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The Influence of Bystanders in Subsequent Bullying Behavior

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THE INFLUENCE OF BYSTANDERS IN SUBSEQUENT

BULLYING BEHAVIOR

by

Jenny Lane Mason

Abstract of a Dissertation
Submitted to the Graduate School
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

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ABSTRACT

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Aggression that is targeted towards an individual or a group of individuals who is at a disadvantage to respond is known by several terms in the literature, including bullying, harassment, and mobbing. There has been much interest in this sort of targeted aggression among school-aged children and, therefore, a large body of literature on the topic exists. In adult populations, especially in workplace environments, much research has focused on the respective roles of the victim and bully in this adverse social dynamic, with less information available on the role of the bystander, which has emerged as an important part of the dynamic. The purpose of this study was to investigate secondary bystander behaviors towards a victim, bystander, or aggressor through a reaction-time task that followed an episode of aggression in which the type of aggression and response of the primary bystander was manipulated. Significant results were not found in levels of aggressive or prosocial responding due to the bystander intervention, but due to the opponent being played in the task. It is proposed that circumstances of aggression are extremely ambiguous, creating misinterpretation and often leaving aggression unchallenged, which is interpreted by the aggressor as support. Future research and implications are discussed.

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LIST OF ABBREVIATIONS

COMPACT   Competitive Prosocial/Aggression Continuum Task

BPAQ   The Buss-Perry Aggression Questionnaire

BPAQ-P   The Buss-Perry Aggression Questionnaire – Physical Aggression

BPAQ-V   The Buss-Perry Aggression Questionnaire – Verbal Aggression

BPAQ-A   The Buss-Perry Aggression Questionnaire – Anger

BPAQ-H   The Buss-Perry Aggression Questionnaire - Hostility

YSQ-SF   The Young Schema Questionnaire – Short Form

YSQ-ED   The Young Schema Questionnaire – Emotional Deprivation

YSQ-AB   The Young Schema Questionnaire - Abandonment

YSQ-MA   The Young Schema Questionnaire – Mistrust/Abuse

YSQ-SI   The Young Schema Questionnaire – Social Isolation

YSQ-DS   The Young Schema Questionnaire – Defectiveness/Shame

YSQ-FA   The Young Schema Questionnaire – Failure

YSQ-DI   The Young Schema Questionnaire – Dependence/Incompetence

YSQ-VH   The Young Schema Questionnaire – Vulnerability to Harm/Illness

YSQ-EM   The Young Schema Questionnaire - Enmeshment

YSQ-SB   The Young Schema Questionnaire - Subjugation

YSQ-SS   The Young Schema Questionnaire – Self-Sacrifice

YSQ-EI   The Young Schema Questionnaire – Emotional Inhibition

YSQ-US   The Young Schema Questionnaire – Unrelenting Standards

YSQ-ET   The Young Schema Questionnaire - Entitlement

YSQ-IS   The Young Schema Questionnaire – Insufficient Self-Control/Self-Discipline

VS   Vengeance Scale

CRT-A   Conditional Reasoning Test for Aggression

GFIDR   Gender-Free Inventory of Desirable Responding

CHAPTER I

INTRODUCTION

Bullying can be described as recurrent episodes of targeted aggression aimed at causing either physical or psychological harm toward an individual who often is in a position of lower authority, power, or social standing, and who has done nothing to warrant such abuse (Garandeau & Cillessen, 2006). In recent literature, bullying has been compared to and described as harassment, mobbing, and targeted aggression. Succinctly, bullying is said to be a "systematic abuse of power" (Smith, 1997, p. 249). Thus, bullying behaviors are related to prestige and perceived popularity, where prestige is not the same as being liked (Sijtsema, Veenstra, Lindenberg, & Salmivalli, 2009). Typically, because of the power difference, the target or victim of the bullying is not in a position to defend him or herself, creating an ongoing environment of power abuse (Garandeau & Cillessen, 2006).

Bullying in Childhood

Much of what we know about bullying has been revealed by research with children, focusing on bullying in the school system. Targeted and recurrent aggression in school-aged children has been an ongoing interest in psychological research, resulting in a large body of literature on childhood bullying. In fact, bullying has been found to begin as early as kindergarten, with the most common form being physical aggression (Chan, 2006). Young bullies engage in aggressive behavior without apparent provocation or threat from the victim, while chosen victims often have difficulty defending themselves due to a power imbalance (Olweus, 1993) and as a result suffer from loneliness, depression, and frequent psychosomatic complaints (Cook, Williams, Guerra, Kim, &

Sadek, 2010). Bullying behaviors have been shown to increase as children enter into adolescence and middle school (Hazler, 1996). As children get older, they begin to rationalize their aggressive acts, often no longer relating them as aggressive, but as warranted reactions toward others (Monks & Smith, 2006). Similarly, the witnesses of such bullying acts are more likely to accept the behaviors and not reject the bully if bullying has become normative in that particular environment (Sentse, Scholte, Salmivalli, & Voeten, 2007). If not normative for the environment, it is more likely that both bullies and victims will be equally disliked by peers (Sijtsema et al., 2009). Determining the characteristics of bullies and victims has predominated the childhood bullying research, allowing researchers to get a base understanding of bully and victim characteristics.

Interventions to reduce childhood bullying have focused on increasing (a) prosocial attitudes in the bully (Committee for Children, 2001 as cited in Frey et al., 2005), (b) assertiveness and healthy coping in the victim, and most recently (c) intervention in the bystander (Merrell, Gueldner, Ross, & Isava, 2008). The results of these intervention programs are inconsistent, with many producing no significant changes in behaviors. Those that increase the presence of authoritative adults show positive results including decreases in bullying behaviors and increases in student reactions against bullying, while those that offer problem-solving skills to the students or peer supporters result in significant increases in bullying behaviors (Merrell et al., 2008). More recently, a multilevel bullying approach has been introduced that includes intervention strategies for the bullies, victims, and bystanders (Frey et al., 2005). An example of such is the Bully Busters program in which students are exposed to strong

social models and the climate in the school is changed to be more prosocial (to encourage prosocial behavior in bullies), teachers facilitate discussion about how to work through problems more effectively and to openly and assertively address bullying concerns (to encourage assertiveness in victims), and social skills and conflict management training is offered to students (to aid bystanders in effective intervention) (Bell, Raczynski, & Horne, 2010). This program style is yielding more positive results and has been shown to decrease pro-bullying attitudes (Merrell et al., 2008).

Bullying in Adulthood

Notably, bullying and harassment has been found to be a common occurrence in adults as well, with much of the extant adult research focusing on workplace aggression. Although methods of bullying change throughout the lifespan, e.g., from overt aggression to covert aggression, allowing the bully to avoid consequences (Björkqvist, Österman, & Lagerspetz, 1994), the occurrence of bullying continues through adulthood (Chan, 2006). Olweus (1993) suggests that childhood bullies continue aggressive and bullying behaviors into adulthood, affecting work relationships, family relationships, and intimate relationships. Similarly, victims of bullying behaviors in childhood often remain victims as adults. Smith, Singer, Hoel, and Cooper (2003) found that the adults at highest risk for workplace victimization were those individuals who reported being victims of bullying as children.

However, there is a danger in comparing young school-yard bullies with adult workplace offenders, as these people and their presenting circumstances differ. In school settings, children are typically more closely monitored, allowing a teacher or other adult to step in against the incidents on behalf of the victim. This takes away much of the

power from the bully. Few corporations have an individual looking out for and addressing such workplace concerns. Additionally, the school-yard bullies are most often categorized as equals to their victims, as both parties are young students. This is not always the case in adult bullying circumstances. Some workplace bullies may have greater influence over rewards (reward based power) because of their position in the organization. As Pearson and Porath (2009) explain, "two-thirds of workplace offenders have the power of the organizational hierarchy behind them" (p. 161), which gives them a frightening amount of power and say-so within the corporation. Their position also typically gives these individuals greater access to resources, such as other high-powered connections, along with less supervision, making adult bullying a much more frightening and potentially devastating situation.

Adult bullying most commonly manifests in the form of covert aggression rather than physical aggression. There are several forms of covert aggression including indirect and relational aggression. Archer and Coyne (2005) identify relational aggression "in terms of its endpoint, which is to manipulate or disrupt relationships and friendships" (p. 212). Thus, it is similar to indirect aggression, as both are low-cost means of aggressing upon another, but relational aggression differs in emphasis. Females are found to be more likely to utilize relational aggression, while males are more likely to utilize other covert forms of aggression, such as rational appearing (Crick & Grotpeter, 1995; Vail, 2002). It has been theorized that this sex difference is due primarily to gender roles (Crothers, Lipinski, & Minutolo, 2009), as women are expected to avoid overt confrontation when possible and are therefore encouraged to resolve conflicts through

manipulative means of aggression (Bem, 1981). However, more information is needed on gender variables at this time.

Björkqvist et al. (1994) describe indirect aggression as "sophisticated strategies of aggression so that the aggressor is able to harm a target person without even being identified" (p. 27). Kaukiainen et al. (2001) describes three different forms of indirect aggression: (a) *indirect manipulative aggression* refers to aggressive acts involving a peer group, such as spreading rumors or isolating someone from their group, (b) *covert insinuative aggression* is when the aggressive act is disguised in the form of malicious insinuations and suggestions, such as imitating the person in an insulting manner, and (c) *rational-appearing aggression* is characterized by the bully's attempt to conceal his/her intention to hurt the victim by shrouding his or her aggressive acts in seemingly rational actions. This last form of indirect aggression is probably the most invisible type of aggression and, thus, is used most frequently in workplace bullying. Often, these acts appear to others as everyday communications, not as targeted attempts of aggression.

<center>Bullying in the Workplace</center>

Bullying specific to adults in the workplace has been described as "the persistent exposure to interpersonal aggression and mistreatment from colleagues, superiors or subordinates" (Einarsen, Hoel, & Notelaers, 2009, p. 24). Due to the current media attention on school-yard bullying, workplace bullying has become a *silent epidemic* (Onorato, 2013). It is in the workplace that we most often see the non-physical forms of bullying, including verbal and covert bullying. Most often, adult bullying in the workplace occurs in the form of insulting and offensive remarks, recurrent public criticism, harming of social status or relationships, or even threats of physical abuse

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(Archer & Coyne, 2005; Einarsen, Raknes, & Matthiesen, 1994). It is these forms of indirect or verbal aggression that undermine the victim's status, making future bullying more acceptable (Garandeau & Cillessen, 2006). Specific forms of adult covert and verbal bullying have been found to generate very differing responses. Specifically, belittlement of another is more often ignored by others, while undermining another's work and verbal abuse often result in reciprocal aggression (Lee & Brotheridge, 2006). As bullying increases in frequency and severity, Österman et al. (1994) found that bullies rationalize their behaviors, making them less likely to recognize their behaviors as aggressive, while victims and bystanders begin to report much higher levels of aggression in these bullying individuals. Thus, bullies make assumptions about the situations and excuses for their reactions to it. However, determining whether or not this is the key to bullying needs further investigation. Baker and Schaie (1969) have found that a bully's physiological and psychological arousal remain elevated until there is follow-through of an aggressive act, resulting in relief from the arousal state. Through indirect aggression, this can be accomplished with potentially minimal cost (Archer & Coyne, 2005).

In 2007, an online survey was conducted by the Workplace Bullying Institute (as cited in Magnuson & Norem, 2009), with findings indicating that 37% of American workers experienced bullying at their workplace. Over one-half of these experiences occurred in public environments with 72% of the repeated bullies holding positions of authority. Reports from the victims were largely ignored or the bullying escalated as a result of the reporting. Other research has found even higher numbers, with nearly half of all adults reporting bullying in the workplace, and all but 10% of those victims not reporting the incidents for fear of escalation. Onorato (2013) states that ongoing attention

must be focused on the leadership characteristics of the managers and leaders of the workplace environment, as repeatedly aggressive behavior from a bully boss can cause a domino effect of torment in the environment. The few victims that do report incidents of bullying feel that it was not only the unreasonable and overly-aggressive incidents that were problematic, but the inadequate means taken toward resolution that perpetuated the problem (Bairy et al., 2007). Moreover, onlookers and witnesses to the bullying often report seeing the incidents as uncivilized behavior or general lack of respect, but rarely as recurring targeted aggression, which leads to underreporting (Einarsen et al., 2009). Bullying has been found to occur more frequently towards females than towards males (Björkqvist, Österman, & Hjelt-Back, 1994), more frequently towards minority populations (Fox & Stallworth, 2005), and equally across workplace environments, including at colleges and universities (Quine, 2002). Bullying in the workplace is most often conceptualized by companies as physically aggressive acts or blatant Equal Employment Opportunity violations, leaving more covert forms of bullying and aggression to go unnoticed in the workplace and thus unaddressed (Crothers et al., 2009).

Characteristics of Bullying Environments

Zapf and Einarsen (2001) discuss the effects of adult forms of bullying and aggression through the lens of Industrial/Organizational Psychology, explaining that the circumstances have a devastating effect on not only the victim (emotionally, psychologically, and physically), but also on the organization as a whole. Companies that allow such covert aggression put their professional reputations at great risk. It has been found that nine out of 10 victims tell someone about their offender's actions, creating alienation in others from further use of the company's services. Two out of three

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victims will specifically tell a neutral party in order to try and damage the offender's

reputation. Furthermore, the repetition and escalation involved in the workplace

aggression is discussed as important in turning what would be a single incident of

aggression into bullying (Einarsen et al., 2009). It is this repetition of aggressive acts that

has a normative effect on the witnesses and bystanders of a workplace environment,

further increasing the likelihood of bullying and decreasing the chances of intervention

(Hutchinson, 2009).

Further increasing the potential for a bullying environment has been found to

occur when perpetrators of the workplace bullying have higher perceived employability

(De Cuyper, Baillien, & De Witte, 2009). Thus, bullies are more likely to engage in the

aggressive acts when they feel confident that work could easily be found elsewhere.

Björkqvist et al. (1994) suggests that many of the bullying behaviors come from job

competition and envy-based power struggles over coveted positions. Treadway, Heames,

and Duke (2009) expanded on this idea, stating that it is the ever-increasing complexity

of our organizational environments in business that leads to the ever-growing frequency

of adult bullying in America. Thus, power differences have become greater and more

diverse, increasing the opportunity for bullying. Harvey, Heames, Richey, and Leonard

(2006) implicate specific characteristics of the organizational environment that impact the

occurrence of bullying, the hierarchy within the business, but not specifically the people

within each rung of the ladder.   However, Hauge, Skogstad, and Einarsen (2007) state

that it is noteworthy that people make up these organizational systems, and it must thus

be acknowledged that, ultimately, it is the people who create the negative and bullying

atmospheres, viewing bullying as a direct result of interpersonal friction and destructive leadership.

There is general agreement among researchers in the field of work-place bullying that it is the interplay between the work environment or organizational chain of command and the workers within it that create a bullying atmosphere (Björkqvist et al., 1994; Hauge et al., 2007; Roscigno, Lopez, & Hodson, 2009; Treadway et al., 2009). Often, there is a combination of organizational chaos and relational powerlessness that lays the groundwork for bullying environments. For example, counter-aggressiveness is often found in bullying environments in which bullying continues down the chain of command in an effort for each victim (now the new bully) to vent his or her frustrations in an aggressive manner on a lower level employee (Lee & Brotheridge, 2006). This is especially true of males (Hauge et al., 2009). Thus, bullying at the top of a corporate ladder can create rung after rung of bullying experiences. Once an environment is open for power abuse, bullying can quickly become normative (Hodson, Roscigno, & Lopez, 2006). Although organizations cannot be held responsible for the particular aggressive acts, it is important that they hold themselves responsible for the correction of the environment in order to minimize the effects (Rhodes, Pullen, Vickers, Clegg, & Pitsis, 2010). Additionally, companies need to be aware of the possible antecedents to bullying in the workplace, such as work-related stress. Environments that are more highly stressful on employees have been found to breed higher levels of bullying behaviors (Hauge, Skogstad, & Einarsen, 2009). In fact it is in those environments that bullying thrives. Workplaces without authority figures capable of effectively addressing bullying

concerns create an increasingly vulnerable workplace, opening a business up to supervisory bullying and unhealthy managerial control (Roscigno et al., 2009).

Similarly, extreme status inconsistencies where workers feel they cannot relate to or work closely with authority figures also open a business up to possible misuse of power and authority (Heames, Harvey, & Treadway, 2006). Pearson and Porath (2009) state several important means of decreasing and even fully alleviating workplace aggression and incivility, which include making sure that managers and executives remain role models of the norms and expectations set by the company, weeding out potential offenders on the front end by screening for aggression during the interview process, holding frequent training programs to enhance workplace cooperation and collaboration, training employees and managers to better recognize and appropriately respond to potential threats, and enforcing strict rules against workplace aggression to further deter potential offenders. In order for these guidelines to be followed, a company must know how to best deter aggressors and their offenses, which means a clear understanding of the bullies and individuals who can stop them.

<center>Characteristics of Bullies</center>

Workplace bullying creates an environment that is experienced as negative by both victims and bystanders, as each group fears escalation and retaliation. This targeted aggression has been found to correlate with leadership dissatisfaction, as well as role conflict among employees, and a generally negative social climate (Einarsen et al., 1994). Bullies are often viewed as group outsiders, while victims band together into supportive teams, which can unknowingly make them easier to victimize (Coyne, Craig, & Chong, 2004). Much literature can be found on the characteristics of bullies, discussing their

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aggressive tendencies in other areas of life (Garandeau & Cillessen, 2006), as well as

their selfish and hostile personalities (Harvey et al., 2006), or comparing them to their

victims, who also have been found to have self-esteem problems, high levels of anxiety

(Matthiesen & Einarsen, 2007), and depression (Björkqvist et al., 1994). Additionally,

bullies have been found to have lower levels of agreeableness and higher levels of

neuroticism on personality measures (Meier, Robinson, & Wilkowsky, 2006; Turner &

Ireland, 2010) and are more often males who have, themselves, experienced bullying in

the past or are working in high stress environments (Hauge, Skogstad, & Einarsen, 2009).

Jenkins, Zapf, Winefield, and Sarris (2012) interviewed individuals accused of workplace

bullying and were told by the accused that the occurrences were due to stress levels

becoming overwhelming, high levels of conflict across departments, and staff shortages.

The characteristic that most delineates the aggressors from their victims, however, is

aggression. Although both parties are found to be higher on reactive aggression, bullies,

but not victims, display proactive aggression that is focused on others in a recurrent and

targeting manner (Camodeca & Goossens, 2005). Seigner, Coyne, Randall, and Parker

(2007) point out that many of the characteristics measured in bullies have also been

determined to be characteristics necessary in effective leadership: competitiveness,

extroversion, independence, egocentrism, and aggressiveness, and thus bullies are not

only tolerated but often rewarded by supervisors and senior management, further

encouraging bullying relationships at work (Murray, 2009). Research has shown that

specific leadership styles constitute whether a manager is seen as being assertive and

strong or as aggressive and bullying toward employees. Specifically, it has been found

that an unpredictable style of leadership is often seen in workplace bullies, where

punishment is delivered on the manager's own terms and beyond the scope of what is expected for the circumstance (Hoel, Glaso, Hetland, Cooper, & Einarsen, 2010). Senior members of organizations need to be more cognizant of this leadership expectation and specific leadership styles or workplace bullying is anticipated to remain high in American businesses (Harvey, Treadway, & Heames, 2007). It must be recognized by management teams that it is the way in which these strong leadership characteristics are utilized in a position of power that creates effective or abusive leadership, and that only appropriate use should be rewarded and encouraged.

<div align="center">Resulting Consequences to Those Targeted</div>

Not surprisingly, victims of workplace bullying experience many resulting negative symptoms and behaviors. More frequent absenteeism, reduced motivation compared to others, and leaving the position are just a few of the ways in which a bully can alter a victim's ability to perform effectively in the workplace (Keeling, Quigley, & Roberts, 2006). Furthermore, bullying can have a detrimental effect on a victim's psychological and physical health, including high levels of stress, PTSD symptoms (Leymann & Gustafsson, 1996), depression (Camodeca & Goossens, 2005), cardiac problems, and many other health concerns (Srabstein et al., 2008). Workplace bullying can cause physical and/or psychological trauma to the victims regardless of their coping resources (Nielson, Matthiesen, & Einarsen, 2008). Due to the increasing levels of fear and self-doubt, victims often delay reacting to bullying behaviors, believing they may be at least partially to blame for the circumstances (Garandeau & Cillessen, 2006). They begin to internalize their problems, increasing the negative symptoms and decreasing their chances of reacting to or reporting the incidences (Camodeca & Goossens, 2005). It

has also been found that many of the resulting problems remain long after the bullying has ceased or the victim no longer works with the bully. For example, sleep problems are likely to continue more than two years later, including difficulty falling asleep and ongoing restless sleep (Hansen, Hogh, Garde, & Persson, in press).

<p style="text-align:center">The Cost of Workplace Bulling</p>

Workplace bullying has both individual and systemic consequences (Rhodes et al., 2010). The potentially escalating nature of workplace bullying and the effect on U.S. companies is of great concern. Complaints made about bullying are fast-growing. Up to 55% of current workers experience bullying each year, according to Haines, Marchand, and Harvey (2006) and as a result have been found to cost companies employee productivity and commitment, while increasing health problems and absenteeism (Keeling et al., 2006). But further cost to companies has also been noted recently. The Corporate Leavers Survey in 2007 (Level Playing Field, n.d.) found that more than two million managers and professionals left their jobs citing unfairness and bullying as the sole reason. Query and Hanley (2010) calculated that the estimated cost of such turnover is approximately $64 billion dollars a year for corporate America, with the analysis including only those openly reporting the bullying, leaving much room for error. According to the Equal Employment Opportunity Commission (EEOC, n.d.), this high cost is equivalent to the settlements for all sex and race-based lawsuits between the years of 1997 and 2006 combined.

Specifically in academic settings, Raineri, Frear, and Edmonds (2010) conducted a study to examine observed bullying by sending out 2,200 self-report surveys to small and midsize colleges and universities in the northeast and central U.S. that included

specific statements describing characteristics of bullies and victims, asking faculty members to report observances of bullying. The study found that 75% of faculty reported observing bullying behaviors from fellow faculty members within the same department and 50% reported observing bullying from administrators. In health care settings, ongoing bullying was significantly more likely to make the victims take long-term sickness absence in order to avoid the aggressive environment. Specific numbers have shown that as much as 10% of employees in these settings have experienced occasional to frequent bullying, leading to absences at work (Ortega, Christiensen, Hogh, Rugulies, & Borg, 2011).

Furthermore, an International Labor Organization report (as cited in Hoel, Sparks, & Cooper, 2007) indicated that bullying complaints are the fastest growing complaints from employees worldwide, citing bullying as an ever-growing cost concern. The report goes on to explain that bullying not only creates a huge loss in income and man-power, but is also contributing to a national health crisis, as bullying is directly linked to serious physical and mental health concerns (Hoel et al., 2007). Beyond the productivity and turnover effects, bullying potentially creates legal costs to the company and can leave a corporation with negative publicity, affecting future hiring and networking (Duffy, 2009).

Pearson and Porath (2009) found that oftentimes "people who were treated uncivilly purposely punished their organizations by reducing the time they spent working" (p. 53). Results from a national survey on the effects of workplace bullying and incivility on managers and employees in the U.S. revealed that the discovered loss to employee motivation, loyalty, and ability is staggering, as is shown in the following findings:

48% intentionally decreased work effort, 47% intentionally decreased time at

work, 38% intentionally decreased work quality, 80% lost work time worrying

about the incident, 63% lost time avoiding the offender, 66% said their

performances declined, and 78% said their commitment to their organization

declined. (Pearson & Porath, 2009, p. 55)

The report further predicted that for a single victim of workplace bullying a total of 20

hours of work time will be lost per incident. Thus, in a total of 40-hour workdays for 52

weeks, 2,080 hours by each victimized employee will be entirely lost. This is a

devastating and preventable deficit in productivity. Bystanders will also lose work time

as a direct result of witnessing the incident. Several hours are lost in addressing the

incident, several more are often lost in either continuing to mull over the incident, avoid

further incidents, or keep track of future related incidents. Pearson and Porath (2009)

calculated that with only one or only two bystanders, stress and health care costs resulting

from a single incident could be as much as $1,500,000. Legal costs were estimated at

$35,000. The costs of managing incivility by the company's HR department was

estimated at $262,500, and absenteeism from those employees as a direct result of the

incident cost an estimated $1,443,600 (Pearson & Porath, 2009). Clearly, bystanders are

affected and involved by these incidents.

College and university settings are not excluded from such bullying experiences.

Fogg (2008) reports that the aggression is often displayed as fellow professors spreading

rumors to undermine a colleague's credibility, interrupting each time that the victimized

colleague tries to speak at meetings, or even verbally assaulting and threatening a victim.

Reports from surveys collected at University in Minnesota found that one-third of

professors reported experiencing bullying (Fogg, 2008). Bullying towards graduate students is not uncommon either according to Jagatic (2002), who reports that advantage can be taken of any power differentiation. In a study of 627 graduate students from various universities across America, it was found that hostility by faculty was prevalent among professionals-in-training and had significant negative outcomes on the victims (Jagatic, 2002). In addition to college and university settings, those who are completing on-the-job training experience significantly high rates of bullying. This is especially documented in medical and health care fields (Beech & Leather, 2003). It has been reported that medical students suffer high levels of mistreatment throughout medical school but that the bullying experienced also spills over into their early training years. Quine (2002) reports that 84% of junior doctors admit to being bullied in the past year, and that this did not vary by job grade or age. The medical students were asked to report how often others attempted to belittle and undermine their work (232/582 respondents, or 40%), how often others made inappropriate jokes about them (160/582 respondents, or 28%), and how often they were demoralized in front of others (96/580 respondents, or 17%).

The Role of Bystanders in Bullying

More recent research on adult bullying has taken the descriptive literature from Industrial/Organizational Psychology and expanded it into the area of Social Psychology, utilizing the determined characteristics in an attempt at decreasing or even alleviating adult targeted aggression in general adult populations. Thus, group and community (such as organizational) violence has been expanded to include cases of interpersonal violence. In trying to understand what perpetuates interpersonal aggression, it has been found that

bystanders play an integral role (Banyard, 2008). A bystander can be described as any person or group who witnesses the bullying event. In criminal-focused literature, the bystander is defined as "the social audience in many crime events whose actions and reactions may affect both the risks of the onset of violence and its ultimate consequences to the victim" (Hart & Miethe, 2008, p. 637). Thus, incidences of bullying do not simply involve a bully and a victim, but also an audience of one or more bystanders, who have been found to have a considerable impact on the bullying, whether they intervene or not (Oh & Hazler, 2009; Salmivalli, Kaukiainen, & Voeten, 2005). Lutgen-Sandvik, Tracy, and Alberts (2007) found that even when employees are not direct victims of the violent act, levels of fear, expectations of the work environment, and stress levels are significantly altered simply from witnessing the event. Furthermore, the witnesses/bystanders of workplace bullying are found be aware of more negative acts in the workplace once they experience a single bullying episode, making their understanding of the work atmosphere potentially forever changed.

Bystanders are not only affected by the targeted aggression that they witness, but their presence at the site of the aggression also affects future targeting by the aggressor (Oh & Hazler, 2009). This effect occurs regardless of whether the bystander intervenes on behalf of the victim, supports the aggressor, or displays no response (Hart & Miethe, 2008; Twemlow & Sacco, 1996). Simply having an audience present, especially if the audience members are active in their support of the aggressive behavior, can increase or perpetuate the bullying. The tolerance of an aggressive act resembles support for the aggressor. The aggressor determines that if the group does not intervene then it accepts the deviant behavior (Harvey et al., 2007). However, bystander intervention on behalf of

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the victim can decrease or even prevent future occurrences of targeted aggression. Thus, bystanders can be seen as active and necessary in the prevention of a bullying culture, as bullying most often occurs out of a supervisor's sight, with only bystanders available to intervene immediately (Aboud & Miller, 2007; Twemlow & Sacco, 1996). Furthermore, it is often bystanders who are the majority in incidents of bullying, which is why their role is not just vital, but also profound (Oh & Hazler, 2009). Because it has been found that bystander intervention, not victim assertiveness training or bully anger-management training, is the most effective means of diminishing both current and recurrent incidences of bullying (Hart & Miethe, 2008; Ramsey, 2005), further understanding the role, motivation, and behavior of bystanders is an important aspect of having an overall effect on ongoing bullying.

<div align="center">Bystander Intervention</div>

Hart and Miethe (2008) explain that bystanders serve as a visible deterrent to aggressive and bullying behaviors simply with their presence, but that active intervention on behalf of the side of the victim can further help the victim, hindering an attack in progress and lessening the likelihood of future attacks. This explains why, recently, bystander intervention has become the center of attention in adult bullying research and literature. With researchers recognizing that bystanders are not passive witnesses, but directly affect the outcome of the situation, as well as the resulting effects on other involved participants, the victim and bully (Twemlow & Sacco, 1996), there has been more effort to understand the implications of the bystander role in the bullying environment.

Effective and appropriate bystander intervention may address a bullying

environment more completely and with greater effectiveness than interventions with the

bully or victim. However, without training, bystanders more often than not remain what

they believe is neutral, choosing not to get involved in the bullying situation either out of

fear of retaliation from the bully or for lack of knowledge about how exactly to intervene

appropriately and effectively (Banyard, 2008; Magnuson & Norem, 2009). The fear of

getting involved can be explained by contagion theory, which proposes that individuals

attach a physical or mental characteristic to circumstances, which they believe can be

shared across space, i.e., it becomes contagious (Nemeroff & Rozin, 1994), with

proximity increasing perceived contagion. Thus, the closer the group, either in working

proximity or emotional closeness, the more likely others (in this case, the bystanders) are

to perceive that circumstances will spread to them (Mishra, Mishra, & Nayakankuppam,

2009). Unfortunately, remaining uninvolved has been found to sustain or even increase

the bullying, as it gives a signal to the bully that s/he is either powerful enough to have

others watch without stopping the aggression, or that s/he is being supported in her/his

actions (Aboud & Miller, 2007; Hart & Miethe, 2008). Additionally, ineffective and

inappropriate bystander intervention on behalf of the victim has instead been shown to

assist, allow, or even further encourage bullying of the individual (Oh & Hazler, 2009).

Training of bystanders, therefore, is absolutely necessary and has the potential to be

intensely valuable in the successful fight against workplace bullying.

<div align="center">Characteristics of Bystanders</div>

Although much research has been conducted to determine the characteristics of

the bullies, victims, and environments that sustain bullying, comparatively little has been

conducted on the bystanders, despite their integral part in the sustenance of a bullying environment. According to Salmivalli (1999), there are four different types of bystanders: *assistants* are those bystanders who actively join in on the bullying by holding the victim for the bully (typically only seen in incidents of physical aggression); *reinforcers* are bystanders who provide positive feedback to the bullies, supporting and reinforcing the bullying behaviors; *outsiders*, the most populated group, are those who entirely stay away from the situation in order to remain uninvolved; and finally *defenders* are bystanders who try to support the victims by taking sides with them, defending them, and displaying clear anti-bullying behaviors. The most common of these is the outsiders who typically make up about 24% of the participant roles in bullying, while reinforcers make up another 20%, defenders another 17%, and assistants 7% (Salmivalli, Lagerspetz, Björkqvist, Österman, & Kaukianen, 1996).

Defender behavior communicates to the bully that the negative and aggressive behaviors will not be tolerated and are unacceptable. This has become labeled as *social control* (Chaurand & Brauer, 2008), as it places boundaries, or controls, on the social interactions in that particular environment. This is, of course, the most effective response to deter bullying, by creating an environment of unacceptance to the negative and aggressive behaviors, as well as to provide support or aid to the victim. Moreover, defender behavior from bystanders has been shown to decrease the incidence of repeat occurrences of bullying (Salmivalli et al., 2005). Thus, bystander interventions must be made an integral part of bullying research. It seems pertinent to identify the characteristics of individuals more likely to engage in such intervention and discover training methods to enhance the likelihood of witnesses intervening in such a manner.

Prosocial behavior (a pattern of beneficial activity) and altruism (a genuine motivation to help others) may be a key concept in this intervention (Knickerbocker, n.d.). It has been theorized that it is altruism that strongly mediates prosocial behavior in bystanders of aggressive acts (Harris, Liguori, & Joniak, 1973), as the two have a negative correlation. Individuals having stronger feelings of altruism (experiencing anger and hostility toward the bully while simultaneously experiencing sympathy for the victim) are also the bystanders that are more likely to intervene on behalf of the victim (McGinley & Carlo, 2005). Modeling altruism, however, has not been found to increase altruistic behaviors, making it difficult to increase effective instances of bullying intervention through these means.

Further complicating matters is the finding that there are two types of prosocial interventionists: prosocial and proactive prosocial (Boxer, Tisak, & Goldstein, 2004), where the latter engages simply to get his or her own needs met, not for a genuinely positive purpose. Proactive prosocial behavior has actually been found to positively correlate with aggression and is based on selfish manipulation or circumstances. Thus, although the noticeable behaviors of individuals exhibiting proactive prosocial behaviors may seem directed against bullying, the overall purpose is not to counter the bullying, and could ultimately support the bullying environment. Few witnesses to bullying intervene in any way (effective or not), wrongly believing, just as many of the victims do, that ignoring the behaviors will resolve the problem (Heames et al., 2006). Finally, bystanders, similar to victims, experience psychological and physical symptoms in the midst of recurrent bullying circumstances (Mikkelsen & Einarsen, 2002). Witnessing ongoing and repetitive forms of aggression such as workplace bullying causes stronger

and more lasting trauma in bystanders than do isolated traumatic events such as natural disasters or experiencing the death of another (Janson, Carney, Hazler, & Oh, 2009), making workplace bullying potentially more problematic than many acute, even severe, life crises.

<div style="text-align: center;">Factors Inhibiting Bystander Intervention</div>

Several factors inhibit bystander intervention including group size. The larger the group of persons involved (including other witnesses to the event), the less likely each bystander is to intervene. This was determined as early as the 1960s after the brutal murder of Kitty Genovese, witnessed by 38 people who did not intervene throughout the entirety of the ongoing event. The assumption that each individual is waiting for another to intervene, known as the bystander effect, is an important factor in bullying intervention. According to the bystander effect, the number of witnesses to any potentially problematic or aggressive event negatively correlates with the number of people who will intervene. This effect was first discovered by Darley and Latane in 1968 after the Genovese case, and has become an ongoing integral notion in social psychology (Levine & Casssidy, 2010). However, danger potential is also a factor as the presence of others in a situation perceived as having low danger potential inhibits intervention, while circumstances of high danger potential more often than not increase the likelihood of intervention regardless of how many witnesses there are (Fischer, Greitemeyer, & Pollozek, 2006). Although this is not always the case, as can be seen in the well-known Kitty Genovese murder, Fischer et al. (2006) resolve this by explaining that generally in high danger situations bystanders are able to more clearly recognize that there is a

problem and will fear the consequences of not reacting, making them more likely to intervene.

On the other hand, identifying with the victim, either in ethnicity or sex has been determined to encourage bystander intervention (Levine & Crowther, 2008), as people are more likely to stand up for a victim if physical similarities are readily noticeable or if both bystander and victim experience an understood group cohesion. Bystanders, like victims, experience psychological reactions to witnessing the events. In general, they have been found to have higher stress levels and are more likely to experience their work environment as negative, despite not actually being targeted by the aggression themselves (Lutgen-Sandvik et al., 2007). On the other hand, feelings of competency and a prosocial attitude arise from effective training for bystander intervention (Banyard, Moynihan, & Plante, 2007).

Further Research Needs

In knowing that bystanders either support the bully or support the victim with their behaviors, whether they actively intervene or not, training bystanders to intervene more often and more effectively is integral to decreasing bullying. It is recommended by Banyard (2008) that bystanders first be trained to better recognize incidents of bullying early on, as bullying often begins as small, intimidating actions toward the victim and gradually increases over time. An increase of awareness and knowledge will lead to an increase in confidence that one can appropriately intervene. Additionally, specific intervention skills are necessary in order to increase the likelihood of bystander intervention. Chaurand and Brauer (2008) agree that further training is necessary to ensure prosocial bullying intervention, or social control. They have found that there are

three main factors involved in bystander interference: a bystander's feelings of personal responsibility to intervene, the perceived appropriateness of intervention at that moment, and the extent to which bystanders feel angered over the incident. Thus, both competence and natural emotional experience contribute to the bystander's likelihood of intervention. Much more, however, needs to be known about bystanders in situations of targeted aggression in order to better understand how to train bystanders and to increase their involvement in these aggressive circumstances in an effort to decrease incidents of bullying in adults and increase feelings of competency and efficacy in witnesses.

Although investigations into the roles of bystanders in bullying incidences have begun, behavioral investigations of how future interactions with the aggressor, victim, and bystander are affected by bystander behavior are lacking. Therefore, for this study, episodes of bystander intervention against an aggressor will be presented in order to determine the subsequent behavioral responses of participants towards victims, aggressors, and the bystander that may lead to exacerbate or mitigate further episodes of aggression in the environment. Additionally, the tendencies towards revenge and aggression, and justification mechanisms for aggressive responding will be related to aggressive responding in participants. For this study, the following hypotheses were offered.

- *Hypothesis 1*: Aggression levels directed toward the victimized opponent, aggressive opponent, or bystander opponent will depend on video condition. Specifically, those participants viewing the unchallenged aggression scenario and playing the victim as their opponent will demonstrate more aggression than

participants playing either the bully or bystander opponents after watching the same video skit.

- *Hypothesis 2*: After viewing the no aggression and bystander intervention videos, participants will have similar levels of aggression when playing the aggressor, victim, or bystander.

- *Hypothesis 3*: Participants who are more aggressive on the behavioral measure of aggression (COMPACT) will score higher on the self-report measures of aggression.

CHAPTER II

METHODS

Participants

Prior to collecting data, a description of the study was submitted to the experimenter's university Internal Review Board for review and approval. This approval is in Appendix A. A power analysis using the program G*Power was conducted in order to determine the sample size needed to obtain a large (0.8, N = 48), medium (0.5, N = 107), or small (0.2, N = 776) effect with effect size delineations based on recommendations from Cohen (1992). College students primarily from psychology classes were recruited to participate in the study through an online student recruiting system utilized by the university. Data collection ended with 235 total participants. Data from 198 participants were viable for analyses because of a computer malfunction that occurred toward the end of data collection. Most participants fell within the 18 to 25 year old age bracket, with 66% being male. Most participants were Caucasian at 55%, with another 42% African American, and 4% other ethnicities. Descriptives for the demographic variables are displayed in Table 1. All participants were undergraduates. Participants received class credit for all involvement and had to confirm that they were 18 years or older to participate.

Table 1

Descriptives for Demographic Variables

Demographic Variable	Label	Proportion
Sex	Male	66%
	Female	34%

Table 1 (continued).

Demographic Variable	Label	Proportion
Race	African American	42%
	Asian/Pacific Islander	2%
	Caucasian	55%
	Hispanic	1%
	Native American	1%

	Range	Mean (SD)
Age	18 - 50	19.99 (4.46)

Design

The purpose of this study was to determine the differential effects of both bystander intervention and the subsequent interaction with an opponent on participants' aggressive behaviors, measured in four ways. In order to assess this, there were two independent variables (bystander intervention and opponent) and four dependent variables (measures of aggression on a computer-based paradigm). Thus, statistical analysis was a two-way between-subjects design. Due to the multiple outcome measures, a multivariate analysis of variance was used.

Materials

Behavioral Measure

The Competitive Prosocial/Aggression Continuum Task (COMPACT; Biondolillo, Greer, Green. & Harsh, 2010) is a computer-based competitive reaction time aggression program that elicits prosocial or aggressive responding by allowing participants to choose aversive and pleasant auditory stimuli to administer to their "opponent" if the participant "wins" the reaction time trial. It utilizes different sounds,

normatively rated as pleasant and unpleasant, that are set at a constant volume by the administrator. The paradigm can be set up to provide participants with any number of wins and losses. Similarly, the paradigm can be set up to have participants receive more aversive or more pleasant stimuli. For the purposes of the current study, the setting was such that participants lost more often than not (a 60-40 split) and received only aversive sounds. Cronbach's alpha for the COMPACT across 28 trials indicated high consistency with an alpha of .926. Scores on the COMPACT were correlated with such established measures as the Life History Aggression Scale ($r = 0.15$, $p = .02$), the Buss-Perry Aggression Questionnaire ($r = 0.23$, $p < .01$), and the Vengeance Scale ($r = 0.17$, $p < .01$). In the current study, further validation measures were included to verify these results with the current settings. This instrument was specifically used to assess whether or not witnesses respond to a victim depending on which study condition was observed (i.e., aggression with bystander intervention, aggression without bystander intervention, no aggression) by providing them with the opportunity to respond either prosocially or aggressively to the aggressor, victim, or bystander. The system was programmed to display a photograph of one of those confederates to create deception that the participants are playing that person directly in real time. Thus, participants believed that to be their opponent.

A brief demographics questionnaire was presented to each applicant on the computer at the beginning of the COMPACT that included sex, age, ethnicity, and highest level of education completed. Demographic variables related to the dependent variable were assessed as potential correlates.

Self-Report Measures

The Conditional Reasoning Test for Aggression (CRT-A; James & McIntyre, 2000) is a 22-problem questionnaire that determines one's justification mechanisms (JMs) for aggressive responding by providing brief scenarios and asking participants to conclude the reasoning behind the behavior presented in that scenario. There are three main components to this instrument: aggressive disposition, implicit cognitive readiness to aggress, and aggressive behavior. Scoring for the instrument is done by giving participants a score of 1 for each aggressive answer to the questions and a 0 for all other non-aggressive options to the answer. A low score on the instrument suggests that JMs are not instrumental in shaping respondents' reasoning. Higher scores display a person who not only justifies aggressive reactions to circumstances, but is more likely to engage in aggressive acts because they are likely to effectively justify such behaviors. The uncorrected validity related to behavioral criteria such as physical acts of violence, stealing, and lying was found to be .44, while reliability scores ranged from $\alpha = .74$ to $\alpha = .87$ (James, McIntyre, Glisson, Bowler, & Mitchell, 2004). This instrument provides information about each person's general propensity to perceive situations as provocative, deserving of an aggressive response. One of the questions on this assessment is as follows (James & McIntyre, 2000):

Many poor hospitals in this country are experiencing a shortage of nurses. Yet enrollment in nursing schools is at an all-time high. Which of the following is the most logical conclusion based on the above?

a. The prospect of a low-paying job attracts many people to nursing school.

b. Enrollment in dental schools is at an all-time high.

c. Most people who start nursing school never graduate.

d. Nurses tend to seek out jobs that pay well. (p. 2)

The instrument was used as a potential correlate with the COMPACT in this study but was not found necessary for further exploratory analyses.

The Young Schema Questionnaire: Short Form (YSQ-SF; Schmidt, Joiner, Young, & Telch, 1995) is a 75-item questionnaire created from the original longer version having 305 items so that one could take the entire test in less than one hour. It measures a person's internal representations and interpretations of the world, natural schemas, which are known to fuel that person's reactions to the environment by having participants rank how accurate each statement is in accordance with that participant's life. For example, the questionnaire asks participants to rate the accuracy of the following sentence: "In general, people have not been there to give me warmth, holding, and affection" (Schmidt et al., 1995). Because schemas are an integral part of one's personality, measuring these was intended to provide information about a person's assumptions about the world and the people in it, which can further provide information about schemas that may lead to aggression. Scoring for this instrument requires the experimenter to first break down the scale into its 15 subscales, which are as follows: Emotional Deprivation, Abandonment, Mistrust/Abuse, Social Isolation, Defectiveness/Shame, Failure, Dependence/Incompetence, Vulnerability to Harm and Illness, Enmeshment, Subjugation, Self-Sacrifice, Emotional Inhibition, Unrelenting Standards, Entitlement, and Insufficient Self-Control/Self-Discipline. Scores are then tallied for each subscale and kept separate for analysis as indicators of what type of schemas and assumptions participants most likely make in response to the world. The

alpha level for the overall YSQ-SF was .96 for the clinical group of subjects and .92 for the non-clinical group, showing high internal consistency. The instrument has been found to be high in predictive validity for depression and was found to be positively correlated with self-reports on measures of depressive symptoms (Oei & Baranoff, 2007). It has also been found to have convergent validity with measures of depression ($r = .59$), anxiety ($r = .47$), and a measure determining affective traits such as enthusiasm and anger ($r = .40$), as well as a negative correlation with self-esteem ($r = -.26$). Additionally, a regression analysis for predictive distress found depression to be $R = .52$ to .58 and anxiety to be $R = .53$ to .58 (Schmidt et al., 1995). One of the statements to be rated on a scale from one to six (one being completely untrue, six being completely true) on this assessment is as follows (Schmidt et al., 1995): "Most of the time, I haven't had someone to nurture me, share him/herself with me, or care deeply about everything that happens to me" (p. 304). Similar to the CRT-A, this measure was proposed as a potential correlate with the COMPACT and set aside for further exploratory analysis as needed.

Procedures

Students from psychology classes were recruited and offered class credit to participate in the study through an online student recruiting system utilized by a university in the Southeast. Participants who signed up for the study were placed into small groups based on their schedule availability and then directed through the university's online research system to arrive at a pre-assigned room equipped with a monitor in the front of the room as well as laptop computers on each desk. The study was described as an online video game that measures student reaction time. Reaction time was not actually a factor in this study, but the reaction time paradigm was used to provide

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participants with an opportunity to engage in aggressive behaviors with a fictitious

opponent. As participants came into the classroom, the researcher pretended to take a

photograph of each participant (camera flashed but there was no actual recording of

participants' photos) stating that the photos would be displayed to the participants'

opponents once the video game began.

Participants were then seated at laptops with at least two chairs between them to

ensure that no student could see the other laptop monitors and to limit communication

among participants. The experimenter turned on the monitor at the front of the classroom

that showed a video of a group of students entering a classroom. The experimenter told

participants that these were the students they would be playing in the reaction-time game,

and then pretended to load the photographs just taken of participants into a computer. The

video displayed on the monitor was actually one of three pre-recorded skits of

confederates (described in detail later): an episode of recurrent aggression that had

appropriate bystander intervention, aggression that had no bystander intervention, or the

control video in which no aggression occurred. If aggression occurred, the experimenter

said "wow" to alert participants to the aggression in the episode, and then left the room

while participants continued to watch the episode. While the experimenter was away,

participants saw one of the skits, presumably in real time, followed by a narrative of

further instructions (see Appendix C) for the online portion of the study delivered by the

experimenter. In the narrative, participants were told they were to play the reaction-time

game with a person randomly chosen from the group of participants at the university's

other campus location, someone who was just viewed on the monitor. They were then

told how to play the reaction-time game and were asked to begin the study on the laptops in front of each of them.

The participants' individual laptop screens began with the informed consent form (see Appendix B) explaining the purpose of the study (measuring reaction time in various situations) and anticipated benefits and risks. Each participant was then required to electronically sign the informed consent form on their computer and was given a paper copy for their records by the experimenter (who reentered the classroom just as the participants were told to begin). A brief demographics questionnaire was then administered (see Appendix F), assessing age, race, and gender. All computer screens then depicted a pretend opponent that participants had just seen on the monitor. For each participant, either the victim, bystander, or aggressive character from the video was chosen at random by the computer and displayed as their opponent. The computer delivered instructions then requested participants to listen to several sounds and rank them on a scale from pleasant to aversive. These sounds were used by the computer program to allow participants to send pleasant or aversive sounds to their opponents when they win a trial and receive pleasant or aversive sounds from their opponent when they lose a trial. There was no actual competition, as the computer was programmed to "win" 60% of reaction time trials and to administer the chosen aversive stimuli to the participant after each of those trials. Trials asked participants to respond by hitting a certain key stroke as soon a signal appeared on the screen. Participants were then told whether they responded faster or slower than their opponent and, as a result, either sent a sound choice to their opponent or received one from their opponent. Thus, it seemed as though participants were competing to be the fastest responder so they could be in charge

of sending a pleasant or aversive sound to their losing opponent rather than being the receiver of a sound by their opponent.

Following completion of the COMPACT, participants answered a series of computer-delivered questions designed to assess the effectiveness of the deception. The Conditional Reasoning Test for Aggression (James & McIntyre, 2000), the Young Schema Questionnaire: Short Form (Schmidt et al., 1995), the Vengeance Scale (Stuckless & Goranson, 1992), the Gender-Free Inventory of Desirable Responding (Becker & Cherny, 1994), and the Buss-Perry Aggression Questionnaire (Buss & Perry, 1992) were then administered.

This research study was designed to involve a degree of deception that is necessary to ensure natural responding. Thus, because the informed consent includes such deception regarding the nature of the study, the researcher conducted a follow-up debriefing with participants through their given email addresses, providing a debriefing questionnaire (see Appendix D), explaining the reason for the deception, and allowing participants the option to remove their data from the final analysis of the study. Each participant was asked to review the final debriefing form (see Appendix E) and return it electronically if they desired to have their data removed from the study. No participants stated a desire to be removed from the study.

<div align="center">Intervention Groups</div>

Aggression with Bystander Intervention

The participants who viewed the video skit of aggressive behavior with appropriate bystander intervention saw the aggressor interacting with an unknown confederate about an upcoming exam in another class. The victim began to join in on the

<div align="center">34</div>

conversation, stating that she would be happy to get the aggressor notes from a friend who just finished taking the same course. The aggressor responded curtly that he was uninterested and returned to his initial conversation. After a moment, the victim stated that she just got a message from her friend on her phone and would be happy to get him information about the class or the exam. The aggressor responded this time with aggression, getting loud and asking her why she thought it was allowable to speak to him. He proceeded to make fun of her looks and intelligence after the victim apologized and tried to turn away from the interaction. The bystander, sitting next to the victim, then intervened stating that his tone and response were unnecessary, as the victim was just trying to be helpful. The bystander then asked the victim if she was all right.

Aggression with No Intervention

The participants who viewed the video skit of aggressive behavior without bystander intervention saw nearly the same skit as described above but shorter. The video ended with the aggressor making fun of the victim and then he returned to his previous conversation as if nothing had occurred. The bystander in this skit watched the aggression occur, but said nothing, even turning her chair slightly away from the victim by the end of the aggressive act.

No Aggression

Finally, the participants who viewed the video skit of no aggression saw the victim ask the aggressor if she should contact her friend for his aid in the course, and the aggressor (showing no aggression in this skit) agrees and thanks her for her help. The conversation then proceeds agreeably between the two confederates. The bystander confederate is not involved in any way in this skit.

CHAPTER III

RESULTS

Pre-Existing Differences

In order to determine whether there were any pre-existing demographic differences on any of the dependent measures and to assess for potential covariates, One-Way ANOVAs were conducted on each of the dependent variables, with demographic variables as grouping variables. An effect for both race and gender were found. Specifically, significant differences were found between African Americans and Caucasians in their sound level settings on trial 1: $F_{(6, 191)} = 3.45, p = .003$ with African Americans scoring higher ($M = 6.30, SD = 9.51$) than Caucasians ($M = 6.233, SD = 10.80$). Gender differences found for the maximum aversive sound displayed $t_{(196)} = 3.09, p = .002,$ and revealed males scored lower ($M = 17.56, SD = 20.75$) than females ($M = 28.13, SD = 26.31$), which is surprising based on the known literature and expectations of the study. Males had a tendency to score lower on aversive responding and higher on prosocial responding in comparison to females on all accounts, but other differences were not significant. Due to these race and gender results, analyses were conducted both controlling for race and gender (covarying those two variables) and without doing so. No differences were found, however, with and without gender and race as covariates; thus, results are reported without controlling for the effects of gender and race. Table 2 provides the results of demographic differences for the dependent variables.

Table 2

Relationship between Demographic Variables and Dependent Variables

Measure	Sex		Race		Age	
	t	Sig.	F	Sig.	r	Sig.
Mean Sound Level Set across Trials	1.56	.121	1.90	.096	-.06	.409
Sound Level at Trial One	0.02	.984	4.15	.001*	.12	.096
Frequency of Maximum Aversive	3.09	.002*	1.30	.264	.04	.539
Frequency of Maximum Pleasant	1.85	.065	1.36	.241	.05	.489

Note. *Significant results.

Data Screening

Prior to the main analysis, preliminary data screening was done to assess whether the assumptions for ANOVA were seriously violated. Examination of histograms on the three outcome variables suggested that the scores for frequency of maximum aggression were positively skewed, but that the other outcome variables had scores that were nearly normal in distribution. Thus, no data transformation was applied. In addition to multivariate normality, no serious violations of the assumption of linearity of associations between quantitative outcome variables were found. Correlations among the four dependent variables assessed by the COMPACT were nearly all significant. These intercorrelations are provided in Table 3 along with the relevant descriptive results. The

correlations are expected to be higher, as all of the outcome measures are assessing facets

of the same concept: aggressive/prosocial responding.

Table 3

Descriptives and Correlation Matrix of Response Variables on the COMPACT (DV)

Measure	1	2	3	4
1. Mean Sound Level Set across Trials	M = 2.50 SD = 1.41 Range = 6.00 Skew = .15	-.32**	.78**	-.52**
2. Sound Level at Trial One		M = .07 SD = 5.62 Range = 18.00 Skew = .06	-.17*	-.04
3. Frequency of Maximum Aversive			M = 21.14 SD = 23.26 Range = 100.00 Skew = 1.47	-.19*
4. Frequency of Maximum Pleasant				M = 14.12 SD = 20.73 Range = 100.00 Skew = 2.61

Note. *$p < .05$

** $p < .01$

The Levene test computed for each outcome measure indicated no significant violation of

the homogeneity of variance assumption, making the variables appropriate for further

comparison. It is noteworthy that although the factorial design was not perfectly

orthogonal, each of the nine cells had nearly the same number of participants (n = 17 to

24). Type III sums of squares were used to correct for the minor confounding between

factors that occurred because of the slightly unequal ns in the cells.

Main Analysis

In order to determine the extent to which the bystander intervention condition (aggression with appropriate intervention, aggression without intervention, and no aggression) impacted responding on the COMPACT depending on opponent (whether responding is toward the aggressor, victim, or bystander), a 3 X 3 Multivariate Analysis of Variance (Two-Way MANOVA) was conducted using SPSS version 20 software. The predictor variables for the analyses were the reaction of the bystander in the video (no aggression [control], bystander as outsider [no intervention], bystander as defender [appropriate intervention]) and the opponent on the COMPACT (aggressor, victim, or bystander). The criterion variables were the levels of responding by the participants on the COMPACT displayed in four different ways: (a) mean level of aversive responses, ranging from 0 for no sound to 6 for the most aversive sound, (b) sound level at the first trial (ranging from a pleasant -6 to an aversive +6 with additional options of -9 for the maximum pleasant sound and +9 for the maximum aversive sound), (c) frequency of maximum aversive (sound set at +9), and (d) frequency of maximum pleasant (sound set at -9).

The 3 X 3 MANOVA revealed an overall significant Wilks's $\lambda = .931$, approximate $F_{(6, 374)} = 2.256$, $p = .038$ with the corresponding partial η^2 effect size of .035 indicating a small to medium effect for the overall model. Although there was no interaction between the two predictors (Wilks's $\lambda = .943$, approximate $F_{(12, 495)} = 0.928$, $p = .518$), there was a main effect of opponent (Wilks's $\lambda = .931$, approximate $F_{(6, 374)} = 2.256$, $p = .038$). The significant main effect of opponent was then followed up with univariate ANOVAs on each of the dependent variables. The 2-way ANOVAs revealed a

main effect of opponent only for sound level chosen on the first trial, $F_{(2, 189)} = 6.580$, $p= .002$, with Tukey's HSD indicating that this initial sound choice was significantly less aversive towards the bully in comparison to the bystander or victim regardless of video condition. There was no significant main effect in the bystander intervention condition (Wilks's $\lambda = .988$, $F = .368$, $p = .889$). Table 4 outlines the mean differences in sound levels of the first trial based on the study's independent variables.

Table 4

Sound Level at Trial One for the Opponent x Bystander Reaction Interaction

	Aggressor		Victim		Bystander	
Bystander Reaction	n	M (SD)	n	M (SD)	n	M (SD)
Appropriate Intervention	20	6.00 (11.19)	27	6.30 (9.47)	18	8.06 (22.30)
No Intervention	27	3.89 (4.46)	24	8.54 (12.11)	24	9.58 (16.21)
Control	17	5.88 (8.70)	18	8.06 (22.30)	23	4.57 (9.16)
Average	64	5.07 (8.14)	69	7.54 (14.47)	65	7.38 (12.78)

Note. Only main effect of opponent was significant.

Follow-up Analyses

Follow-up analyses were conducted to determine whether behavioral measures of aggression (COMPACT scores) were differentially related to self-report measures of aggression (CRT-A, BPAQ, VS) and to justifications for aggression (YSQ, CRT-A) depending on the bystander intervention condition and opponent. Descriptive statistics on the self-report measures are provided in Table 5.

Table 5

Descriptives for Self-Report Measures Assessing Aggression and Justifications for Aggression

Scale		Range	M (SD)	Skew
GFIDR	Total	31.00	32.34 (6.02)	-.22
CRT-A	Total	13.00	5.73 (2.11)	.54
VS	Total	98.00	63.80 (19.68)	.15
BPAQ	Physical Aggression	45.00	20.40 (8.14)	.60
	Verbal Aggression	20.00	13.01 (4.68)	.44
	Anger	25.00	16.41 (5.93)	.54
	Hostility	32.00	18.51 (8.06)	.54
YSQ-SF	Emotional Deprivation	4.00	.43 (.85)	2.18
	Abandonment	5.00	.53 (1.17)	2.47
	Mistrust/Abuse	5.00	.81 (1.35)	1.73
	Social Isolation	4.00	.39 (.85)	2.32
	Defectiveness/Shame	5.00	.23 (.73)	4.33
	Failure	3.00	.08 (.39)	5.70
	Dependence/Incompetence	3.00	.26 (.57)	2.45
	Vulnerability to Harm & Illness	5.00	.26 (.71)	3.42
	Enmeshment	3.00	.15 (.25)	3.72
	Subjugation	4.00	.25 (.68)	3.14
	Self-Sacrifice	5.00	1.52 (1.56)	.77
	Emotional Inhibition	5.00	.60 (1.15)	2.23
	Unrelenting Standards	5.00	2.48 (1.75)	.08
	Entitlement	5.00	.96 (1.36)	1.55

Table 5 (continued).

Scale		Range	M (SD)	Skew
YSQ-SF	Insufficient Self-Control/Self-Discipline	5.00	.59 (1.17)	2.24

Simple correlations of self-report measures of aggression and justification of aggression with COMPACT variables are located in Table 6.

Table 6

Correlation Matrix of Response Variables on the COMPACT and Self-Report Measures

Measure	Mean Sound Level Set across Trials	Sound Level at Trial One	Frequency of Maximum Aversive	Frequency of Maximum Pleasant
GFIDR	-.079	.051	-.047	-.029
CRT-A	.016	-.078	.012	-.044
VS	.328**	-.019	.353**	-.203**
BPAQ-P	.294**	-.019	.296**	-.109
BPAQ-V	.223**	.043	.192**	-.113
BPAQ-A	.181*	.052	.161*	-.030
BPAQ-H	.095	-.085	.045	-.035
YSQ-ED	.048	-.048	.042	-.022
YSQ-AB	.015	-.068	.074	.071
YSQ-MA	.104	-.142	.107	.035
YSQ-SI	.085	-.063	.110	-.006
YSQ-DS	-.028	.013	.059	.094
YSQ-FA	.033	-.020	-.055	-.079

Table 6 (continued).

Measure	Mean Sound Level Set across Trials	Sound Level at Trial One	Frequency of Maximum Aversive	Frequency of Maximum Pleasant
YSQ-DI	-.079	-.008	.005	.089
YSQ-VH	.079	-.018	.100	.036
YSQ-EM	.052	-.112	.062	.062
YSQ-SB	-.078	-.073	-.044	.164**
YSQ-SS	.044	-.040	.040	-.124
YSQ-EI	.007	-.142	.058	.018
YSQ-US	.085	-.037	.225**	.091
YSQ-ET	.207**	-.077	.207**	-.135
YSQ-IS	.074	.052	.056	-.078

Note. ** *p < .01*

As can be seen in Tables 5 and 6, participants that were more aggressive on the behavioral measure received higher scores on the aggressive self-report measures and those participants that were less aggressive behaviorally (more prosocial on the COMPACT) received lower scores on the self-report measures, as was expected for the study. As significant correlations were found between many of these instruments and the COMPACT variables, having the COMPACT set to more aggressive sound settings can be seen as still providing reliable and valid results, as the results of this study are similar to those previously reported for the COMPACT (Biondolillo et al., 2010).

Simple relationships between self-report measures and COMPACT variables for the differing experimental conditions revealed an interesting pattern of

results. Specifically, in the video where the aggressor is challenged by the bystander, when playing the aggressor there was a positive correlation for mean sound level on the COMPACT and vengeance ($r = .50$, $p = .024$) and a negative correlation for the frequency of use of the maximum pleasant sound and vengeance ($r = -.48$, $p = .034$). When playing the bystander who intervened, there were positive correlations between vengeance and both the mean sound level ($r = .59$, $p = .009$) and the frequency of maximum aversive ($r = .59$, $p = .009$). Thus, when participants saw the bystander intervene against the aggressive act, those who responded with subsequent aggression toward the aggressive individual and toward the bystander had higher scores on vengeance.

After viewing the video where the aggressor was unchallenged by the bystander, there was a positive correlation for mean sound level on the COMPACT and scores on the BPAQ-PA when participants played either the bully ($r = .38$, $p = .048$) or the victim ($r = .43$, $p = .035$), with higher scores on the COMPACT, indicating more aggressive responding. Further, a negative correlation was found between the frequency of maximum pleasant responses and scores on the BPAQ-PA when playing the bystander ($r = -.43$, $p = .038$). Thus, when participants saw the aggressive act against the victim go without response from the bystander, those who responded with subsequent aggression toward the aggressor or the victim had higher scores of self-reported physical aggression.

CHAPTER IV

DISCUSSION

Aggression in the workplace exacts a great toll on the individuals involved as well as on businesses as a whole (Keeling et al., 2006). Though researchers agree that young aggressors continue bullying behaviors into adulthood, affecting work relationships (Chan, 2006; Olweus, 1993), few experimental studies have been conducted that assess the impact of bystander intervention on future aggressive interactions in a behavioral paradigm. Hart and Miethe (2008) have proposed that bystanders serve as visible deterrents to aggressive and bullying behaviors simply with their presence, and that active intervention of the bystander on behalf of the victim can further help the victim, hindering an attack in progress and lessening the likelihood of future attacks. In the present study, episodes of various forms of bystander interventions against an aggressor were presented to participants as real-life interactions in order to determine whether subsequent behavioral responses of participants towards the victim, aggressor, and bystander exacerbated or mitigated further episodes of aggression from participants. Participants in the experiment watched videos of an episode of aggression that had an appropriate bystander intervention, an episode of aggression in which the bystander did not intervene, or, in a control condition, an episode of interactions without aggression. Participants were then given the opportunity to behave either prosocially or aggressively through a computer video game towards a confederate who they believed was the victim, bystander, or aggressor. This study's main hypothesis, that higher levels of participant aggression would be directed toward the victim when there was no bystander intervention, was only partially supported, as results indicated differences in responding

based on the opponent, while still showing no opponent by bystander intervention interaction. Specifically, it was only the sound level chosen on the first trial that showed significant opponent differences, with participants being significantly less aversive towards the bully in comparison to the bystander or victim regardless of video condition.

As a second objective, the research examined the relationship between responding on the behavioral measure of aggression and the self-report measures, expecting that participants with more aggressive behaviors towards confederates would also report higher levels of aggressive tendencies and more justifications for aggressive responding. Although justifications were low in the sample, reported physical aggression and vengeance were positively correlated with aggressive responding toward the opponent, suggesting that aggressive responding to incidences of bullying may be dependent upon participants' predisposition for physical retaliation.

Bystander intervention is critical in reducing the frequency and intensity of many aggressive interactions (Banyard, 2008). However, in this study, the intervention did not have the expected effect. A proposed reasoning for this is that the current study presented a single episode of aggression to which participants were given the opportunity to respond, while typical bullying would include recurrent incidents that result in emotional or even physical hardship to the victim (Garandeau & Cillessen, 2006). As participants were unable to see repeated responses over a long period of time, one might argue that the aggressive act seemed less threatening. Multiple incidents may enable bystanders to recognize the recurrent and harmful nature of the aggression. As there was little likelihood of lasting harm from the incident, the presented scenario may have been too low cost for participants to deem worthy of further action. This is a concern, as

researchers argue that a single isolated incident of aggression or even uncivil behavior should be addressed, as it may indicate a much larger issue or could be the first of many such incidents from that aggressive individual (Ghosh, Jacobs, & Reio, 2011). Still, this study displayed that a single incident may not create responses from bystanders. Thus, the results provide evidence for the ambiguity of such interactions and how, subsequently, individuals may not respond in a predictable manner when presented with an opportunity to intervene against aggression.

Implications

Interactions between people are extremely complex and can easily be misinterpreted, making it easy for aggression to be excused or unnoticed. Although the aggressor in the current study was a hired, trained actor and presumably performed a convincing act of aggression, we cannot know for certain that his behaviors were interpreted as aggression by the participants. The actor playing the aggressive role seemed to smile during his aggressive act, intended as insolence, but the smile could have been perceived as a friendly gesture. Thus, there may have been questions regarding the actor's intentions or the intensity of the aggressive actions. Underwood (2004) states that because females are more likely to use nonverbal means of communication when displaying aggression toward peers, they are also more likely to interpret nonverbal communication cues in an accurate manner, whereas males are less likely to interpret nonverbal aggressive cues accurately and may overlook them as irrelevant to the circumstance.

Such research provides some explanation for the gender effects found in the current study. Results indicated that the female participants were more aggressive than

the male participants, a finding inconsistent with prior research (Crothers et al., 2009).

Examination of the data revealed that female participants were more likely to administer the maximum aversive response to their opponents regardless of the video being viewed. Furthermore, much of this aversive responding was directed towards the female confederates from the videos (the victim and bystander), suggesting that the female participants may have misinterpreted the behaviors of these confederates. Research shows that women are more likely to engage in physical aggression when they feel that an intimate partnership is being violated or threatened (Archer, 2000). In the current study, the victim touched the aggressor's arm when initiating conversation, interrupting his conversation with another woman. This could have been seen as an invasion of personal space or as a threat to his relationship with the other woman, both warranting a rude or hostile response toward the victim.

Although the response differences based on the bystander interaction were not statistically significant, some tendencies occurred that were consistent with the study's hypothesis. Individuals who witnessed appropriate bystander intervention were more likely to respond to the victim in a prosocial manner than if no intervention or no aggression occurred. Further, individuals increased aggressive responding toward the aggressor when the bystander intervened on behalf of the victim. However, if no bystander intervention occurred, individuals were less aggressive toward the aggressor, even less so than in the control group in which no aggression occurred. Thus, participants responded prosocially toward the aggressor if no one stood up to him in the video. We know from previous research that such responses would allow further aggression to occur, as a lack of intervention against the aggressor signals to him that the aggressive

behavior is acceptable (Hart & Miethe, 2008; Twemlow & Sacco, 1996). It could be assumed that, were subsequent bystanders behaving in a prosocial manner as a result of the aggression, the aggressor would potentially read this as support for the aggression.

The differences in individual responding were particularly interesting towards the bystander in the different conditions. Although these were not found to be significant differences in the current sample, meaningful changes occurred and may be noteworthy. When the bystander did not intervene against the aggressive act, participants became aggressive towards the bystander. This level of aversive responding was higher than responses towards any other opponent in any other condition, which suggests that participants were aggressive due to the lack of appropriate response. However, in the condition during which appropriate intervention occurred, participants were much less aggressive towards the bystander and more prosocial responding was seen toward this opponent. Thus, despite the absence of significant interactions in the full experimental model, some meaningful changes occurred in the direction anticipated.

Future Directions

The current research aimed to behaviorally measure the effect of bystander intervention against an act of aggression on subsequent opportunities for responding. The value of this study comes from the presentation of a real-world scenario that can be perceived in multiple ways, making appropriate responding difficult.

In sum, circumstances of aggression can be viewed in diverse ways by those witnessing the event, often creating ambiguous interpretations of the act and leaving the aggression unchallenged. It is likely because of this ambiguity that interventions on behalf of the victim do not often occur, leaving the aggressor to feel supported in his or

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her actions and making it difficult for businesses to form and enact effective policies that

thwart workplace aggression.

APPENDIX A

IRB APPROVAL/PERMISSION

THE UNIVERSITY OF
SOUTHERN MISSISSIPPI.

INSTITUTIONAL REVIEW BOARD
118 College Drive #5147 | Hattiesburg, MS 39406-0001
Phone: 601.266.6820 | Fax: 601.266.4377 | www.usm.edu/irb

NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional
Review Board in accordance with Federal Drug Administration regulations (21 CFR 26,
111), Department of Health and Human Services (45 CFR Part 46), and university
guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the
  data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and
  to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects
  must be reported immediately, but not later than 10 days following the event. This should
  be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.
  Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: R10092001
PROJECT TITLE: The Influence of Bystanders in Subsequent Bullying Behavior
PROJECT TYPE: Previously Approved Project
RESEARCHER/S: Jenny L. Morris
COLLEGE/DIVISION: College of Education & Psychology
DEPARTMENT: Pyschology, Experimental Program
FUNDING AGENCY: N/A
IRB COMMITTEE ACTION: Expedited Review Approval
PERIOD OF PROJECT APPROVAL: 10/17/2011 to 10/16/2012
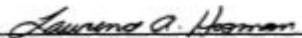
Lawrence A. Hosman   10-26-2011
Lawrence A. Hosman, Ph.D.   DATE
Institutional Review Board Chair

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APPENDIX B

INFORMED CONSENT FORM

1. Purpose: The purpose of this study is to gain a better understanding of the effects of competition on concentration skills and reaction speed.

2. Description of Study: You will be asked to participate in a competitive task against an opponent via the Internet after viewing the possible opponents, and will then fill out a set of questionnaires on a computer. You should expect the entire procedure, including questionnaires, to last about one hour. You must be 18 years of age or older to participate in this study. If you are not 18 please notify the experimenter that you cannot participate so that you may be excused.

3. Benefits: Engaging in this experiment will allow you to meet class requirements for research credit.

4. Risks: The present study presents no more than minimal risk, or the risk one would incur in the course of daily life. In the event that you find this experiment upsetting, the following mental health options may be used: the Student Counseling Center (601) 266-4829, the Gutsch Counseling Clinic (601) 266-4601, the USM Psychology Clinic (601) 266-4588, Pine Grove Recovery Center (601) 288-4800, and Pine Belt Mental Healthcare Resources at (601) 544-4641. If problems arise please email either Jenny Morris at jenny.morris@eagles.usm.edu or Dr. Tammy Greer at tammy.greer@usm.edu.

5. Confidentiality: You will not be asked to identify yourself on the self-report questionnaires you complete. You will be required to electronically sign a consent form, which will be kept as a record of participation. Consent forms will be kept

separate from questionnaire data so information cannot be matched to identities. Once all data have been entered into a database, the original data collection documents will be deleted to maintain the confidentiality of participants.

6. Alternative Procedures: Participation in this study is voluntary and there are several other research projects available for students to engage in and complete for research credit. Anyone not wishing to participate in research may fulfill research requirements through alternative means. Also, if at any time during the study you begin to feel uncomfortable you may leave and no penalty will be assessed.

7. Participant's Assurance: Whereas no assurance can be made concerning results that may be obtained (since results from investigational studies cannot be predicted) the researcher will take every precaution consistent with the best scientific practice. The University of Southern Mississippi has no mechanism to provide compensation for subjects who may incur injuries as a result of participating in research projects. However, efforts will be made to make available the facilities and professional skills at the University. Participation in this project is completely voluntary, and participants may withdraw from this study at any time without penalty, prejudice, or loss of benefits. Questions concerning the research should be directed to Jenny Morris at jenny.morris@eagles.usm.edu or Dr. Tammy Greer at tammy.greer@usm.edu. This project and this consent form have been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research subject should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147,

Hattiesburg, MS 39406-0001, (601) 266-6820. You will be given a copy of this

form.

_____   _____

Signature of Research Participant   Date

_____   _____

Signature of Researcher   Date

APPENDIX C

ORAL PRESENTATION NARRATIVE

Welcome, everyone.

You are about to participate in a study investigating the effects of various conditions on reaction speed and concentration skills.

You will be competing against a randomly selected student at our other site in an online game that tests your concentration and reaction time.

Before starting the game, we will take a photograph of you to place you in the pool of potential competitors.   You will then be required to complete a task that assesses your standard reaction time and to answer a series of questions about yourself.

You will then engage in a competitive reaction time task. After completing the game, you will be asked to fill out a few brief surveys. All information that you provide will be kept strictly confidential and will not be used to identify you in any way.

Please answer all questions as accurately and honestly as you can on each of the questionnaires.

After that, you will be required to rank a series of pleasant sounds from most pleasant to least pleasant and a series of aversive sounds from most aversive to least aversive.

Before each round of the game, you will select one of these sounds that you will deliver to your opponent if you win the round. Your opponent will do the same.

You will also have the option to select an extremely pleasant sound made up of the other pleasant sounds or extremely aversive sound made up of the other aversive sounds, as well as the option to send no sound to your opponent.

For each round of the game, you will wait until a red "X" appears on the screen. Press

the space bar as fast as you can when you see the red "X."

Whoever presses the space bar the fastest will win the round, and the winner's sound

choice will be delivered to the player who lost that round.

If you or your opponent press the space bar before the red "X" appears, no sound will be

delivered to either player, and the round will be repeated.

Please try to do your best when playing the game.

Don't worry if you've forgotten some of what I've said; the program will include

instructions along the way to guide you through, so make sure you read the instructions

carefully.

[brief pause]

Now, everyone please put on your headphones and enter the ID number from your

printed Informed Consent form on the screen and then click the "Start" button to begin

the program.

APPENDIX D

DEBRIEFING QUESTIONNAIRE

Instructions: Please carefully answer the following questions about the study you just

participated in using the scale indicated below. Answer all questions as honestly and

completely as you can.

1 – Disagree strongly

2 – Disagree somewhat

3 – Neither agree nor disagree

4 – Agree somewhat

5 – Agree strongly

1) The explanation of the study was sufficient to complete the task.   1 2 3 4 5

2) I tried to be nice to my opponent even though he or she was trying   1 2 3 4 5

to hurt me.

3) I tried to be nice to my opponent because he or she was nice to me.   1 2 3 4 5

4) I tried to hurt my opponent even though he or she was nice to me.   1 2 3 4 5

5) I tried to hurt my opponent because he or she was trying to hurt   1 2 3 4 5

me.

6) I only used extreme responses when the situation called for it.   1 2 3 4 5

7) I was suspicious about the intent of the study.   1 2 3 4 5

Please provide as much information as possible for the following questions.

How would you describe your opponent?

How did your opponent's responses make you feel?

What do you think your opponent's intentions were?

What do you believe is the purpose of the study?

APPENDIX E

DEBRIEFING FORM

Thank you for participating in the preceding research. The study team needs to include some very important information regarding your decision to be in this study. You were actually engaged in research that used a form of deception. The use of deception was necessary in order to ensure that participant(s) behaved naturally. The purpose of this study was to examine levels of aggressive and prosocial responding in participants in response to an aggressor after viewing a pre-recorded video of that victim being targeted by aggressive behavior. In the reaction time program, all participants were paired against a computer opponent whose responses were controlled by the experimenter.

You now have the choice of either having your data included in the research study, or to be withdrawn from the research study. If you choose to withdraw from this research study, your data will be deleted immediately. If you have any further questions, you may contact Jenny Mason at jenny.morris@eagles.usm.edu or Dr. Tammy Greer at tammy.greer@usm.edu. *If you feel that you need to speak to a professional concerning any uncomfortable feelings from your participation in this research, you may contact any of the following: the Student Counseling Center (601) 266-4829, the Gutsch Counseling Clinic (601) 266-4601, the USM Psychology Clinic (601) 266-4588, Pine Grove Recovery Center (601) 288-4800, or Pine Belt Mental Healthcare Resources at (601) 544-4641.*

Please check one:

_____ I authorize the use of my data for the stated research purpose.

_____ I choose to withdraw from the study and wish to have my data deleted.

I have been fully debriefed and the study team has offered to answer any and all of my questions related to this research study.

Print Name _____

Sign Name _____

Date _____

APPENDIX F

BRIEF DEMOGRAPHICS QUESTIONNAIRE

Instructions: Please answer the following questions by circling the letter associated with your correct answer.

1. What is your sex?

      a. Male

      b. Female

2. What is your age? _____

3. What is your race?

      a. White

      b. White, Non-Hispanic

      c. African-American

      d. Hispanic

      e. Asian/Pacific Islander

      g. Native American

      h. Other

4. What is the highest level of education you have completed?

      a. Freshman year completed

      b. Sophomore year completed

      c. Junior year completed

      d. Undergraduate degree obtained (BS, BA)

      e. Master's degree obtained

      f. Doctoral degree obtained

      g. Professional degree obtained (MD, JD)

APPENDIX G

PRIMARY MEASURES

The Conditional Reasoning Test for Aggression

Instructions: For each question, circle the one answer that is the most logical based on the information presented. Sometimes this will require you to cut through answers that look logical in order to get to the most genuine or "real" answer.

1. Many poor hospitals in this country are experiencing a shortage of nurses. Yet enrollment in nursing schools is at an all-time high.
Which of the following is the most logical conclusion based on the above?
a. The prospect of a low-paying job attracts many people to nursing school.
b. Enrollment in dental schools is at an all-time high.
c. Most people who start nursing school never graduate.
d. Nurses tend to seek out jobs that pay well.

2. Customers like to shop at stores where they can get a good deal. So stores typically put a few items "on sale" and sell them at cost or at a loss.
Which of the following is the most logical conclusion based on the above?
a. Stores would make more money if they never put anything on sale.
b. Customers often buy other items in addition to sale items.
c. Customers generally prefer to pay full price for their purchases.
d. Most stores accept charge cards and personal checks.

3. Joe is usually on time for work and for meetings with his boss and clients. He is also on time for appointments with his doctor, dentist, and priest. However, Joe is always five or more minutes late for meetings with Bill.
Which of the following is the most logical explanation for Joe being late for meetings with Bill?
a. Bill gets up later than Joe.
b. Joe is usually on time for people he respects, so he must not respect Bill.
c. Joe and Bill are both self-employed.
d. Joe and Bill are friends, so they don't care about being on time for each other.

4. People who are pushy about getting what they want are often disliked by others. However, aggressively going after customers is often needed to be successful in sales. People who are successful in sales are usually respected by others.
Which of the following is the most logical conclusion based on the above?
a. Doctors are not respected by most people.
b. Sales is the only job that requires pushiness.
c. Pushy salespeople may be successful but will often be disliked.
d. Salespeople who are not pushy will not be successful or respected.

5. History shows that many generals who were good leaders in war were not as good during peacetime. Also, many generals who were promoted during peacetime were not good at leading soldiers in war.

Which of the following is the most logical conclusion based on the above?

a.   Weak people with friends in high places are often chosen to be generals during peacetime.
b.   It is hard to know how officers will do in battle until they are actually in a war.
c.   Generals and privates usually sit together at meals.
d.   Modern wars are more often fought at sea than in the air.

6. A common side effect of allergy medication is drowsiness. Joan has never taken allergy medication. Occasionally, however, Joan gets drowsy.

Which of the following is the most logical conclusion based on the above?

a.   Joan has a physical examination once a year.
b.   There are other causes of drowsiness besides allergy medication.
c.   Allergy medication gives some people high blood pressure.
d.   Joan is allergic to dust, pollen, and ragweed.

7. The old saying, "an eye for an eye," means that if someone hurts you, then you should hurt that person back. If you are hit, then you should hit back. If someone burns your house, then you should burn that person's house.

Which of the following is the biggest problem with the "eye for an eye" plan?

a.   It tells people to "turn the other cheek."
b.   It offers no way to settle a conflict in a friendly manner.
c.   It can only be used at certain times of the year.
d.   People have to wait until they are attacked before they can strike.

8. Most bosses do not like to criticize employees. It makes both the boss and the employee uneasy.

Which of the following is the most logical explanation for the above?

a.   Bosses and employees like a friendly place to work.
b.   Annual performance reviews happen only once a year.
c.   Many companies now have no-smoking policies.
d.   Bosses are afraid to criticize problem workers.

9. New technology has changed the American workplace. A job that is here today could be gone tomorrow. People can no longer expect to work on the same job for very long. On the other hand, many new jobs are being created.

Which of the following is the most logical conclusion based on the above?

a.   People will spend more time in school learning new skills.
b.   More people will buy their homes rather than rent.
c.   Trying to be steady and dependable will not be as important in future jobs.
d.   The American workplace never changes.

10. Girl Scouts and Boy Scouts teach young people a sense of discipline. They also teach respect for authority, neatness, dependability, and loyalty.

Which of the following is the most logical prediction of what Scouts will be like when they grow up?

a. They will be easily controlled by leaders.
b. They will be reluctant to attend foreign films.
c. They will be self-conscious about their height.
d. They will be ready to take on responsibility.

11. People in a rich neighborhood in New York were pushed around for years by a homeless man. This man slept in alleys, stayed drunk or high on drugs, and cursed and threatened to hurt many of the residents. The police were called many times. But the homeless man always got a lawyer and returned to the neighborhood and caused trouble.
Which of the following is the most logical conclusion regarding the people who lived in this neighborhood?
a. They were used to dealing with the cold weather.
b. They were afraid of the man, and would not fight back.
c. They worked in New Jersey.
d. They did all that they could do within the law.

12. Businesses say they want to give customers a good product at a low price. To keep costs down, companies have cut back to the smallest workforce possible. And the pay for most workers does not buy as much as it used to.
Which of the following is the most logical conclusion based on the above?
a. Getting customers depends on keeping costs low.
b. Many companies pay employees monthly.
c. As long as their prices are low, companies don't care about the quality of life of their employees.
d. Companies usually raise prices to attract customers.

13. 100 years ago, male college students often fought duels with swords. One or both fighters were cut. Some people argued that duels should be outlawed. Other people stood up for dueling. They said that duels were a good way to pick out leaders who were brave and strong. In those days, leaders in the military and business often had dueling scars. Ultimately, however, duels were outlawed.
Which of the following is the most logical conclusion based on the above?
a. Guns made duels less dangerous.
b. Colleges wanted to be known as places of learning rather than fighting.
c. Without duels, it became harder to identify good leaders.
d. People interested in business stopped attending college.

14. Doreen has noticed that a new girl at her high school has been looking at her from across the cafeteria. The new girl is like Doreen in many ways. She is pretty, wears nice clothes, cuts her hair short, and seems to get along with both girls and boys. Doreen notices that the new girl is checking out who Doreen's friends are and how Doreen acts around boys.
Which of the following is the most logical conclusion based on the above?
a. The new girl is planning on joining the soccer team.
b. The new girl is checking Doreen out as a likely rival.
c. Doreen has algebra during second period.
d. The new girl may become friends with Doreen.

15. More people are getting permits to carry guns. Most of these people say that they want to carry a gun to protect themselves.
Which of the following is the most logical conclusion based on the above?
a. These people would not mind shooting someone if threatened or attacked.
b. These people would gladly buy a new car.
c. These people think they are less likely to be hurt if they have a gun.
d. Bullets for guns are expensive and difficult to get.

16. American cars have gotten better in the last 15 years. American car makers started to build better cars when they began to lose business to the Japanese. Many American buyers thought that foreign cars were better made.
Which of the following is the most logical conclusion based on the above?
a. America was the world's largest producer of airplanes 15 years ago.
b. Swedish car makers lost business in America 15 years ago.
c. The Japanese knew more than Americans about building good cars 15 years ago.
d. American car makers built cars to wear out 15 years ago, so they could make a lot of money selling parts.

17. Store employees are told to watch out for people who look like shoplifters. If a customer looks like a shoplifter, then employees are supposed to watch the customer closely.
Which of the following is the biggest problem with this practice?
a. Most retail stores don't open until 10:00 in the morning.
b. Many customers who look like shoplifters are honest and do not steal.
c. Parking is getting harder to find in shopping malls.
d. Abuse by store employees who use it as an excuse to bother people they don't like.

18. Many companies use bonuses to reward their employees. For example, salespeople are supposed to make a certain number of sales. If they sell more than they are supposed to, then they receive a bonus. Bonuses include extra pay and time off from work.
Which of the following is the most logical explanation for why companies use bonuses?
a. Bonuses give new employees a way to learn more about the business.
b. Bonuses give customers a reward for being loyal.
c. Bonuses give managers a way to have more control over their employees.
d. Bonuses give hard-working employees a way to earn extra money or time off.

19. People who work for restaurants often have their purses or bags searched. Managers search employees as they leave work. The reason given for the searches is that they reduce theft of food and equipment.
Which of the following is the biggest problem with this reasoning?
a. Most restaurant employees are honest and feel embarrassed by the searches.
b. Many restaurant employees receive tips from customers.
c. Employees who steal are too smart to be caught by this type of search.
d. More restaurants are opening up for lunch.

20. Gangs have formed in many large cities. Gangs often fight over territory, selling drugs, and insults. Gang members are often killed in these fights. Few murders of gang members are solved. Which of the following is the most logical conclusion based on the above?
a. The police don't really care about the deaths of a few gang members.
b. Gangs never use weapons in fights.
c. Most police are trained in hand-to-hand combat.
d. Too many people are in gang fights to know who committed the murders.

21. Wild animals often fight to see who will breed. This ensures that only the strongest animals reproduce. When strong animals reproduce, their young tend to grow into strong and powerful animals. Unlike animals, people who are not strong often reproduce.
Which of the following is the most logical conclusion based on the above?
a. People who are not strong can be successful.
b. Animals breed most often in the fall.
c. The study of biology is getting less popular.
d. Humans are becoming physically weaker.

22. Many hold-ups take place on city streets. Hold-up victims are usually not hurt if they do everything a robber wants.
Which of the following is the most logical conclusion regarding hold-up victims who do get hurt?
a. They resisted, refused to turn over money, or started a fight.
b. They met a robber with a taste for violence.
c. They were held up during the day rather than at night.
d. They were able to outrun their attacker.

23. Half of all marriages end in divorce. One reason for the large number of divorces is that getting a divorce is quick and easy. If a couple can agree on how to split their property fairly, then they can get a divorce simply by filling out forms and taking them to court. They do not need lawyers.
Which of the following is the most logical conclusion based on the above?
a. People are older when they get married.
b. If one's husband or wife hires a lawyer, then he or she is not planning to play fair.
c. Couples might get back together if getting a divorce took longer.
d. More men than women get divorced.

24. Some companies treat employees badly. For example, some companies lay people off and then expect one person to do the work of two people. Managers get big raises in some companies, but employees get only small increases. To get even, some employees have damaged company equipment, slacked off on the job, or faked being sick. However, most employees do not act in these ways.
Which of the following is the most logical conclusion based on the above?
a. Most employees are afraid of being caught.
b. Most employees never get sick.
c. Most employees drive to work rather than walk.
d. Most employees value good behavior at work.

25. Germany took over many small countries before World War II. Other countries thought that

they could stop Germany. They had Germany sign agreements promising not to attack again.
Germany broke these promises many times.
Which of the following is the most logical conclusion based on the above?
a.   Only weak countries follow agreements.
b.   Signing agreements works best when all countries can be trusted.
c.   England should not have invaded France.
d.   Small countries are always more powerful than large countries.

(James & McIntyre, 2000)

Young Schema Questionnaire: Short Form

Instructions: Listed below are statements that a person might use to describe himself or
herself. Please read each statement and decide how well it describes you. When you are
not sure, base your answer on what you emotionally feel, not on what you think to be
true. Choose the highest rating from the 1 to 6 rating scale listed below that describes
you and write the number in the space before the statement.

1 = Completely untrue of me
2 = Mostly untrue of me
3 = Slightly more true than untrue
4 = Moderately true of me
5 = Mostly true of me
6 = Describes me perfectly

1. _____ Most of the time, I haven't had someone to nurture me, share him/herself with
me, or care deeply about everything that happens to me.
2. _____ In general, people have not been there to give me warmth, holding, and
affection.
3. _____ For much of my life, I haven't felt that I am special to someone.
4. _____ For the most part, I have not had someone who really listens to me, understands
me, or is tuned into my true needs and feelings.
5. _____ I have rarely had a strong person to give me sound advice or direction when I'm
not sure what to do.
6. _____ I find myself clinging to people I'm close to, because I'm afraid they'll leave me.
7._____I need other people so much that I worry about losing them.
8. _____ I worry that people I feel close to will leave me or abandon me.
9. _____ When I feel someone I care for pulling away from me, I get desperate.
10. _____ Sometimes I am so worried about people leaving me that I drive them away.
11. _____ I feel that people will take advantage of me.
12._____I feel that I cannot let my guard down in the presence of other people, or else
they will intentionally hurt me.
13._____It is only a matter of time before someone betrays me.
14. _____ I am quite suspicious of other people's motives.
15. _____ I'm usually on the lookout for people's ulterior motives.
16. _____ I don't fit in.
17. _____ I'm fundamentally different from other people.

18. _____ I don't belong; I'm a loner.
19. _____ I feel alienated from other people.
20. _____ I always feel on the outside of groups.
21. _____ No man/woman I desire could love me once he/she saw my defects.
22. _____ No one I desire would want to stay close to me if he/she knew the real me.
23. _____ I'm unworthy of the love, attention, and respect of others.
24. _____ I feel that I'm not lovable.
25. _____ I am too unacceptable in very basic ways to reveal myself to other people.
26. _____ Almost nothing I do at work (or school) is as good as other people can do.
27. _____ I'm incompetent when it comes to achievement.
28. _____ Most other people are more capable than I am in areas of work and achievement.
29. _____ I'm not as talented as most people are at their work.
30. _____ I'm not as intelligent as most people when it comes to work (or school).
31. _____ I do not feel capable of getting by on my own in everyday life.
32. _____ I think of myself as a dependent person, when it comes to everyday functioning.
33. _____ I lack common sense.
34. _____ My judgment cannot be relied upon in everyday situations.
35. _____ I don't feel confident about my ability to solve everyday problems that come up.
36. _____ I can't seem to escape the feeling that something bad is about to happen.
37. _____ I feel that a disaster (natural, criminal, financial, or medical) could strike at any moment.
38. _____ I worry about being attacked.
39. _____ I worry that I'll lose all my money and become destitute.
40. _____ I worry that I'm developing a serious illness, even though nothing serious has been diagnosed by a physician.
41. _____I have not been able to separate myself from my parent(s), the way other people my age seem to.
42. _____ My parent(s) and I tend to be overinvolved in each other's lives and problems.
43. _____ It is very difficult for my parent(s) and me to keep intimate details from each other, without feeling betrayed or guilty.
44. _____ I often feel as if my parent(s) are living through me; I don't have a life of my own.
45. _____I often feel that I do not have a separate identity from my parent(s) or partner.
46. _____ I think that if I do what I want, I'm only asking for trouble.
47. _____ I feel that I have no choice but to give in to other people's wishes, or else they will retaliate or reject me in some way.
48. _____ In relationships, I let the other person have the upper hand.
49. _____ I've always let others make choices for me, so I really don't know what I want for myself.
50. _____ I have a lot of trouble demanding that my rights be respected and that my feelings be taken into account.
51. _____ I'm the one who usually ends up taking care of the people I'm close to.
52. _____ I am a good person because I think of others more than of myself.

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53. _____ I'm so busy doing for the people that I care about, that I have little time for myself.

54. _____ I've always been the one who listens to everyone else's problems.

55. _____ Other people see me as doing too much for others and not enough for myself.

56. _____ I am too self-conscious to show positive feelings to others (e.g., affection, showing I care).

57. _____ I find it embarrassing to express my feelings to others.

58. _____ I find it hard to be warm and spontaneous.

59. _____ I control myself so much that people think I am unemotional.

60. _____ People see me as uptight emotionally.

61. _____ I must be the best at most of what I do; I can't accept second best.

62. _____ I try to do my best; I can't settle for "good enough."

63. _____ I must meet all my responsibilities.

64. _____ I feel there is constant pressure for me to achieve and get things done.

65. _____ I can't let myself off the hook easily or make excuses for my mistakes.

66. _____ I have a lot of trouble accepting "no" for an answer when I want something from other people.

67. _____ I'm special and shouldn't have to accept many of the restrictions placed on other people.

68. _____ I hate to be constrained or kept from doing what I want.

69. _____ I feel that I shouldn't have to follow the normal rules and conventions other people do.

70. _____ I feel that what I have to offer is of greater value than the contributions of others.

71. _____ I can't seem to discipline myself to complete routine or boring tasks.

72. _____ If I can't reach a goal, I become easily frustrated and give up.

73. _____ I have a very difficult time sacrificing immediate gratification to achieve a long-range goal.

74. _____ I can't force myself to do things I don't enjoy, even when I know it's for my own good.

75. _____ I have rarely been able to stick to my resolutions.

(Schmidt et al., 1995)

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POTENTIAL COVARIATE MEASURES

The Vengeance Scale

Instructions: Listed below are a number of statements that describe attitudes that different people have. There is no right or wrong answer, only opinions. Read each item and decide whether you agree or disagree and to what extent by using the following scale.

1 – Disagree strongly
2 – Disagree
3 – Disagree slightly
4 – Neither disagree nor agree
5 – Agree slightly
6 – Agree
7 – Agree strongly

	disagree						agree
1) It's not worth my time or effort to pay back someone who has wronged me.	1	2	3	4	5	6	7
2) It is important for me to get back at people who have hurt me.	1	2	3	4	5	6	7
3) I try to even the score with anyone who hurts me.	1	2	3	4	5	6	7
4) It is always better not to seek vengeance.	1	2	3	4	5	6	7
5) I live by the motto "Let bygones be bygones."	1	2	3	4	5	6	7
6) There is nothing wrong in getting back at someone who has hurt you.	1	2	3	4	5	6	7
7) I don't just get mad, I get even.	1	2	3	4	5	6	7
8) I find it easy to forgive those who have hurt me.	1	2	3	4	5	6	7
9) I am not a vengeful person.	1	2	3	4	5	6	7
10) I believe in the motto "An eye for an eye; a tooth for a tooth."	1	2	3	4	5	6	7
11) Revenge is morally wrong.	1	2	3	4	5	6	7
12) If someone causes me trouble, I'll find a way to make them regret it.	1	2	3	4	5	6	7
13) People who insist on getting revenge are disgusting.	1	2	3	4	5	6	7
14) If I am wronged, I can't live with myself unless I get revenge.	1	2	3	4	5	6	7
15) Honor requires that you get back at someone who has hurt you.	1	2	3	4	5	6	7
16) It is usually better to show mercy than to take revenge.	1	2	3	4	5	6	7
17) Anyone who provokes me deserves the punishment that I give them.	1	2	3	4	5	6	7
18) It is always better to "turn the other cheek."	1	2	3	4	5	6	7
19) To have a desire for vengeance would make me feel ashamed.	1	2	3	4	5	6	7
20) Revenge is sweet.	1	2	3	4	5	6	7

(Stuckless & Goranson, 1992)

The Gender-Free Inventory of Desirable Responding

Instructions: Below are a number of statements that may or may not describe you. Please indicate HOW MUCH EACH STATEMENT DESCRIBES YOU by using the following scale:

1 – Does not describe me at all
2 – Describes me a little
3 – Somewhat describes me
4 – Describes me well
5 – Describes me greatly

1) I am always courteous, even to people who are disagreeable.	1 2 3 4 5
2) At times I have really insisted on having things my own way.	1 2 3 4 5
3) There have been times when I was quite jealous of the good fortune of others.	1 2 3 4 5
4) I like to gossip about other people's business.	1 2 3 4 5
5) I say only good things about my friends behind their backs.	1 2 3 4 5
6) I sometimes put things off until tomorrow what I should do today.	1 2 3 4 5
7) I have some pretty awful habits.	1 2 3 4 5
8) I always tell the truth.	1 2 3 4 5
9) I have never cheated on a test or assignment in any way.	1 2 3 4 5
10) I am always free of guilt.	1 2 3 4 5

(Becker & Cherny, 1994

The Buss-Perry Aggression Questionnaire

Instructions: Below are a number of statements that may or may not describe you. Please indicate HOW MUCH EACH STATEMENT DESCRIBES YOU by using the following scale:

1 – Extremely uncharacteristic of me
2 – Somewhat uncharacteristic of me
3 – Neither characteristic nor uncharacteristic of me
4 – Somewhat characteristic of me
5 – Extremely characteristic of me

1) Once in a while I can't control the urge to strike another person.	1 2 3 4 5
2) Given enough provocation, I may hit another person.	1 2 3 4 5
3) If somebody hits me, I hit back.	1 2 3 4 5
4) I get into fights a little more than the average person.	1 2 3 4 5
5) If I have to resort to violence to protect my rights, I will.	1 2 3 4 5
6) There are people who pushed me so far that we came to blows.	1 2 3 4 5
7) I can think of no good reason for ever hitting a person.	1 2 3 4 5
8) I have threatened people I know.	1 2 3 4 5

9) I have become so mad that I have broken things.   1 2 3 4 5
10) I tell my friends openly when I disagree with them.   1 2 3 4 5
11) I often find myself disagreeing with people.   1 2 3 4 5
12) When people annoy me, I may tell them what I think of them.   1 2 3 4 5
13) I can't help getting into arguments when people disagree with me.   1 2 3 4 5
14) My friends say that I'm somewhat argumentative.   1 2 3 4 5
15) I flare up quickly but get over it quickly.   1 2 3 4 5
16) When frustrated, I let my irritation show.   1 2 3 4 5
17) I sometimes feel like a powder keg ready to explode.   1 2 3 4 5
18) I am an even-tempered person.   1 2 3 4 5
19) Some of my friends think I'm a hothead.   1 2 3 4 5
20) Sometimes I fly off the handle for no good reason.   1 2 3 4 5
21) I have trouble controlling my temper.   1 2 3 4 5
22) I am sometimes eaten up with jealousy.   1 2 3 4 5
23) At times I feel I have gotten a raw deal out of life.   1 2 3 4 5
24) Other people always seem to get the breaks.   1 2 3 4 5
25) I wonder why sometimes I feel so bitter about things.   1 2 3 4 5
26) I know that "friends" talk about me behind my back.   1 2 3 4 5
27) I am suspicious of overly friendly strangers.   1 2 3 4 5
28) I sometimes feel that people are laughing at me behind my back.   1 2 3 4 5
29) When people are especially nice, I wonder what they want.   1 2 3 4 5

(Buss & Perry, 1992)

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