Why Do Bullies Bully?: An Examination of the Role of Intrinsic and Extrinsic Factors in Motivating and Enabling Bullying Behavior

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Personal Section:

I, like many others, have been a perpetrator and a victim of bullying behavior. As such, my interest in bullying as an academic subject stems from those curious experiences. Subsequently, my long-standing interest in Psychology exposed me to myriad interpretations of human behavior, some of which I naturally leaned towards. It struck me that Evolutionary Psychology, one of those fields I find more fascinating, had much to contribute to the field of bullying, and so it became the foundation upon which my entire paper was written. Evolutionary Psychology, for those unfamiliar with it, essentially argues that people are often competing for one another social, somatic, and sexual advantages. It stands to reason that one way people compete is by bullying one another, but curiously something that this seemingly apparent possibility is not a commonly defended stance in the literature on bullying.

I conducted my research and collected data at my high school with my social science research mentor, Dr. Nardi. High schools are an especially fertile ground to do social science research because students are easily accessed, willing to cooperate, and numerous. Collecting data was straightforward and simple thanks to the number-crunching power of computers, on which I heavily relied. In order to make complicated statistical calculations I relied on a statistics program that allowed me to manipulate data in very complicated ways, find correlations, perform chi-squared analyses, and so on. Though I did not have to perform any calculations by hand or teach myself statistics during my lunch periods, I still had to know what I was doing.

If I had to give advice to current or future social science researchers it would be to find a topic that one loves long before one begins to work on the project itself. Scrambling to find something interesting can be both a dangerous waste of time and a fatal mistake. The amount of time and effort that goes into a research project can be gargantuan, ensconcing it in the category of undertakings aptly described as ‘labors of love,’ such as raising children and building scale models of national monuments out of nothing but toothpicks. In short, be sure you are willing to commit to a topic you enjoy before sitting down with your highlighter and a mountain of scientific papers. In addition to teaching you a gargantuan body of facts about your topic of study, these papers are going to inform you of the immense importance of mathematics in the sciences. Math is the language of the sciences as they say, and in order to engage scientific papers one must be able to speak that language. As someone who has long been interested in the

practical applications of math, I was pleased to see it serving the interests of social scientists in their attempts to quantify their fascinating, complex, thought-provoking, complicated theories.

Research Section:

By now, most people know that bullying is a serious societal problem, and if you asked them what ought to be done about it, they will tell you 'something drastic.' While this is certainly the attitude to have, an effective approach is just as important as the willingness to take action. As such, it is integral to have an understanding of bulling behavior that is both useful and accurate. In my paper, I attempted to establish an explanatory theoretical model from the perspective of evolutionary psychology that would satisfy that dual purpose. This evolutionary model was raised in opposition to the traditional model of bullying behavior, which I nicknamed the 'bully on the playground' model. It holds, among other things, that most of bullying behavior is carried out by a small group of people, bullies. 'Bullies' as traditionally conceived have been believed to be aggressive and bigger than average, to have deficient social skills, and so on. But that picture has been contested, and some have even concluded that bullies are manipulating Machiavellian personalities with strong ability to manipulate others. A noticeable controversy over the personality of the bully led me to think that perhaps bullies are not of a single stripe at all. Perhaps they are not a small social group but rather encompass many different types of people. Some surprising results of my survey vindicated that belief but I'll stop here for fear of putting too fine a point on it.

Abstract

This study examined the relationships between a number of intrinsic and extrinsic factors and two necessary precedents of bullying behavior in 191 students in grades 9-12. A survey was administered to examine these factors on scales developed by the researcher, one of which measuring the moral attitudes of students toward various bullying behaviors, and the other measuring the likelihood of bullying to occur in a variety of situations. These factors were grouped into categories of motivating and enabling factors .Motivating factors make people

willing to bully, and enabling factors make them able to do so. It was examined how motivating factors influenced students' perception of the acceptability of bullying behavior, and how enabling factors affected students' perception of the likelihood of bullying behavior. Analyses indicated that both motivating and enabling factors play an important role in causing bullying behavior, and suggest that it is a more ordinary phenomenon than previously thought. In light of this, a model of bullying is presented which accounts for the commonality of bullying as well as its multicausal nature.

Introduction

The rise of bullying to international prominence as a social issue was followed closely by many studies investigating the behavior. Researchers and the public were shocked to find that

bullying is a phenomenon which occurs not only in schools, but also among a great variety of demographics, with nearly innumerable manifestations and a plethora of causes, and which has been observed in every society that has been examined for it (Volk et al., 2012). Although, researchers (Hawker &Boulton, 2000; Card & Hodges, 2008; Segrin, Nevarez, Arroyo, & Harwood, 2012) have come to some consensus on the negative effects of bullying (loneliness, depression, low self-concept, general and social anxiety of victims), the *causes* of bullying are far less agreed upon (Agervold & Mikkelsen, 2004). Moreover, understanding them is equally, if not more important in the undertaking of effective programs to combat bullying in schools and workplaces. A number of causes of bullying have been proposed, which point to low self-control among bullies, bullies' associations with peers who model delinquent or antisocial behavior, negative emotions, deficient social skills, and low socioeconomic status as causes of bullying behavior (Moon et al., 2008; Volk et. al, 2012; Pellegrini & Brooks, 1999; Scwartz & Proctor, 2000). These frameworks have in turn led researchers to paint a psychological picture of bullies that has changed over time, but has generally portrayed them as nonanxious, confident, tough, average or slightly below average academically, aggressive, and as having a socially manipulative personality (Olweus 1977; Sutton & Keogh 2000). The long-held notion that bullies are generally less popular or even social outcasts has been recently supplanted by an image of bullies as somewhat popular (Thornberg, 2010; Cho & Chung, 2011), perhaps reflecting a greater acceptance of the notion that bullies are not of a single stripe.

A New Theoretical Framework

The first respect in which this paper breaks from much of the literature is that it rejects the notion that bullying behavior is carried out by a small, identifiable social group. Rather, bullying is regarded herein as a widespread social phenomenon, characteristic of the social interactions of those who would not be branded as 'bullies' in the traditional sense. Bullying behavior is not emblematic of the mentally or emotionally disturbed bully, but rather is an inevitable result of the repeated convergence of motivating and enabling factors of bullying behavior (Zapf, 1999). For bullying to occur, the perpetrator must be willing *and* able to perform the behavior. The *repeated* coincidence of these factors is necessary because in order for a behavior to qualify as bullying, it must be repeated over time.

If personality can be thought of as a stable construct, it follows that people can be expected to react to setbacks and difficulties in a manner similar to how they have in the recent past. We all face negative emotions, and many of us are imperfect in coping with them, often resulting in 'thoughtless' behaviors or communications directed at others. The result is a set of repeated behaviors which, if directed in a hostile manner at others, might very aptly be called bullying. Therefore, many of us can be evaluated as 'bullies' under this criterion, not in the traditional sense, but in a more broad one which does not regard us as antisocial personalities, but as social animals whose behavior toward others is shaped by our varying emotional states. A school is a particularly fertile ground for this kind of research, as students are constantly under societal and peer pressure to succeed academically. In their striving to achieve, students are often met with setbacks and disappointments which evoke the negative emotions focused on in this paper.

A review of the literature suggests that the factors which are most implicated in motivating bullying behaviors were competition, stress/anxiety, frustration, and disappointment (Salin, 2003a; Vartia, 1996; Salin, 2003b) be latter three intrinsic and motivating factors are the emotional responses many experience upon encountering a setback or hardship. In the context of the school environment, setbacks involve doing poorly on a test, not making the sports team, and so forth. The first factor, competition, motivates bullying behavior especially strongly from the perspective of evolutionary psychology, an important influence upon this research. It predicts that even in the absence of emotional disturbances, we could expect considerably more individuals to perpetrate bullying behavior than is typically reflected in public thought. It has been argued that man's evolutionary inclination toward survival, coupled with limited resources, makes it inevitable that competition be a normal part of social organization (Tiesl et al., 2011). Much of the previous literature on bullying suggests that bullying behavior is a maladaptive trait, meaning that it is an indicator of mental disruption of some kind, or that something has gone wrong in the development of children who bully; but this paper takes the stance of evolutionary psychologists, that bullying behavior is perpetrated by ordinary individuals competing for somatic, sexual, and social advantages (Hawley, 1999; Volk et al., 2012).

The existence of enabling factors simply follows from the prerequisites of bullying behavior that were set out earlier, that a perpetrator be willing and able. Motivating factors make

people willing, and enabling factors make them able. The research literature(Rapp-Pagilicci et al., 2004;Salin, 2003a;Einarsen & Skogstad, 1996; Donat et al., 2012),suggests that some of the factors involved in enabling bullying behavior are a potential benefit, low cost, and a power imbalance. All three of these factors serve to make bullying behavior worthwhile for individuals and, from an evolutionary standpoint, possible. Take 'low cost' for example. If A was ostracized from a group for bullying B, the costs of bullying would outweigh its benefit sand the behavior can be expected to decrease. Conversely, if the benefits of A's behavior outweighed its costs, we could expect the behavior to continue for as long as that is true. As these examples show, we can expect a lower cost, higher potential benefit, or greater power imbalance to increase the likelihood of bullying behavior.

Many studies (Meyer-Adams & Conner, 2008)of bullying have emphasized solely intrinsic-psychological or environmental factors in their examination of its causes, and in doing so have neglected precursors of bullying behavior without which a complete picture of bullying behavior cannot be realized. This research is a synthesis of sorts – its goal is to show the pivotal importance of both enabling and motivating factors, and in doing so to show that bullying behavior is a more commonplace behavior than it is typically believed to be.

Hypotheses

1. Of all the motivating factors, competition will be the factor which most strongly motivates bullying behavior.

    a. The factor of stress/anxiety will be the second strongest motivator of bullying behavior.
    b. The factor of frustration will be the third strongest motivator of bullying behavior.
    c. The factor of disappointment will be the fourth strongest (weakest) motivator of bullying behavior.

2. More than twenty percent (20%) of those surveyed will identify themselves as having acted as a bully.

3. Gender will be a significant factor in the perception of any bullying behavior's understandability or likelihood, specifically

a. Females will describe bullying behavior motivated by competition, stress/anxiety, frustration and disappointment as less acceptable than males will.
b. Females will consider disappointment to be a stronger motivating factor than frustration.
c. Females will consider stress to be a stronger motivating factor than competition.
d. Males will consider frustration to be a stronger motivating factor than disappointment.
e. Females will consider bullying behavior enabled by a power imbalance to be more likely than males will.

4. There will be no correlation between one's self-assessed popularity and bully status.

5. A potential benefit will be the strongest enabling factor of bullying behavior.

a. A low cost will be the second strongest enabling factor of bullying behavior.
b. A power imbalance will be the third strongest enabling factor of bullying behavior.

6. Grade will be a significant factor in adolescents' perception of the likelihood and acceptability of bullying behavior.

a. Younger adolescents (in grades 9 and 10) will view competition-motivated bullying behavior as less understandable as compared to older adolescents (in grades 11 and 12).
b. Older adolescents (11 & 12) will view stress-motivated bullying behavior as more understandable than younger adolescents (9 & 10).
c. Younger adolescents (in grades 9 & 10) will be more likely to rate a power imbalance as enabling bullying behavior.
    i. Those in grade 9 will be more likely than those in grade 10 to rate power imbalances as enabling bullying behavior.

7. Ethnicity will be a significant factor in adolescents' perception of the likelihood and acceptability of bullying behavior.

a. Those who belong to a minority ethnic group will describe bullying behavior enabled

by a power imbalance as more likely than those who do not belong to a minority ethnic group.

b. Those who belong to a minority ethnic group will describe competition-motivated bullying behavior as more understandable than those who do not belong to a minority ethnic group.

8. A direct correlation will exist between the motivating competition factor and the enabling potential benefit factor.

9. There will be a positive correlation between a higher GPA and a higher self-assessed competitiveness.

10. Self-assessed competitiveness will be an important factor in adolescents' rating of competition-motivated bullying behavior as understandable, specifically

a. Those who assess themselves as more competitive will view competition-motivated bullying behaviors as more understandable than those who assess themselves as less competitive.

Methodology

Sample and Procedures

This paper was reviewed and approved by an institutional review board. Consent was obtained from all participants, who were informed of the purpose of the survey, as well as the confidentiality and anonymity of their responses. All participants were given about 20 minutes to answer the survey. The sample population in this study consisted of 9^{th}, 10^{th}, 11^{th}, and 12^{th} grade students attending a suburban public high school. To ensure that the sample of participants was representative of adolescents between the ages of 13 and 18, surveys were distributed as evenly as possible among all four grade levels, both genders, and Advanced Placement and standard level classes. Of the 191 students surveyed, 82 (42.9%) were female and 109 (57.1%) were male. Fifty (26.2%) belonged to grade 9, 45 (23.6%) belonged to grade 10, 45 (23.6%) belonged to grade 11, and 51 (26.7%) belonged to grade 12.

Instrument

The instrument used in this survey consisted of three parts. The first part of the survey requested information about one's grade, gender, GPA, ethnicity, popularity, competitiveness, as well as one's status as a perpetrator of bullying, victim of bullying, and bystander of bullying. Also in this section was a list of examples of bullying behaviors, and a definition of bullying.

The second section used a Likert-type scale called the *Bullying Acceptability Scale*, which was developed by the researcher after a review of the literature which suggested that providing a number of potential responses, some with further justification, would be the best way to capture a person's moral attitude toward bullying behavior. Items on the scale were developed from a review of the literature of the emotions often found to motivate bullying.

Sixteen unique bullying situations were presented, and students were asked to select the option which most closely matched their judgment of the permissibility of a bullying action. For each situation, students chose an option which was associated with a score of 1, 2, 3, or 4, where higher numbers indicated that the bullying behavior was more unacceptable. The 16 item scale was divided into four subscales, each evaluating a unique item: competition-motivated bullying behavior, disappointment-motivated bullying behavior, frustration-motivated bullying behavior, and stress-motivated bullying behavior. Each subscale contained four questions, which were organized randomly throughout the section. The purpose of this section was to determine how strongly each factor justified bullying behavior in a number of situations. Those factors that justified the behavior also motivated it, as only one factor was mentioned in any given situation.

The third section used a measure called the *Bullying Likelihood Scale*. This scale was developed by the researcher after a review of the previous research of the factors likely to be implicated in bullying behavior. The three items chosen were similarly the product of a review of this literature. They were believed by the researcher to be the most applicable factors to the school environment and adolescent demographic in this survey.

Twelve unique situations (all occurring within a school setting) were presented, where a reasonable possibility existed for bullying to occur in each given one. Students were asked to make a judgment regarding the likelihood of a bullying action in each situation. The twelve item scale was divided into three subscales, each evaluating a unique item: low-cost enabled bullying behavior, potential-benefit enabled bullying behavior, and power-imbalance enabled bullying

behavior. On each scale, an indication that the bullying behavior was ‘very likely’ corresponded to a score of 1, that it was ‘likely’ corresponded to a 3, that it was ‘unlikely’ corresponded to a 5, and that it was ‘very unlikely’ corresponded to a 7.

Results

One hundred and ninety-one students from a suburban high school volunteered to participate in this study.

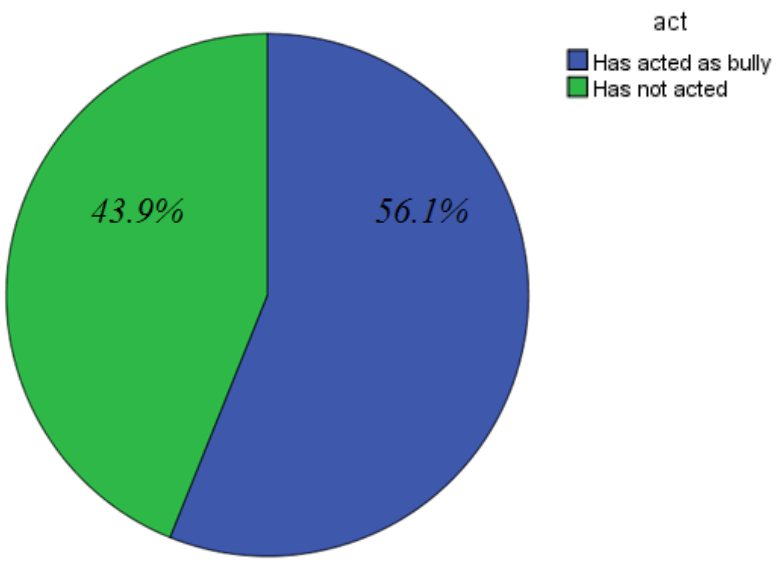
Hypothesis One

In hypothesis one, a bivariate correlational analysis was used to obtain the following descriptive values. Lower values indicate both that a factor was more strongly motivating of bullying behavior and that the behavior was perceived to be more understandable (less unacceptable). Higher values indicate that a factor was less strongly motivating of bullying behavior and that the behavior was perceived to be less understandable (more unacceptable).

Although competition was a strong motivating factor of bullying (M 10.89, S.D. 1.94), it was not the strongest motivating factor, which was stress/anxiety (M 10.75, S.D. 1.99). Competition was the second strongest motivating factor of bullying. As predicted, frustration was the third strongest motivating factor (M 12.05, S.D. 1.68), and disappointment was the weakest motivating factor (M 12.07, S.D. 1.78).Thus, hypotheses 1b and 1c have been affirmed.

Hypothesis Two

Hypothesis two predicted that at least twenty percent of the students surveyed would report having acted as a bully. In reality, 56.1% did. Thus, hypothesis two is affirmed.



Graph 1: 56.1% of adolescents surveyed admitted to having acted as a bully on at least one occasion (N = 187).

Hypothesis Three

In hypothesis three, independent T-tests were used to determine the relationship between gender and all four motivating factors, as well as the relationship between gender and the enabling factor of power imbalance.

As predicted, females indicated that bullying behaviors motivated by stress (M 11.11 v. 10.48), competition (M 11.33 v. 10.56), frustration (M 12.54 v. 11.68), and disappointment (M 12.38 v. 11.83) were more unacceptable than boys believed them to be, as indicated by higher scores than the boys in all four of these cases (See table 1 below).These values indicate that females consider disappointment to be a stronger motivating factor than frustration, as predicted. In addition, females indicated that bullying behavior motivated by stress (M 11.11, S.D. 2.02) was more understandable than bullying behavior motivated by competition (M 11.33, S.D. 1.99).

It was predicted that males would consider frustration (M 11.68, S.D. 1.66) to be a stronger motivating factor than disappointment (M 11.83, S.D. 1.73) This was found to be true. Thus, hypothesis three is completely affirmed.

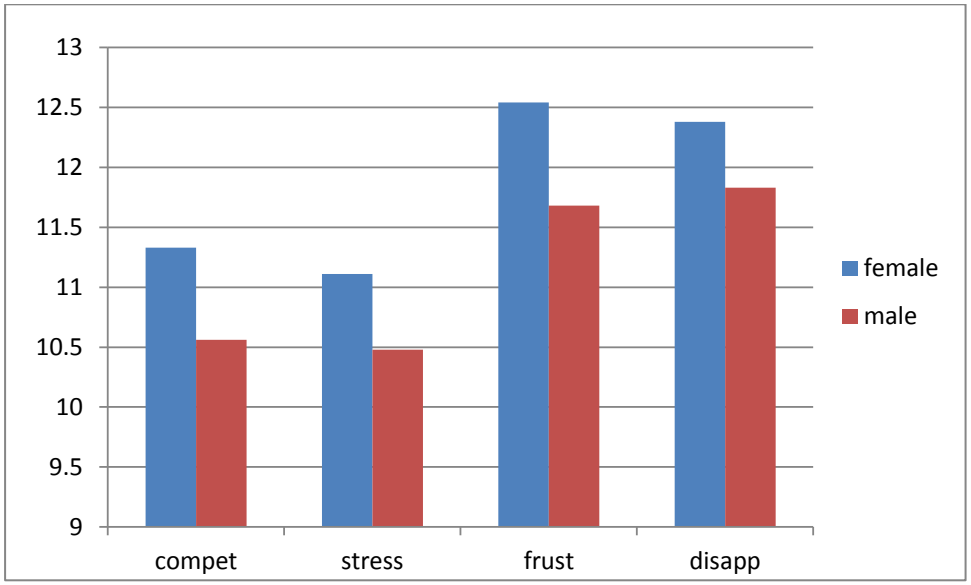
It was found that females(M 12.95, S.D. 3.24) believed a power imbalance was a stronger enabling factor than boys did(14.06, S.D. 4.37), where a smaller value indicates a greater likelihood of bullying occurring. p = .05.

Table 1: Summary of T-Tests Comparing Strength of Motivating Factors Competition, Stress, Frustration and Disappointment between Genders

Variable	t	df	Sig. Level	Mean Difference
Females vs. Males				

Competition	2.75	189	.006	.861
Stress	2.20	189	.029	.633
Frustration	3.61	188	.000	.543
Disappointment	2.11	189	.036	.770

Graph2: Motivating factors' strength versus gender



(Note: N = 191 except for the factor 'frust', where N = 190. Lower values indicate that the behavior is considered more understandable).

Hypothesis Four

The correlation between self-assessed popularity and having committed bullying behavior failed to reach significance.

Hypothesis Five

Hypothesis five examined the relative strengths of the three enabling factors tested, where stronger factors are more likely to enable bullying behavior. A bivariate correlational analysis was used to find the descriptive measures of the three enabling factors, which revealed

that the three extrinsic factors enabled bullying behavior to the extent that was predicted in hypothesis five. A potential benefit was the factor most likely to enable bullying (M10.51, S.D. 4.29). Low cost was the second most likely (M 12.56, S.D. 4.33), and a power imbalance was the least likely factor to enable bullying behavior (M13.59, S.D. 3.95). This analysis indicates that a potential benefit was the strongest enabling factor of bullying, while a low cost was the second strongest, and that a power imbalance was the weakest enabling factor of bullying, and that hypothesis five is affirmed.

Hypothesis Six

Grade was not a significant factor in adolescents' perception of the acceptableness of bullying behavior in the manner predicted. A One-way ANOVA test revealed that the relationship between grade and acceptability of bullying behavior failed to reach significance. Regarding the prediction in part b., older adolescents indicated that stress-motivated bullying behavior was less understandable than younger adolescents' believed it to be (M 10.99, S.D. 1.19 v. 10.51, S.D. 2.07, p = .026).Additionally, older adolescents found disappointment-motivated bullying behavior to be less acceptable than younger adolescents did (M12.37, S.D. 1.53 v. 11.76, S.D. 1.87, p = .001).(In each of the previous comparisons, the first number is the average of the mean scores of the 11th and 12th graders versus the average of the mean scores of the 9th and 10th graders.)

Table 2: Summary of ANOVA for acceptability of stress-motivated bullying behavior by grade (N = 191).

Source	Sum of Squares	Df	Mean Square	F	Sig. Level
Total acceptability of stress-motivated bullying behavior by grade.	36.06	3	12.02	3.15	.026

Grade	n	Mean	Standard Deviation
9th	50	10.32	2.10
10th	45	10.71	2.04
11th	45	10.49	1.59
12th	51	11.43	2.01

No significance was found between grade and the perception of the likelihood of bullying behavior enabled by a power imbalance.

Hypothesis Seven

The relationship between the ethnicity of adolescents and the likelihood or acceptability of bullying behavior failed to reach significance.

Hypothesis Eight

The correlation between competition-motivated bullying behavior and potential-benefit enabled bullying behavior failed to reach significance. However, it is notable that a bivariate correlation analysis found a negative correlation between disappointment-motivated bullying behavior and potential-benefit enabled bullying behavior ($r = -.16$, $p = .029$).

Hypothesis Nine

This study revealed that GPA and self-assessed competitiveness were interrelated however, they did not interact in the way predicted. A bivariate correlational analysis revealed an inverse correlation between GPA and higher self-assessed competitiveness ($r = -.201$, $p = .006$).

Hypothesis Ten

The relationship between self-assessed competitiveness and the acceptability of competition-motivated bullying behavior failed to reach significance.

Discussion

While much of the research is the field of bullying assumes the stereotypical 'bully on the playground' model, it is questionable whether this popular image truly represents the nature of bullying in our schools. Depending on the broadness of the definition of bullying used, reports of bullying prevalence range widely, from 1-10% in workplaces (Agervold & Mikkelsen, 2004) to 45% (Nesdale et al., 2008) in schools. This suggests that the definition of bullying is not sufficiently broad, and in order to explain the unaccounted bullying behavior of the broader definition, a new perspective is needed. A more holistic approach suggests that neither the

psychological characteristics of a bully nor environmental factors are sufficiently able to explain bullying single-handedly. Rather, these factors work in conjunction to make bullying behavior possible and more likely (Zapf, 1999). This study attempted to breach the divide; it examined the importance of both internal and external factors with respect to how they motivated and enabled bullying behavior. Ten hypotheses were put forth and tested in this study.

Hypothesis one predicted that, of the four motivational factors, competition would be the strongest motivator of bullying behavior, followed by stress, frustration and disappointment, in that order. As it were, stress was found to be a stronger motivating factor than competition, a discrepancy which can be attributed to the unique climate of a public school. In comparison to workplaces, in which many studies of bullying that have emphasized competition have been conducted, a public school lacks many of the structures which may encourage bullying behavior among employees, such as the pressure for greater efficiency (Salin, 2003b). Where students are not struggling against one another in a zero-sum game, the effect of stress may well be greater than the effect of competition. The literature supports this finding; it has been argued by Appelberg et al. (1991) and others that a high degree of stress is conducive of greater interpersonal conflict. The finding that disappointment and frustration, both closely related to dissatisfaction, make bullying behavior more likely complements the work of Einarsen et al., (1994). Thus, hypothesis one is partially affirmed.

Hypothesis two examined the prevalence of bullying by asking students whether they have ever acted as a bully. It was predicted that at least 20% would answer in the affirmative, and the hypothesis was affirmed when 56.7% did. This surprising result obviously conflicts with much of the literature on bullying and may suggest the limitedness of current models of bullies and bullying behavior, specifically their inability to account for the exceeding commonality of a maladaptive trait, such that it is actually found in the majority of students! The implication is that bullying behavior is in fact an adaptive trait. Another interesting result found by the researcher was that 65.2% (122/187) of students identified themselves as a victim of bullying. High measures of both bully and victim status are what one would expect in a population dominated by individuals who are bullies and victims (‘bully-victims’) instead of a small group of exclusive bullies.

Hypothesis three introduced the possibility that gender is a determinant of the perception of the likeliness and acceptability of bullying behavior motivated or enabled by a specific factor. To the researcher's knowledge, no such measurement has ever been taken before Part a. of the hypothesis proposed that females would consider bullying behavior less acceptable than males, when motivated by any of the four factors tested. This was supported, with females indicated that, in all cases, bullying behavior was less acceptable than males thought the behavior was. The result agrees with a large body of research which demonstrates that females rate as being more empathetic than males (Ang & Goh, 2010).Part b. and d. of the hypothesis was proposed because women tend to feel the emotions of anger and frustration less readily than males, and so it was suspected that the motivating force by disappointment would be stronger. Likewise, part d. predicted that males tend to feel the negative emotions of anger and frustration to a greater extent, than those of disappointment and sadness, and so bullying behavior would be more strongly motivated by those emotional states. Part c. of the hypothesis was developed by the researcher in light of an anomalous background of gender research which finds that females rate themselves as more stressed than males, and the stress-effect would therefore outweigh the competition effect, which was found to be the case not only in females but in both genders. Part e. suggested that females would indicate bullying behavior motivated by a power imbalance to be more likely than males considered it to be. This was found to be the case. The disparity between genders can likely be attributed to the greater sensitivity to imbalances of power in women, given the assumption that they are less powerful than males in their social lives and elsewhere.

Hypothesis five utilized the Bullying Likelihood Scale to measure the likelihood of bullying behaviors enabled by a potential benefit, low cost, or power imbalance. It was proposed that a potential benefit would be the strongest enabling factor, followed by a low cost and a power imbalance. According to expectations, the results supported all parts of this hypothesis. These predictions were developed from an evolutionary perspective. The most important factor when considering the whether a behavior will be performed is its advantage or disadvantage to the individual who performs it, advantage being defined in terms of the increased chances of survival of the individual's genes. In this light, it stands to reason that the existence of bullying behavior is contingent, first and foremost, on the potential benefit it renders to the 'bully'. Bullying is only as worthwhile as the benefit rendered to the bully. Although, bullying may be

beneficial, it may have its drawbacks as well. In order for bullying to continue to occur, its benefits must outweigh its costs, and so the costs of bullying are secondary in importance to a potential benefit. Although cost seems to have an equal role in the cost-benefit analysis, it does not. A low cost is not enough to enable bullying behavior because even with a low cost, if the potential benefit of bullying is low or 0, no incentive exists. The weakest enabling factor was predicted and turned out to be a power imbalance, which may surprise some, as a power imbalance is overwhelmingly included as a necessary condition of bullying behavior (Lodge & Frydenberg, 2005). This factor suffers from the same problems as a low cost in that it is not able to make bullying behavior more likely on its own, a power imbalance must exist alongside a potential benefit for it to have a meaningful impact on the likelihood of bullying behavior.

Hypothesis six examined the relationship between grade and the acceptability of various motivating factors, and the likelihood of bullying behavior motivated by a power imbalance. It was proposed that 9th and 10th grade students would view competition and stress motivated bullying behavior as less acceptable than older students. This hypothesis was made with mind specifically to the school in which the study was conducted, where a general consensus is that 11th and 12th graders are more stressed (due to their generally taking higher level classes, standardized tests, and applying to colleges). However, the opposite was found to be true in both these cases, as older students were less tolerant of bullying behavior in all its forms. This result is supported by research on social dominance which suggests that the strategies employed by children to attain maintain social and material resources change over time (Tiesl, et al, 2012).Tiesl et al. found that a developmental progression exists from primarily coercive strategies to more socially acceptable and competent ones, even prosocial ones such as cooperation. Extrapolating these findings to the adolescents in this study, it stands to reason that older students would find bullying behaviors even less acceptable than younger students.

Hypothesis nine illustrated an interesting interaction between self-assessed competitiveness and GPA, which indicated that the relationship between a higher GPA and competitiveness was negative. The researcher attributes this to an error of the instrument, specifically the ambiguity of the prompt for competitiveness, which is believed to have been interpreted differently than was intended. The researcher suspects that some students associated the trait ‘competitiveness’ with sports activities. Because some students most likely put greater

emphasis on their competitiveness with regard to sports, rather than their academics, the result was a greater competitiveness rating being related to a greater participation in and dedication to sports activities. A greater participation in sports activities might alone suggest a lower GPA as a result of the time and energy invested in sports as opposed to academic pursuits, but it is also worth noting that the relationship may also be explained by gender's relationship to GPA. In this sample, males (M 2.71, S.D. 1.24)had a lower average GPA (p = .03) than females (M 2.33, S.D. 1.14).Males (M 3.85, S.D. 0.98) also rated themselves as more competitive (p = .01)than females (M 3.47, S.D. 1.05. Moreover, males outnumbered females in this study, 109 to 82, suggesting that the correlation was made stronger as a consequence of an average GPA being skewed lower and average competitiveness higher by this plurality of males.

This study illuminates the utility of the evolutionary psychologist's model of bullying behavior, and underscores the importance of the multifactorial nature of bullying behavior. Further research should delve more deeply into the interactions between environmental and internal factors, as well as explore the merits of this model in developing measures for future bullying prevention programs.

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