Note: PHSF: Personal, Home, Social and Formal Relations Questionnaire: PHSF1 (self-confidence); PHSF2 (self-esteem); PHSF3 (self-control); PHSF4 (nervousness); PHSF5 (health); PHSF6 (family influences); PHSF7 (personal freedom); PHSF8 (sociability–group); PHSF9 (sociability–sex related); PHSF10 (moral sense); PHSF11 (formal relations). CSE: Coping Self-Efficacy Scale: CSE-PFC (problem focused coping); CSE-SUE (stopping unpleasant emotions); CSE-SFF (thoughts and support from friends and family). GHQ-12: General Health Questionnaire. AQ: Aggression Questionnaire.

Table 2: Cronbach alpha coefficients and SEPATH indices of scales/subscales for total group (N = 512).

	Alpha			
PHSF1	0.54			
PHSF2	0.65			
PHSF3	0.27			
PHSF4	0.27			
PHSF5	0.64			
PHSF6	0.34			
PHSF7	0.80			
PHSF8	0.75			
PHSF9	0.50			
PHSF10	0.71			
PHSF11	0.72			
CSE Total	0.70			
GHQ-12 Total	0.73			
AQ-Phys	0.71			
AQ-Verb	0.50			
AQ-Ang	0.50			
AQ-Host	0.59			
SEPATH		Lower 90%	Point	Upper 90%
Steiger-Lind RMSEA Index	PHSF 1-5	0.049	0.051	0.053
Steiger-Lind RMSEA Index	PHSF 6-7	0.058	0.062	0.066
Steiger-Lind RMSEA Index	PHSF 8-10	0.049	0.052	0.055
Steiger-Lind RMSEA Index	PHSF 11	0.057	0.065	0.074
Steiger-Lind RMSEA Index	CSE	0.080	0.090	0.099
Steiger-Lind RMSEA Index	GHQ-12	0.052	0.063	0.075
Steiger-Lind RMSEA Index	AQ	0.066	0.070	0.075

Table 3A: Multiple regression analysis with AQ-Phys as the dependent variable and PHSF, CSE and GHQ-12 subscales as independent variables (N = 512).

Model	Unstandardised Coefficients		Standardised Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	39.30	3.17	-	12.40	0.00
PHSF1	-0.24	0.08	-0.14	-2.93	0.00
PHSF5	-0.27	0.06	-0.19	-4.42	0.00
PHSF7	-0.17	0.05	-0.16	-3.74	0.00
PHSF10	-0.42	0.06	-0.33	-7.27	0.00
CSE-SUE	-0.10	0.04	-0.11	-2.59	0.01
GHQ-Cope	0.67	0.29	0.10	2.30	0.02

Regression Model Properties:

R	R Square	Adjusted R Square	Mean Square	F	Sig
0.56	0.31	0.29	626.9 39.6	15.8	0.00

Table 3B: Multiple regression analysis with AQ-Verb as the dependent variable and PHSF, CSE and GHQ-12 subscales as independent variables (N = 512).

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	19.34	1.94	-	9.99	0.00
PHSF1	-0.13	0.05	-0.14	-2.60	0.01
PHSF7	-0.06	0.03	-0.10	-2.03	0.04
PHSF10	-0.17	0.04	-0.25	-4.78	0.00

Regression Model Properties:

R	R Square	Adjusted R Square	Mean Square	F	Sig
0.31	0.10	0.07	57.14 14.79	3.86	0.00

Table 3C: Multiple regression analysis with AQ-Anger as the dependent variable and PHSF, CSE and GHQ-12 subscales as independent variables (N = 512).

Model	Unstandardised Coefficients		Standardised Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	25.27	2.32	-	10.92	0.00
PHSF5	-0.11	0.04	-0.11	-2.40	0.02
PHSF7	-0.10	0.03	-0.14	-2.88	0.01
PHSF8	-0.10	0.04	-0.13	-2.65	0.01
PHSF10	-0.10	0.04	-0.12	-2.46	0.01
CSE-SUE	-0.06	0.03	-0.10	-2.12	0.04
GHQ-Depr	0.34	0.18	0.10	1.87	0.05

Regression Model Properties:

R	R Square	Adjusted R Square	Mean Square	F	Sig
0.43	0.18	0.16	168.42 21.14	7.97	0.00

Table 3D: Multiple regression analysis with AQ-Host as the dependent variable and PHSF, CSE and GHQ-12 subscales as independent variables (N = 512).

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	35.95	2.54	-	14.16	0.00
PHSF2	-0.17	0.06	-0.16	-3.01	0.00
PHSF7	-0.12	0.04	-0.16	-3.41	0.00
PHSF10	-0.20	0.05	-0.20	-4.28	0.00
PHSF11	-0.12	0.05	-0.11	-2.36	0.02
CSE-SFF	-0.08	0.04	-0.10	-2.24	0.03
GHQ-Depr	0.65	0.20	0.17	3.27	0.00

Regression Model Properties:

R	R Square	Adjusted R Square	Mean Square	F	Sig
0.50	0.25	0.23	306.35 25.43	12.05	0.00

Table 4A: Moderation effect of PHSF variables on coping self-efficacy, in relation to aggression (N=512).

Dependent: Aggression		Standardised Regression Coefficient β (*=significant at p<0.05)	R² (*=significant at p<0.05)
Independent Variables			
Main	Combination		
CSE		-0.22*	0.05
	PHSF1	-0.06	
	CSE	-0.20*	0.05
CSE		-0.22*	0.05
	PHSF2	-0.16*	
	CSE	-0.17*	0.07*
CSE		-0.22*	0.05
	PHSF5	-0.27*	
	CSE	-0.18*	0.12*
CSE		-0.22*	0.05
	PHSF7	-0.29*	
	CSE	-0.13*	0.13*
CSE		-0.22*	0.05
	PHSF8	-0.04	
	CSE	-0.23*	0.05
CSE		-0.22*	0.05
	PHSF9	-0.18*	
	CSE	-0.22*	0.08*
CSE		-0.22*	0.05
	PHSF10	-0.36*	
	CSE	-0.12*	0.17*
CSE		-0.22*	0.05
	PHSF11	-0.16*	
	CSE	-0.17*	0.07*

Table 4B: Moderation effect of PHSF variables on general health, in relation to aggression (N=512).

Dependent: Aggression		Standardised Regression Coefficient β (*=significant at p<0.05)	R² (*=significant at p<0.05)
Independent Variables			
Main	Combination		
GHQ-12		0.32*	0.10*
	PHSF1	-0.03	
	GHQ-12	0.31*	0.10*
GHQ-12		0.32*	0.10*
	PHSF2	-0.08	
	GHQ-12	0.28*	0.11*
GHQ-12		0.32*	0.10*
	PHSF5	-0.20*	
	GHQ-12	0.24*	0.13*
GHQ-12		0.32*	0.10*
	PHSF7	-0.25*	
	GHQ-12	0.23*	0.16*
GHQ-12		0.32*	0.10*
	PHSF8	-0.06	
	GHQ-12	0.33*	0.10*
GHQ-12		0.32*	0.10*
	PHSF9	-0.16*	
	GHQ-12	0.30*	0.13*
GHQ-12		0.32*	0.10*
	PHSF10	-0.36*	
	GHQ-12	0.27*	0.23*
GHQ-12		0.32*	0.10*
	PHSF11	-0.17*	
	GHQ-12	0.29*	0.13*

CHAPTER 4:
CONCLUSIONS, LIMITATIONS AND
RECOMMENDATIONS OF THE STUDY

4.1 INTRODUCTION

The present study aimed to identify intra- and inter-personal psychological factors contributing to aggressive or violent behaviour in adolescents by examining secondary school learners' experiences in specific domains, which included self-related well-being, coping self-efficacy, general health, inter-personal relationships and manifested aggression. In the overview, a literature study was conducted to describe the phenomenon of school violence and several intra- and inter-personal aspects related to it. Article one and article two described the research that was conducted as well as the research results and related conclusions. In this chapter, the conclusions of the literature reviewed and the research articles will be combined and final conclusions, limitations and recommendations will be discussed.

4.2 LITERATURE CONCLUSIONS

4.2.1 Conclusions based on the literature

During the investigation of existing literature, it was found that there is much information available about violence in schools in other countries, but little relevant information exists about violence in schools in South Africa. Although it is apparent that violence is occurring regularly in South African schools, it is not reported and recorded, as one would expect it to be. Although there are various recent sources of literature on aggression and violence in youth, the majority are older sources concerning theoretical explanations of the aggression phenomenon. Much of the literature also focuses on adult aggression and violence, while in adolescents, aggressive behaviour is mostly considered within the contexts of delinquency or conduct disorder. In regards to violence at schools, bullying was found to be most prominent and thus, more information was available about the causes, types and results of bullying. Fairly little information about physical and verbal

aggression was found; instead anger seemed to be a more readily-used term when considering violence and aggression in youth. Volumes of research have been done on adolescence as a developmental stage, including the biological, psychological, social and economic changes, and the forming of an identity or sense of self. However, only a few authors explore that aggression and violence in youth often manifest as a result of developmental difficulties or developmental failures. Intrafamilial violence witnessed and/or experienced by children, as well as societal violence, are indicated as powerful sources of aggression in youth and parental pathology, ineffective parenting styles and other parent-related aspects seem to be major causes of violent behaviour in youth.

More recent literature sources of violence and aggression in adolescents highlight media violence as a strong precursor of violence and aggression, especially television viewing and violent game play. Psychological effects of school violence are only mentioned briefly in literature. Despite the fact that newspapers abound with reports on school violence and other forms of behavioural aggression/violence among youth in South Africa, there is a paucity of recent research results about the phenomenon.

From the exploration of literature pertaining to aggressive or violent behaviour in adolescents, it was evident that intra-personal and inter-personal factors play a determining role in the manifestation of aggression by youth. The rationale for research, such as was performed in this study, was clear.

4.2.2 Conclusions from the literature of article one: Psychological factors and aggressive or violent behaviour of adolescents

The brief literature overview indicated the influence of psychological factors such as self related well-being, coping self-efficacy, general health and inter-personal relations manifested anger, hostility and aggression of adolescents in secondary schools (O'Toole,

2000; Louw & Louw, 2007; Sigelman & Rider, 2006; Rathus, 2011; Frydenberg, 1999; Medina, Margolin, & Gordis, 2002). School violence is often the product of such anger, hostility and aggression in adolescents. It was concerning to find that adolescents with low self-esteem are vulnerable to delinquent behaviour (Carr, 2004; Lefrancois, 2001; Rice, 1990; Santrock, 2008). One of the leading causes of aggression and violence in adolescents seems to be exposure to violence, whether as a witness or a victim, and this clearly resulted in negative behavioural and emotional outcomes. This was confirmed by the social learning theory (Collings & Magojo, 2003; De Wet, 2003; Kaplan, 2000; Medina et al., 2002), and raised great concern about the psychosocial well-being of youth in South Africa, due to the high levels of familial and societal violence, evident in local contexts.

4.2.3 Conclusions from literature of article two: Psychological factors that predict or moderate aggression in youth

The literature in this article intended to identify psychological factors that could predict or moderate anger, hostile and aggressive or violent behaviour in adolescents. Emphasis was placed on theories and different types of aggression. From the literature, it was evident that frequent exposure to aggression or violence could intensify negative emotions underpinning aggression, and also strengthen cognitive structures relating to aggressive and violent behaviour, which in turn could influence adjustment in all developmental areas (Baron, Byrne, & Branscombe, 2006; Meece & Daniels, 2008; O'Toole, 2000). Intra- and inter-personal psychological factors were identified as predictors of aggression or violence in adolescents. A prominent contribution to aggression was found in physical and mental health aspects of an adolescent, especially the experience of anxiety (Newman & Newman, 2003; Robinson & Clay, 2005; Vogel, 2002). Dysfunctional coping strategies are powerful predictors of aggressive or violent behaviour in adolescents (Ebersöhn & Eloff, 2003;

Frydenberg, 1999) and according to the literature, family and social relations play determining roles in all causes of aggression and violence in adolescents (Patton, Bond, Butler, & Glover, 2003; Meece & Daniels, 2008; Medina et al., 2002; Michael & Ben-Zur, 2007; Zirpoli, 2008). It was difficult to find literature sources explaining causative factors for the different types of aggression, especially in regards to physical aggression. Very little research could be found on variables serving a moderating function in aggressive or violent behaviour of youth.

4.3 EMPIRICAL CONCLUSIONS

The research design and method used, seemed to be successful in this research study, since the aims that were set out were achieved. The findings of both articles supported what was learned from the literature study. The measuring instruments used in this study population proved reliable and valid and were able to measure the psychological factors influencing anger, hostility and aggression of the various participants.

In article one, the purpose of the study was to determine descriptive statistical tendencies of these participants, compared to those found in literature, as well as the correlations between psychological factors, measured by the PHSF, CSE and GHQ-12, and aspects of aggression, as determined through the AQ. The means and standard deviations found, compared well with those in literature. The main finding was that adaptive psychological factors have significantly negative relationships with aspects of aggressive behaviour, suggesting that the more psychological wellness adolescents experience, the less they will engage in, or manifest, aggressive behaviour. Aspects of mental dysphoria significantly related to aggressive features in these youth, supporting the above-mentioned observation that psychological ill-being or mental difficulties play a prominent role in adolescent aggression. In this study, the significant differences found between gender and

racial subgroups on aspects of psychological adjustment, coping and general health and on aspects of aggression, anger and hostility, attested to lower and different manifestations of aggression in females, but especially to the difficult and demanding psychosocial contexts faced by African youth compared to White youth in South Africa.

It can be concluded that the research reported in article one was successful in achieving the aims set out in order to answer the research question. Based on the findings of this investigation, it can be assumed that intra- and inter-personal psychological factors significantly contribute to aggressive or violent behaviour of adolescents.

In article two, the general aim of the study was to investigate whether psychological factors, measured through PHSF, CSE and GHQ-12, could predict anger, hostile and/or aggressive or violent behaviour, measured with AQ, in a group of adolescents, and to determine the moderating effect of certain psychological variables. The main findings were that aspects of personal and social adjustment (PHSF variables), of coping self-efficacy (CSE) and of mental health (GHQ-12), significantly predicted features of aggression (AQ) in adolescents who participated. This finding supported the researcher's personal hypothesis gained from working with learners as a school counsellor; that personal issues were powerful factors in aggressive/violent behaviour; as well as the theoretical insight obtained from the literature study about intra- and inter-personal precursors of aggression in youth. Furthermore, intra- and inter-personal aspects of psychological adjustment (PHSF subscales) significantly moderated the strength of the coping self-efficacy (CSE) and aggression (AQ) relationship, as well as, the general mental health (GHQ-12) and aggression (AQ) relationship. This finding was particularly insightful due to the little information available about variables that have a moderating effect on youth aggression/violence, but especially since coping difficulties and mental problems have been reported in literature as precursors of adolescent aggression/violence. These findings show that physical health, personal freedom

or autonomy and a moral or ethical sense in relationships could enable, or even buffer/protect, youth in dealing with the aggression/violence they encounter, either in themselves or in others. These results could introduce topics for exploration in youth counselling. Further research in this regard, is also called for.

It can be concluded that the research reported in article two was successful. The results answered the research question and achieved the four specific objectives employed to meet the general aim of the study.

4.4 LIMITATIONS

The following limitations were identified during the course of this research study:

- The use of the PHSF Relations Questionnaire to measure aspects of intra- and inter-personal functioning or adjustment. The PHSF is a very old and a lengthy questionnaire that poses reliability problems on some of its subscales. Various shorter and more recent scales could have measured the same psychological features, more reliably.
- Minimal research regarding school violence in the South African context, or of comparable studies with similar variables, could be found to incorporate in the literature review of this study, and also against which to compare to the findings in this research study.
- South Africa has eleven official languages, but measures used in this study were only available in English, except for PHSF, which is also available in Afrikaans. Since the psychological features measured by these scales have a strong emotional component, it would have been preferable to present them in the language of the respondent.

4.5 RECOMMENDATIONS

The following recommendations for future research are suggested:

- It is recommended that research on the contribution of various psychological variables to aggression, anger and hostility in youth be conducted, using different scales, and with the questionnaires translated into the languages of the participants.
- It is recommended that a measurement model be statistically identified, from the data of this study, for use in further investigations, and even in intervention programmes for youth, aimed at dealing with aspects of aggression.
- That research be conducted on South African youth with regards to the causes of anger, aggression and hostility experienced by them, by using qualitative research.
- That psychological variables, with a moderating effect on aggression/violence, be identified.
- That questionnaires for the principals and teachers are included in future studies to gain a better perspective of school violence from the school itself.

4.6 CONTRIBUTION OF THIS RESEARCH STUDY

The contribution of this research study to the field of psychology, especially in the South African context, is:

- New and relevant information about the psychological aspects contributing to aggressive or violent behaviour of South African adolescents in secondary schools
- The possible publication of the articles from this study in the South African Journal of Psychology.

4.7 PERSONAL NARRATIVE

In conclusion, I share my awareness obtained throughout this research journey. This research process augmented my passion for working with youth, and my love of psychology and all aspects related to it. It provided insight to understanding why adolescents are displaying aggression and violent behaviour in the schools where I encounter them. It increased my compassion and willingness, as a school counsellor, to work with these learners and help them understand and cope with their aggression. The results of this study made me realise that the development and introduction of intervention programmes in schools is imperative to help violent or aggressive learners cope with their aggression in a positive manner. Throughout this research process, it was evident that adolescents need love, nurturing and someone truly caring for, and listening to them. They also need coaching to enable them to deal with the challenges they face and to build their own psychological competence and well-being.

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APPENDICES

APPENDIX A:

Request for permission to do research and approval from the Gauteng Department of Education

Mrs. E van Bosch
P.O Box 5518
Vanderbijlpark
1911

23 April 2010

The District Director
D8 Sedibeng West

Dear Mr/Mrs/Ms

RE: RESEARCH PROCESS WITHIN THE D8 SEDIBENG WEST DISTRICT

REQUEST: I request to do research at the following schools located in Vanderbijlpark, Gauteng: HTS Carel de Wet, Hoërskool Driehoek, Hoërskool Suiderlig, Suncrest High, The Vaal High school.

I am at present a Masters student in Psychology at the North West University (Vanderbijlpark campus). The title of my study is: " Psychological factors contributing to aggressive or violent behaviour of adolescents in secondary schools".

The specific aims of this study are to determine:

- How adolescent anger/hostility/aggression and the identified psychological factors are conceptualized in literature.
- The levels of self related well-being, coping self-efficacy, general health and social adjustment and anger/hostility/aggression in a group of secondary school learners, by means of descriptive statistics.
- The psychometric properties (reliability and validity indices) of the measurements used in this research.
- The Pearson-12 correlations between the psychological factors and anger/hostility/aggression in the group of participants.
- Significance of differences between gender and cultural subgroups of participants in the factors measured, by means of ANOVA, t-tests and effect size indices.
- Whether the psychological factors can predict anger/hostility/aggression in this group of participants, as found with structural equation modeling.

I request permission to administer validated questionnaires to the grade nine learners of the above-mentioned schools. I am attaching the questionnaires and research proposal for your referral.

Participation is voluntary, and the learners and their parents must give informed consent before a learner completes a questionnaire. Permission for this research will also be obtained from the Ethical Committee of the North-West University and the principals of the various schools before any research is undertaken.

My study leader is Prof. C. van Eeden. If you have any questions you can contact Prof. van Eeden at (016) 910 3419.

If my request is approved, please provide me with a letter to this effect in English.

Thank you



Mrs. E. van Bosch
Student no: 12607495
084 734 1073 or (016) 931 1448/9
elzanepieterse@yahoo.com



Prof C. van Eeden
Research Leader



Date:	05 May 2010
Name of Researcher:	Van Bosch Elzané
Address of Researcher:	23 N.J. van der Merwe Street Vanderbijlpark 1911
Telephone Number:	0169311448/0847341073
Fax Number:	0169331149
Research Topic:	Psychological Factors Contributing to Aggressive or Violent Behaviour of Adolescents in Secondary Schools
Number and type of schools:	5 Secondary Schools
District/s/HO	Sedibeng West

Re: Approval in Respect of Request to Conduct Research

This letter serves to indicate that approval is hereby granted to the above-mentioned researcher to proceed with research in respect of the study indicated above. The onus rests with the researcher to negotiate appropriate and relevant time schedules with the school/s and/or offices involved to conduct the research. A separate copy of this letter must be presented to both the School (both Principal and SGB) and the District/Head Office Senior Manager confirming that permission has been granted for the research to be conducted.

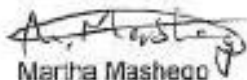
Permission has been granted to proceed with the above study subject to the conditions listed below being met, and may be withdrawn should any of these conditions be flouted:

1. *The District/Head Office Senior Manager/s concerned must be presented with a copy of this letter that would indicate that the said researcher/s has/have been granted permission from the Gauteng Department of Education to conduct the research study.*
2. *The District/Head Office Senior Manager/s must be approached separately, and in writing, for permission to involve District/Head Office Officials in the project.*
3. *A copy of this letter must be forwarded to the school principal and the chairperson of the School Governing Body (SGB) that would indicate that the researcher/s have been granted permission from the Gauteng Department of Education to conduct the research study.*

4. *A letter / document that outlines the purpose of the research and the anticipated outcomes of such research must be made available to the principals, SGBs and District/Head Office Senior Managers of the schools and districts/offices concerned, respectively.*
5. *The Researcher will make every effort obtain the goodwill and co-operation of all the GDE officials, principals, and chairpersons of the SGBs, teachers and learners involved. Persons who offer their co-operation will not receive additional remuneration from the Department while those that opt not to participate will not be penalised in any way.*
6. *Research may only be conducted after school hours so that the normal school programme is not interrupted. The Principal (if at a school) and/or Director (if at a district/head office) must be consulted about an appropriate time when the researcher/s may carry out their research at the sites that they manage.*
7. *Research may only commence from the second week of February and must be concluded before the beginning of the last quarter of the academic year.*
8. *Items 6 and 7 will not apply to any research effort being undertaken on behalf of the GDE. Such research will have been commissioned and be paid for by the Gauteng Department of Education.*
9. *It is the researcher's responsibility to obtain written parental consent of all learners that are expected to participate in the study.*
10. *The researcher is responsible for supplying and utilising his/her own research resources, such as stationery, photocopies, transport, taxes and telephones and should not depend on the goodwill of the institutions and/or the offices visited for supplying such resources.*
11. *The names of the GDE officials, schools, principals, parents, teachers and learners that participate in the study may not appear in the research report without the written consent of each of these individuals and/or organisations.*
12. *On completion of the study the researcher must supply the Director: Knowledge Management & Research with one Hard Cover bound and one Ring bound copy of the final, approved research report. The researcher would also provide the said manager with an electronic copy of the research abstract/summary and/or annotation.*
13. *The researcher may be expected to provide short presentations on the purpose, findings and recommendations of his/her research to both GDE officials and the schools concerned.*
14. *Should the researcher have been involved with research at a school and/or a district/head office level, the Director concerned must also be supplied with a brief summary of the purpose, findings and recommendations of the research study.*

The Gauteng Department of Education wishes you well in this important undertaking and looks forward to examining the findings of your research study.

Kind regards



Mariha Mashego

ACTING DIRECTOR: KNOWLEDGE MANAGEMENT & RESEARCH

The contents of this letter has been read and understood by the researcher.	
Signature of Researcher:	
Date:	

APPENDIX B:

Request for permission to do research and approval from the various secondary schools

Mrs. E van Bosch
P.O Box 5518
Vanderbijlpark
1911

REQUEST FOR GRADE 9 LEARNERS TO PARTICIPATE IN RESEARCH

Mr. Knoetze

Request: I request to do research at Hoërskool Driehoek

I am at present a Masters student in Psychology at the North West University (Vanderbijlpark campus). The title of my study is: "Psychological factors contributing to aggressive or violent behaviour of adolescents in secondary schools".

The specific aims of this study are to determine:

- How adolescent anger/hostility/aggression and the identified psychological factors are conceptualized in literature.
- The levels of self related well-being, coping self-efficacy, general health and social adjustment and anger/hostility/aggression in a group of secondary school learners, by means of descriptive statistics.
- The psychometric properties (reliability and validity indices) of the measurements used in this research.
- The Pearson-12 correlations between the psychological factors and anger/hostility/aggression in the group of participants.
- Significance of differences between gender and cultural subgroups of participants in the factors measured, by means of ANOVA, t-tests and effect size indices.
- Whether the psychological factors can predict anger/hostility/aggression in this group of participants, as found with structural equation modeling.

I request permission to administer validated questionnaires to the grade nine learners of your school. I am attaching the questionnaires and research proposal for your referral.

Participation is voluntary, and the learners and their parents must give informed consent before a learner completes a questionnaire. Permission for this research will also be obtained from the Ethical Committee of the North-West University and the Department of Education before any research is undertaken.

My study leader is Prof. C van Eeden. If you have any other questions you can contact her at (016) 910 3419.

If my request is approved, please provide me with a letter to this effect in English.

Thank you



Mrs. E. van Bosch
Student no: 12607495
084 734 1073
elzanepieterse@yahoo.com



Prof C. van Eeden
Research Leader

TO WHOM IT MAY CONCERN

We hereby confirm that MS ELZANE VAN BOSCH has been granted permission to conduct research with the Grade 9 learners on 16th July 2010 commencing at 08h30.

Yours faithfully

PRINCIPAL

2010.06.01

20 July 2010

TO WHOM IT MAY CONCERN

We hereby confirm that Mrs. ELZANÉ VAN BOSCH has been granted permission to conduct research with the Grade 9 learners on the 21st of July 2010 commencing at 12:00.

Yours faithfully

ACTING PRINCIPAL

To whom it may concern

We hereby confirm that Mrs Elzane van Bosch has been granted permission to conduct research with the grade 9 learners on 28 July 2010 commencing at 09:30.

Yours faithfully

PRINCIPAL
2010.08.24

3 AUGUST 2010

TO WHOM IT MAY CONCERN

We hereby confirm that MS ELZANE VAN BOSCH has been granted permission to conduct research with the Grade 9 learners on 3 August 2010 commencing at 8h30.

Yours faithfully

PRINCIPAL

APPENDIX C:

Request for consent from parents and participants

REQUEST FOR GRADE 9 LEARNERS TO PARTICIPATE IN RESEARCH

Dear Parent

Participation in research: Psychological factors contributing to aggressive or violent behaviour of adolescents in secondary schools.

I am at present a Masters student in Psychology at the North West University (Vanderbijlpark campus). I am doing research on the above-mentioned topic and will appreciate it if your child can take part in this research.

The specific aims of this study are to determine:

- How adolescent anger/hostility/aggression and the identified psychological factors are conceptualized in literature.
- The levels of self related well-being, coping self-efficacy, general health and social adjustment and anger/hostility/aggression in a group of secondary school learners, by means of descriptive statistics.
- The psychometric properties (reliability and validity indices) of the measurements used in this research.
- The Pearson-12 correlations between the psychological factors and anger/hostility/aggression in the group of participants.
- Significance of differences between gender and cultural subgroups of participants in the factors measured, by means of ANOVA, t-tests and effect size indices.
- Whether the psychological factors can predict anger/hostility/aggression in this group of participants, as found with structural equation modeling.

Validated questionnaires will be used to gather information. The information gathered will be confidential between the researcher and research leaders only. Your child's name will not be disclosed during the research or publication of the results.

Participation is voluntary and you are kindly requested to complete the attached consent form to indicate that you are willing to let your child participate in this research. Research will be done in English.

Thanking you in anticipation



Mrs. E van Bosch
Researcher

CONSENT BY PARENTS TO PARTICIPATE IN RESEARCH

RESEARCH: Psychological factors contributing to aggressive or violent behaviour of adolescents in secondary schools

I _____ hereby give consent to voluntary participation of my child in the above research project.

Child: _____

Date: _____

Parent's Signature: _____

REQUEST FOR GRADE 9 LEARNERS TO PARTICIPATE IN RESEARCH

Dear Learner

Participation in research: Psychological factors contributing to aggressive or violent behaviour of adolescents in secondary schools.

I am at present a Masters student in Psychology at the North West University (Vanderbijlpark campus). I am doing research on the above-mentioned topic and will appreciate it if you can take part in this research.

The specific aims of this study are to determine:

- How adolescent anger/hostility/aggression and the identified psychological factors are conceptualized in literature.
- The levels of self related well-being, coping self-efficacy, general health and social adjustment and anger/hostility/aggression in a group of secondary school learners, by means of descriptive statistics.
- The psychometric properties (reliability and validity indices) of the measurements used in this research.
- The Pearson-12 correlations between the psychological factors and anger/hostility/aggression in the group of participants.
- Significance of differences between gender and cultural subgroups of participants in the factors measured, by means of ANOVA, t-tests and effect size indices.
- Whether the psychological factors can predict anger/hostility/aggression in this group of participants, as found with structural equation modeling.

Validated questionnaires will be used to gather information. The information gathered will be confidential between the researcher and research leaders only. Your name will not be disclosed during the research or publication of the results.

Participation is voluntary and you are kindly requested to complete the attached consent form to indicate that you are willing to participate in the research. Research will be done in English.

Thanking you in anticipation



Mrs. E van Bosch
Researcher

CONSENT BY LEARNERS TO PARTICIPATE IN RESEARCH

RESEARCH: Psychological factors contributing to aggressive or violent behaviour of adolescents in secondary schools

I _____ hereby give consent to voluntarily participate in the above research project.

Date: _____

Participant's Signature: _____

APPENDIX D:
Proof of professional editing

Ms Linda Scott
English language editing
SATI membership number: 1002595
Tel: 083 654 4156
E-mail: lindascott1984@gmail.com

27 November 2012

To whom it may concern

This is to confirm that I, the undersigned, have language edited the completed research of Elzané van Bosch for the Magister Artium in Psychology thesis entitled: Psychological factors contributing to aggressive or violent behaviour of adolescents in secondary schools, at the North-West University (Vaal Triangle Campus).

The responsibility of implementing the recommended language changes rests with the author of the thesis.

Yours truly,

Linda Scott