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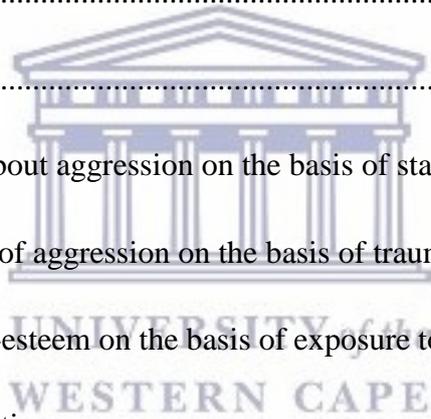
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DECLARATION

I declare that the mini-thesis entitled, “Exposure to trauma and self-esteem as predictors of normative beliefs about aggression: A study of South African young adults”, is my own work. It has not been submitted for any degree or examination at any other university, and that all the sources I have used or quoted have been indicated and acknowledged by complete references.

Signature:



Date: 30/04/2018



ABSTRACT

Aggressive behaviour is prevalent in the South African context. This is evident in the high rates of interpersonal violence including rape, intimate partner violence and homicide. Young adults appear to be both the main perpetrators and victims of aggressive behaviour.

Normative beliefs about aggression have been identified as a central factor underlying aggressive behaviour. Normative beliefs refer to an individual's cognitions about the acceptability of specific behaviours and serve to regulate actions. Despite the identified salience of normative beliefs in influencing aggressive behaviour, limited research has been conducted within South Africa on this topic. This study thus investigated normative beliefs about aggression held by young adults attending university. The study also aims to investigate whether prior exposure to trauma, self-esteem and demographic factors (e.g. age, gender and family size) predicted normative beliefs about aggression. Results indicated that exposure to traumatic events, as well as state self-esteem significantly predicted normative beliefs about aggression. Gender differences were evident in various subscales. Ethical approval to conduct this study was obtained by the Senate Higher Degrees Committee of the University of the Western Cape, as well as the University of the Western Cape registrar.

CHAPTER ONE: INTRODUCTION

1.1 Background

Aggressive behaviour is prevalent in South Africa and regarded as a significant societal concern. Aggressive acts perpetrated by an individual have ramifications which affect other individuals, families and communities (Arseneault, Bowes, & Shakoor, 2010; Lehohla, 2016). Aggression has been defined by Anderson and Bushman (2002) as behaviour directed towards another individual with the intent to cause that person harm. Aggression can take the form of bullying (Werner & Nixon, 2005), physical assault, sexual assault, community violence, political violence, intimate partner violence (IPV), and other forms of interpersonal violence (Bruce, 2006). South African society is characterized by a high prevalence of these forms of aggressive behaviour (Kaminer, du Plessis, Hardy, & Benjamin, 2013; Lehohla, 2016; Seedat, Van Niekerk, Jewkes, Suffla, & Ratele, 2009). The majority of both perpetrators and victims of aggression and violence are young adults in South Africa (Seedat et al, 2009). Particular attention has been paid to the high rates of IPV among university students (Gordon & Collins, 2013; Straus, 2008). It has been reported that one fifth (Pengpid & Peltzer, 2016) to one third (Straus, 2008) of students are exposed to IPV.

Seedat et al. (2014) noted that psychological research on violence and trauma in South Africa is dominated by a focus on gathering information regarding typology, magnitude, costs and consequences of violence, as well as the determinants and protective factors. While these types of studies are important, it is equally necessary to investigate the cognitive factors that contribute to the perpetration of aggressive acts. As such the focus of this study is on normative beliefs about aggression, which are cognitive structures relating to the acceptability of aggression.

High rates of aggressive behaviour have been linked to socio-cultural factors, one of these factors include the role which the history of apartheid played in South Africa when

establishing political freedom for many South Africans (Bruch, 2006). Through this process, it can be argued that violence has been normalized and justified as a means to achieve goals and advancement in South Africa (Bruce, 2006). However, historical and socio-cultural factors alone do not predict aggressive behaviour (Anderson & Bushman, 2002). Instead, socio-cognitive theories have emphasised the role of normative beliefs about aggression, in predicting aggression (Gilbert, Daffern, Talevski, & Ogloff, 2013).

Normative beliefs are cognitions which serve to inform individuals of the range of acceptable behaviours in a given situation (Heusmann & Guerra, 1997). These normative beliefs are acquired through a process of socialisation, whereby through experiencing and observing aggression, these behaviours become normalised and internalised as they are encountered, evaluated, rehearsed, and reinforced (Huesmann, 1998). It has been well established in the literature that normative beliefs accurately and consistently predict aggressive behaviour (Amjad & Skinner, 2008; Gilbert et al., 2013; Heusmann & Guerra, 1997). Interventions which aim to change the way children and adolescents think about the use of aggression through the modelling and encouragement of pro-social problem-solving in school have shown some success (Guerra, Henry, Huesmann, & Tolan, 2007)

Existing research has identified a number of factors that correlate with normative beliefs about aggression. These include age, gender, exposure to trauma and self-esteem. Normative beliefs are more malleable in childhood and are typically consolidated by early adulthood (Heusmann & Guerra, 1997). Research has identified that girls endorse more indirect forms of aggression (e.g. social exclusion of peers) while boys tend to endorse more direct forms of aggressive behaviour (Werner & Nixon, 2005). Further to this, gender differences have been found with regards to normative beliefs when the gender of the aggressor and the victim are taken into account (Bettencourt & Miller, 1996; Feld & Felson, 2008). Exposure to interpersonal violence has been identified as being related to normative

beliefs in favour of aggression, as well as aggressive behaviour in children (Guerra, Huesmann, & Spindler, 2003). Similarly, exposure to accidental forms of traumatic events, for example, natural disasters, have also been related to an increase in aggressive behaviour (Scott, Lapre', Marsee, & Weems, 2014; Terranova, Boxer, & Morris, 2009;). In terms of self-esteem, existing literature distinguishes between trait-like self-esteem, which is considered to be a stable feature of one's personality, and state-like self-esteem which is considered to be more prone to instability and changes in environment or situation (Lee, 2014; Webster, Kirkpatrick, Nezlek, Smith, & Paddock, 2007). Individuals with an unstable yet favourable view of themselves are more prone to react aggressively when their sense of self is under threat (Kernis, Grannemann, & Barclay, 1989). It can thus be expected that those who have a high, but unstable self-esteem will be most likely to behave aggressively in order to maintain their sense of self in situations where their normative beliefs inform them that aggression is an acceptable means by which to achieve this goal.

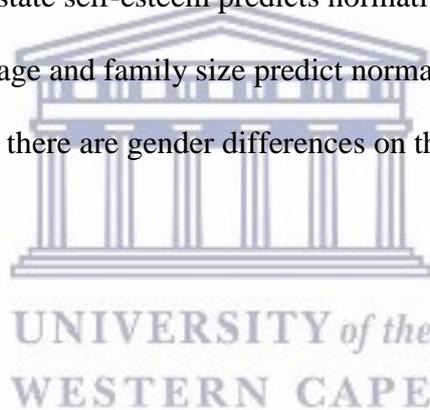
The majority of research conducted on normative beliefs about aggression originates from international research. Additionally, the sample populations were focused on younger children and adolescents (Gendron, Williams, & Guerra, 2011; Heusmann & Guerra, 1997; Werner & Nixon, 2005). Limited research has been conducted within South Africa on the issue. Given the prevalence of aggressive behaviour in this country, particularly among young adults, and the fact that beliefs are central in predicting aggressive behaviour, it is important to understand the normative beliefs possessed by individuals. Further to this, it is important to understand factors related to beliefs that favour the use of aggression as this would allow for the development of more effective violence prevention strategies.

1.2 Aims and objectives

The broad aims of the current study were to investigate trauma exposure and self-esteem as correlates of normative beliefs about aggression among a sample of South African university students.

The objectives of the study include:

1. To characterise the types of normative beliefs about aggression held by university students.
2. To determine whether exposure to traumatic events predicts normative beliefs about aggression
3. To determine whether state self-esteem predicts normative beliefs about aggression
4. To determine whether age and family size predict normative beliefs about aggression
5. To investigate whether there are gender differences on the various scales and their predictions.



CHAPTER TWO: LITERATURE REVIEW

This chapter will focus on providing background information that informs the aims of the study, which are to investigate South African university students' beliefs about the use of aggression as predicted by exposure to traumatic events, state self-esteem and demographic factors.

2.1 Social information processing and normative beliefs about aggression

Aggressive behaviour is broadly defined by Bandura (1983) as behaviour that results in personal injury and destruction, which may result in physical or psychological damage. While violence is at the extreme end of the aggression continuum, many behaviours can be considered aggressive, such as bullying, social exclusion, name-calling, pushing and shoving, manipulating and so on (Anderson & Huesmann, 2003). In this regard, all violent behaviour is by definition aggressive, but aggression does not necessarily have to result in physical harm (Liu, Lewis, & Evans, 2013).

Central to the perpetration of aggression is normative beliefs approving of such behaviour (Heusmann & Guerra, 1997). Previous theories linking aggression to innate, or purely biological factors have been disproven and discarded, while aggression is increasingly being accepted as a socially acquired behaviour (Bandura, 1983; Guerra et al., 2007; Snethen & Van Puymbroeck, 2008). Accordingly, the social-cognitive approach is the dominant theoretical position in the study of aggressive behaviour, which views aggression as the outcome of social information processing (Bandura, 1983; Gilbert et al., 2013; Huesmann; 1998; Werner & Nixon, 2005). People are able to navigate their way through the world in their ability to represent, process and communicate information. Underlying these abilities are cognitive processes, the internal workings of the human mind which enable people to make sense of their environment (Gilbert et al., 2013). According to social information processing (SIP) models of cognition and behaviour, there is a sequence of cognitive

processes involved in the production of any behaviour, similar to the sequence of operations a computer program follows to produce a certain function or output (Huesmann, 1998).

People are not born with extensive knowledge systems or beliefs about aggressive behaviour. Instead, these knowledge bases are learnt (Bandura, 1983). In order for aggressive behaviour to occur, individuals must first learn a behaviour, be in situations which trigger aggression and have internal and external conditions that reinforce the aggressive behaviour (Snethen & Van Puymbroeck, 2008). The SIP models explain this process under the assumption that the human memory is seen as a complex system of nodes representing cognitive concepts and emotions, and experience enables links to be made which connect these nodes to form knowledge structures, termed schemas (Anderson & Huesmann, 2003). Social learning, which is the encoding of new connections between social stimuli and social schemas, scripts, or behaviours, can occur through either enactive learning or observational learning (Bandura, 1983). Enactive learning can be both instrumental and classical conditioning, where a person experiences either a positive or negative consequence for their behaviour and depending on the consequence the social script becomes more or less accessible in future situations. Observational learning refers to learning that takes place by observing others act in a certain way (Huesmann, 1998). However, observational learning from the perspective of SIP suggests that it is not the behaviour of others that is directly learnt as an example, but rather the outcome of such a behaviour which are encoded and stored (Bandura, 1983). Observational learning can take place when an individual observes those in the family system, peers, and the media (Guerra et al., 2003). When schemas in support of aggression are linked in a meaningful way, that schema is called a script, which serves as a guide for what to expect and how to act in a given situation (Huesmann, 1998).

The particular schemas which Huesmann and Guerra (1997) identified as having a key role in aggressive behaviour are called normative beliefs, which provide internalised

prescriptions about what is appropriate or inappropriate behaviour for that individual, thereby reducing the cognitive workload when processing information. When processing situational information, normative beliefs mediate the effect of environmental stimuli and other internal factors, and which ultimately determine whether or not the individual will act aggressively (Huesmann, 1998). Despite being socially acquired and reinforced, normative beliefs are not always consistent with broader dominant social norms, however there is usually a parallel between an individual's normative beliefs and those of his or her own social group (Heusmann & Guerra, 1997), and in particular those of powerful role models (Guerra, Huesmann, & Spindler, 2003).

The international literature has consistently confirmed that normative beliefs are central in influencing aggression (Amjad & Skinner, 2008; Gilbert et al., 2005; Heusmann & Guerra, 1997; Kikas, Peets, Tropp, & Hinn, 2009; Lim & Ang, 2009). Normative beliefs about aggression are encoded, rehearsed, stored and retrieved in similar ways to scripts employed for other stable behaviours, and become more established over time the more they are rehearsed (Huesmann & Guerra, 1997). As with all learned behaviour, aggressive scripts need to be rehearsed in order to maintain the script in memory. Such rehearsal may take the form of simple recall of the learning events, fantasising, or play acting (Huesmann, 1998). As Guerra et al. mention (2003), more aggressive children are more likely to rehearse and fantasise about aggressive acts and are less likely to rehearse prosocial problem-solving cognitions. As children get older they are also likely to re-evaluate what they have learnt and may discard certain scripts. According to Bandura (1983), even though people can learn, retain and process the knowledge required to act aggressively, such behaviour may not be enacted if the behaviour has no functional value. Bandura mentions that there are incentive and motivational processes which regulate the outcomes of aggressive behaviour. Since the enactment of aggression relies on the interpretation of social cues (environmental stimuli) in

combination with internal scripts, Crick and Dodge (1996) distinguish between proactive and reactive aggression. Reactive aggression is angry, defensive aggression which occurs in response to frustration or provocation, while proactive aggression is goal driven, deliberate behaviour controlled by external reinforcements which are enacted with the purpose of attaining some reward or goal. Normative beliefs favouring aggression have been found to predict both reactive and proactive forms of aggression (Bailey and Ostrov, 2008).

While there are many definitions of aggression when it comes to overt, hostile, instrumental, physical and verbal, etc., the most useful distinction is made when it comes to observable (direct) aggression and non-observable (indirect) aggression. Observable or direct aggression is usually physical or verbal behaviour directed at another individual in an observable way, for example, hitting, verbal insults, and so forth. Non-observable, indirect aggression has been defined using three terms as set out by Artz et al. (2008): *Relational aggression* refers to behaviours used to damage relationships, other peoples feelings of acceptance among peer groups, or social inclusion. *Social aggression* refers to aggressive behaviour intended to damage an external individual's self-esteem but not social relationships. Social aggression is used to make people feel anxious or bad about themselves without directly verbally insulting or attacking them. *Indirect aggression* is a form of aggression where manipulation is employed in order to harm another person, for example, gossiping, revenge tactics, or trying to get others to dislike another person.

Considering the above, specific normative beliefs about aggression appear to be related to specific forms of aggression. For example, Werner and Nixon (2005) found that high levels of physical aggression were related exclusively to favourable attitudes towards physical aggression, whereas no correlation with verbal or indirect aggression was found. On the other hand, they found that normative beliefs about relational aggression were uniquely associated with engagement in relationally aggressive behaviour, but not physical aggression.

Additionally, a cross-sectional study among South African high-school students found that favourable attitudes towards intimate partner violence successfully predicted violent behaviour towards intimate partners (Fisher et al., 2007). Emotional arousal plays a significant role in the processing of stimuli as they are part of the knowledge structures, and can alter the way certain knowledge structures are brought forward in certain situations (Anderson & Huesmann, 2003). Due to the fact that normative beliefs become more automatically accessible the more they are rehearsed, high states of arousal result in a narrower search for the appropriate behavioural script and aggression. States of anger and rage result in a less careful evaluation of scripts making aggression much more likely (Huesmann, 1983). Script activation will then depend on the appraisal of social cues, as it has been shown that aggressive children have a hostile attributional bias, in that when they are presented with ambiguous situations, they attribute malicious intent to the situation, which causes anger and frustration (Bailey & Ostrov, 2008; Crick & Dodge, 1996), increasing the activation of reactive aggression.

To date, the majority of research surrounding normative beliefs discussed thus far have been conducted with children (for e.g., Artz, Nicholson, & Magnuson, 2008; Huesmann & Guerra, 1997; Werner & Nixon, 2005). Limited information is available when it comes to normative beliefs held among young adults, during which aggressive behaviour escalates into more serious and violent acts, such as domestic violence, sexual abuse, child abuse, and homicide (Artz et al., 2008). One South African study conducted interviews surrounding the risk and protective factors of perpetrating violence, male university students identified that a normative view of violence in peer groups increases the likelihood of violent behaviour (Clowes, Lazarus, & Ratele, 2010). Similarly, Baily and Ostrov (2008) confirmed child research findings with a sample of young adults, indicating that normative beliefs were

associated with all subtypes of aggressive behaviour. It is necessary to significantly expand on the literature on normative beliefs among this population.

In sum, the literature on normative beliefs and aggressive behaviour indicates that if people view aggression as an acceptable means to resolve conflict and attain goals, and if they have acquired scripts supporting this view, they are more likely to engage in aggressive behaviour (Amjad & Skinner, 2008; Anderson & Bushman, 2002; Guerra et al., 1995; Slaby & Guerra, 1988;).

2.2 Aggression in the South African context

South African society is characterised by a high prevalence of aggressive behaviour. This is apparent in the pervasiveness of interpersonal violence including rape, intimate partner violence, physical assault and homicide (Crime Stats SA, 2017; Lehohla, 2016). This information is of serious concern, with South Africa holding the 12th highest murder rate in the world (Crime Stats SA, 2017). The Western Cape appears to have the highest homicide rate compared to the national average, which Kaminer et al. (2013) notes may be due to the high rates of gang activity in low-income communities. While homicide rates are alarmingly high, injury resulting from violent acts are also prominent in South Africa. According to Seedat et al. (2009), approximately 3.5 million people seek health care every year for non-fatal injuries in South Africa, of which half can be attributed to violence. As mentioned earlier, violence is at the extreme end of the aggression continuum, there are many other forms of aggression (Anderson & Bushman, 2002). The literature on violent acts in South Africa will be discussed below, highlighting the extent to which aggressive behaviour damages and burdens South African society. Verbal, social and relational aggression will be discussed following this, with particular reference to normative beliefs favouring these behaviours.

When it comes to physical violence, a survey of victims of crime in South Africa (Lehohla, 2016), found that the majority of contact crimes (interpersonal crime) are perpetrated either within the victim's household or by someone they know personally. The majority of perpetrators of physical aggression appear to be between the ages of 15 and 35, as Lehohla (2016) reports that between 2011 and 2016, up to 70% of offenders fell within this age bracket. Furthermore, almost half (44%) of individuals in South Africa's prisons are under 25 years old, two-thirds of which are serving sentences for violent and aggressive crimes (Department of Correctional Services, 2011). Gupta et al. (2008) similarly found that the men between the ages of 18 and 29 were significantly more likely to have perpetrated interpersonal violence than any other age group. Gupta et al. (2008) revealed that more than 1 in 4 adult men were exposed to parental violence during childhood, and three-quarters of men reported being currently exposed to violence in the community. Individuals between the ages of 18 and 35 have significantly increased odds of exposure to all forms of violence, with the exception of collective violence (Benjet, et al., 2016). From the perspective of SIP, this exposure has a direct effect on normative beliefs about aggression (Guerra et al., 1995), which in turn perpetuates the cycle of aggressive behaviour (Amjad & Skinner, 2008; Gilbert et al., 2013).

Following a survey of rural South African hospitals, Donson and Marais (2004) found that intimate partners were responsible for over a third of male-on-female violence. Violence within intimate relationships or IPV is especially prominent among South Africans (Seedat et al., 2009). An epidemiological study done by Abrahams et al. (2009) which looked at causes of death of women between the ages of 14 and 40 recorded in 25 mortuaries around South Africa, revealed that the overall homicide rate of women in South Africa was 24.7 per 100 000. Not only is this the highest rate found in literature, but almost six-fold higher than the global rate of 4 per 100 000 estimated in the World Health Organizations Global Burden

of Disease project for the year 2000 (Dahlberg & Krug, 2002). Furthermore, from the cases where the perpetrator was known, Abrahams et al. (2009) further found that 1 in every 2 of these homicide cases concerned women who were killed by an intimate partner, at a rate of 8.8 per 100,000. Although death is the most severe consequence of IPV, many incidents of IPV will not be reported to the police and thus not be reflected in official records.

Furthermore, Abrahams, Jewkes and Hoffman (2006) found that 42% of adult males that were interviewed reported physically abusing their partner in the last 10 years, while Gupta et al. (2008) reported that 27.5% of men in their study reported using physical violence against their current or most recent female partner.

Although the prevalence rate of exposure to IPV is generally accepted to be higher among women, it may be the case that men are just as likely to be victims of IPV, and are more likely to be the victims of assault and other forms of interpersonal violence. For example, using information collected in the South African Stress and Health (SASH) study, Kaminer et al. (2008) found that 42.9% of men had been subject to some form of violence. In this same study, the overall exposure to any form of interpersonal violence among women was 34.3%. Furthermore, criminal assault was the most commonly reported form of violence, experienced by 26% of men in the sample. Global studies have found no significant difference between genders in the perpetration or victimisation of IPV (Pengpid & Peltzer, 2016). For example, Straus (2008) found that a third of both men and women reported physically assaulting their partner in the last 12 months, and Edwards et al. (2009) reported that over two-fifths of female students reported being verbally abusive, and over a quarter had been physically abusive towards their partners.

Despite the disproportionately high femicide rates in South Africa due to IPV (Abrahams et al., 2009), it becomes apparent that men and women abuse their partners at about the same rate, although the motives for aggression may differ for the two genders

(Straus, 2008). Among adolescents, one study found that half of both male and female adolescents report being involved in a violent relationship, either as victims or perpetrators (Swart, Mohamed, Stevens, & Ricardo, 2002). Interestingly, multiple studies conducted in South Africa have found that self-reported perpetration of violence in intimate relationships among high school students is higher among girls than boys (Abrahams et al., 2006; Fisher, Myer, Merais, Lomard, & Reddy, 2007). These findings may appear surprising or even contradictory to the commonly accepted notion that men are and “should” be more aggressive than women. However, many studies have noted that norms approving of female aggression are actually endorsed more so than norms approving of male aggression (Bettencourt & Miller, 1996; Feld & Felson, 2008; Sorenson & Taylor, 2005). While gender differences have been found in terms of approval of proactive aggression, the gender gap seems to close under provocation (or reactive aggression) which seem to provide justification for aggression for women in particular (Bettencourt & Miller, 1996). When considering social expectations and norms, Feld and Robinson (1998) found that females expected a bystander to approve of their aggression when provoked, whereas men expected bystanders to disapprove, regardless of the gender of the provocateur. Furthermore, chivalry norms have been found to hinder men’s aggressiveness towards women, even when men reported being angrier when provoked by a woman than a man (Schnake, Ruscher, Gratz, & O’Neal, 1997). It appears the norms associated with male-to-female violence are clearer and more widely understood and accepted than female-to-male norms (Crick, Bigbee, & Howes, 1996; Sorenson & Taylor, 2005).

Prevalence rates of non-physical forms of aggression have also raised cause for concern in South Africa. In high schools around the country, between two-fifths (Blake & Louw, 2010; Liang, Flisher, & Lombard, 2007; Reddy, et al., 2003;) and two-thirds (Boyes, Bowes, Cluver, Ward, & Badcock, 2014; Dussich & Maekoya, 2007; Grobler & Greef, 2008;

Townsend, Flisher, Chikobvu, Lombard, and King 2008) of adolescent learners have reported exposure to bullying. According to Blake and Louw (2010), bullying is defined as aggressive behaviour intended to be harmful, where an imbalance of power exists between perpetrator and victim. Bullying can take various forms, either direct (face-to-face) behaviours which include verbal and physical aggression, as well as indirect bullying, or relational aggression (Werner & Nixon, 2005). By its very definition, bullying takes place in a social context and within ongoing relationships (Gendron et al., 2011), where the pattern of aggression or abuse is repetitive and enduring (Arseneault et al., 2010). Relationally aggressive acts such as social exclusion, spreading rumours, manipulation and isolation have been recognized as aggressive acts by children and proven to be a unique construct, independent from direct aggression (Crick & Grotpeter, 1995; Crick, Bigbee, & Howes, 1996). Consistent with international studies (Crick & Grotpeter, 1995; Werner & Nixon, 2005), rates of bullying victimisation are more or less matched for males and females, however, the nature of victimisation differs for males and females in South Africa. Multiple studies have reported that while males tend to experience more direct forms of bullying, females are generally more relationally aggressive (Blake & Louw, 2010; Boyes et al., 2014; Grobler & Greef, 2008). Additionally, when it comes to indirect forms of aggression, males are far more likely to choose males as targets, whereas females are less discriminating when it comes to the choice of victim (Artz et al., 2008). Literature has highlighted the long-term effects of exposure in addition to the immediate consequences of bullying. Bullying victimisation and perpetration has been linked to higher reports of anxiety, depression, Post-Traumatic Stress Disorder (PTSD), conduct problems and violence (Arseneault et al., 2010; Boyes et al., 2014; Liang et al., 2007), even years after exposure occurred (Dussich & Maekoya, 2007; Ttofi, Farrington, & Lösel, 2012).

A study by Dussich and Maekoya (2007) found that among South African adolescents, name-calling and slandering were the most commonly reported forms of

bullying, while physical bullying was more common in the United States. On the other hand, physical fighting has been identified as a significantly larger problem than physical bullying by learners in South Africa (Blake & Louw, 2010). Physical bullying is different from fighting behaviour as it is contextually and socially perpetrated, whereas fighting is not considered bullying as there is usually no power differential between those involved (Arseneault et al., 2010). It has been suggested that aggressive children and adolescents are likely to have extensive knowledge structures for both direct and indirect aggressive behaviours (Kikas et al., 2009), which may explain these findings. Accordingly, perpetrators of bullying have been found to have higher rates of fighting, carrying weapons and anti-social behaviour than victims of bullying (Liang et al., 2007). The choice of aggressive behaviour used by the perpetrator would depend on what the expected outcomes of this behaviour is in different situations (Huesmann, 1998).

International (Arseneault et al., 2010; Artz et al., 2008) and local (Blake & Louw, 2010) studies have reported that bullying behaviour among high-school learners is seen as normal everyday occurrences, and not deviant behaviour. Werner and Hill (2010) reported that when relational aggression is supported among peers or in classrooms, adolescents in those groups were found to be more relationally aggressive. When rewards are experienced or observed following aggression (such as status and popularity), the use of scripts supporting proactive aggression are increased and reinforced (Liu, Lewis, & Evans, 2013). Individuals who engage in proactive aggression do not expect to experience any negative consequences for their behaviour (Heusmann, 1998), but rather anticipate rewards (Crick & Dodge, 1996). This notion has also been extended to cyber aggression, in that normative beliefs favouring aggression predicted cyberbullying, or bullying on social media platforms (Ang, Tan, & Mansor, 2011; Wright & Li, 2013). Since specific normative beliefs predict aggressive behaviours based on those beliefs (Reyes, Foshee, Niolon, Reidy, & Hall, 2016; Werner &

Nixon, 2005) encouraging social norms which promote more prosocial conflict resolution and goal attainment have been suggested (Guerra et al., 2007; Lim & Ang, 2009).

2.2.1 Aggression and violence among university students in South Africa

Among university students worldwide there is a high prevalence rate of sexual assault and intimate partner violence (Chan, Straus, Brownridge, Tiwari, & Leung, 2008; Desmarais, Reeves, Nicholls, Telford, & Fiebert, 2012; Pengpid & Peltzer, 2016). In a global study focusing on partner violence rates, Straus (2008) found that 42.9% of men and 14% of women in South African universities reported perpetrating physical assault of a severe nature, while perpetration of minor assault was roughly matched for men (43%) and women (39%). These figures were substantially higher than other countries, with severe male perpetration reported to be almost six times higher than the global average reported in this study. South African students have consistently been found to have higher rates than the national average in similar studies conducted (Pengpid & Peltzer, 2016). This shows that being a student has increased odds of exposure to certain forms of violence, which includes being the victim, as well as being the perpetrator, of all forms of interpersonal violence, IPV, and mugging with a weapon (Benjet, et al., 2016).

Survivors of sexual violence on campus revealed that hierarchical patterns of control and dominance may contribute to the sexual victimisation of female students on campuses (Dastile, 2008). Women living on campus have indicated that forceful relationships are common among South African students (Clowes, Shefer, Fouten, Vergnani, & Jacobs, 2009), while others report living in fear of being raped or assaulted, needing to always be prepared for what could happen, and having to follow “rules” to avoid being victimised. These rules include walking in groups, not walking in certain areas at night, and avoiding certain areas on campus altogether (Gordon & Collins, 2013). Men living on campus also report feeling unsafe in certain areas, or during certain times of the day when lighting is poor (Ngabaza,

Bojarczuk, Masuku, & Roelfse, 2015). It is possible that group norms favouring these types of aggression are prominent among university students, which have been demonstrated to have an influence on behaviour and script rehearsal (Werner & Hill, 2010). South African students have indicated that growing up in family environments which normalise violence results in more favourable views of violent behaviour, while also noting that peer norms approving of aggression further perpetuate such beliefs (Clowes et al., 2010).

From the above discussion, it is clear that violence remains a large concern in South Africa. Taken together, these findings emphasise that young adults are more likely to be both the perpetrators and victims of aggressive behaviour. Furthermore, the high rates of assault and in particular IPV among university students is cause for concern. As such, it is important to understand the factors underlying the perpetration of aggressive behaviour in order to form strategies that aim to reduce the incidence rate.

2.3 Correlates of normative beliefs

Several factors have been associated with normative beliefs about aggression. Existing research has identified that a history of trauma (Guerra et al., 2003; Edwards et al., 2009; Hinsberger et al., 2016) and self-esteem (Gendron et al., 2011; Webster et al., 2007) are associated with beliefs about the appropriateness of aggression. In addition, studies have also identified particular demographic factors including age (Heusmann & Guerra, 1997), gender (Nelson, Springer, Nelson, & Bean, 2008), and family size (Padmanabhanunni & Martin, 2018) as correlates of normative beliefs. However, limited research exists in the South African context on normative beliefs about aggression and its correlates.

2.3.1 Exposure to traumatic events

Exposure to potentially traumatic events (PTEs) have been associated with a variety of adverse emotional and psychological outcomes (Chu, Williams, Harris, Bryant, & Gatt,

2013; Jeavons, Greenwood, & Horne, 2000; Stein et al., 2008). Exposure to any PTE can alter the way in which an individual thinks and feels about the world they live in (Janoff-Bulman & Frantz, 1997). Previous research has paid particular attention to the role of exposure to violence in the development of beliefs about the acceptability of aggressive behaviour. It has been established that repeated exposure to violence leads to the internalisation of violent behaviour as acceptable (Edwards et al., 2009; Hinsberger et al., 2016; Sommer et al., 2017). There are a range of contexts in which individuals can experience traumatic or stressful events, particularly for individuals who live in densely populated urban areas (Williams, et al., 2007), the effects of which may have a lasting effect on behavioural and emotional functioning (Guerra et al., 1995; Magwaza, 1999; Phillips, Stargatt, & Fisher, 2011).

As discussed in the previously, aggressive behaviour and thus the potential for exposure to violent TEs are prevalent in South Africa. A study by Kaminer et al. (2013) surveyed South African high-school students and found that almost all of the participants in their study had witnessed some form of community violence (98.9%), a third of students having witnessed a murder. Exposure to violence within the community has been shown to increase both aggressive behaviours as well as cognitions supporting aggression for both males and females (Guerra et al., 2003). In adult studies, men who witness parental violence or experience abuse as children may come to view such behaviour as normative, and have been found to be four times more likely to perpetrate IPV than men who were not exposed to these kinds of violence (Gupta, et al., 2008). Furthermore, Hinsberger et al. (2016) discovered that an attraction to violence is preceded by a history of violence exposure, and that victimisation in particular resulted in violent offences. In a study among Congolese refugees, Hecker et al. (2015) found that exposure to violence was associated with both proactive and reactive aggression. Interestingly, they found that individuals experiencing

PTSD symptoms displayed higher levels of reactive aggression, while those who were exposed to violence, but were not showing signs of PTSD tended to engage in proactive aggression. In line with SIP theory, individuals exposed to violent and aggressive behaviour interpret and store this type of behaviour as a normal and acceptable means of attaining one's goals (Edwards et al., 2009; Heusmann & Guerra, 1997). In support of this, Sommer et al. (2017) found that among South African men, the more traumatic the event experienced by participants, the higher their self-reported violent offences. Being a victim of severe violence has been found to predict hostile attributional bias, hostile social goals and approval of aggression (Shahinfar, Kupersmidt, & Matza, 2001).

Both neighbourhood violence and life-event-stressors predict normative beliefs about aggression as well as aggressive behaviour (Guerra et al., 1995). The effects of trauma on normative beliefs and aggressive behaviour has been documented for non-violent or accidental TEs. For example, following natural disaster there has been a documented increase in reports of aggression in schools (Scott, Lapre', Marsee, & Weems, 2014; Terranova, Boxer, & Morris, 2009). It becomes apparent that the effect of trauma during the developmental stages in particular will have lasting effects on cognitions supporting the use of aggression (Chu et al, 2013; Lee & Hoaken, 2007). The remainder of this section will discuss possible mechanisms by which TEs influence normative beliefs about aggression and in turn aggressive behaviour.

There is a wide array of events which would be considered as PTEs. An event is considered to be potentially traumatic if individuals directly experience, bear witness to, or are indirectly exposed to any situation in which actual or threatened death, serious injury, or sexual assault to oneself or others occurs (*American Psychiatric Association, 2013*). Often, exposure results in intense feelings of fear, prolonged psychological distress and negative changes in mood and cognition (*American Psychiatric Association, 2013*). In terms of

psychological impact, Kaminer and Eagle (2010) describe trauma as the psychological wounding and experience of unwanted thoughts, emotions and experiences for a person exposed to a PTE. While direct exposure to traumatic events (TE) is often at the forefront of research (Atwoli, et al., 2013), indirect exposure in cases where someone else's safety is threatened can result in similar outcomes to direct exposure (Kaminer & Eagle, 2010). Indirect exposure can take the form of witnessing an event happen to someone else, or hearing about trauma which occurred to someone else, this may be particularly traumatising if the victim of trauma is a relative, close friend or loved one (Williams, et al., 2007).

Given the high prevalence of violent crime, interpersonal trauma in the forms of violence, abuse and sexual assault are often the most commonly investigated PTEs in South Africa (Abrahams et al., 2009; Kaminer et al, 2008). However, South Africa's death rate from unintentional injury is 30% higher than the global average (Kaminer & Eagle, 2010). A common form of unintentional injury results from transportation accidents, which have been found to be potentially traumatising even when serious injury has not occurred (Jeavons et al., 2000). According to Seedat et al. (2009), violence and injuries are the second leading cause of death and disability in South Africa. The other types of PTE's are receiving a life-threatening diagnoses (for example, HIV or cancer), a natural disaster, or the loss of a loved one due to unforeseen circumstances (American Psychiatric Association, 2013).

The South African Stress and Health (SASH) study was conducted to determine the prevalence of risk factors for mental disorders in South Africa. Findings reveal that 73.8% of South African adults had been exposed to at least one PTE in their lifetime, with those who reported exposure having encountered an average of 4.3 PTE's (Atwoli et al., 2013), this is substantially higher than the global average of 3.2 PTE's (Benjet, et al., 2016). Interestingly, the most prevalent type of TE reported was the unexpected death of a loved one, accounting for 43% of all reported PTE's (Williams, et al., 2007). Other traumas with high frequencies

include witnessing trauma, threat to one's own life, physical violence, intimate partner abuse and being in a transportation accident (Atwoli, et al., 2013). The distribution of exposure to PTEs among South Africans is similar to global patterns, however prevalence rates remain higher than global averages (Benjet et al., 2016; Williams, et al., 2007).

Exposure to PTE often has implications for psychological and emotional wellbeing (Williams, et al., 2007). Distress reactions vary from person to person and can manifest as anxiety or fear-based symptoms, dysphoric symptoms, and in many cases angry and aggressive outbursts (American Psychiatric Association, 2013). Due to the varying responses to trauma, exposure has been associated with an array of mental health outcomes, including PTSD, anxiety, depression (McGowan & Kagee, 2013; Scott, Lapre', Marsee, & Weems, 2014; Ward, Flisher, Zissis, Muller, & Lombard, 2001), attachment disorders, acute stress disorder, and adjustment disorder (American Psychiatric Association, 2013), to name a few. The SASH study found that the most prevalent type of mental disorders in South Africa were anxiety disorders, alcohol abuse disorders and mood disorders (Stein, et al., 2008). Furthermore, individuals who had the highest rates of trauma exposure were five times more likely to report psychological distress than those with no trauma (Williams, et al., 2007). Other research has found that traumatic and stressful events in the early years of life can result in higher anxiety and depressive symptoms in adulthood (Chu, Williams, Harris, Bryant, & Gatt, 2013). A history of trauma has also been found to predict aggressive behaviour among children (Phillips, Stargatt, & Fisher, 2011).

Individuals exposed to TE's may find it difficult to understand why the trauma happened to them. Kaminer and Eagle (2010) describe how survivors of trauma may struggle with ways to reconcile the traumatic experience with existing expectations and beliefs about themselves, other people and the world in general. The struggle to do so has the potential to leave the survivor feeling vulnerable, distrustful and uncertain. According to Janoff-Bulman's

(1989) assumptive world theory, the way in which people think and behave is influenced by three basic assumptions about the world: that the world is good or benevolent, that the world is meaningful, and that the self is worthy. These assumptions are not always conscious but serve as a cognitive model which shapes the ways individuals navigate their world (Kaminer & Eagle, 2010). From the perspective of the SIP theory, these cognitions are important to consider when it comes to aggressive scripts and behaviour (Huesmann, 1998).

The first assumption, the world is inherently good, Janoff-Bulman (1989) explains that people believe the world and people to either be benevolent or malevolent. The more an individual believes in the goodness of people, the more he or she believes that people are kind, caring and helpful. When a person believes in the benevolence of the world, they believe that misfortune is relatively uncommon. The second assumption, that the world is meaningful, comprises of three assumptive aspects; that the world is governed by orderly and just laws (bad things don't happen to good people), that there is an element of control over what happens (for example, believing that driving carefully avoids car accidents), and that things do not happen arbitrarily without meaning. Janoff-Bulman (1989) mentions that these three assumptions about the meaning of outcomes are not mutually-exclusive and that most people place varying importance on these assumptions depending on the situation. The third assumption people hold is that they are worthy. This aspect regards the extent to which individuals see themselves as deserving of good versus bad outcomes. If people think of themselves as good, moral, worthy people, they would not anticipate bad things to happen to them in a good and just world.

When exposed to a traumatic event, these assumptions are often shattered as people try to make sense of what has happened (Janoff-Bulman & Frantz, 1997). World assumptions have been found to be negatively related to trauma exposure, even years after the event had occurred (Janoff-Bulman, 1989; Lilly, Valdez, & Graham-Bermann, 2011;

Magwaza, 1999), which suggests that trauma results in less optimistic worldviews which endure over time. Another perspective is that not all people hold positive assumptions about themselves, other people and the world, but rather that those with a history of early life trauma exposure are simply more likely to view the world as hostile and dangerous (Kaminer & Eagle, 2010). For people who see the world in this way, exposure to new TE's confirm and strengthen these negative assumptions. Research has also pointed out that individuals who hold more negative assumptions about the world report greater psychological distress (Currier, Holland, & Niemeyer, 2009), and that South African survivors of trauma view the world and other people as malevolent and the world as unjust, dangerous and less meaningful (Magwaza, 1999). From the SIP theory literature, we know that those who interpret ambiguous social stimuli as hostile have more favourable beliefs about the use of aggression and behave more aggressively than those who do not have a hostile attributional bias (Crick & Dodge, 1996; Bailey & Ostrov, 2008). This may be one of the ways in which trauma influences normative beliefs about aggression. Research has shown that emotional reactivity and arousal plays a role in the selection and activation of scripts favouring aggression (Bandura, 1983; Snethen & Van Puymbroeck, 2008), which may be another way trauma and hostile attribution styles produce aggression. Another influence might be from what is learned from witnessing a TE. Shahinfar et al. (2001) report that adolescents who reported greater witnessing of severe violence had more favourable views about the use of aggression to attain goals, with confidence that aggressive act would yield positive outcomes for them. There seem to be many channels through which exposure to trauma can influence cognitive scripts about the use of aggression, this needs further investigation rooted in the South African context.

2.3.2 *Self-esteem*

Self-esteem is defined by Heatherton and Wyland (2003) as an evaluative aspect of self-concept which is related to an overall sense of the self as worthy or unworthy. This includes the extent to which an individual regards themselves as capable, important and successful. The role of self-esteem in aggressive behaviour has been researched extensively (Baumeister, Bushman, & Campbell, 2000; Gendron et al., 2011; Kernis et al., 1989; Lee, 2014; Webster et al., 2007). A view that has long been held within psychology is that low self-esteem contributes to aggression, however the opposite view has also been given much attention (Baumeister, Smart, & Boden, 1996; Bushman et al., 2009; Kernis et al., 1989; Lee, 2014; Webster et al., 2007). As Baumeister et al. (2000) point out, people with low self-esteem are often shy, lacking in confidence and avoid risk-taking, these factors are generally associated with avoidance of conflict. Rather, as discussed in a review conducted by Baumeister et al. (1996), evidence points toward positive self-regard, or high self-esteem as a stronger predictor of aggression (as cited in Baumeister et al., 2000).

In order to understand the role of self-esteem on aggressive behaviour, a distinction is made between trait self-esteem and state self-esteem (Lee, 2014; Webster et al., 2007). Trait self-esteem refers to individuals overall views about themselves and is presumed to remain a stable feature of one's personality, whereas state self-esteem is subjective to the influences of immediate situational effects, and is less persistent and stable than the former (Lee, 2014). Stability of self-esteem is thus the magnitude of fluctuations in a temporary, contextually based self-esteem (Kernis, Cornell, Sun, Berry, & Harlow, 1993). While trait self-esteem is measured along a continuum from low to high, state self-esteem is seen as ranging from unstable to stable across contexts and domains (McCain, Jonason, Foster, & Campbell, 2015). Measures of trait and state self-esteem are highly correlated under neutral conditions (Heatherton & Wyland, 2003). However, research has shown that the stability of self-esteem

(Webster et al., 2007) is a stronger predictor of aggression when one is comparing the two. A pioneering study by Kernis et al. (1989) confirmed this proposition, reporting that “stability and level of self-esteem are important predictors of the dispositional tendencies to experience anger and hostility” (p.1019). They also found that those most likely to engage in aggressive behaviour were individuals with scores of high, but unstable self-esteem, this has been confirmed in recent literature (Lee, 2014; Webster et al., 2007; Baumeister et al., 2000). Research further indicates that individuals with both a stable and high self-esteem were least likely to have aggressive tendencies (Kernis et al., 1989). The same findings have also been found for hostile attributions, in that those with an unstable high self-esteem have the highest hostility (Baumeister, Campbell, Krueger, & Vohs, 2003). Individuals who have high self-esteem have a heightened need to not only achieve but maintain a more stable and positive self-view, while those with low self-esteem are concerned with avoiding a continuously low self-regard (Kernis et al., 1993).

Considering the relationship between self-esteem and aggressive behaviour, differences emerge for proactive and reactive aggression. Although proactive and reactive aggression are correlated to one another since aggressive individuals usually have extensive knowledge structures for both forms of aggression (Crick & Dodge, 1996), these two types of aggression fulfil different functions and are indicative of different underlying processes behind aggressive behaviour (Lee, 2014). As discussed by Crocker and Park (2004), state self-esteem may influence motivation for aggression. These authors mention that because trait self-esteem level is relatively stable, there is little evidence that it has incentive power. Since increases in self-esteem feel good, and decreases in self-esteem feel bad, situational fluctuation in state-self esteem has the necessary motivational aspect to drive behaviour. Considering the premise that drops in self-esteem have emotional consequences, it may be that emotional arousal in response to threat (Bandura, 1983) leads to the activation of

aggressive scripts in order to achieve the goal of an increase in self-esteem. It is important to note that high self-esteem individuals regard themselves as more liked and more popular than others, but this reality mostly exists in their own minds, and external judgments from peers generally oppose these views (Baumeister et al., 2003). Thus, individuals with unstable state self-esteem are more susceptible to influences that undermine their sense of self, implying that retaliation (or reactivity) is an activated response used to restore self-worth (Baumeister et al., 2000; Lee, 2014). In contrast, individuals with a stable high self-esteem have little motivation to react to such egotistic threats, as they are more secure in their self-perception and don't require constant validation from others (Baumeister et al., 1996; Kernis et al., 1989). Research has shown that unstable and high self-esteem is thus predictive of reactive aggression, but not proactive aggression (Lee, 2014), which may be the result of acquired normative beliefs approving aggression as an acceptable means with which to restore status and pride (Guerra et al., 1995). In addition, SIP theory has shown that aggressive children hold a hostile attributional bias (e.g., Crick & Dodge, 1996.), which may further draw the link between unstable self-esteem and reactivity (Lee & Hoaken, 2007).

Self-esteem comprises of various domains, and people generally tend to invest their self-worth in a particular domain (Heatherton & Wyland, 2003). According to Crocker and Park (2004), self-esteem evaluations depend on supposed success or failure in the domains of which self-worth is invested, this results in generalised feelings of worth. The domains of state self-esteem identified by Heatherton and Polivy (1991) are performance, social and appearance state self-esteem. According to Heatherton and Wyland (2003), performance self-esteem involves evaluations and feelings of general competence, intellectual ability, academic performance, efficacy, and agency. Social self-esteem refers to evaluations of how an individual thinks other people perceive, value and respect them. Appearance or physical self-esteem refers to feelings surrounding an individuals view of their physical appearance,

attractiveness, body image, as well as stigmas related to race and ethnicity. The domain in which self-esteem is invested motivates people with the goal to validate their feelings of self-worth (Crocker & Park, 2004). Furthermore, it has been found that males and females invest their self-worth in different domains, usually in alignment with dominant social and cultural norms (Strahan, Wilson, Cressman, & Buote, 2006). Additionally, gender differences are evident with girls being more invested in social relationships and boys invested in success. This may provide insight into the differences in aggression and beliefs about aggression between males and females. For example, a meta-analysis by Bettencourt and Miller (1996) reported that women are usually not angered by the suggestion of intellectual competence, while men displayed heightened levels of anger and aggression under the same circumstances. However, it was also found women responded with more anger and aggression when insulted. Thus, in the domains in which self-worth is invested, people adopt the goal of validating their abilities or qualities, and hence their self-worth (Crocker & Park, 2004). When this view of self-concept is susceptible to being challenged, the combination of emotional arousal, perceived threat (hostility perception), and script activation in support of aggression, would likely result in the outcome of aggressive behaviour (Huesmann, 1998; Baumeister et al., 2000).

It is important to note that the majority of research conducted regarding the relationship between self-esteem and aggression has been conducted with children or adolescents, although this could be assumed to be applicable to the adult population, it would require further validation.

2.3.3 Demographic correlates

Certain demographic factors have been associated with normative beliefs about aggression. In particular, attention has been paid to gender, age and family size. From the above discussion it becomes apparent that males and females differ in the types of aggression

they endorse and engage in (e.g., Crick et al., 1996; Werner & Nixon, 2005). In general, research suggests that males hold more favourable beliefs towards aggression than females (Guerra et al., 1995; Guerra et al., 2003; Slaby & Guerra, 1988; Werner & Nixon, 2005). However, a study done by Gilbert et al. (1997) found no differences between adult men and women regarding normative beliefs, even though men tended to act aggressively more often than women. This finding may be explained by the fact that women are more likely to engage in relational, or nonverbal forms of aggression (Amjad & Skinner, 2008; Werner & Nixon, 2005). When inferring connections between beliefs and behaviours, Huesmann and Guerra (1997) pointed out that while aggression scales generally measure both physical and relational aggression, the normative beliefs scales only measures attitudes towards direct aggression. It has been established that girls tend to engage in more relational aggression starting in early childhood (Werner & Nixon, 2005; Webster, et al., 2007), research findings making use of this scale should therefore be interpreted with this in mind. Additionally, South Africa may be faced with a unique situation as a study done by Fisher et al. (2007) found no difference between girls and boys beliefs about aggression, but adolescent girls reported higher levels of aggression in intimate relationships than their male counterparts.

Gender differences may be more apparent when we consider the reasons for acting aggressively, with particular reference to reactive aggression. Winstock and Enosh (2007) found that boys and girls perceive provocation differently. In their study, the gender of the provocateur was most influential when boys decide whether or not to retaliate, reporting that they were less likely to react to provocation from a girl than a boy. Girls on the other hand, focused on the severity and mode of the provocation, distinguishing between verbal and physical provocation at different levels of severity. Similarly, a study conducted by Lim and Ang (2009) found that when controlling for general normative beliefs about aggression among boys, specific normative beliefs about retaliatory aggression against males, but not

against females, strongly predicted the use of physical, verbal, and indirect aggression.

Findings among adult populations also confirm that the gender of the opponent is significant, and men generally tend to act aggressively towards other men (Archer & Haigh, 1997; Nelson et al., 2008).

Literature regarding the correlations of age and normative beliefs tends to be found in research mostly conducted with children, indicating that during early childhood beliefs in favour of aggression spike, and taper off to moderate, more consistent views in favour of aggression in the late elementary school years (Grade 0-5) (Guerra et al., 1995; Guerra et al., 2003; Gendron, Williams, & Guerra, 2011; Fisher et al., 2007). A decline in the approval and use of aggression with age is associated with developmental changes in the processing of information (Crick & Dodge, 1996). As such, and in line with SIP theory, older children and adolescents have evaluated and maintained the scripts which they deem appropriate for use to attain goals or resolve conflict, this should be relatively unchanging as they reach adulthood (Huesmann, 1998).

A South African study (Padmanabhanunni, 2017, in press) found that family size correlates with normative beliefs about aggression. The above study indicated that living in a large family is associated with less approval of certain forms of aggression. As such, it would be important to investigate this further and determine if the same applies to young adults.

CHAPTER THREE: METHODOLOGY

The aim of the current study is to identify South African university students' beliefs about the use of aggression, and whether these beliefs can be predicted by reported exposure to traumatic events, state self-esteem and demographic factors. In this chapter, the methodology of the study is described.

3.1 Research design

This study employed a cross-section research design, where data was collected from the sample population at a single point in time (Bourque, 2011). Information from men and women were collected, allowing for the comparison of findings between genders. The cross-sectional design allowed for the collection of self-reported quantitative information on normative beliefs about aggression, history of trauma, and self-esteem in order to perform analyses that would provide empirical data indicative of the relationship between the variables. Demographic variables scored categorically were used in the analysis. Non-probability purposive homogenous sampling was used for sample selection since participants share common characteristics. Participants were included in the study on the basis of age (18-25 years) and year of enrolment at the university (i.e., undergraduate students). Purposive sampling was used since the sample is sufficiently representative of the undergraduate student population (Laher & Botha, 2012) at the University of the Western Cape (UWC).

3.2 Participants

The study included 255 undergraduate students enrolled at UWC. Students were enrolled in first, second and third year courses relating to the Social Sciences. Participants between the ages of 18 and 25 were included ($M = 20.24$, $SD = 1.44$). The majority of participants were female (78%). Family size was indicated by the amount of people currently living in the same household as the participant, this ranged from 1 to 14, with an average of $M = 4.57$ ($SD = 1.69$).

3.3 Instruments

Four self-report questionnaires were used for data collection purposes:

3.3.1 Demographic questionnaire

A short demographic section was completed by respondents, where they were asked to indicate their age, gender, and the number of people who currently live in the same household as them (see Appendix A).

3.3.2 Normative Beliefs About Aggression Scale (NOBAGS)

Formulated by Huesmann and Guerra (1998), the NOBAGS scale is a 20 item self-report scale intended to measure an individual's beliefs about the acceptability of aggressive behaviour in different instances (see Appendix B). The scale can be divided into two broad subscales; Approval of Retaliation beliefs in the presence of provocation, consisting of 12 items, and General Approval beliefs in the absence of provocation, consisting of 8 items. Two retaliation subscales are also identified; Retaliation Against Males and Retaliation Against Females. Items are scored using a 4-point Likert scale, where a score of 1 indicates that the participant believes the behaviour to be "least approving of aggression", and a score of 4 indicates "most approving of aggression". Therefore, the higher an individual's score, the more favourable views they hold towards the use of aggression. The total score for each scale is based on the mean of non-missing values on that scale (Huesmann et al., 1989). Therefore, the maximum score for each scale is 4, while the minimum is 1. The scale has been used in a variety of contexts and has an internal consistency reliability coefficient $\alpha = 0.87$ (Heusmann & Guerra, 1997). The psychometric properties of the NOBAGS has been investigated in the South African context (Padmanabhanunni, 2017). This investigation provided support for the use of the scale as a bi-factor scale, as well as a two-factor scale in which the two subscales (retaliation and general beliefs) are used independently.

3.3.3 Life Events Checklist (LEC)

The LEC is a 17 item self-report measure designed to determine whether participants have had exposure to various stressful or traumatic life experiences over the course of their lifetime (see Appendix C). The LEC has been found to have adequate temporal stability and good convergence with other measures of traumatic experiences. The LEC has been found reliable, with a mean kappa of .61, and a retest correlation of $r = .82, p < .001$ (Gray, Litz, Hsu, & Lombardo, 2004). Therefore, the LEC can be considered appropriate for use in this context. Participants are asked to mark their exposure to each event, by indicating “1 = happened to me”, “2 = witnessed it”, “3 = learned about it”, “4 = not sure”, or “5 = doesn’t apply”. The nature of the LEC allows respondents to report multiple types of exposure to the various PTE’s.

3.3.4 State Self-esteem Scale (SSES)

Developed by Heatherton and Polivy (1991), the SSES is a 20-item self-report scale that measures a participant’s self-esteem at a given point in time (see Appendix D). All items are answered using a 5-point Likert scale. The scale includes positively (e.g., I feel that others respect and admire me) and negatively (e.g., I am dissatisfied with my weight) worded items. The SSES has been found to be psychometrically sound for the purpose of measuring state self-esteem, with a coefficient alpha $\alpha = 0.92$, and an average population score of 70 (Heatherton & Polivy, 1991). Items 2, 4, 5, 7, 8, 10, 13, 15, 16, 17, 18, 19, 20 are reverse-scored. The SSES consist of the three subscales as identified as domain of state self-esteem (Heatherton & Wyland, 2003); Academic Performance Self-esteem, Social self-esteem and Appearance self-esteem.

3.4 Procedure

Prospective participants were provided with questionnaires and information regarding the study at the beginning or end of one of their regular lecture timeslots. Participants

completed an informed consent form. It was made clear that participation was voluntary and did not form part of their coursework, and as such they would not suffer any consequences should they choose not to participate. Anonymity and confidentiality was stressed, and participants were informed that they could stop or withdraw from participating if they felt uncomfortable or distressed in any way. In the event that any participant experienced psychological harm or distress by the study, they were informed of the counselling services available on campus, and/or to speak to the researcher privately after administration in order to provide referrals for the necessary assistance. All questionnaires were completed in a single administration.

3.5 Data analysis

Data was captured using the Statistical Package for the Social Sciences (IBM SPSS, version 24). In addition to descriptive statistics, the data was analysed using simple linear regression, where predictors are entered into the model individually (Field, 2009). Due to the abovementioned gender differences on various factors included in this study, separate regression analyses were carried out for men and women using the split file function on SPSS. The predictive effect for each variable was examined independently, with multiple combinations resulting in the analysis.

In order to assess whether state self-esteem predicted beliefs about aggression, the SSES total and the subscale scores for Appearance, Performance and Social self-esteem were regressed against the NOBAGS and its subscales. Additionally, in order to try and assess the predictive ability of self-esteem stability, the standard deviation score for each participant on the SSES and the three subscales were calculated, which indicated the degree of variability of responses to these measures. A higher standard deviation indicates that responses on the questionnaire were more variant (or unstable), while a low standard deviation indicates the consistency of responses.

When assessing whether trauma exposure predicted normative beliefs, participant responses to the LEC were recoded into variables indicating how many TEs they had been directly exposed to (LEC_Happened), how many TEs witnessed (LEC_Witness) and TEs they had learned about (LEC_Learned). A higher score for these variables indicated greater exposure to TEs in each category. These three variables were entered into the regression model as predictors, with the NOBAGS scales as dependent variables.

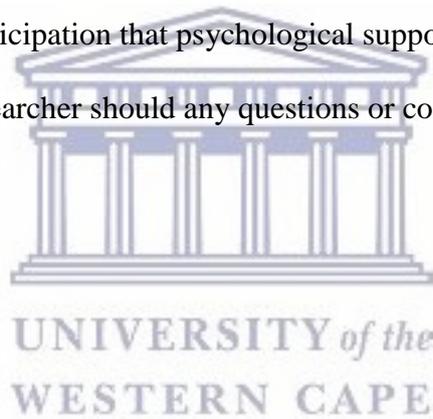
Additionally, regression analysis was run to determine whether exposure to TEs predicted state-self esteem, where the three trauma exposure variables were regressed against SSES and its subscales to examine the effects. Finally, age and family size were entered into a regression model in the same way as other predictors to examine whether they predicted beliefs about aggression.

3.6 Reliability and Validity

Reliability and validity were ensured throughout the research process by ensuring that procedures were adhered to strictly and consistently. All questionnaires were completed at a single point in time and in a similar setting for all participants, eliminating situational influences in responses. Participants had equal opportunity to take part in the study, and informed consent was obtained before participation. Since the study employed quantitative data collection methods, researcher bias in the interpretation of responses is eliminated. Each instrument used in this study was only used to measure the constructs which have been proved as valid for testing. Data was captured and analysed using SPSS (version 24) and back checked for errors. By generating descriptive statistics, the information collected was summarized across the sample, providing important information regarding beliefs about aggression as well as its correlates among a South African sample.

3.7 Ethical Considerations

Ethical clearance was granted by the Humanities and Social Sciences Research Ethics Committee (HSSREC), thereafter permission from the UWC registrar's office was granted to recruit students. Students were debriefed on the nature of the study, as well as the requirements of participation. In this regard, students were informed that participation is completely voluntary, they were further assured of anonymity and confidentiality of their responses. Students were made aware that they would be at no disadvantage, and would suffer no negative consequences if they chose not to partake in the study. In particular, the nature of the LEC was explained in order to inform participants that some questions may evoke discomfort. Participants were made aware that if they were to experience any distress or discomfort during their participation that psychological support services were available on campus and to contact the researcher should any questions or concerns arise.



CHAPTER FOUR: RESULTS

In this chapter, descriptive statistics are presented for demographics, normative beliefs about aggression, exposure to traumatic events with regards to direct exposure (“happened to me”), witnessing a traumatic event (“witnessed it”), and learning of a traumatic event happening to someone else (“learned about it”), and state-self-esteem. The results of the regression analysis are also presented here.

4.1 Descriptive statistics

The study was conducted using a sample of 255 undergraduate university students from the University of the Western Cape. The majority of participants were female, with only one fifth being male. The averages, standard deviations and reliabilities for the LEC, NOBAGS and SSES are presented in Table 1. The NOBAGS total was found to be reliable ($\alpha = .88$, 20 items), as well as all the subscales, which have similar coefficients to previous studies (Huesmann et al., 1989; Padmanabhanunni, 2017). The average NOBAGS score was $M = 1.72$ ($SD = .44$), with approval of retaliation beliefs ($M = 2.02$, $SD = .60$) being higher than general beliefs ($M = 1.27$, $SD = .433$). The current sample was more approving of verbal ($M = 2.33$, $SD = .87$) than physical ($M = 1.86$, $SD = .59$) retaliation. Interestingly, retaliation against males ($M = 2.19$, $SD = .66$) and female aggression ($M = 2.17$, $SD = .68$) was approved of more than retaliation against females ($M = 1.85$, $SD = .60$) and male aggression ($M = 1.86$, $SD = .58$) respectively.

Within the current sample, an acceptable reliability coefficient was found ($\alpha = .92$, 20 items) for the SSES and its subscales Appearance, Social and Academic Performance state self-esteem. The average SSES total score was $M = 68.60$ ($SD = 15.04$). Reliabilities and averages are consistent with those established by Heatherton and Polivy (1991). The subscale SSES Appearance had the lowest scores ($M = 20.33$, $SD = 5.74$) of the three subscales.

With regards to trauma exposure, the most reported type of exposure was learning about a TE ($M = 4.36$, $SD = 2.98$), followed by direct exposure ($M = 3.02$, $SD = 1.90$). The least reported type of exposure was witnessing a TE ($M = 2.77$, $SD = 2.03$). Students exposure to the 17 TEs is presented in Table 2.

Table 1

Descriptive Statistics and reliabilities for LEC, SSES and NOBAGS

	N	Min.	Max.	Mean	Std. Deviation	Cronbach's Alpha	N of items
Happened	255	0	9	3.02	1.91		17
Witnessed	255	0	11	2.77	2.03		17
Learnt	255	0	14	4.36	2.98		17
NOBAGS total scale	245	1.00	3.65	1.72	.44	.88	20
NOBAGS retaliation beliefs	245	1.00	3.50	2.02	.60	.88	12
NOBAGS general beliefs	254	1.00	4.00	1.27	.43	.86	8
NOBAGS verbal retaliation beliefs	253	1.00	4.00	2.34	.87	.92	4
NOBAGS physical retaliation beliefs	245	1.00	3.63	1.86	.59	.88	8
NOBAGS retaliation against males	247	1.00	3.83	2.19	.66	.78	6
NOBAGS retaliation against females	246	1.00	4.00	1.85	.60	.78	6
NOBAGS Male aggression	245	1.00	4.00	1.86	.58	.79	6
NOBAGS Female aggression	248	1.00	3.83	2.17	.68	.79	6
SSES total	240	24.0	98.00	68.60	15.04	.92	20
SSES Academic Performance	248	7.00	35.00	23.85	5.34	.82	7
SSES social	248	7.00	35.00	24.54	6.24	.84	7
SSES appearance	251	6.00	30.00	20.33	5.74	.86	6
Valid N (listwise)	232						

Table 2

Exposure to potentially traumatic events

Potentially Traumatic Event (PTE)	Happened		Witnessed		Learned		Total exposure	
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
Natural disaster	14	5.5	26	10.2	139	54.5	179	70.20
Fire or explosion	16	6.3	90	35.3	81	31.8	187	73.33
Transportation accident	87	34.1	86	33.7	47	18.4	220	86.27
Serious accident at work or home	39	15.3	64	25.1	53	20.8	156	61.18
Exposure to toxic substance	14	5.5	15	5.9	89	34.9	118	46.27
Physical assault	113	44.3	72	28.2	27	10.6	212	83.14
Assault with a weapon	59	23.3	58	22.9	64	25.1	181	71.0
Sexual assault	30	11.9	12	4.7	125	49	167	65.49
Other unwanted sexual experience	61	24.2	19	7.5	68	26.7	178	69.80
Combat or exposure to a war-zone	3	1.2	5	2	72	28.2	80	31.37
Captivity	8	3.1	5	2.0	101	39.6	114	44.70
Life threatening illness/ injury	33	12.9	64	25.1	57	22.4	154	60.39

Severe human suffering	9	3.5	55	21.6	64	25.1	128	50.20
Sudden, violent death	-	-	57	23.5	97	38.0	154	60.39
Sudden, unexpected death of someone close to you	137	53.7	55	21.6	20	7.8	212	83.14
Serious injury, harm, or death caused to someone else	9	3.9	-	-	-	-	9	3.9
Any other stressful event	147	57.6	22	8.6	7	2.7	176	69.02



Table 2 indicates that the most frequently experienced traumatic events among the sample were transportation accidents (86.27%), physical assault (83.14%), and the sudden and/or unexpected death of someone close (83.14%). The least reported traumatic events were combat or exposure to a war zone (31.37%) and serious injury, harm or death caused to someone else (3.9%). Table 3 shows total exposure to the 17 PTE's for men and women. Men reported higher rates of exposure to all forms of TEs than women did. The most striking differences are seen in reported exposure to physical assault and exposure to combat or a war zone. The inter-correlations between the various scales are reported in Table 4.

Table 3

Exposure to potentially traumatic events by gender

Potentially Traumatic Event (PTE)	Women		Men	
	<i>f</i>	Percentage (%)	<i>f</i>	Percentage (%)
Natural disaster	136	68.34	42	76.36
Fire or explosion	142	71.36	45	81.82
Transportation accident	169	84.92	51	92.27
Serious accident at work or home	118	59.30	37	67.27
Exposure to toxic substance	87	43.72	31	56.36
Physical assault	162	81.40	49	89.09
Assault with a weapon	135	67.84	46	83.64
Sexual assault	129	64.82	38	69.09
Unwanted sexual experience	115	57.79	33	60.00
Combat or exposure to war zone	53	26.63	27	49.09
Captivity	84	42.21	29	52.73
Life threatening illness/ injury	119	59.80	34	61.82

Severe human suffering	99	49.75	28	50.90
Sudden violent death	119	59.80	34	61.81
Sudden, unexpected death of someone close to you	165	82.91	46	83.64
Serious injury, harm, or death caused to someone else	4	2.01	5	9.09
Any other stressful event	135	67.83	40	72.27



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Table 4

Correlations table between variables

	1	2	3	4	5	6	7	8	9	10	11	12
1. NOBAGS total scale	-											
2. Retaliation beliefs	.94**	-										
3. General Beliefs	.64**	.33**	-									
4. Verbal retaliation beliefs	.77**	.83**	.20**	-								
5. Physical retaliation beliefs	.87**	.91**	.33**	.53**	-							
6. SESS Performance	-.11	-.08	-.11	-.12	-.04	-						
7. SESS Social	-.06	-.04	-.07	-.08	-.02	.61**	-					
8. SESS Appearance	-.16*	-.14*	-.09	-.11*	-.11	.58**	.64**	-				
9. SESS Total	-.13*	-.11	-.13*	-.14*	-.07	.84**	.88**	.87**	-			
10. LEC Happened	.12	.11	.11	.06	.11	-.12	-.14*	-.13*	-.15*	-		
11. LEC Witnessed	-.05	-.09	.06	-.08	-.10	-.11	-.12	-.05	-.11	.05	-	
12. LEC Learnt	-.03	-.06	.02	-.05	-.03	.04	.03	.02	.04	-.06	.04	-

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

4.2 Group comparisons

To check for significant differences between men and women on the various scales, an independent samples t-test was run (Table 5).

Table 5

Comparison of Means for Males and Females

	Gender		<i>t</i>	<i>df</i>
	Male	Female		
LEC Happened	3.49 (1.88)	2.89 (1.90)	2.06*	252
LEC Witnessed	3.22 (2.13)	2.64 (1.99)	1.89	252
LEC Learnt	4.38 (2.73)	4.36 (3.06)	.04	252
NOBAGS total scale	1.84 (.52)	1.68 (.41)	2.50*	242
NOBAGS retaliation beliefs	2.09 (.60)	1.99 (.60)	1.09	242
NOBAGS general beliefs ^a	1.52 (.68)	1.20 (.31)	3.37**	60.28
NOBAGS verbal retaliation beliefs	2.34 (.77)	2.33 (.90)	.02	250
NOBAGS physical retaliation beliefs	1.96 (.63)	1.83 (.58)	1.47	242
NOBAGS retaliation against males	2.25 (.63)	2.16 (.67)	.88	244
NOBAGS retaliation against females	1.92 (.65)	1.82 (.58)	1.05	243
NOBAGS Male aggression	1.98 (.64)	1.82 (.55)	1.71	242
NOBAGS Female aggression	2.19 (.65)	2.16 (.69)	.29	245
SSES Academic Performance ^a	24.31 (4.44)	23.74 (5.58)	.79	104.54

SSES Social ^a	24.49 (5.19)	24.53 (6.51)	-.05	101.35
SSES Appearance	21.77 (5.11)	19.97 (5.86)	2.02*	248
SESS Total ^a	70.48 (11.06)	68.11 (15.96)	1.22	109.19

Note. *= $p < .05$, **= $p < .01$. a = equal variances not assumed
Standard Deviations appear in parentheses below means.

Men reported higher rates for direct exposure to TEs than women ($t(252) = 2.06, p < 0.05$). Frequencies for witnessing and learning about events were not significantly different between men and women. NOBAGS total scores were also higher among men than women ($t(242) = 2.498, p < 0.05$). The NOBAGS retaliation scores (including approval of verbal and physical retaliation, retaliation against males and retaliation against females), and approval of male and female aggression did not differ between men and women. However, approval of general aggression was higher among men than women ($t(251) = 4.99, p < 0.01$). In terms of self-esteem, a significant difference was found on the appearance subscale, where men had higher scores than women ($t(248) = 2.02, p < 0.05$).

Based on the significant differences on many of the scales, and the literature discussed supporting gender differences with regards to beliefs about aggression (Amjad & Skinner, 2008; Werner & Nixon, 2005), and investment in different self-esteem for males and females (Heatherton & Wyland, 2003) regression analyses were run separately for men and women.

4.3 Regression analysis

The data met all of the assumptions required for multiple regression analysis (Field, 2013).

4.3.1 Predicting Beliefs about aggression on the basis of state self-esteem

None of the SSES scales predicted any of the NOBAGS scales for men. However, predictions for women were found which will be outlined below. No significant predictions were found for men or women for the SSES Academic Performance and Social subscales when predicting NOBAGS scores.

SSES total predictions

A summary of the simple linear regression models with state self-esteem scale total scores as the predictor is shown in Table 6.

Table 6

Summary of simple linear regressions with state self-esteem as the predictor (for women)

Predictor	Outcome variable entered	B	Std. Error	Beta (β)	t-value	R ²
SESS total	NOBAGS Total	-.004	.002	-.148	-2.00*	.022
	NOBAGS general beliefs	-.004	.001	-.184	-2.56*	.034
SESS SD	NOBAGS Total	.283	.122	.167	2.32*	.028
	NOBAGS retaliation beliefs	.354	.178	.144	1.99*	.021
	NOBAGS retaliation against females	.422	.171	.176	2.464*	.031
	NOBAGS male aggression	.427	.164	.186	2.601**	.035

Note. * = $p < 0.05$, ** = $p < 0.01$

SSES total significantly predicted NOBAGS total scores for women ($R^2 = .022$, $F(1,179) = 4.025$, $p < 0.05$). The model indicates that higher SSES total scores predicted lower approval of total aggression ($\beta = -.148$, $p < .05$). SSES total did not predict retaliation beliefs, however Table 8 shows that there was a significant prediction for general beliefs for women ($F(1,187) = 6.568$, $\beta = -.184$, $p < 0.05$), with an R^2 of .034.

When considering self-esteem stability, standard deviation scores were calculated for each participant based on the scores provided on SSES. Standard deviation scores provide an indication of how consistent each individual responded to the SSES, although it does not provide evidence of the temporal stability of self-esteem. On this basis, regression analysis is interpreted under the assumption that a higher inconsistency (i.e., a higher standard deviation score) of responses on a given subscale indicates that an individual is not as confident in their self-worth in that domain as individuals who provided more consistent responses.

It was found that total SSES Standard deviation (SD) significantly predicted NOBAGS total scores, with an R^2 of .028 ($F(1,188) = 5.386, \beta = .167, p < 0.05$), retaliation beliefs ($F(1,188) = 3.970, \beta = .144, p < 0.05$), with an R^2 of .021, retaliation against females ($F(1,189) = 6.071, \beta = .176, p < 0.05$), with an R^2 of .031, and male aggression ($F(1,188) = 6.763, \beta = .186, p < 0.05$), with an R^2 of .035. These results indicate that for women, a higher standard deviation, and therefore higher inconsistency of responses, predicted higher approval of aggression. Again, no significant predictions were found for men for SSES SD.

SSES appearance predictions

The table summary of the significant simple linear regressions for women, with the SSES Appearance subscale as the predictor is presented below (Table 7). SSES appearance scale significantly predicted NOBAGS total ($F(1, 188) = 7.718, p < 0.05$), with an R^2 of .04. The regression found that an increase in women's SSES appearance scores predicted lower NOBAGS total scores ($\beta = -.199, p < .05$).

The SSES appearance subscale also significantly predicted general approval of aggression ($F(1,196) = 8.297, \beta = -.202, p < 0.05$), with an R^2 of .01, and retaliation approval ($F(1,188) = 5.054, \beta = -.162, p < 0.05$), with an R^2 of .03.

When considering the retaliation subscales, for women only the SSES appearance significantly and negatively predicted verbal retaliation ($F(1,194) = 5.112, \beta = -.160, p < 0.05$), with an R^2 of .026, retaliation against males ($F(1,189) = 4.301, \beta = -.149, p < 0.05$), with an R^2 of .026, retaliation against females ($F(1,189) = 6.250, \beta = -.179, p < 0.05$), with an R^2 of .032, male aggression ($F(1,188) = 6.047, \beta = -.177, p < 0.05$) with an R^2 of .031, and female aggression ($F(1,190) = 4.381, \beta = -.150, p < 0.05$), with an R^2 of .023. The only subscale not predicted by female SSES appearance was the approval of physical retaliation.

Similar to SSES total SD scores, SSES SD scores were calculated for the Appearance subscale and entered into the regression model as a predictor. It was found that for women, SSES Appearance SD significantly predicted NOBAGS total ($F(1,188) = 4.870, \beta = .159, p < 0.05$), with an R^2 of .03, general approval of aggression ($F(1,196) = 4.476, \beta = .149, p < 0.05$), with an R^2 of .02, and retaliation against females ($F(1,189) = 4.316, \beta = .149, p < 0.05$), with an R^2 of .02. No significant predictions were found for men for SSES Appearance SD.

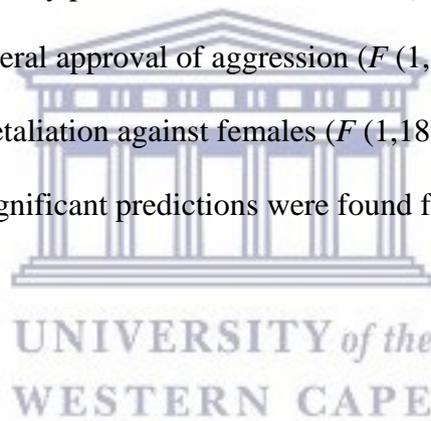


Table 7

Summary of simple linear regressions with state self-esteem as the predictor (for women)

Predictor		Std.		Beta		R²
variable entered	Outcome variable entered	B	Error	(β)	t-value	
SSES Appearance	NOBAGS Total	-.014	.005	-.199	-2.78**	.04
	NOBAGS general beliefs	-.011	.004	-.202	-2.88**	.01
	NOBAGS retaliation beliefs	-.017	.007	-.162	-2.25*	.03
	NOBAGS verbal retaliation beliefs	-.024	.011	-.160	-2.26*	.03
	NOBAGS retaliation against males	-.017	.008	-.149	-2.07*	.02
	NOBAGS retaliation against females	-.018	.007	-.179	-2.50*	.03

	NOBAGS male aggression	-.017	.007	-.177	-2.46*	.03
	NOBAGS Female aggression	-.018	.008	-.150	-2.09*	.02
Appearance SD	NOBAGS total scale	.172	.078	.159	2.21*	.03
	NOBAGS general beliefs	.118	.056	.149	2.12*	.02
	NOBAGS retaliation against females	.229	.110	.149	2.08*	.02

Note. * = $p < 0.05$, ** = $p < 0.01$

4.3.2 Predicting approval of aggression on the basis of trauma exposure

Trauma exposure in the forms of direct experience, witnessing or learning of an event did not significantly predict any of the NOBAGS scales for men. For women, the regression summaries are presented in Table 8. Direct exposure to traumatic events (LEC Happened) significantly predicted NOBAGS total scores ($F(1,188) = 4.851$, $\beta = .159$, $p < 0.05$) with an R^2 of .03, general approval of aggression ($F(1,196) = 3.994$, $\beta = .141$, $p < 0.05$), with an R^2 of .02, and retaliation against females ($F(1,189) = 4.030$, $\beta = .144$, $p < 0.05$) with an R^2 of .02. Exposure to TE through witnessing or learning did not have any significant predictions on NOBAGS scores.

Table 8

Summary of simple linear regression models for trauma exposure as a predictor of normative beliefs about aggression for women

Predictor			Std.	Beta		
variable entered	Outcome variable entered	B	Error	(β)	t-value	R^2
LEC Happened	NOBAGS total scale	.034	.015	.159	2.20*	.03
	NOBAGS general beliefs	.023	.011	.141	2.00*	.02
	NOBAGS retaliation against females	.044	.022	.144	2.008	.02

Note. * = $p < 0.05$

4.3.3 Predicting state self-esteem on the basis of exposure to trauma

Independent regression analysis for men and women are reported due to group differences. Separate regression analysis was run to determine whether direct exposure (LEC Happened), witnessing or learning of a TE predicted SSES.

5.3.3.1 Men

The regression summaries for trauma exposure as a predictor of state self-esteem is presented in Table 9 below.

LEC Happened

Direct exposure did not significantly predict SSES or the subscales Academic Performance, Social and Appearance self-esteem for men.

LEC witness

Witnessing TEs significantly and negatively predicted SSES total for men ($F(1,48) = 5.596, \beta = -.323, p < 0.05$), with an R^2 of .10, indicating that the more events men witnessed, the lower total state self-esteem. Witnessing TEs also significantly predicted SESS Academic performance ($F(1,52) = 4.230, p < 0.05$), with an R^2 of .08, and SSES Appearance ($F(1,50) = 5.785, p < 0.05$), with an R^2 of .10 for men. The predictions for Academic performance and ($\beta = -.274, p < 0.05$) and Appearance ($\beta = -.322, p < 0.05$) were both negative, indicating that witnessing more TEs predicted lower scores on these subscales. No significant predictors of SESS social evaluation were found for men.

LEC Learnt

Learning of TEs did not significantly predict SSES or the subscales Academic Performance, Social and Appearance self-esteem for men.

Table 9

Summary of simple linear regression models for trauma exposure as a predictor of state self-esteem for men

Predictor		Std.	Beta			
variable entered	Outcome variable entered	B	Error	(β)	t-value	R ²
LEC Witness	SESS Total	-1.629	.688	-.323	-2.37*	.10
	SSES Academic performance	-.566	.275	-.274	-2.06*	.08
	SSES appearance	-.764	.318	-.322	-2.405	.10

Note. * = $p < 0.05$

5.3.3.2 Women

The regression summary table for simple linear regression analysis with trauma exposure as a predictor of state self esteem for women is found in Table 10.

LEC Happened

Direct exposure to TEs significantly negatively predicted SSES total for women ($F(1,187) = 4.710, \beta = -.157, p < 0.05$), with an R² of .03. This result indicates that an increase in direct exposure to TEs predicted lower state self-esteem total scores for women. Direct exposure significantly predicted SSES Appearance for women ($F(1,196) = 5.117, p < 0.05$), with an R² of .03. When appearance self-esteem was predicted by direct exposure, the prediction was negative ($\beta = -.160, p < 0.05$), signifying that an increase in direct exposure to TEs predicted lower appearance scores.

No prediction was found for direct exposure and the SSES Academic performance and social subscales when analysed separately for women.

Table 10

Summary of simple linear regression models for trauma exposure as a predictor of state self-esteem for women

Predictor			Std.	Beta		
variable entered	Outcome variable entered	B	Error	(β)	t-value	R ²
LEC Happened	SESS Total	-1.289	.594	-.157	-2.17*	.03
	SSES appearance	-.489	.216	-.160	-2.26*	.03

Note. * = $p < 0.05$

4.3.4 Demographic predictions

Regression analysis was run to determine whether age and family size predicted NOBAGS, SSES and LEC scores for men and women. No significant predictions were found for women for any regression models. The model summaries table for 1= simple linear regressions with demographic variables as predictors of normative beliefs about aggression is presented in Table 11. Age negatively predicted NOBAGS total for male participants ($F(1,51) = 6.101, \beta = -.327, p < 0.05$) with an R² of .11, indicating that younger men had more approving beliefs about aggression.

Table 11

Summary of simple linear regression models with age as a predictor of normative beliefs about aggression for men

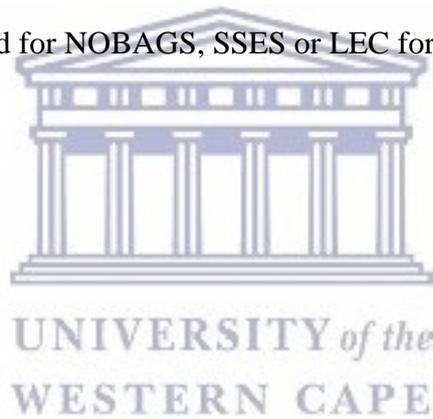
Predictor			Std.	Beta		
variable entered	Outcome variable entered	B	Error	(β)	t-value	R ²
Age	NOBAGS total scale	-.117	.048	-.327	-2.47*	.11
	NOBAGS retaliation beliefs	-.123	.056	-.293	-2.19*	.09

NOBAGS physical retaliation beliefs	-.132	.057	-.307	-2.30*	.09
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Note. * = $p < 0.05$

Age was also a significant predictor for males for retaliation beliefs ($F(1,51) = 4.801$, $\beta = .159$, $p < 0.05$) with an R^2 of .09, and physical retaliation beliefs ($F(1,51) = 5.294$, $\beta = -.307$, $p < 0.05$) with an R^2 of .09. These findings mean that younger male participants were more approving of retaliation, and psychological retaliation. No significant predictions were found for general beliefs, verbal retaliation, retaliation against males, retaliation against females, male aggression, or female aggression.

Age did not significantly predict any SSES and LEC exposure. With regards to family size, no predictions were found for NOBAGS, SSES or LEC for either men or women.



CHAPTER FIVE: DISCUSSION

The aim of this study was to characterise South African university students' normative beliefs about aggression, and to investigate the association between normative beliefs about aggression, trauma exposure and self-esteem.

The study has several significant findings. Students endorsed aggression in the form of retaliation more than general aggression. When looking at gender differences, men and women did not differ in terms of retaliation aggression, however men were more approving of general aggression compared to women. These findings are in line with previous research (Heusmann & Guerra, 1997; Padmanabhanunni & Martin, 2018). Participants reported high rates of exposure to TEs. Men reported higher rates of exposure than women overall, particularly physical assault. Direct exposure to trauma was found to be predictive of beliefs favouring aggression. Thirdly, it was found that both level and stability of self-esteem predicted beliefs about aggression.

5.1 Beliefs about aggression of university students

Overall, aggression in the form of retaliation was approved of more than general aggression in the current study. These findings are in line with existing literature reporting that under conditions of provocation, retaliation is viewed as more appropriate than acts of unprovoked aggression (Amjad & Skinner, 2008; Heusmann & Guerra, 1997). With regards to gender differences, it was found that men held more favourable views towards the use of aggression overall and were more approving of general aggression than women. Similar results were found in other studies (for e.g. Guerra et al., 1995; Guerra et al., 2003; Slaby & Guerra, 1988; Werner & Nixon, 2005). There did not appear to be a difference between men's and women's beliefs about retaliation, either verbal or physical. These results corroborate existing research demonstrating that under provocation gender differences in the

use and approval of aggression are minimal (Bettencourt & Miller, 1996; Bondü & Richter, 2016; Fisher et al., 200:).

Results of this study indicate that both men and women endorsed retaliation against males more so than retaliation against females. Both genders also were more approving of female aggression more than male aggression. Approval of female aggression indicates that participants endorsed women perpetrating aggression, regardless of the gender of the target. Approval of retaliation against males is the approval of both men and women responding to provocation by males in an aggressive manner. Similar responses are reported in another South African sample (Padmanabhanunni, 2017). Aggression is described by Eagly and Steffen (1986) as a behaviour which reflects differences in current societal expectations held for men and women. From the perspective of SIP theory, aggression is a socially acquired behaviour (Crick & Dodge, 1996), and it is well established that an individual's normative beliefs often reflect social group norms, which in turn exert a strong influence on behaviour (Heusmann & Guerra, 1997; Werner & Hill, 2010).

While traditional chivalry norms may prescribe respect to women and may be responsible for social norms prohibiting male-to-female aggression, there is also the implied notion that women need to be protected as they are less powerful and less capable (Eagly & Steffen, 1986; Schnake et al., 1997). This notion may be so entrenched in society that female aggression is not taken seriously, and the harm done by a woman is not seen as having the same magnitude as harm done by a male. A study by Sorenson and Taylor (2005) found that under the same conditions, male violence against intimate partners is judged more harshly than women's violence. In addition, respondents in the latter study also reported that female violence is less wrong, less likely to be illegal, less likely that it should be illegal, and less important for intervention than the same behaviour when perpetrated by a male. More importantly, and in line with the findings of this study, these responses were consistent for

both male and female participants in the study. It has also been found that males usually prefer same-sex targets, aggressing the least against females, while the gender of the victim is less important to female aggressors (Winstok & Enosh, 2007). These findings are consistent for both direct and indirect aggression (Artz et al., 2008). Since it has been established that more aggressive individuals perceive ambiguous stimuli as hostile, and since male aggression is viewed as more serious than female aggression, the approval of retaliation among females is likely to be the outcome of scripts learnt for protection against threat (Crick & Dodge, 1996). On the other hand, these behaviours might not always be employed when retaliation is perceived to result in further danger or negative outcomes. While female retaliation is strongly endorsed and encouraged, the effects of these beliefs on behaviour may be reliant on the presence of bystanders (Feld & Robinson, 1998), which may provide protection and reduce the potential for the anticipation of negative consequences. Those that fear negative consequences as a result of reactive aggression are more likely to control their aggressive behaviour (Bettencourt & Miller, 1996).

With regards to social norms, male traditional gender roles tend to prescribe aggression, but they also encourage chivalry towards women (Eagly & Steffan, 1986). It has been observed in multiple studies that men are expected to withhold anger and aggression when provoked by a woman (Feld & Robinson, 1998; Sorenson & Taylor, 2005). In fact, Schnake et al. (1997) reported that even when a man felt more provoked by a woman, the level of aggression used in response was not proportionate to their level of anger. However, when provoked by men, their aggression was proportionate to the level of anger. People generally believe that it is less acceptable for anyone to retaliate against female aggressors while finding it particularly unacceptable for male victims to retaliate when the aggressor is female (Feld & Felson, 2008). On the other hand, women have reported that it is not only

acceptable but that it is actually expected of them to retaliate when the aggressor is male (Feld & Robinson, 1998).

5.2 Self-esteem of university students and beliefs about aggression

The study found that the self-esteem scores were within the normal range based on established averages (Heatherton & Polivy, 1991). Women in this study were found to have marginally lower total state-self esteem scores than men. The gap between men's and women's self-esteem has been established across various populations (Bleidorn, et al., 2016; Gentile, Grabe, Dolan-Pascoe, Twenge, & Wells, 2009), with men consistently having higher self-esteem, although these differences are not large. This may be because the domains in which self-esteem is primarily invested in differs for men and women, with females usually being most influenced by relationships and males being more influenced by objective success (Heatherton & Wyland, 2003). Further to this, men and women differ in the type of information used to evaluate their self-worth. Women have been found to attach more importance to reflected appraisals (what other people think), while men place importance on social comparisons (who is better than who) (Schwalbe & Staples, 1991). In this study, it is likely that women were basing their responses to the SSES on how they perceived others to view them.

Self-evaluations that are made based on reflected appraisals from others, self-esteem is said to be rooted in relationships and a need to 'belong' (Baumeister & Leary, 1995). A meta-analysis by Gentile et al. (2009) found that the largest difference between men's and women's self-esteem was indeed in the appearance domain, which is related to societal standards and ideals about female appearance exposed to women regularly. While objective standards of physical attractiveness are equal for men and women, exposure to images of the female ideal are encountered more frequently, and norms regarding women's appearance are more rigid and have a larger effect on women (Boute, Wilson, Strahan, Gazzola, & Papps,

2011). Women tend to describe their appearance more negatively than men and make more upward comparisons when evaluating themselves, however in other domains this is not the case (Strahan, Wilson, Cressman, & Buote, 2006).

In line with previous research (Baumeister et al., 1996; Kernis et al., 1989; Webster et al., 2007), results of this study found that both level and state self-esteem significantly predict beliefs about aggression. It was found that a higher self-esteem score predicted lower approval of aggression, while a higher variation in SSES responses predicted higher approval of aggression scores. These results support the notion that individuals with a high, but stable self-esteem, are the least aggressive, while individuals with high, but unstable self-esteem, are usually the most aggressive (Baumeister et al., 1996).

Of the three SSES subscales, only the Appearance subscale significantly predicted beliefs about aggression. Lower Appearance scores predicted higher approval of aggression and retaliation, while higher variability in appearance self-esteem predicted higher approval of aggression. These results provide support for the concept that both the level and stability of self-esteem are important for predicting beliefs about aggression and aggressive behaviour. Since appearance self-esteem was a significant predictor for women, it is likely that the women who took part in this study place salience on their feelings about appearance for their perceptions of self-worth.

When self-esteem is invested in a particular domain, the meaning of events associated with that domain becomes a point of preoccupation in order for people to feel worthy (Crocker & Park, 2004). It is possible that when females in this study were responding to NOBAGS questions such as “suppose a boy/girl says something bad to a girl”, that they were imagining an insult to their appearance, rather than an insult to their intelligence or social standing. This may explain why the Appearance subscale was the only domain which reached

significance when predicting NOBAGS scores. Those with a fragile self-esteem react more defensively to negative feedback in ways that are destructive or even self-destructive (Crocker & Parke, 2004).

These findings also align with findings that those who are the least aggressive have a high, and stable self-esteem (Kernis et al., 1989; Kernis, 2005; Lee, 2014). It has been reported that those with high but unstable self-esteem have more hostile attribution styles than people with low self-esteem (Baumeister et al., 2003; Kernis et al., 1993). These individuals may access scripts endorsing aggression more readily under the premise of emotional arousal when searching for scripts (Huesmann, 1998), compared to stable self-esteem individuals who have lower hostile attributions. These results support previous findings which have demonstrated that unstable high self-esteem is predictive of reactive aggression, but not proactive aggression (Lee, 2014).

It is important to note that the standard deviation calculated for the SSES was based on the sum of individual responses to each item, answered at a single point in time. This may reflect the variability of current state self-esteem but does not give us an indication of the individual's self-esteem stability over time. Other studies have used scale total scores for this calculation, where participants completed the questionnaire over the course of a few days, and the standard deviation of these multiple assessments were used as a reflection of self-esteem stability (see for e.g. Kernis, 2005; Lee, 2014). Nonetheless, this may explain why a lower state self-esteem was found to predict favourable beliefs about aggression, while more variant responses also predict beliefs favouring the use of aggression in the current study. Furthermore, the use of the term 'low' self-esteem needs to be understood in context. As mentioned by Baumeister et al. (2003) unlike measurement instruments such as IQ tests that are designed to result in symmetrical distributions of scores, self-esteem measures allow for skewed distributions with the majority of individuals scoring above or close to the mean.

Considering this, and the fact that majority of participants in this study reported self-esteem levels above population means (Heatherton & Polivy, 1991), the findings of this study do not imply that low-self esteem is predictive of beliefs approving of aggression, but rather that individuals with relatively lower self-esteem in the sample were found to endorse such beliefs. The distribution of standard deviation scores are normally distributed however, and results can be interpreted at face value.

An alternative theory for the relationship between self-esteem and aggression put forward by Baumeister et al. (1996) suggests that in some cases the cause of violent behaviour has little to do with self-esteem, but rather that certain individuals simply possess violent tendencies. In such cases, a combination between violent tendencies and low self-esteem may result in individuals acting aggressively towards or choosing a more vulnerable target. By choosing a vulnerable target the victim is unlikely to retaliate, and aggressive acts against the weak do not necessarily require the confidence which individuals with a high self-esteem have. Baumeister et al. (1996) further propose that domestic violence (particularly child abuse) or IPV may be a scenario in which people who lack self-esteem are the perpetrators of abuse.

5.3 Exposure to PTE's among university students and beliefs about aggression

In the current sample of university students, the most prevalent TEs reported in the current study were transportation accidents, the unexpected or sudden death of a loved one and physical assault, with over 2 fifths of the sample reporting exposure. In terms of direct exposure, the most encountered TEs were the unexpected death of a loved one, physical assault, transportation accidents and other TEs not listed in the LEC. These findings are consistent with other student reports of exposure to TEs in South Africa (McGowan & Kagee, 2013). An alarming 83% of individuals had been exposed to interpersonal violence, with two-thirds of the sample reporting exposure to multiple violent events.

When predicting normative beliefs about aggression on the basis of trauma exposure, there were significant results for women. It was found that reported direct exposure to TEs significantly predicted beliefs about aggression. In other words, the more traumatic events women were directly exposed to, the more approving of aggression they were. These findings replicate previous research which has demonstrated that exposure to traumatic and stressful life-events increases the approval of aggression (Guerra et al., 1995; Shahinfar et al., 2001). Results further found that direct exposure to TE's predicted both approval of general and retaliatory aggression. It has been found that exposure in conjunction with PTSD symptoms predicts reactive aggression, while exposure without PTSD symptoms predicts proactive aggression (Hecker et al., 2015). Since PTSD symptoms were not assessed in this sample, it can be assumed that when individuals were approving of reactive aggression, the experience of TE's reinforced scripts in favour of the use of aggression in response to threat, while traumatic experiences also reinforced scripts that prescribe aggression as a means to achieve instrumental goals (Crick & Dodge, 1996; Huesmann, 1998).

Exposure to TE's has been associated with negative world assumptions that the world is inherently good (Janoff-Bulman, 1989), resulting in a more hostile and untrusting perception of the world. Since these assumptions are directly related to hostile attributions, which in turn predict aggressive behaviour (Bailey & Ostrov, 2008; Crick & Dodge, 1996), the connection between exposure to trauma and beliefs favouring aggression becomes evident.

The results of this study further found that an increase in exposure to TE's predicted an increase in approval of aggression. Using information from the SASH study, Williams et al. (2007) found that individuals who were exposed to the most traumatic events were at the greatest risk for psychological distress symptoms (Williams, et al., 2007). Such distress symptoms include emotional distress, anxiety, PTSD, depression etc. The SIP theory has

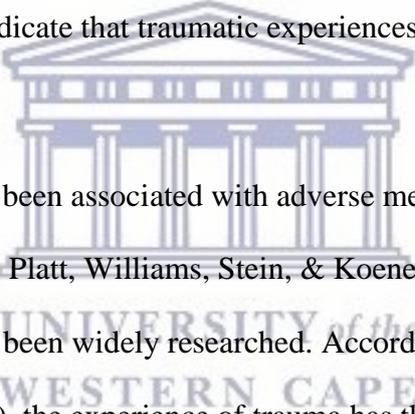
demonstrated that the encoding and activation of scripts in favour of aggression are largely reliant on emotional arousal and interpretation of social cues as hostile (Bandura, 1983; Huesmann, 1998). Hostile cognitions are common among individuals with PTSD, serving as pathways to high levels of physical aggression (Dyer, et al., 2009). This may provide an additional mechanism by which an increase in exposure to trauma increases the approval of aggression found in this study

Given the alarmingly high rates of trauma exposure among South Africans, it becomes almost impossible to untangle the exact effects of witnessing, victimisation, and indirect exposure through learning about events. The average number of TEs reported by South Africans is 4.3 events (Atwoli, et al., 2013), substantially higher than the global average. In this study, students reported an average 3.4 events. It can be assumed that only the most severe incidents are reported in such surveys, and the violent and hostile context of some South African communities entail continuous exposure to stressful and upsetting events.

5.4 Exposure to PTEs and state-self esteem

Results found that for men, witnessing TEs negatively predicted total SSES, Academic performance and Appearance state self-esteem. This finding implies that the more TEs men witnessed, the lower their state self-esteem. Men who witness the traumatic experience of a loved one report feeling helpless and frustrated at not being able to intervene (White, 2007). These feelings may have an impact on men's sense of self-worth and meaningfulness, where a negative events is viewed as out of their control and as being unable to take precautionary measures to protect those they love (Janoff-Bulman & Frantz, 1997). For women, direct exposure to TEs predicted SSES total and Appearance self-esteem scores. Women with higher direct exposure rates had lower state self-esteem scores. While rates of

trauma among men and women do not differ, type of trauma exposure does. In particular, women are more likely to be exposed to intimate partner and sexual violence than men (Benjet, et al., 2016; Freedman, et al., 2002). Exposure to these traumatic events has implications for an individual's self-esteem and may lead to women having a negative concept of their self-worth (Janoff-Bulman & Frantz, 1997). Exposure to sexual abuse in particular is associated with self-conscious feelings of blame (Street, Gibson, & Holohan, 2005), guilt and humiliation, which have a bearing on self-worth and self-esteem. As pointed out by Freedman et al (2002), gender differences in response to traumatic events are likely to be as a result of the different types of TEs experiences by men and women and the gender-specific meanings attached to TEs, rather than a result of susceptibility to distress symptoms. Taken together, these results indicate that traumatic experiences result in lower self-esteem among students in this sample.



Exposure to trauma has been associated with adverse mental and emotional outcomes among South Africans (Atwoli, Platt, Williams, Stein, & Koenen, 2015). Self-esteem among individuals exposed to TEs has been widely researched. According to Janoff-Bulman's assumptive world theory (1989), the experience of trauma has the potential to shatter an individual's feelings of worthiness. This concept has been demonstrated in various contexts. For example, exposure to parental violence (Silvern et al., 1995), domestic abuse (Şahin et al., 2010), and political violence (Magwaza, 1999) has been related to lower self-esteem and feelings of self-worth. Individuals with lower (Adams & Boscarino, 2006), and fragile (Kashdan, Uswatte, Steger, & Julian, 2006) self-esteem are similarly more at risk for developing PTSD following a traumatic event. There is also a relationship between physical aggression and self-harm in people with PTSD, which possibly indicates that physical aggression is an externalised method of coping with negative emotions about ones-self following traumatic experiences (Dyer et al., 2009).

It is unclear from the results of this study whether self-esteem mediates a trauma response, or an aggression response. The relationship between self-esteem, trauma exposure and aggression appears to be complex and requires further investigation in South Africa.

5.5 Demographics and normative beliefs about aggression

When predicting beliefs about aggression on the basis of demographic factors, it was found that being a younger male significantly predicted higher approval of total beliefs about aggression, approval of retaliation and physical retaliation. No significant results were found for family size for either men or women. These results are similar to previous research indicating that younger males are the most approving of aggression (Amjad & Skinner, 2008). The majority of research regarding age and normative beliefs has to date focused on the developmental phases of childhood and adolescents (Werner & Nixon, 2005; Amjad & Skinner, 2008; Padmanabhanunni & Martin, 2018). However, young males make up the lions share of South African prisoners serving sentences for violent offences (Crime Stats SA, 2017). Young men between the ages of 18 and 25 also have the highest rates of exposure to violence, particularly community violence and stranger violence (Benjet et al., 2016; Freedman et al., 2002), providing opportunities for social learning and script reinforcement. Another possible explanation may be due to developmental differences in information processing and social reasoning skills (Crick and Dodge, 1996; Snethen & Van Puymbroeck, 2008) among young men, which may be slightly slower compared to young women and girls.

5.6 Importance of addressing trauma, self-esteem and beliefs about aggression among university students

Normative beliefs in favour of aggression have repeatedly been shown to predict aggressive behaviour (Amjad & Skinner, 2008; Heusmann & Guerra, 1997; Kikas et al., 2009). There is a lack of research conducted in South Africa regarding normative beliefs about aggression, and the factors which affect such beliefs. By understanding which factors

are associated with beliefs endorsing aggressive behaviour, interventions aimed at reducing violent and interpersonal related crime, as well as addressing the emotional and mental consequences of aggressive behaviour can be tailored to the population's unique needs.

5.7 Limitations and recommendations

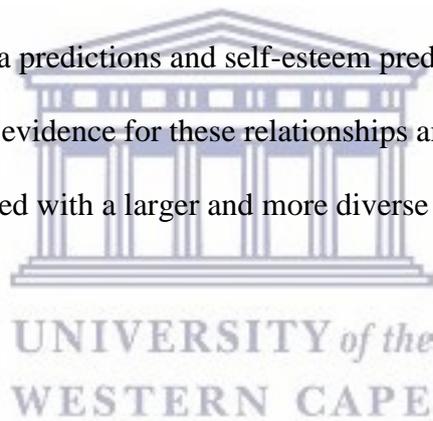
There are a number of limitations of this study which need to be considered. Data was collected from university students by a young, white female researcher, which may have resulted in respondent bias. The majority of the sample consisted of young females, and it is possible that young men did not want to take part in the study due to the researcher's presence given the nature of the study. Given the small number of males that agreed to take part in this study, the findings cannot be generalised to the broader male population of UWC. The findings of this study relate mostly to direct forms of aggression (verbal and physical). Indirect forms of aggression such as social exclusion, manipulation, spreading rumours and other forms of social aggression were not measured in this study, and require further investigation among South African populations.

Future research regarding normative beliefs about aggression in South Africa should be done on the broader population. The relationship between exposure to trauma, emotional distress, self-esteem and aggression should be investigated. It would be interesting to look at whether individuals with low self-esteem are more susceptible to emotional distress and aggression following a traumatic event, or whether trauma results in lowered or more fragile self-appraisals, thus making an individual prone to endorse aggression. It would also be worthwhile to investigate whether there is a differential effect for those from different backgrounds, for example education level, income bracket, and levels of social support.

5.8 Conclusion

The aim of the current study was to identify South African university students' beliefs about aggression, and whether these beliefs can be predicted by reported exposure to traumatic events, state self-esteem and demographic factors. Results showed that direct exposure to traumatic events predicted more favourable beliefs about the use of aggression. In terms of self-esteem, it was found that both level and stability of self-esteem predicted beliefs about aggression. Further to this, the results showed that lower and more variable state self-esteem scores predicted beliefs about both retaliatory and general aggression. Additionally, exposure to TEs predicted lower self-esteem scores for both men and women in this study.

The findings for trauma predictions and self-esteem predictions are in line with existing research, and provide evidence for these relationships among young South African adults. Future research is needed with a larger and more diverse population sample in South Africa.



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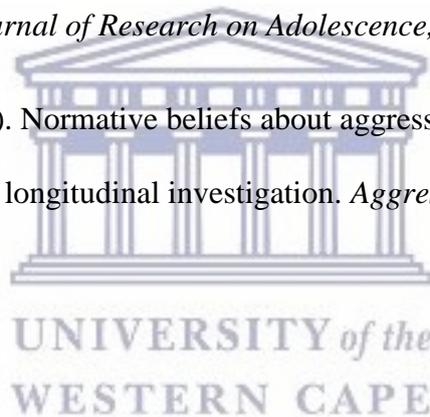
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APPENDICES

Appendix A: Demographic questionnaire

Please indicate which of the following apply to you by placing a tick (✓) in the relevant box.

1	Gender:	Male <input type="checkbox"/>	Female <input type="checkbox"/>	Other <input type="checkbox"/>
2	Age:	<i>(Please indicate age below)</i>		
3	Number of people in your household:	<i>(Please indicate how many people live in the same house as you)</i>		



Appendix B: Normative Beliefs About Aggression Scale (NOBAGS)

Please read the scenario written in bold and then the questions that come after it. Thinking about the scenario, mark the answer to the question – It's perfectly OK, It's sort of OK, It's sort of wrong, or It's really wrong – based on which answer most closely matches how you feel when you read the question.

	It's perfectly okay	It's sort of okay	It's sort of wrong	It's really wrong
Suppose a young man says something bad to another young man, John:				
1) Do you think it's OK for John to scream at him?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2) Do you think it's OK for John to hit him?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Suppose a young man says something bad to a young woman.				
3) Do you think it's wrong for the young woman to scream at him?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4) Do you think it's wrong for the young woman to hit him?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Suppose a young woman says something bad to another young woman, Mary.				
5) Do you think it's OK for Mary to scream at her?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Do you think it's OK for Mary to hit her?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	It's perfectly okay	It's sort of okay	It's sort of wrong	It's really wrong
Suppose a young woman says something bad to a young man.				
7) Do you think it's wrong for the boy to scream at her?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8) Do you think it's wrong for the boy to hit her?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Suppose a young man hits another young man, John?				
9) Do you think it's wrong for John to hit him back?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Suppose a young man hits a young woman.				
10) Do you think it's OK for the young woman to hit him back?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Suppose a young woman hits another young woman, Mary?				
11) Do you think it's wrong for Mary to hit her back?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Suppose a young woman hits a young man.				
12) Do you think it's OK for the boy to hit her back?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13) In general, it is wrong to hit other people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14) If you're angry, it is OK to say mean things to other people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15) In general, it is OK to yell at others and say bad things.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16) It is usually OK to push or shove other people around if you're mad.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17) It is wrong to insult other people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18) It is wrong to take it out on others by saying mean things when you're mad.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19) It is generally wrong to get into physical fights with others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20) In general, it is OK to take your anger out on others by using physical force.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

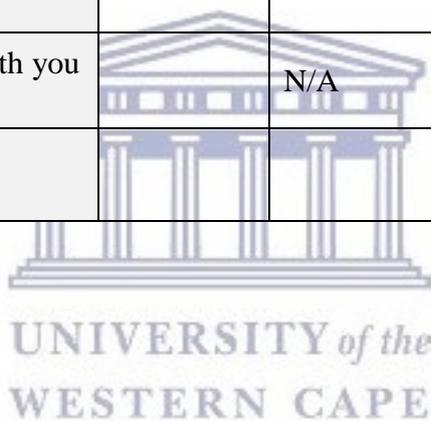
Appendix C: The Life Events Checklist (LEC)

Listed below are a number of difficult or stressful things that sometimes happen to people. For each event, tick (✓) one or more of the boxes to the right to indicate that: (a) It *happened to you* personally, (b) you *witnessed it* happen to someone else, (c) you *learned about it* happening to someone close to you, (d) you're *not sure* if it applies to you, or (e) it *doesn't apply* to you. Mark *only one* item for any single stressful event you have experienced. For events that might fit more than one item description, choose the one that fits best.

Be sure to consider your *entire life* (growing up, as well as adulthood) as you go through the list of events.

	Event	Happened to me	Witnessed it	Learned about it	Not sure	Doesn't apply
1	Natural disaster (for example, flood, hurricane, tornado, earthquake)					
2	Fire or explosion					
3	Transportation accident (for example, car accident, boat accident, train wreck, plane crash)					
4	Serious accident at work, home, or during recreational activity					
5	Exposure to toxic substance (for example, dangerous chemicals, radiation)					
6	Physical assault (for example, being attacked, hit, slapped, kicked, beaten up)					
7	Assault with a weapon (for example, being shot, stabbed, threatened with a knife, gun, bomb)					
8	Sexual assault (rape, attempted rape, made to perform any type of sexual act through force or threat of harm)					
9	Other unwanted or uncomfortable sexual experience					

10	Combat or exposure to a war-zone (in the military or as a civilian)					
	Event	Happened to me	Witnessed it	Learned about it	Not sure	Doesn't apply
11	Captivity (for example, being kidnapped, abducted, held hostage, prisoner of war)					
12	Life-threatening illness or injury					
13	Severe human suffering					
14	Sudden, violent death (for example, homicide, suicide)	N/A				
15	Sudden, unexpected death of someone close to you					
16	Serious injury, harm, or death you caused to someone else		N/A	N/A		
17	Any other stressful event or experience					



Appendix D: State Self-esteem Scale (SSES)

This is a questionnaire designed to measure what you are thinking at this moment. There is of course, no right answer for any statement. The best answer is what you feel is true of yourself at the moment. Be sure to answer all of the items, even if you are not certain of the best answer. Again, answer these questions as they are true for you **RIGHT NOW**.

		Not at all	Little bit	Somewhat	Very much	Extremely
1	I feel confident about my abilities.					
2	I am worried about whether I am regarded as a success or failure.					
3	I feel satisfied with the way my body looks right now.					
4	I feel frustrated or rattled about my performance.					
5	I feel that I am having trouble understanding things that I read.					
6	I feel that others respect and admire me.					
7	I am dissatisfied with my weight.					
8	I feel self-conscious.					
9	I feel as smart as others.					
10	I feel displeased with myself.					
11	I feel good about myself.					
12	I am pleased with my appearance right now.					
13	I am worried about what other people think of me.					
14	I feel confident that I understand things.					
15	I feel inferior to others at this moment.					
16	I feel unattractive.					
17	I feel concerned about the impression I am making.					
18	I feel that I have less scholastic ability right now than others.					
19	I feel like I'm not doing well					

20	I am worried about looking foolish.					
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Appendix E: Information Sheet



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Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-959 2852 Fax: 27 21-959 3515

E-mail: emmawagener@gmail.com

INFORMATION SHEET

Project Title: Exposure to trauma and self-esteem as correlates of normative beliefs about aggression: A study of South African young adults.

What is this study about?

This is a research project being conducted by Emma Wagener at the University of the Western Cape. We are inviting you to participate in this research project because you are a young adult studying at UWC. The purpose of this research project is to investigate attitudes and beliefs about the use of aggression among young adults in South Africa.

What will I be asked to do if I agree to participate?

You will be asked to complete a questionnaire given to you at the start or end of a lecture.

The questionnaire should take 10 to 15 minutes to complete. In the questionnaires, you will be asked some simple demographic questions (your age, gender, and amount of people in your family), as well as questions about your views on aggression, any exposure to violence or stressful situations, and a short questionnaire on how you feel about yourself right now.

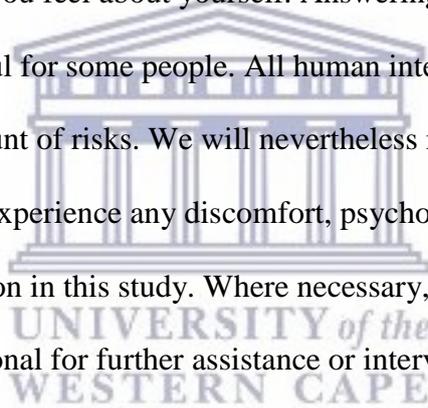
Participation is completely voluntary, completing the questionnaire is not a course requirement.

Would my participation in this study be kept confidential?

The researchers undertake to protect your identity and the nature of your contribution. To ensure your anonymity, all questionnaires are completed anonymously and no information that could identify you will be required. All of the completed questionnaires will be stored in a secure area that only the researcher and research supervisor have access to, any digital information will be password protected. If we write a report or article about this research project, your identity will be protected.

What are the risks of this research?

There are very few risks for participating in this study. However, you will be asked about your beliefs about aggression, previous exposure to stressful or violent situations, and you will also be asked about how you feel about yourself. Answering these questions may be uncomfortable or even stressful for some people. All human interactions and talking about self or others carry some amount of risks. We will nevertheless minimise such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention.



What are the benefits of this research?

This research is not designed to help you personally, but the results may help the investigator learn more about beliefs about aggression in South Africa. We hope that, in the future, other people might benefit from this study through improved understanding of the factors that play a role in the perpetration of aggressive behaviour, particularly within South Africa.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If

you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

What if I have questions?

This research is being conducted Emma Wagener, a Masters student in the department of psychology at the University of the Western Cape. If you have any questions about the research study itself, please contact Emma Wagener at: 071 4808 350 or emmawagener@gmail.com.

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Dr. Maria Florence

Deputy Head of Department: Psychology

University of the Western Cape

Private Bag X17

Bellville 7535

mflorence@uwc.ac.za



This research has been approved by the University of the Western Cape's Humanities and Social Sciences Research Ethics Committee. REFERENCE NUMBER: *HS17/4/9*

Appendix F: Consent form



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CONSENT FORM

Title of Research Project: Exposure to trauma and self-esteem as correlates of normative beliefs about aggression: A study of South African young adults.

The study has been described to me in language that I understand. My questions about the study have been answered. I understand what my participation will involve and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits.

Participant's name.....

Participant's signature.....

Date.....



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