Promoting Prosocial Behavior to Prevent Aggression and Bullying in Middle Schools:

An environment, person, and behavior-focused intervention

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ABSTRACT

The most common school-based interventions to prevent victimization from bullying use disciplinary methods and increase playground supervision. While enforcement approaches can prevent bullying, the effects are often short term and may lead to undesirable side effects. Thus, it seems a positive approach to increase prosocial behavior and prevent victimization is needed. This study evaluated the Actively Caring for People (AC4P) approach in four Southwest Virginia middle schools. Sixth and seventh grade students from two schools (n=209) participated in a five-week prosocial-focused curriculum, while 194 students served in the control group. All participants completed pre and post-test measures on their prosocial behavior performed and received, aggressive victimization and aggression performed, as well as bullying victimization and bullying performed to others. Linear regression and binary logistic regression were used to assess the impact of the Intervention. Follow-up moderator analyses were performed to assess the impact of Intervention Fidelity, Classroom Climate, Coaches' Entity Prosocial Mindset, and Role Model Perceptions. No intervention effects were observed and no moderators of the intervention were significant. Implications, limitations, and future directions are discussed.

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1.0 – Introduction

"Nearly all men can stand adversity, but if you want to test a man's character, give him power," asserted U.S. President Abraham Lincoln (Lincoln, 2013). Even today, there may not be a greater threat to our humanity than the actions of the numerous character-less abusers of power, exemplified by the playground aggressor (Olweus, 1994), the highly coercive university professor (Hollis, 2012; Lester, 2012), the reckless Wall Street warriors (White, 2013), and the politicians who promote conflict over peaceful dialogue.

In each situation, a powerful person is performing aggressive behavior that harms others repeatedly over time, subsequently leading to another societal problem. These numerous forms of bullying can affect multiple levels of the ecosystem: individual, interpersonal, school, community, and socio-political (Bronfenbrenner, 1977). The abuse of power is the common denominator of dysfunctional human dynamics augmenting problems related to school safety, health care, financial and economic security, and even environmental sustainability.

For a society to flourish in the short and long term, the development of moral character and the prevention of bullying are critical. Moral character reflects a "set of psychological characteristics that affect that person's ability and inclination to function morally" (Berkowitz, 2002, p. 48). "Good character consists of knowing the good, desiring the good, and doing the good" (Lickona, 1991, p. 51). This suggests knowledge and reasoning, emotions and motivation, as well as skills and moral action are critical. Since the days of ancient Greece, character and moral education were proclaimed essential components of an integrated education curriculum. Plato stated, "By

maintaining a sound system of education and upbringing, you produce citizens of good character" (Edutopia, 2011 as cited in Straub, 2012, p.45).

Today, the U.S. Department of Education recognizes the necessity to "promote strong character and citizenship among our nation's youth" as one of six strategic goals (U.S. Department of Education, 2007). Even the American people consider the development of effective and responsible citizens to be a primary goal of education (Rose & Gallup, 2000; as cited in Cohen, 2006). However, a recent review of seven school-wide character-education programs in elementary schools demonstrated no improvements in social and emotional competencies and no reductions in problem behavior (Social and Character Development Research Consortium, 2010). Given the ineffectiveness of character-education programs and overwhelming frustration with the U.S. education system, the application of evidence-based principles are needed to enrich the school culture by addressing moral character and preventing bullying in schools.

Although U.S. President Barack Obama has emphasized the importance of education (Whitehouse.gov, 2013, p.1), the current state of the U.S. education system is in turmoil. Some blame the political system, finding fault with the exorbitant budget cuts from state legislative bodies (Gin, 2013) and top-down mandates from the federal government for increased standardized test achievement (Nichols & Berliner, 2007). Others suggest teachers need more effective incentives (Fryer, Levitt, List, & Sadoff, 2012), higher pay (Walker, 2012), and safer environments (Espelage et al., 2013).

Despite a $389 million investment in K-12 education start-up companies (Heussner, 2012), research-based solutions from scholars and organizations (e.g., DuFour, DuFour, & Eaker, 2008) and organizations offering controversial solutions (e.g.,

Students First, 2013; The Heritage Foundation, 2013), little progress has been made to reform education in the U.S. Although many one-size-fits-all programs and politically-charged solutions have been suggested and offered on both a small and large scale, scholars and the general public have failed to unify on a feasible and sustainable solution.

This thesis research was designed to develop and evaluate an innovative and comprehensive research-based intervention to improve school culture by preventing bullying and enhancing character strengths among 6th and 7th grade students in two middle schools. This mission was achieved by: 1) reviewing prior literature involving the relationship between character strengths and bullying, 2) offering an integrated framework for school-based interventions that guided the intervention approach developed and evaluated in this study, and 3) providing a comprehensive intervention that targets environment, behavior, and person factors based on principles and strategies from positive psychology and applied behavior analysis.

The prevention of bullying and enhancement of character strengths and prosocial behavior in schools are critical for a flourishing society of individuals. The most encompassing and potentially effective school-based interventions affect three domains (i.e., environment, person, and behavior), and both promote and prevent certain outcomes (i.e., promotion and prevention-focused). Specifically, a 2 (outcomes) x 3 (domains) matrix is discussed as a guide for the development of a universal intervention focused on enhancing specific character strengths, promoting prosocial behavior, and preventing bullying. Finally, this study evaluated a cost-effective curriculum for middle school, based on principles from positive psychology and applied behavior analysis and delivered by trained undergraduate research assistants (i.e., coaches).

1.1 – Bullying

Bullying occurs when a victim perceives an imbalance of power and receives intentionally aggressive behavior from an aggressor repeatedly over time (Olweus, 1994). A cross-national review of bullying prevalence among 11 to 15 year-olds in U.S. schools found 22.2% of boys and 16.6% of girls were involved as a bully or a victim (Craig et al., 2009). A recent review investigated U.S. schools and reported nearly 30% of six through tenth-graders were moderately or frequently involved in bullying (Nansel et al., 2001).

Bullying has been linked to a variety of negative outcomes with consequences ranging from poor academic achievement to suicide (Klomek et al., 2009; Swearer, Espelage, Vaillancourt, & Hymel, 2010). In addition, victims of bullying had higher rates of psychiatric disorders and family challenges than non-victims (Copeland, Wolke, Angold, & Costello, 2013). Thus, school-based interventions are needed to prevent bullying and the associated negative effects. In addition to preventing and alleviating behavior-based problems, interventions have been developed to promote desirable person characteristics and behaviors: character strengths and prosocial behavior.

1.2 – Character Strengths

Park states, "Good character is at the core of positive youth development" (Park, 2009, p.43). Character strengths are a specific subset of positive individual characteristics (i.e., strengths) that are morally valued. From the Values in Action (VIA) model, character strengths are defined as psychological processes or mechanisms that reflect one of the six virtues of wisdom, courage, humanity, justice, temperance, and transcendence (Park & Peterson, 2006). Research has demonstrated children's character strengths relate directly with well-being and happiness (Toner, Haslam, Robinson, &

Williams, 2012). Both kindness and gratitude correlated positively with general life satisfaction and satisfaction in college (Lounsbury, Fisher, Levy, & Welsh, 2009). For this proposed study, only kindness, courage, and gratitude were taught for the intervention. These are discussed below.

Gratitude

Gratitude occurs when one notices and feels grateful for the good things in their life (Park & Peterson, 2008). Dispositional gratitude is positively correlated with life satisfaction, vitality, subjective happiness, optimism, hope, positive affect, dispositional empathy, prosocial behaviors, spiritual transcendence, self-transcendence, a multitude of religious-oriented and related variables, and of the Big Five personality traits (i.e., excluding neuroticism), as well as negatively correlated with anxiety, depression, and envy after controlling for extraversion and positive affectivity (McCullough, Emmons, & Tsang, 2002). Gratitude serves as a moral barometer, reinforcer, and motive (Bono & Froh, 2009, p. 77). Thus, gratuitous individuals receive immediate benefits as receivers of kind acts and subsequently are more motivated to act prosocially.

Gratitude interventions have been shown to increase positive affect, physical exercise, as well as increase the quantity and quality of sleep, heighten optimism, and improve perceptions of relatedness to others (Emmons & McCullough, 2003). Additionally, writing an appreciation letter and then expressing gratitude led to higher levels of reported happiness as well as less depressive symptoms in the short term and lasted until a one-month follow-up (Seligman, Steen, Park, & Peterson, 2005). The *count your blessings* (every day for a week) exercise demonstrated enhanced happiness scores at one-month, three-month, and six-month follow-ups (Seligman, Steen, Park, &

Peterson, 2005).

Courage

Courage refers to the "will to accomplish goals in the face of opposition, external or internal" (Park & Peterson, 2006, p.894). Geller (2013) proposed three specific types of courage - physical, moral, and psychological courage – whereas, Hannah, Sweeney, and Lester (2007) proposed physical, moral, and social courage. Social courage refers to one's "refusal to conform to group views" (Hannah, Sweeney, & Lester, 2007, p. 129). Moral courage occurs when a person stands up for his or her core values in a moral dilemma (Lachman, 2006). Geller (2013) considers social courage within his definition of moral courage: an action occurring "in the face of possible shame, embarrassment, or discouragement" (p. 66).

Hannah, Sweeney, and Lester (2007) proposed courageous actions are facilitated by positive personality traits (e.g., core self-evaluation), positive person states (e.g., efficacy, hope, resiliency, positive emotions), values and beliefs (e.g., duty, selflessness, honor) and social forces (e.g., interdependence, social identity, and cohesion). Although this model has not been tested, empirical evidence supports some of the proposed relationships among variables in their model of courage. Thus, an intervention aiming to address social forces (e.g., enhance interdependence, social identity, and cohesion) and positive person states (e.g., efficacy, hope, and positive emotions) should increase courage (although no empirical studies have tested this proposed model).

Positive psychologists refer to kindness as the performance of favors and good deeds for others (Park & Peterson, 2008). Since kindness and prosocial behavior have been used synonymously (Layous, Nelson, Oberle, Schonert-Reichl, & Lyubomirsky,

2012), a brief summary of the more common term (i.e., prosocial behavior) and the associated extant literature is summarized below.

Prosocial Behavior

Prosocial behavior has been defined as any intentional action "defined by society as generally beneficial to other people and to the ongoing political system" (Piliavin, Dovidio, Gaertner, & Clark, 1981, p. 4 as cited in Dovidio, Piliavin, Schroeder, & Penner, 2006). Among adults, numerous types of intentional behavior benefit or help others, including, but not limited to: helping, volunteering, and donating (Weistein & Ryan, 2010). A focus group of adolescents reported the most frequent types of prosocial behaviors performed by peers: defending and standing up for others, providing comfort and support, developing competence in others, and providing recognition (Bergin, Talley, & Hamer, 2003)

The literature has documented numerous beneficial psychosocial outcomes from prosocial actions. In fact, such behavior has increased happiness (e.g., Dunn, Aknin, & Norton, 2012) and benefited need satisfaction and well-being (Lyubomirsky & Layous, 2013). Self-directed (i.e., autonomous) performers of prosocial behavior and their recipients experienced enhancement of self-esteem and well-being relative to a control group (Weinstein & Ryan, 2010). Additionally, the performance of prosocial acts over a four-week time period improved peer acceptance and well-being (Layous, Nelson, Oberle, Schonert-Reichl, & Lyubomirsky, 2012).

1.3 – Psychological Strengths and Behaviors

Although few studies connect psychological strengths (both signature strengths and morally-valued strengths) to prosocial behavior and bullying, some empirical studies

provide direction. For example, individuals with numerous psychological strengths performed more prosocial behaviors, including helping behaviors (Scales et al., 2000) and volunteering (Donnon & Hammond, 2007). Youth who scored in the highest category for developmental strengths, consisting of both environmental strengths (e.g., school culture, parental expectations, and school cohesiveness) and internal strengths (e.g., self-efficacy, self-esteem, and empathy) reported half the victimization levels and nearly $1/10^{th}$ of the perpetration rates of those in the lowest category (Donnon & Hammond, 2007).

Rather than assess the frequency of bullying, McCarty (2013) studied the four student classifications related to bullying at four middle schools: bullies only (i.e., students who bully, but are not victimized), victims only (i.e., students who are victimized, but do not bully), bully-victims (i.e., students who both bully others and receive bullying), and uninvolved students. Bully-victims scored significantly lower on self-efficacy, hope, and subjective well-being compared to those students uninvolved in bullying. Thus, a strengths-based intervention to prevent bullying should address both person factors (i.e., enhancing positive psychological strengths) and behavior (i.e., reducing undesirable behavior).

1.4 – The Intersection of Prosocial, Aggressive and Bullying Behaviors

Bullying reflects a specific type of aggressive behavior. Aggression has been studied from evolutionary, developmental, behavioral, ecological and social perspectives. Anderson and Bushman (2002) proposed an integrated framework of aggression to provide a comprehensive and parsimonious model. The general aggression model incorporates cognitive neoassociation theory, social learning theory, script theory,

elicitation transfer theory, and social interaction theory to explain reactive and proactive aggression.

Reactive aggression, or "hot-headed" hostile aggression, refers to behaviors performed under negatively-charged affective states in response to provocation. Whereas, proactive aggression, or instrumental aggression, refers to unprovoked, goal-directed behavior. For this thesis, proactive behavior – aggressive, bullying, and prosocial – was viewed through the lens of social learning theory (Bandura, 1977), which posits behavior is motivated by perceived expectancies learned through direct experiences and observations.

Aggressive Behavior

Instrumental aggression is often planned and motivated by expectations of self-serving consequences (Dodge, 1991). For example, some middle-school students act aggressively to gain social consequences, such as popularity. Eighth-grade students reported social status, fun or funny, and even low self-esteem as the most common reasons why kids are mean to others (Faris & Felmlee, 2011). Research has demonstrated that students' aggression is influenced by: parental punishment (Eron et al., 1991), mother's tolerance of aggression (Olweus, 1980), and peers' social attention (Patterson, Littman, & Bricker, 1967). Additionally, Dishion, McCord, and Poulin (1999) suggest, "Youth being actively reinforced through laughter, social attention, and interest for deviant behavior are likely to increase such behavior" (p. 762).

Aggression and Prosocial Behavior

Prosocial behavior can also be interpreted within a Resource Control (RC) framework. Hawley (2003) used RC to explain the differing behavioral styles of people:

coercive, prosocial, bistrategic, typical controllers, and non-controllers. Coercive controllers use aggressive strategies to obtain resources and maintain control. Prosocial controllers use cooperative and prosocial strategies. Bistrategic controllers use both strategies, whereas non-controllers use neither. Typical controllers use an average level of both strategies.

Hawley et al. (2010) suggest, "Aggression is performed in the service of resource control (i.e., social dominance) and is performed in a manner suggesting it is strategic rather than impulsive (e.g., aggression balanced with prosocial behavior in the service of goal attainment), tends to be associated with positive attention from peers, high status, acceptance, and a litany of attributes that might be characterized as 'skills'" (p. 104). In fact, research has linked aggression with perceived popularity (Parkhurst & Hopmeyer, 1998).

Aggression and Bullying

Although conceptually different terms, bullying and aggression have been used interchangeably, despite only 25% of shared variance between the two constructs (Pepler et al., 2008). Even victims of aggression and bullying differ. In comparison to victims of aggression, bullied victims perceive less personal control and a higher perceived threat, in addition to increased symptoms of depression (Hunter, Boyle, & Warden, 2007).

As stated previously, bullying is a negative action when someone intentionally inflicts, or attempts to inflict, injury or discomfort upon another individual (Olweus, 1994, p. 1173). Additionally, the definition includes repeated behavioral occurrences to a victim who perceives an imbalance of power. Additionally, students who bully seek power and coercive dominance, find satisfaction in causing injury and suffering to other

students, and receive tangible or social rewards for their behavior (Olweus, 2013). Given the responsiveness of these students to rewards, it seems an anti-bullying intervention should include an incentive/reward contingency that promotes prosocial behavior contrary to bullying.

Bullying and Prosocial Behavior

Behavior analysts have claimed the best way to eliminate an undesirable behavior is to reinforce an incompatible alternative behavior (Sidman, 1989). They refer to behaviors that cannot occur simultaneously as incompatible alternatives. For example, a student cannot act prosocially and aggressively at the same time. In fact, Biglan, Flay, Embry, and Sandler (2012) suggest identifying and reinforcing prosocial behaviors as a strategy for reducing violence and its correlates. Similarly, Anderson and Bushman (2002) conclude their review of aggression by suggesting prosocial opportunities should be increased and rewarded. Specific to bullying, Colvin, Tobin, Beard, Hagan, and Sprague (1998) suggest bullying-prevention programs should emphasize the teaching of prosocial behavior to replace bullying. Thus, increasing the frequency of prosocial behavior has been suggested as a strategy to reduce aggression and bullying.

1.5 – Intervention Framework

This thesis introduces an integrated framework for intervention development of a school-based intervention to promote desirable environments, person factors, and behaviors and prevent undesirable environments, person factors, and behaviors. Geller (2001) categorizes AC4P behaviors by these three domains because the antecedents and consequences of these behaviors differ. He proposes an individual behavior directed toward his/her environment (environment-focused) is easier to perform than behavior

involving corrective feedback about an individual's undesirable behavior (behavior-focused) (Geller, 2013). In social cognitive theory (Bandura, 1986), person, behavioral, and environmental factors are reciprocally related.

Thus, intervention can target any of these three domains directly to influence the other two areas indirectly. Therefore, this framework includes a cooperative framework of youth promotion and prevention with specific strategies to address these three domains. Figure 1 shows promotion and prevention outcomes on the top with three domains cutting across the face of the cube, which depicts the intersection of the three domains with promotion and prevention.

Proactive and Reactive Behavior

The research literature on aggressive behavior has identified different underlying theories and correlates of proactive and reactive aggression (Miller & Lynam, 2006), suggesting interventions may target proactive or reactive behaviors differently. Interventions rooted in the frustration-aggression hypothesis (Dollard, Doob, Miller, Mowrer, & Sears, 1939) that focus on social-cognitive processes (e.g., hostile-attribution biases, competent responses to social problems, and devaluing aggression) have been shown to reduce reactive, hostile aggression (Dodge & Godwin, 2012).

These interventions teach students how to respond appropriately to the behaviors of another person. For example, aggressive children can undertake "attributional retraining" to more appropriately understand and interpret others' intentions, leading to more appropriate behavioral responses (Hudley et al., 1998). Other approaches teach moral reasoning and problem-solving skills for improved decision-making and behavioral choices after the occurrence of conflict or undesirable behavior (Committee for Children,

2013).

To date, few interventions aim to change proactive (aggressive, bullying, or prosocial) behavior before an undesirable event (e.g., conflict situation) or behavior (e.g., provocation) from another person occurs. Numerous approaches teach reactive prosocial behavior rather than teaching and promoting proactive prosocial behavior. To our knowledge, no whole-school intervention aims to improve both proactive (e.g., performing prosocial behavior) and reactive (e.g., recognizing prosocial behavior after it occurs) behavior as a strategy for preventing bullying.

Promotion and Prevention

As a field, psychologists have focused almost exclusively on strategies to prevent or reduce undesirable behaviors and the associated negative behavioral and mental outcomes. However, in recent years positive psychologists have directed a focus on optimal human functioning, and the positive development of strengths (Seligman, & Csikszentmihalyi, 2000). Cowen and Kilmer (2002) suggest the development of positive strengths could prevent psychological problems. "By identifying, amplifying, and concentrating on these strengths in people at risk, we will do effective prevention" (Seligman, 2002, p.5).

In the late 2000s, the Office of Safe and Drug-Free schools within the U.S. Department of Education (USDOE) was prevention-focused; a "good school has been defined by showing that it keeps weapons and drugs out of its building and off its campus, rather than by any positive characteristics" (Higgins-D'Alessandro, p. 28). At present day, much of this paradigm continues to linger. The Center for the Study and Prevention of Violence (CSPV) identified promising initiatives and evidence-based

"blueprint" youth-targeted, violence-prevention models with effectiveness at reducing aggression, delinquency, and substance abuse. Of 19 promising approaches, only five demonstrated marked improvements in positive behavior; of nine model programs, only four even assessed positive outcomes (Kidron & Osher, 2012).

Researchers have urged schools to promote positive youth development (PYD) in addition to preventing problem behaviors among children (Catalano, Hawkins, Berglund, Pollard, & Arthur, 2002). The PYD framework aims to promote and foster: 1) bonding, 2) resilience, 3) social competence, 4) emotional competence, 5) cognitive competence, 6) behavioral competence, 7) moral competence, 8) self-determinism, 9) spirituality, 10) self-efficacy, 11) clear and positive identity, 12) belief in a positive future, 13) recognition for desirable behavior, 14) opportunities for prosocial involvement, and 15) prosocial norms (Catalano, Berguland, Ryan, Lonczak, & Hawkins, 2004). Catalano, Hawkins, Berglund, Pollard, and Arthur (2002) conclude a cooperative framework of PYD and prevention science is critical for developing empirical approaches that address both protective and risk factors, as well as successfully addressing multiple areas of positive youth development. For this study, the intervention aims and assessment include both the prevention of negative and the promotion of positive behaviors.

Targeting Three Domains

Bandura's social cognitive theory (1986) posits behavior, environment, and person factors to be reciprocally related. Thus, an intervention aiming to improve behavior and enhance person factors can target all three domains for both direct and indirect effects. Discussed below are specific strategies within each domain that affect the other domain, leading to the promotion of positive and the prevention of negative

outcomes.

Bronfenbrenner (1977) discusses the nesting of individuals within multi-level social-ecological systems. Research has shown the social context leads to differential processes and outcomes for students. For example, self-esteem was directly related to bullying perpetration in a "poor school climate," but the relationship was inversely related in a positive school climate (Gendron, Williams, & Guerra, 2011), suggesting behavior (e.g., bullying) is influenced by the person-environment interaction of self-esteem and school climate.

Similarly, self-esteem was positively related to prosocial behavior among Mexican-American children with a norm of cooperativeness, whereas high self-esteem was associated with competitiveness among Anglo-Americans with a cultural norm of competitiveness (Kagan & Knight, 1977). Thus, the development of person factors appears to depend on one's perception of his/her behavior within the context of specific cultural norms.

The Centers for Disease Control and Prevention recommend a social-ecological perspective in order to intervene at multiple levels for the prevention of violence (CDC, 2013; Dahlberg et al., 2002). Swearer and Espelage (2011) expanded this framework to include the essential levels for youth prevention: individual (i.e., bullies, victims, bully-victims, bystanders), family, peers, school, community, and culture. Most of the anti-bullying strategies perceived as effective by school psychologists were environment-focused, meaning they included: 1) modified space and schedule for less structured activities, 2) written anti-bullying policy, 3) increased supervision in specified locations, 4) zero-tolerance policy with bullies, 5) a procedure to report bullying, 6) an anti-bullying

committee for activity coordination, and 7) parental involvement (Sherer & Nickerson, 2010).

Empirical evidence has corroborated many perceptions related to the effectiveness of environment-focused strategies, including the establishment of behavioral expectations, rules, and policies. In fact, lower rates of aggression and violence occur when students perceive school rules to be applied equally and consistently to all students (Payne, Gottfredson, & Gottfredson, 2003). For example, students had higher rates of disruption in schools with zero tolerance policies, poor communication practices, and unclear behavioral expectations (Gottfredson et al., 2000). Additionally, meta-analytic results demonstrated two environment-focused intervention components – playground supervision and anti-bullying policies – significantly reduced bullying (Ttofi & Farrington, 2010). Thus, an effective environment-focused intervention could reduce bullying.

Social psychologists and behavior analysts have employed behavior-focused interventions to promote positive and prevent negative outcomes. Select social psychologists have used the positive-activity model (Lyubomirsky & Layous, 2012) to enhance person factors, while behavior analysts employ contingency-management strategies for behavior change. Specifically, they use the antecedent-behavior-consequence (ABC) model to increase desirable and reduce undesirable behaviors. Behavior-focused methods for increasing a behavior include: a) modeling, b) incentive/reward contingencies, and c) behavioral feedback (Geller, Berry, Ludwig, Evans, Gilmore, & Clarke, 1990)

Bandura (1977) found the likelihood of modeling others increases under three

conditions: 1) the role model is viewed as powerful; 2) the model's behavior is rewarded; and 3) the observer shares overt characteristics with the role model. Students model both undesirable and desirable behavior. For example, many middle school students become prosocial when they have prosocial peers (Wentzel, Barry, & Caldwell, 2004). Thus, a school-based intervention should use role models to demonstrate, teach, and reward prosocial behavior.

A differential-reinforcement procedure with an individual contingency has been used to reward desirable behaviors in order to reduce disruptive classroom behaviors (e.g., Ogier & Hornby, 1996). Additionally, group contingencies have been effective strategies for increasing academic and social behaviors in order to reduce classroom disruptions (Lo & Cartledge, 2004). Even large-scale approaches using a token economy are successful in schools (e.g., Christensen, Young, & Marchant, 2004). Numerous theories support the notion that an alteration in incentives and rewards in a school can increase the frequency of desirable action.

Behavior-focused interventions have been shown to influence person factors. Specifically, the positive-activity model (Lyubomirsky & Layous, 2012) posits the performance of positive activities (e.g., a kind act) leads to positive emotions, positive thoughts, positive behaviors, and need satisfaction, subsequently leading to enhanced well-being.

These features include a variety of activities, dosage and amount of activities, social support, and environmental stimuli to activate behavior. Varying the type of kind act led to higher well-being in comparison to those who performed the same type of act (Sheldon, Boehm, & Lyubomirsky, 2012). A high dose of prosocial acts in less time

enhanced well-being more so than the same behavioral frequency spread over a longer period of time (e.g., Lyubomirsky, Sheldon, & Schkade, 2005). Research evidence influenced Lyubomirsky and Layous (2012) to suggest simple and easy ("starter") activities for prosocial development. A competence and autonomy-enhancing technique to slowly build student empowerment has been referred to as instructional scaffolding (e.g., Gallimore & Tharp, 1990).

Positive psychologists have extensively explored positive person factors (e.g., character strengths and virtues; Peterson & Seligman, 2004), positive emotions, and positive relationships (Snyder, Lopez, & Pedrotti, 2011). Recently, approaches from positive psychology have been applied in educational settings (Gilman, Huebner, & Furlong, 2009), resulting in two specific applications for students: the Penn Resiliency Program (PRP) and the Strath Haven Positive Psychology curriculum. PRP teaches "students to think more realistically and flexibly about the problems they encounter" (Seligman, Ernst, Gillham, Reivich, & Linkins, 2009, p. 297).

PRP is grounded in cognitive behavioral therapy (Ellis, 1962), which aims to alter thinking (i.e., individuals' negative beliefs) for beneficial behavior change. A recent meta-analysis of PRP found reductions in depressive symptoms, anxiety and hopelessness and enhanced optimism (Brunwasser & Gillham, 2008). Additionally, positive-psychology-based psychotherapy has addressed a variety of behavioral problems, from eating disorders to alcohol dependence and abuse (Snyder, Lopez, & Pedrotti, 2011).

1.6 – Prior Interventions

Evidence for a school-based intervention framework was discussed earlier. As

shown in Figure 1, the framework suggests positive outcomes can be promoted and negative outcomes prevented by applying specific intervention processes that target the domains of environment, behavior, and person. This framework was used to categorize prior strategies and guide the development and evaluation of this multi-grade intervention.

Numerous philosophies have guided interventions for schools. Prosocial education, based on an interdisciplinary perspective, refers to "programs and practices designed to promote prosocial behavior, including moral reasoning, social skills, civic engagement, social-emotional learning, and character" (Kidron & Osher, 2012, p. 51). On the other hand, Positive Behavioral Interventions and Support (PBIS), rooted in applied behavior analysis, is a proactive and system-wide approach to increase the occurrence of desirable behavior (e.g., academic performance) and decrease occurrences of problem behavior (e.g., bullying).

Additionally, positive education, derived from positive psychology, is defined as "education for both traditional skills and happiness" (Selgiman, Ernst, Gillham, Reivich, & Linkins, 2009, p. 239). Although similarly positive and promotion-based, these approaches differ with regard to a primary aim: promotion of prosocial behavior (prosocial education and positive behavior intervention support) versus enhancement of a person factor: happiness (positive education).

The intervention approaches reviewed below reflect some of the applications of prosocial education, positive behavior intervention support, and positive education. These approaches differ with regard to a relative focus on person, behavior, or environment. Character education programs are person-focused interventions to enhance positive youth

development outcomes and/or character strengths. Prosocial and bullying-prevention interventions use behavior and environment-focused strategies.

Character Education

Both indirect and direct methods have been used to teach character education. The indirect approach aims to empower students through active engagement, whereas traditional direct education uses lectures and books. Both approaches can be used to promote the *Eleven Principles of Effective Character Education* (2002):

> 1) promote core ethical values as the basis of good character, 2) define character comprehensively to include thinking, feeling, and behavior, 3) use a comprehensive, intentional, proactive, and effective approach to character education, 4) create a caring school community, 5) provide students with opportunities for moral action, 6) include a meaningful, challenging academic curriculum that respects all learners, develops their character, and helps them to succeed, 7) strive to foster students' self-motivation, 8) engage the school staff as a learning and moral community that shares responsibility for character education, 9) foster shared moral leadership and long-range support of the character education initiative, 10) engage families and community members as partners in character building, and 11) evaluate the character of the school, the school staff's functioning as character educators, and the extent to which students manifest good character (Vincent & Grove, 2012, p. 128).

A recent review of interventions to build character strengths suggests the following intervention components for maximizing intervention outcomes: 1) include

goal setting, 2) meet psychological needs for autonomy, relatedness, and competence, and 3) garner support from stakeholders (e.g., teachers and peers) to support character strengths (Guinlan, Swain, & Vella-Brodrick, 2012). “Despite growing interest in character education curricula and wellness promotion programmes, empirical validation of their effectiveness is scant” (Park & Peterson, 2006, p. 904).

Bullying-Prevention Interventions

American schools have repeatedly turned to anti-bullying interventions in an attempt to curb the phenomenon. However, such interventions have a poor history of effectiveness, especially over the long term (Swearer et al., 2010). Current intervention programs to reduce bullying, many of which use top-down control and punitive consequences, are not meeting the needs of students in schools (Swearer et al., 2010). Even the “blue ribbon” Olweus Bullying Prevention Program (OBPP) program has demonstrated mixed results when implemented in American schools (Bauer et al., 2007).

OBPP uses punitive consequences to reduce bullying: “serious individual talk with the student, making the student sit outside the principal’s office during some break periods; making the student spend one or more hours in another class, perhaps with younger students; making the student stay close to the supervising teacher during a number of recesses; sending the student for a serious talk with the principal; depriving the student of some privilege” (Olweus, 1993, p. 87).

However, punitive approaches to changing behavior (e.g., bullying) have a number of serious disadvantages over both the short and long term (Sidman, 1989). Although a meta-analysis identified “disciplinary methods” as an effective bullying-prevention component to reduce victimization (Ttofi & Farrington, 2010), Ttofi and

Farrington (2012) recommend both punitive and non-punitive approaches to address bullying. A positive approach that focuses on prosocial behavior is notably lacking.

Colvin, Tobin, Beard, Hagan, and Sprague (1998) provide specific criteria for educators selecting a bullying-prevention program. Specifically, they advise the intervention should be: 1) supported by research, 2) based on behavioral principles, and 3) emphasize the teaching of prosocial behavior to replace bullying. However, a systematic review conducted by Vreeman and Carroll (2007) revealed 26 interventions that used five different approaches for school-based intervention to reduce bullying: 1), curricular, 2) whole-school, 3) social-skills training, 4) mentoring, and 5) social-worker support. However, none of the approaches discussed above followed the specific criteria recommended by Colvin et al. (1998).

Positive Behavioral Interventions and Supports (PBIS) targets multiple behavioral outcomes in addition to bullying, using principles from applied behavior analysis and humanism in order to increase inclusion and desired behaviors (including academic efforts), and reduce numerous problem behaviors (Carr et al., 2002). The PBIS whole-school approach involves the following elements: a) outcomes (e.g., academic performance, social competence) defined and 'valued' by key stakeholders (e.g., students, families, school personnel), b) behavioral-science and biomedical-science principles that provide foundational support to schools, c) empirically-validated practices for achieving these outcomes in real-world contexts, and d) implementation of validated practices into existing systems for sustainable and generalized effects (Sugai & Horner, 2002).

The PBIS approach has demonstrated effectiveness and sustainability for bullying

reduction in elementary schools (Bradshaw, Reinke, Brown, Bevans, & Leaf, 2008). This intervention includes a system-wide approach to model and reward appropriate behavior, including a curriculum that teaches students about the school-wide expectations and provides opportunities for students to develop social skills for optimal personal and interpersonal functioning. In fact, many school psychologists consider a school-wide PBIS plan as the most effective anti-bullying strategy (Sherer & Nickerson, 2010).

Although PBIS might be *perceived* as the most effective strategy, empirical evidence suggests more effective approaches are needed. In particular, researchers have noted Tier 1 whole-school interventions are relatively ineffective at reducing bullying (Richard, Schnieder, & Mallet, 2011), suggesting the need for an innovative whole-scale (i.e., Tier 1) approach for bullying prevention. Moreover, it seems an effective bullying-prevention approach would include the successful intervention components of PBIS.

Scholars (e.g., Kidron & Osher, 2012) argue silo-like interventions have produced less than ideal results. For example, the following interventions reflect the prevalent prevention-focused paradigm of targeting one behavior in schools: The Creating a Safe School program for relational aggression (Nixon & Wener, 2010), OBPP for bullying reduction (Olweus, 1993), and a curriculum for cyber bullying (violencepreventionworks.org).

Although interventions targeting an individual behavior may be effective, limited resources and time prevent stakeholders from adopting an intervention for every desirable behavior (e.g., studying, reading, writing, sharing, practicing a sport) and undesirable behavior (e.g., bullying, relational violence, sexual misconduct, teasing) occurring in a

school setting. Therefore, Hamby and Grych (2013) discuss the importance of integrating prevention efforts for related behaviors. In addition to the prevention of related undesirable behaviors, the promotion of desirable person-related factors is essential, given the literature linking character strengths to well-being.

Promoting Character Strengths to Prevent Bullying

A nine-week positive-psychology curriculum was delivered by classroom teachers to develop individual strengths for students with intervention goals to develop the following qualities: 1) empathy, 2) altruism, 3) optimism, 4) team spirit, 5) amiability, 6) fairness, 7) social acceptance, and 8) patience (Richards, Rivers, & Akhurst, 2008). Although significant reductions in bullying occurred, the change was minimal - a 8.6% increase in the number of students who reported not being bullied from post-test compared to pre-test.

1.7 – The Actively Caring for People (AC4P) Approach

The Actively Caring for People (AC4P) approach applies principles of behavioral and psychological science to increase the quality and quantity of AC4P behavior (Geller, 2013). The AC4P concept and evidence-based principles have been applied as the foundation of interventions to: a) prevent workplace injuries (e.g., Geller, Bolduc, Foy, & Dean, 2012), b) prevent alcohol abuse among college students (Smith & Geller, 2013), c) increase interpersonal recognition on a university campus (Teie, Foy, McCarty, Reichling, & Price, 2011), d) support interpersonal compassion and healing in the aftermath of tragic school shootings (Teie, McCarty, & Cea, 2013), and e) increase prosocial behavior and reduce bullying in elementary schools (McCarty & Geller, 2013).

Elementary School Application

The initial AC4P approach for 199 fourth, fifth, and sixth graders aimed to increase the frequency of prosocial behavior by implementing individual and group "if-then" contingencies. Specifically, students were told to document on story cards the prosocial behaviors performed by classmates. Each day, the teacher read three stories to the class, highlighting one story as the AC4P story of the day and recognizing two heroes from the story (i.e., the prosocial performer and the observer) with an AC4P wristband to wear for the day. Once every student had worn the wristband twice, once for performing kindness and once for reporting AC4P behavior on a story card, every student in the classroom received a wristband to keep.

After the five-week intervention, the significant reductions in bullying perpetration, victimization, and observations of bullying occurred. Specifically, theses decreases occurred for students labeled as: victims only (24.1% to 14.4%), bully-victims (7.5% to 4.6%), and bullies only (9% to 1%). A follow-up study at a different elementary school showed significant reductions in bullying among students in Grades 3 to 6, and an increase in a single-item measure of self-esteem (McCarty & Geller, 2013).

Middle School Application

The AC4P application in middle schools for this study differs from other approaches, because the intervention components addresses behavior, person, and environment domains. Specifically, it: 1) established prosocial behavioral expectations and norms by altering the prompts in the classroom (environment), 2) provided rewards for prosocial behavior and prosocial recognition, and 3) taught relevant character strengths for prosocial development.

A pilot evaluation of this AC4P intervention occurred during the 2013 Spring

semester. In an effort to address bullying and prosocial behavior at multiple levels of the social-ecological model, community members (i.e., educated/trained undergraduate students) delivered an AC4P intervention for middle-school students. These undergraduate research assistants (referred to as "AC4P coaches") were trained in the psychological science of AC4P with 90-minute group education/training sessions each week for six weeks.

Then, 30 AC4P coaches were introduced to the AC4P Movement and growth mindset concept (Dweck, 2007) at two schools (32 classrooms), followed by character-strength lessons on: a) kindness and recognition, b) moral courage, and c) gratitude. The following two-weeks addressed cohesion, including belongingness and concluded with a team celebration. In addition to the teaching and developing of character strengths, behavior-focused components were essential intervention components. The intervention was implemented in order to assess the feasibility of the intervention process and related procedures from data collection to coaching.

Effective behavior-based interventions use evidence-based techniques at the individual and group levels to increase desirable behavior and reduce undesirable behavior through communication/education and consequence management (Geller et al., 1990). The AC4P middle-school approach for this study used 11 of the 23 strategies outlined by Geller et al. (1990). Communicative and educational strategies include a *demonstration* of how to perform AC4P behavior and recognize AC4P behavior throughout various lessons (i.e., *lecture*). Students were not passive recipients of an intervention, but rather *intervention agents* that modeled AC4P behavior and wrote AC4P stories reflecting their observations of AC4P behavior as supportive feedback for their

peers.

Additionally, AC4P coaches used *oral activators* and students saw *written activators* on AC4P shoeboxes that prompted them to write AC4P stories as active bystanders. Moreover, *incentives* and *rewards* were used to motivate story writing. Students were informed of two individual contingencies: 1) If you write an AC4P story on a See, Act, Write (S.A.W.) card after observing a fellow classmate perform AC4P behavior, then a coach may select your story and recognize you with an AC4P wristband to pass on to the kind receiver, and 2) If you write an AC4P story on a Hear, Act, Write (H.A.W.) card after hearing a S.A.W. author share his/her observation with you, then a coach may select your story and recognize you with an AC4P wristband to pass to the S.A.W. writer. Interpersonal recognition (i.e., praise) can facilitate perceptions of competence (e.g., Swann & Pittman, 1977) and self-motivation for students (Cameron & Pierce, 1994). Additionally, the use of person-based feedback increased the time a child spent helping a peer (Dunsmore & Neal, 2012). As a result, person-focused (e.g., you're an AC4P person) and behavior-focused feedback (e.g., "thanks for writing that AC4P story) were critical components for prosocial recognition.

To increase story writing and facilitate ownership, a *team goal* of earning a certain number of points was collectively decided upon by the students. They were informed of a group contingency: If the class reaches their point goal for the week, then the AC4P coach will perform a prosocial behavior once throughout the next seven days (e.g., compliment a stranger). If students exceed the point goal by 10-19, each coach (up to two per classroom) will perform a more challenging AC4P action (e.g., have a conversation with a stranger and ask about his/her day). If students exceed the point goal

by 20+, then AC4P coaches each perform the most challenging AC4P behavior (e.g., sitting with someone who is sitting by him/herself at lunch). These three different levels of AC4P behavior were used to teach "quality" prosocial behavior rather than quantity. This mutually-rewarding process aimed to: a) develop a student perception of active participation and choice, b) facilitate a positive relationship between students and coaches, and c) hold coaches accountable for performing prosocial behavior.

Additionally, students were informed of a *team incentive*: If every student received an AC4P wristband for writing an AC4P story during the five weeks, everyone in the class will receive an AC4P wristband (i.e., *group reward*) to keep or pass on (at school or beyond). Throughout the process, AC4P coaches provided *group feedback* on their achievement or short-fall of the AC4P goal. However, shortcomings were not presented as failures, but rather as an opportunity to adjust the goal downward for success during the following week.

Students were introduced to the "AC4P triangle" that highlights three related prosocial behaviors: 1) performing prosocial behavior, 2) receiving prosocial behavior and then expressing gratitude, and 3) recognizing the prosocial behavior of peers. After the three behaviors are introduced, students are introduced to the concept of a prosocial growth mindset and explicitly told: In order to be more effective at actively caring, the following skills must be practiced with feedback: 1) acting with moral courage, 2) expressing gratitude, and 3) giving recognition.

This instructional scaffolding approach for character strengths involves the teaching of new character strengths each week that build on the lessons from previous weeks. The activities and challenges become progressively more difficult over time and

refers to the "AC4P triangle" in order to teach a character strength in context.

Two alterations were made to the physical environment within the intervention schools: a classroom wristband-tracking sheet and a classroom poster of the school logo with AC4P wristband. Every classroom displayed a chart of students' names and a checkbox (to be marked when s/he received an AC4P wristband from a coach for completing a story card). Figure 2 displays this AC4P wristband-tracking chart, which was hung in the respective classrooms to display the passing of the wristband from coach to S.A.W./ H.A.W. writer, and on to the performer (from S.A.W. writer) and the person sharing the AC4P story (from H.A.W. writer). Every participating classroom from both intervention schools displayed a poster with their school's logo and the AC4P wristband as displayed in Figure 3.

Implementation Science

Traditionally, the development of efficacious interventions has been the primary concern of applied psychologists with limited attention and research on the implementation process. Recently, researchers and practitioners have noted the ineffectiveness of efficacious interventions due to improper implementation practices and poor translation of procedures into unique school environments (Forman, Shapiro, Codding, Gonzales, Reddy, Rosenfield, Sanetti, & Stoiber, 2013). Thus, school psychologists identify the facilitating and inhibiting factors of interventions in education settings (Forman et al., 2013).

Durlak and DuPre (2008) found the following factors enable desired intervention outcomes:

a) "positive work climate; b) organizational openness to change and

incorporation of new programming; c) shared organizational vision; d) shared decision making; e) effective communication mechanisms; f) effective procedures and structures to accomplish work tasks; g) coordination with other local agencies who may be able to contribute resources to the implementation effort; h) effective leadership and administrative support; and i) the existence of a program champion" (Forman et al., 2013, p. 89).

Schools with limited resources cannot easily develop a positive work climate, cultivate buy-in from stakeholders, and develop internal processes and goals in an allotted time. As a result, undergraduate coaches from a local university served as change-agent implementers in lieu of school administration, staff, and teachers. This intervention delivery model is based on the Creating a Safe School (CASS) program, which educates and trains high-school students as change agents to deliver workshops to local middle schools in order to combat relational aggression (Nixon & Wener, 2010). Due to the frequent engagement and active participation between those delivering and receiving the intervention, change agents (i.e., coaches) likely influenced students' behavior and perceptions (i.e., intervention outcomes). Thus, the "mechanisms of change" was assessed by exploring the moderators of intervention outcomes (Bywater, 2012, p. 49).

For this study, the personal beliefs of intervention agents and perceptions of intervention recipients (i.e., students) could influence students' self-reported behavior and related perceptions. Individuals' implicit theory about intelligence (as incremental rather than entity) enhanced their own effort and persistence on

challenging tasks, leading to improved academic outcomes over time (see Dweck, 2007 for a review). Dunsmore and Neal (2012) adapted Dweck's theory from intelligence to prosociality in order to explore feedback type (i.e., process-based and person-based) and parent's beliefs about their child's prosocial behavior. Given the prosocial focus of this intervention and the extant literature demonstrating personal beliefs influence perception (e.g., Nisbett & Ross, 1980) and behavior (e.g., Bandura, 1986), coaches' beliefs about their student's prosocial behavior were assessed.

Students' perceptions of the coaches may affect intervention outcomes. Prior research has shown middle-school students' perception of their teachers as caring enhanced their own prosocial goal pursuit, responsibility goal pursuit, and academic effort (Wentzel, 1997). Additionally, African-American middle-school students' perceptions of prosocial behavior performed by a role model was negatively correlated with violence attitudes and violent behavior (Hurd, Zimmerman, & Reischl, 2010).

Intervention fidelity refers to a "confirmation that the manipulation of the independent variable occurred as planned" (Moncher & Prinz, 1991, p. 247 as cited Mowbray, Holter, Teague, & Bybee, 2003). Prior research has documented the differential rates of bullying for the OBPP based on implementation fidelity (Black, 2007). Thus, coaches self-reported their adherence to the curriculum. Weekly education training sessions, observation and feedback training sessions, and classroom self-reported adherence by coaches of curricula adherence may ensure intervention fidelity.

Classroom Climate

The term "school climate" has been used frequently to describe "atmosphere,

feelings, tone, or setting of the school (Cohen, McCabe, Michelli, & Pickeral, 2009, p. 182). Cohen et al. (2009) define school climate in relation to the norms, teaching and learning practices, and organizational structures. The Alliance for the Study of School Climate (2013) used discipline environment, student interactions, attitude and culture to operationally define classroom climate. Each of these sub-scales positively correlated with academic achievement (ASSC, 2013). Additionally, extensive research has linked a positive school climate to reductions in bullying behavior (American Psychological Association, 2013).

1.8 – Hypotheses

A series of hypotheses were tested to evaluate the AC4P intervention (n=29 classrooms) relative to the control group (n= 11 classrooms), on six outcome variables: 1) prosocial behavior received, 2) prosocial behavior performed, 3) aggressive victimization, 4) aggressive perpetration, 5) bullying victimization, 6) bullying perpetration. Figure 4 displays the conceptual relationships between the Level 1 and Level 2 predictors that could potentially influence the six outcome measures. Two models were run per outcome measure, resulting in 12 statistical analyses. The first model included students from all 40 classrooms, both intervention and control classrooms, on the following variables: gender, grade, and intervention/ control group. Follow-up analyses were performed on students in the intervention classrooms only (n=29) in order to assess specific moderators of the intervention.

The following hypotheses were tested:

Hypothesis 1: After controlling for the Baseline measure of prosocial behavior received, prosocial behavior received at post-test will be significantly higher in the

intervention group than control group. Grade and gender were also explored, but no specific hypotheses were tested.

A moderator analysis followed to explore the effect of the following variables on outcomes in the intervention classrooms: Classroom Climate, Intervention Fidelity, Entity Prosociality, and Role Model Perceptions.

Hypothesis 2: Prosocial behavior received at post-test in the intervention classrooms will be significantly higher at post-test in classrooms with a high positive Climate score, high Intervention Fidelity score, high Entity Prosociality score, and among students reporting a high Role Model Perceptions score.

Hypothesis 3: After controlling for the Baseline measure of prosocial behavior performed, prosocial behavior performed at post-test will be significantly higher in the Intervention than the Control group.

Hypothesis 4: Prosocial behavior performed at post-test in the intervention classrooms will be significantly higher at post-test in classrooms with a high positive Climate score, high Intervention Fidelity score, high Entity Prosociality score, and among students reporting a high Role Model Perceptions score.

Hypothesis 5: After controlling for the Baseline measure of aggressive victimization, aggressive victimization at post-test will be significantly lower in the Intervention than the Control group.

Hypothesis 6: Aggressive victimization at post-test in the intervention classrooms will be significantly lower at post-test in classrooms with a high positive Climate score, high Intervention Fidelity score, and among students reporting a high Role Model Perceptions score.

Hypothesis 7: After controlling for the Baseline measure of aggression performed, aggression performed at post-test will be significantly lower in the Intervention than the Control group.

Hypothesis 8: Aggression performed at post-test in the intervention classrooms will be significantly lower at post-test in classrooms with a high positive Climate score, high Intervention Fidelity score, and among students reporting a high Role Model Perceptions score.

Hypothesis 9: After controlling for the Baseline measure of bullying victimization, bullying victimization at post-test will be significantly lower in the Intervention than the Control group.

Hypothesis 10: Bullying victimization at post-test in the intervention classrooms will be significantly lower at post-test in classrooms with a high positive Climate score, high Intervention Fidelity score, and among students reporting a high Role Model Perceptions score.

Hypothesis 11: After controlling for the Baseline measure of bullying performed, bullying performed at post-test will be significantly lower in the Intervention than the Control group.

Hypothesis 12: Bullying performed at post-test in the intervention classrooms will be significantly lower at post-test in classrooms with a high positive Climate score, high Intervention Fidelity score, and among students reporting a high Role Model Perceptions score.

2.0 – Method

2.1 – Participants

Schools

Administration from an entire school district wanted to collaborate with university researchers and students from a neighboring university in Virginia in order to meet their needs for a whole-school intervention to prevent bullying and promote character with minimal time and effort on behalf of administrators, staff, and teachers. Research staff from the university presented an outline of the intervention plan to the principals of four local middle schools. Each principal provided written consent for his/her school to participate, with an understanding two schools would serve as intervention schools in Fall 2013 and two wait-list controls would receive the intervention in Spring 2014.

Teachers

During the 2012- 2013 academic school year, teachers from all four schools were introduced to the intervention and research protocol during their monthly staff meetings. All teachers (n=40) from the intervention classrooms (n= 29 classrooms) and control classrooms (n=11) were provided consent forms (see Appendix A) for their optional participation.

Coaches

Undergraduate research assistants (RAs) were certified by Virginia Tech's Institutional Review Board to deal appropriately with human subjects. The RAs were trained to: a) provide surveys to students in school, or b) serve as coaches with a responsibility of participating in 14 1.5 hour meetings for education/ training sessions on the curriculum they would deliver for middle-school students. Additionally, some coaches completed a post-test survey on their own perceptions at the last weekly meeting before concluding their semester as a coach.

Students

The Intervention group consisted of sixth and seventh-grade students from Schools A and B. School A included 53 sixth-grade students, and School B consisted of 55 sixth-grade students and 101 seventh-grade students. Schools C and D served as a Control group, School C included 80 sixth-grade students and 102 seventh-grade students. Only 12 sixth-graders from School D met the final criteria for inclusion in the sample. Parents were provided a two-page letter explaining the intervention process and then a choice for their child to participate in the assessment component (see Appendix B). Parents provided consent for their child's participation in assessment regardless of their standing in the Intervention or Control group. For student surveys, RAs entered a classroom and informed the students of their choice, anonymity and confidentiality of the survey process and responses (see Appendix C).

2.2 – Measures

The 2 (Promotion vs. Prevention) x 3 (Behavior, Person, and Environment) intervention framework guided measurement and evaluation of intervention impact. Students were provided a pre-test and post-test survey on behavioral factors to promote (i.e., prosocial behaviors) as well as behaviors (i.e., aggression and bullying) to prevent. This student survey is provided in Appendix D. Coaches completed a survey at the conclusion of the intervention period (see Appendix E). An overview of the following measures for students and coaches are shown in Table 1.

Demographics

Students reported their teacher's name, lunch code number for subject code matching, grade level, gender, and school.

Aggressive/Bullying Victimization

The California Bullying Victimization scale (CBVS) assesses bullying victimization without using the term bullying. Specifically, it assesses the frequency of six aggressive behaviors, each with a five-point scale (0= *never*, 1= *once in the past month*, 2= *2 or 3 times in the past month*, 3= *about once a week*, and 4= *several times a week*) to measure two forms of victimization: aggression and bullying (Felix, Sharkey, Green, Furlong, & Tanigawa, 2011).

A perceived imbalance of power was assessed by asking the victim to consider "*the main person or leader who did these things to you in the past month.*" Students rated the perception of power on a three-point scale (*less than me, same as me, more than me)* on three dimensions *(popularity, intelligence,* and *physical strength).* If students reported any imbalance of power (i.e., more than me) for any of the three dimensions and repeated victimization (2 or more times per month), the behavior was labeled as "bullying." If these criteria were not met, the teasing, exclusive, and hurtful behaviors were deemed aggression. The summed scores ranged from 0 to 24 behaviors received. This scale had a Cronbach's alpha of .85 at both pre-test and post-test.

Aggressive/Bullying Perpetration

Felix et al. (2013) adapted the CBVS for aggressive/bullying perpetration using the same behavioral and modifiers as the measure. The six questions were prefaced with "*how often have you*" performed these specific aggressive behaviors in the last month. A reliability coefficient cannot be provided because the pilot study for the scale has not been completed. The summed scores range from 0 to 24 behaviors performed. The aggressive perpetration scale yielded an internal consistency of .69 and .70 at pre-test and

post-test, respectively.

Prosocial Performed and Received

The prosocial behavior scale was based on six prosocial behaviors, four defined by Ramaswamy and Bergin (2009), prosocial recognition, and prosocial defending (Salmivalli et al., 1996). Comforting (i.e., tried to make a sad person happier), sharing (i.e., shared things you like with another student), including (i.e., included another student into your group), helping (i.e., helped students with their homework), prosocial recognition (i.e., thanked another student for a kind act), and prosocial defending (i.e., I defended someone who was being called mean names).

Prosocial behavior was assessed on the same five-point scale as the CBVS with items reflecting, recognition, inclusion, sharing, and defending behavior. The comforting, sharing, and helping items were derived from the prosocial behaviour scale (Caprara & Pastorelli, 1993). For this study, the prosocial performed scale resulted in the same Cronbach's alpha of .90 at pre-test and post-test. The prosocial received scale yielded .90 and .81 for internal consistency at pre-test and post-test, respectively.

Social Validity

Students completed three measures of social validity at post-test. Three components of social validity were assessed, including student's subjective evaluation of: a) intervention goals, b) procedures, and c) outcomes. It is important to teach students how to care for others; I want the AC4P coaches to continue AC4P lesson plans?; I learned how to actively care better from my coaches. These items used a 6-point rating scale with anchors from *strongly disagree* to *strongly agree*. Statistical analyses were not performed on these data. However, the mean scores were reported in order to describe

students' perceptions of the intervention.

Student's Seriousness of Survey

Students were asked to assess their own responses by choosing "yes" or "no" to: I am taking this survey seriously.

Intervention/ Control Variable

The following intervention-related variables were used to assess the main effects and interaction terms associated with intervention efficacy. To test for intervention effects, a dummy code was created with 0 for Control classrooms and 1 for the Intervention group.

Role Model Perceptions

The prosocial subscale of the role model behavior scale (Hurd, Zimmerman, & Reischl, 2010) assessed a respondent's perception of a role model as prosocial. Response options and coding are: 1= never, 2= rarely, 3= sometimes, 4= often. This modified scale used "AC4P coaches" rather than "role model". The scale included the following three items: How often do your AC4P coaches treat other people with respect? **How** often do your AC4P coaches help other people?; How often do your AC4P coaches take action to make the community better? The Cronbach's alpha for this study was .73.

Students' perceptions of coaches as a role model were individual-level variables that could be aggregated to the classroom level (L2). However, the intra-class correlations (ICCs) using a one-way random effect models ranged from -.5. to .86 with only four of 12 ICCs resulting in statistical significance. The average sample size per class was small (n= 6.76), which may have influenced the range for the sample-size dependent ICC statistic. A follow-up correlation (r=.762) confirmed this positive and

linear relationship between classroom sample size and ICC. Thus, the variables were treated as a Level-1 moderator rather than a Level-2 moderator, due to the lack of agreement between student raters.

Additionally, this variable was extremely negatively skewed, which was not an issue for binary logistic regression models, but required dichotomization for the linear regression models. A total of 157 students (77%) provided a mean score of 4 across three items for the coaches; these were coded as "1" and the 23% (n=45) with a mean less than 4 were coded as "0" for the role model variable.

Coaches' Entity Theory of Students' Prosocial Behavior

The parental lay theory of child's prosocial behavior scale (Dunsmore et al., in press) was adapted from parental perceptions to coaches' perceptions. This scale assessed coaches' perceptions of their own influence on students' prosocial behavior, which included the following items: 1) My students' prosocial behavior is something I cannot really change; 2) Students' prosocial behavior tends to stay the way it is no matter what people do; 3) My actions don't have any effect on my students' prosocial behavior; 4) Anyone can change their students' prosocial behavior. The 6-point scales ranged from strongly disagree (1) to strongly agree (6). The Cronbach's Alpha from the study was .66. The score was the average of the two individual scores from each coach pair (in 38% of classrooms). For 62% of intervention classrooms, only one coach reported his/her individual score. In these cases, only this coach's score was used rather than the mean score from the coach pair.

Classroom Climate

The Classroom Climate Quality Analytic Assessment Instrument (CCAI-S-G;

Alliance for the Study of School Climate, 2013a) assessed teachers' or parents' perceptions of the classroom climate. The 9-item student interactions sub-scale has high internal consistency ($\alpha = .83$) (ASSC, 2013). A composite score of classroom climate sub-scales was calculated from coaches reported perceptions. These constructs use an analytic-type measure, with five response choices from high to low, with descriptors at the high, middle and low as well as high-middle and middle-low choices.

Cohen's Kappa was computed to assess the inter-rater reliability of the classroom climate measure. Eleven pairs of coaches independently completed this measure. Kappa statistics ranged markedly by classroom from -.11 to .72, resulting in a poor overall agreement statistic (i.e., average score of .22). In classrooms without both coaches reporting, the score from the single coach was used.

Fidelity of Intervention

Pairs of coaches completed a fidelity checklist to measure their own intervention adherence (*0= did not complete, 1= completed*) on each of the 11 curriculum components for four weeks (see Appendix G). After presenting a lesson, each coach self-reported his/her adherence to the curriculum. In order to assess agreement among coaches delivering a particular lesson, Cohen's Kappa was computed for each lesson, using 50% as the chance agreement probability. An overall mean fidelity score per classroom was calculated with the following formula: total frequency of agreement across all lessons / frequency of lessons delivered. Overall, agreement was high (κ=.825) for the fidelity checklists across all coaches and lessons. The average score across all lessons and coaches was 10.04, with a standard deviation of .99.

2.3 – Procedure

Principals, teachers, middle-school (MS) students, and coaches were the four critical groups of stakeholders involved in the AC4P procedures.

Staff Education Session

Principals and teachers received a 30-minute education session. This presentation covered the background of AC4P, an overview of the AC4P application for middle schools (MS), and the relevant research protocol.

Coaches

In three 60-minute periods, coaches (i.e., undergraduate research assistants) were educated on the background of AC4P and the MS application, the principles underlying this AC4P intervention (e.g., supportive behavior-based feedback, resource control theory, self-motivation), and a teacher's "toolbox" with tips for teaching MS students. For two 90-minute meetings each week, coaches learned one of the five lessons plans they were teaching to MS students and received training with behavior-based feedback from more experienced coaches to improve their delivery.

Curriculum for MS Students

Each week for five consecutive weeks, coaches delivered a 22-minute lesson to MS students. The AC4P curriculum introduced the AC4P Movement, recognition, courage, gratitude, and belongingness (see Figure 5). Following the Week 1 introduction, the coaches followed a specific format for all four lesson plans: 1) read all the S.A.W. and H.A.W. cards from the week (see Figure 6), 2) randomly select six S.A.W./ H.A.W. cards to read, 3) recognize with AC4P wristbands the observers who documented their observations on cards, 4) instruct the wristband recipients to pass on their wristbands to the kindness performer (for S.A.W. cards) and the student who told the observer about

the kind act (for H.A.W. cards) before the end of the school day, 5) remind the students of the MS student and coach challenge ("For every ten classroom points you earn each week through AC4P actions, I will perform an AC4P act before I return here next week"), 6) count the one point and four points obtained per S.AW. and H.A.W. card, respectively, for a classroom point total, 7) commit publicly to meet the MS students' challenge by performing the corresponding AC4P behaviors for the upcoming week (ten classroom points from MS students = one AC4P action from a coach), 8) present the particular character-strength definition, 9) share stories of character strengths in action - AC4P actions performed by the coach during the previous week as part of the challenge, 10) relate the current week's character strength to previously covered character strengths, and 11) use a participative activity to affect their thinking and social behaviors. These activities aimed to involve students as performers, receivers, and bystanders, thereby enhancing their behavioral skill sets related to performing and receiving prosocial behavior. The activities and accompanying script for coaches reflect these objectives (see Appendix H).

Intervention Process

All four middle schools received a piloted version of the AC4P approach during the 2012-2013 academic school year. For 2013-2014, only students who did not participate last year (i.e., incoming sixth-grade students from four schools and seventh-grade students from two schools). The lesson plans were presented from November 2013 to December 2013.

2.4 – Statistical Analysis

Hierarchical linear modeling (HLM) was proposed to assess mixed-level models

on numerous outcomes variables using HLM7 by Scientific Software International (Raudenbush, Bryk, Cheong, Congdon, & du Toit, 2011). A multi-level regression and multi-level logistic regression accounts for students (Level 1) nested in classrooms (Level 2) with normal and binary outcome measures, respectively. However, the variance components for all six outcomes were not statistically significant ($p > .05$). Thus, a two-level model was not warranted. SPSS 21.0 was used to conduct the linear regression models for the two prosocial behavior measures and binary logistic regression models for the other four aggression/bullying measures.

Missing Data and Exclusion Criteria

Missing data resulted in listwise deletion if the Gender or Teacher variables were not completed. An expectation-maximization (EM) algorithm was used for imputing outcome measures. Missing data were imputed using multiple imputations, which is a more robust procedure than listwise deletion, mean imputation, or regression imputation methods (Schafer, 1997). Missing values accounted for less than 4.72% of the total responses on a given outcome measure. Participants with missing data scored higher than non-missing respondents on aggressive victimization, t (804) = 14.7, $p < .001$.

Students' lunch code IDs were used to track students from pre to post-test. A total of 550 cases from both pre and post-test conditions did not have matching subject codes, and therefore were excluded during the analyses. Fifty-five students were removed for missing categorical data: Gender (n=12) and Teacher (n=33) which were needed to link students to specific classrooms. Additionally, four students admitted via self-report to "not taking the survey seriously." In total, 806 cases out of the original 1371 were available for analyses, resulting in 59% of the original dataset. Each case consisted of

either a pre or post-test assessment for a participant. In order to control for the Baseline measure when predicting the post-test outcome variable, the dataset was restructured from two cases per measurement (e.g., Person A at Pre-test and Person A at Post-test) to one case with both measurements (e.g., Person A with Pre and Post-test scores), resulting in 403 total participants/ cases.

Power Analysis

A power analysis with 403 cases, a 1.3 odds ratio, .05 alpha level, predicted r-square of .20, with a binomial distribution for predictor produced a power of .16 using G-power (Faul, Erdfelder, Buchner, & Lang, 2009).

Bonferroni Correction

An overall family-wise error level of .20 was used to adjust the alpha level up to reduce the underpowered nature of the study from .16 to .6. Then, a Bonferroni correction was used to adjust the alpha level down to .017 for each of the 12 significance tests.

3.0 – Results

Table 2 displays the inter-correlations between all of the variables: grade, gender, prosocial behavior received, prosocial behavior performed, aggressive victimization, aggression performed, bullying victimization, and bullying performed, intervention, intervention fidelity, classroom climate, entity prosocial mindset, and role model perceptions. A few of the correlations are notable. Specifically, both performing and receiving behaviors are positively correlated at pre-test and post-test for prosocial behavior received and performed (r= .403, .746), as well as aggressive victimization and aggression performed (r= .176, .443). Bullying performed and bullying victimization

were significantly correlated at post-test (r= .138), but not pre-test (r= .034).

3.1 – Descriptive Statistics

Table 3 shows the mean scores and standard deviations for both performing and receiving prosocial, aggressive, and bullying behaviors. The baseline and post-test differences in mean scores appear relatively insignificant for both control and intervention conditions. Linear regression and binary logistic regression were used to assess the predictors and moderators of intervention outcomes. These models and results are discussed in depth in a later section.

3.2 – Non-Normality of Outcome Variables

According to the Shapiro-Wilk tests of normality, all six outcome variables (at both baseline and post-test) were not normally distributed: prosocial behavior performed at baseline, $t(403) = .910$, $p < .001$ (see Figure 7a); prosocial behavior performed at post-test, $t(403) = .924$, $p < .001$ (see Figure 7b); aggressive victimization at baseline, $t(403) = .717$, $p < .001$ (see Figure 8a); aggressive victimization at post-test, $t(403) = .716$, $p < .001$ (see Figure 8b); aggressive behavior performed at baseline, $t(403) = .528$, $p < .001$ (see Figure 9a); aggressive behavior performed at post-test, $t(403) = .495$, $p < .001$ (see Figure 9b); prosocial behavior received at baseline, $t(403) = .966$, $p < .001$ (see Figure 10a); prosocial behavior received at post-test, $t(403) = .974$, $p < .001$ (see Figure 10b); bullying victimization at baseline, $t(403) = .519$, $p < .001$ (see Figure 11a); bullying victimization at post-test, $t(403) = .177$, $p < .001$ (see Figure 11b); bullying performed at baseline, $t(403) = .529$, $p < .001$ (see Figure 12a); bullying performed at post-test, $t(403) = .274$, $p < .001$ (see Figure 12b).

The prosocial variables were negatively skewed, especially prosocial performed

which resulted in 8.4% of the total sample selecting the highest values for all of the items. Following the recommendations of Tabachnick and Fidell (2007), a square-root transformation and logarithmic transformation were conducted on both variables. However, this did not result in reduced skewedness ($p < .001$ remained for Shapiro-Wilk test). As a result, the original prosocial variables were used for the analyses.

All of the aggression and bullying variables were positively skewed. In fact, nearly 40% of the participants reported receiving zero aggressive behaviors. Additionally, 67% of students reported performing zero aggressive acts at baseline. Only 30% of students reported involvement in bullying incidents as victims and even less reported bullying others (~11%). Due to the non-normality of the data, a square root transformation was performed on the four outcomes for aggression and bullying. However, inconsistent with previous research (e.g., Nocentini, Menesini, & Salmivalli, 2013), the transformation did not improve the skewed distribution significantly.

3.3 – Group Membership

Four aggression/bullying variables were dichotomized to produce eight groups: victims and non-victims, non-aggressors and aggressors, non-victims of bullying and victims of bullying, non-bullies and bullies. Specifically, if an individual reported any level of victimization ($X>0$), s/he was categorized as a "victim", while individuals who reported zero acts ($X=0$) were categorized as "non-victims". "Aggressors" were individuals who reported performing at least one aggressive act ($X>0$), while "non-aggressors" reported zero ($X=0$). "Victims of bullying" reported at least two aggressive acts ($X>2$) and perceived less power on any of the three power dimensions (i.e., popularity, intelligence, physical strength) with the "main person" who performed these

behaviors towards him/her. “Non-victims of bullying” did not meet the previous criteria for victims of bullying. That is, “bullies” performed at least two aggressive acts and perceived more power than the “main person” to whom they performed aggressive acts. “Non-bullies” did not meet these criteria. Tables 4 and 5 show the changes in group membership from Baseline to Post-test.

3.4 – Assessing Intra-Class Correlations

An unconditional (one-way analysis of variance) model was run using HLM7 for each of the six outcomes to assess whether there was adequate between-classroom variance, as measured by the intra-class correlation (i.e., ICC > .05), to warrant hierarchical modeling. The final estimation of the variance components for prosocial behavior received at post-test produced .161 for the Level 2 variance component (systematic variance) and 38.51 for the Level 1 variance component (error), resulting in an ICC of .004; thus, the average correlation for students’ prosocial behavior received within the same classroom was .004 (χ^2= 46.07, p = .17). Prosocial performed at post-test produced a variance component of .020 and 49.36, resulting in an ICC of .0004 (χ^2= 37.52, p > .50). Four more variance components were estimated for the binary aggression/bullying measures. All four variance components test for the binary outcome measures produced non-significant values: non-victim (χ^2= 34.89, p > .50), aggressor (χ^2= 37.22, p > .50), non-victim of bullying (χ^2= 31.62, p > .50), and bully (χ^2= 32.68, p > .50). Statistical research has shown that estimates of variance components are biased downwards when the number of participants per cluster (e.g., students per classrooms) is between five and ten (Austin, 2010); in this study, the average number of students volunteering to complete surveys per classroom was 6.76. Additionally, even a study of

5th, 8th, and 11th grade students from 78 schools in Colorado reported ICCs barely above the .05 threshold (i.e., ICC = .06 and .08 for bullying performed) (Gendron, Williams, & Guerra, 2011). It should be noted that the ICCs used between-school, rather than between-classroom clusters. The non-significant results for the six outcome measures altered the analytical plan from multi-level modeling to a regression framework.

3.5 – Regression Models

A three-step regression model was used to test the six hypotheses relating to the impact of the Intervention/Control condition on the outcome variables. First, the outcome variable at pre-test was entered for Model 1. Model 2 included the pre-test outcome measure, Gender, and Grade. Model 3 included the previous three variables (from Model 2) and Intervention/Control variable to assess the impact of the intervention. Then, two follow-up models were run with participants from intervention classrooms only (n=209). Model 4 was considered a baseline model with the pre-test outcome measure, Gender and Grade, entered as predictors. Model 5 included the previous variables and four intervention moderators: Intervention Fidelity, Classroom Climate, Entity Mindset, Role Model Perceptions.

Linear Regression

Table 6 shows the results for the five models predicting prosocial behavior received at post-test with the unstandardized regression coefficients, standard errors, and standardized beta coefficients. Additionally, the adjusted R-square value for each model is provided.

As shown in Table 6, the variables in Model 1 significantly predicted prosocial behavior received at post-test, $F(1,391) = 35.86$, $p < .001$. More specifically, prosocial

received at pre-test significantly predicted prosocial received at post-test, $\beta = .29$, $t(391) = 5.99$, $p < .001$. Model 2 provided significant explanatory variance in the criterion, above Model 1, adjusted R^2 change = .042, $F(3,389) = 19.49$, $p < .001$. In Model 2, prosocial received at post-test was regressed on prosocial received at pre-test, $\beta = .26$, $t(391) = 5.37$, $p < .001$, Gender, $\beta = -.22$, $t(391) = -4.54$, $p < .001$, and Grade, $\beta = .01$, $t(391) = .21$, $p = .83$. In general, individuals reporting more prosocial behavior received at pre-test also reported receiving more prosocial behavior at post-test than average. Males ($M = 11.83$, $SD = 6.29$) reported receiving significantly less prosocial behavior at post-test, compared to Females ($M = 15.03$, $SD = 5.79$). In comparison to Model 2, Model 3 did not explain additional variance, adjusted R^2 change = .00, $p = .36$. Additionally, the Intervention/Control variable was not a significant predictor, $\beta = .04$, $t(388) = .93$, $p = .36$. Therefore, Hypothesis 1 was not supported.

Model 4 was significant, $F(3,124) = 24.19$, $p < .001$, however, the variables in Model 5 did not explain additional variance, adjusted R^2 change = .008, $p = .24$. It should be noted the Classroom Climate measure approached significance, $\beta = .17$, $t(120) = 2.27$, $p = .03$. A significant result would have indicated more prosocial behaviors received at post-test in intervention classrooms with a high Classroom Climate score. However, Hypothesis 2 was not supported.

As shown in Table 7, the variables in Model 1 significantly predicted prosocial behavior performed at post-test, $F(1,391) = 257.43$, $p < .001$. More specifically, prosocial behavior performed at pre-test significantly predicted prosocial behavior performed at post-test, $\beta = .63$, $t(391) = 16.05$, $p < .001$. Results from Models 2 and 3 showed no significant change from Model 1 to 2, adjusted R^2 change = -.003, $p = .99$, and Model 2

to 3, adjusted R^2 change = .00, p = .81. In Model 3, the Intervention/ Control variable was not significant, β = .01, t(388) = .24, p = .81. Therefore, Hypothesis 3 was not supported.

Model 4 was significant, F(3,124) = 39.90, p < .001, however, the variables in Model 5 did not explain additional variance, adjusted R^2 change = -.005, p = .24. Thus, Hypothesis 4 was not supported.

Logistic Regression

The Cox and Snell R square statistic provides a pseudo R-square value, but this value should be interpreted with caution since it's a pseudo version of the R-square in OLS regression; this was used to assess the variance explained in the criterion from the predictors identified in the model. The chi-square statistic from the omnibus tests of model coefficients assesses the change in pseudo r-square between the current model and previous model. Significant chi-square values indicate significant explanatory power in the criterion from the new model, above the previous model.

Beyond overall models, each predictor has a beta coefficient, standard error, wald chi-square statistic, degree of freedom, significance level, and odds ratio. The beta coefficients reflect the change in predicted log-odds units for every one unit increase in the predictor, after holding constant the other predictors. A positive value is associated with a higher likelihood of group membership in the primary group (coded 1), while a negative value is associated with a lower likelihood of membership in the primary group. The odds ratio reflects the likelihood of group membership into the primary group (coded 1); if the odds ratios is below 1, the predictor is associated with membership in the secondary group (coded 0); if the odds ratio is equal to 1, the predictor has no association

to either group; if the odds ratio is greater than 1, the predictor is associated with primary membership (coded 1).

The results for the five models with four binary outcome variables are displayed in Table 8 with the beta coefficients, odds ratio, and pseudo R-square value for the overall model. As shown in the table, Model 1 predicted group membership for all four outcome variables. Models 2 and 3, which included Gender, Grade, and Intervention/ Control variables, did not explain the likelihood of group membership above Model 1. Additionally, the Intervention/Control variable in Model 3 was not significant for any of the four outcome measures.

For membership as a victim of aggression, the chi-square statistic for Model 1 was significant ($\chi^2 = 102.34$, $df = 1$, $p < .001$). Victims of aggression at pre-test, compared to non-victims at pre-test, were 9.5 times (95% CI 5.94 to 15.2) more likely to be a victim at post-test ($p < .001$). In other words, if a student was a victim at the first measurement phase, s/he was very likely to remain a victim at the next measurement phase. The block chi-square statistics for Model 2 and Model 3 were not significant, $\chi^2 = 5.306$, $df = 2$, $p = .08$; $\chi^2 = .410$, $df = 1$, $p = .52$. In Model 3, Intervention participants, compared to Control participants, were not less likely to be a non-victim at post-test ($b = -.15$, $\chi^2 = .41$, $p = .52$). Therefore, Hypothesis 5 was not supported.

Model 4 with victim status at pre-test, Gender, and Grade within intervention classrooms was significant ($\chi^2 = 20.16$, $df = 3$, $p < .001$), but Model 5, which assessed the potential moderators of the Intervention, was not significant ($\chi^2 = 7.80$, $df = 4$, $p = .10$). As a result, none of the variables were significant ($p > .017$). Therefore, Hypothesis 6 was not supported.

For membership as an aggressor, the block chi-square statistic for Model 1 was significant ($\chi^2 = 23.25$, $df = 1$, $p < .001$). Aggressors at pre-test, compared to non-aggressors at pre-test, were 3 times (95% CI 1.94 to 4.83) more likely to be an aggressor at post-test ($p < .001$). The block chi-square statistics for Model 2 and Model 3 were not significant, $\chi^2 = 1.94$, $df = 2$, $p = .38$; $\chi^2 = 1.78$, $df = 1$, $p = .18$. In Model 3, Intervention participants, compared to Control participants, were not less likely to be an aggressor at post-test ($b = -.31$, $\chi^2 = 1.77$, $p = .18$). Therefore, Hypothesis 7 was not supported.

Model 4 with aggressor status at pre-test, Gender, and Grade within intervention classrooms was significant ($\chi^2 = 17.81$, $df = 3$, $p < .001$), but Model 5, which assessed the potential moderators of the Intervention, was not significant ($\chi^2 = 4.12$, $df = 4$, $p = .39$). As a result, none of these variables were significant ($p > .017$). Therefore, Hypothesis 8 was not supported.

For membership as a victim of bullying, the block chi-square statistic for Model 1 was significant ($\chi^2 = 67.32$, $df = 1$, $p < .001$). Bully victims at pre-test, compared to non-victims of bullying at pre-test, were 7.8 times (95% CI 4.70 to 12.94) more likely to be a bully victim at post-test ($p < .001$). The block chi-square statistics for Models 2 and 3 were not significant, $\chi^2 = 5.75$, $df = 2$, p = .06; and $\chi^2 = .683$, $df = 1$, $p = .41$, respectively. In Model 3, Intervention participants, compared to Control participants, were not less likely to be a non-victim of bullying at post-test ($b = -.21$, $\chi^2 = .68$, $p = .41$). Therefore, Hypothesis 9 was not supported.

Model 4 with bully victim status at pre-test, Gender, and Grade within intervention classrooms was significant ($\chi^2 = 36.72$, $df = 3$, $p < .001$), but Model 5, which assessed the potential moderators of the Intervention, was not significant ($\chi^2 = 4.23$, $df =$

4, p = .38). As a result, none of these variables were significant (p > .017). Therefore, Hypothesis 10 was not supported.

For membership as a bully, the block chi-square statistic for Model 1 was significant (χ^2 = 17.60, df = 1, p < .001). Bullies at pre-test, compared to non-bullies at pre-test, were 8.87 times (95% CI 3.50 to 22.50) more likely to be classified as a bully at post-test (p < .001*).* The block chi-square statistics for Models 2 and 3 were not significant, χ^2 = 5.04, df = 2, p = .08; and χ^2 = .167, df = 1, p = .68, respectively. In Model 3, Intervention participants, compared to Control participants, were not less likely to be a bully at post-test (b = -.16, χ^2 = .17, p = .68). Therefore, Hypothesis 9 was not supported.

Model 4 with bully status at pre-test, Gender, and Grade within intervention classrooms was significant (χ^2 = 10.38, df = 3, p < .017), but Model 5, which assessed the potential moderators of the Intervention, was not significant (χ^2 = 7.09, df = 4, p = .13). As a result, none of these variables were significant (p > .017). Therefore, Hypothesis 12 was not supported.

3.6 – Social Validity

The social validity measures were descriptive. Nearly 73% of intervention participants strongly agreed with the statement regarding intervention goals: "It is important to teach students how to care for others" (M = 5.55, SD = .88). A majority of students (55%) strongly agreed with the statement:" I want the AC4P coaches to continue AC4P lesson plans" (M = 4.96, SD = 1.45). Finally, 56% of students "strongly agreed" with the statement: "I learned how to actively care better from my coaches" (M = 5.08, SD = 1.39).

4.0 – Discussion

These findings did not demonstrate efficacy for a prosocial-focused curriculum to prevent aggression and bullying. Numerous limitations could account for these results, including the minimal effect sizes reported previously for school-wide interventions to prevent bullying. In fact, a meta-analysis of K-12 interventions to reduce (self-reports of) bullying others and victimization from bullying, yielded effect sizes of .04 and .27 (Merrell, Gueldner, Ross, & Islava, 2008). In a follow-up meta-analysis, grade level of delivery for aggression/bullying interventions demonstrated statistically significant, but a practically insignificant effect size of .08 for middle school students.

Additionally, even Social and Character Development Programs with high intensity (e.g., 30-minute lessons, 3 days a week) delivered for three years produced minimal, and some cases, no positive effects for prosocial behavior (Social and Character Development Research Consortium, 2010). The authors offered four reasons for the ineffectiveness: 1) low power in the design, 2) poor implementation of programs, 3) students in the control schools had different, but potentially comparable prosocial activities, and 4) poor alignment between intervention goals and measurement. These limitations could also explain the findings of the results of the present study.

Fidelity of the intervention, coaches' entity prosocial mindset, classroom climate and role model perceptions were explored as moderators of the intervention. None of these variables moderated the outcomes in the Intervention group. Prior research has explored the impact of classroom climate on victimization and bullying (e.g., Gendron, Williams, & Guerra, 2011). Of nearly 11,000 middle-school students across the state of Delaware, two relationship components of school climate were negatively correlated with verbal, physical, and social bullying, specifically student-to-student relationships and

student-to-teacher (Yang, Bear, Boyer, & Hearn, 2014). In this present study, a positive classroom climate did not predict a lower likelihood of being a member of the four undesirable groups (i.e., victim, aggressor, bully victim, and bully) at post-test in intervention classrooms. However, a nearly significant result did occur: Students in a positive classroom climate nearly received more prosocial behavior at post-test than students in a poor classroom climate. Follow-up research in a high-powered study with additional intervention classrooms should explore these relationships.

Hurd, Zimmerman, and Reischl (2010) found prosocial role models influenced attitudes towards violence, which impacted violent behavior. To the author's knowledge, role model perceptions have not been explored as a moderator of outcomes related to a prosocial-focused intervention until the present study. Students' perceptions of their coaches as role models did not significantly predict a lower likelihood of membership as a victim, aggressor, bully victim, or bully at post-test. However, all of these coefficients were negative for all of the undesirable groups, suggesting follow-up research should explore whether beneficial change occurs for those students who perceived the coach as a role model.

Coaches' entity beliefs about their students' prosocial behavior has never been explored. The results were not significant and non-interpretable, because the coefficients were small and negative for victim, aggressor, and bully victim, but were positive for bullies.

High-fidelity interventions have produced significantly more change in behavior than low-fidelity interventions (e.g., Black, 2007). However, the results in the present study were not consistent with prior research exploring intervention fidelity and

outcomes. Specifically, the non-significant but positive coefficients for the four negative outcome membership groups suggest an opposite effect than hypothesized. In high fidelity classrooms, post-test membership was more likely for victim, aggressor, bully victim, and bully, but this effect was not significant. Interestingly, prosocial behavior received at post-test was marginally, but not significantly higher in high fidelity classrooms compared to low fidelity classrooms. Follow-up research should study intervention fidelity in depth.

4.1 – Overall Strengths

The present study addressed an important empirical question: Can a prosocial-focused intervention reduce aggression and bullying in middle schools? To answer this question, the following steps were employed: 1) develop a long-term relationship with local public school administrators, 2) identify potential school sites to fit the quasi-experimental pre and post-test design with a non-equivalent control design, 3) facilitate buy-in from teachers during the overview and training process, 4) recruit undergraduate research assistants to serve as AC4P coaches, 5) train coaches weekly to learn and deliver lessons plans, 6) coordinate surveyors to enter classrooms at all four school sites and distribute surveys to the students who are participating in the assessment component (after receiving parental consent), 7) encourage post-lesson completion of fidelity checklists from two coaches per classroom, and 8) encourage the coaches to complete the post-intervention survey.

The notable strengths of the intervention include: A four-school design with two intervention and two control schools, the use of external intervention implementers (i.e., coaches), and measures of both prosocial and aggressive behaviors to assess relative

increases and decreases in target behaviors, respectively. Despite the large-scale undertaking for the project and strengths, there were severe limitations worth correcting for future studies.

4.2 – Limitations and Future Study

The guiding 2 (Promotion and Prevention) x 3 (Person, Behavior, Environment) framework was not adequate for a large-scale intervention design process and evaluation. As a result, there were significant limitations that could be ameliorated with an improved framework. Intervention Mapping has been used to guide health-promotion programs during the planning, implementation, and evaluation phases. In the context of this project, a five-step process would include: 1) a full needs assessment from the perspective of the students and administrators, 2) a matrix of change objectives (very similar to the 2 x 3 matrix used in the present study), 3) theory-based intervention methods and practical applications, 4) a more effective training process for implementers who deliver the intervention program, and 5) a short-term and long-term evaluation plan (Bartholomew, Parcel, Kok, Gottlieb, & Fernandez, 2011). While some of these steps were specifically addressed, these steps provide a guide for discussing the limitations of the present study and suggestions for a future intervention study.

Needs Assessment

Although aggression and bullying are problematic, the prevalence and type of behavior may differ as a function of the context of specific schools. For example, the Baseline of .13 and .24 for bullying in the Control and Intervention groups produced a "floor effect," which increases a Type II error, severely reducing the probability of detecting a significant intervention effect from pre-test to post-test. Therefore, school-

based interventions should use focus groups to identify the most important problems. Focus groups for the present study may have shown aggression and bullying behavior were not primary problems, or could have identified the specific types of aggression and bullying worth measuring and preventing.

A Matrix of Change Objectives

Despite the umbrella term of aggression, direct and indirect aggression are distinct. For example, these behavioral types were differentially related to adjustment; indirect aggression (compared to direct aggression) was associated with higher rates of prosocial behavior, rather than lower rates; and indirect aggression was more prevalent among girls than boys (Card, Sawalani, Stucky, & Little, 2008). Unfortunately, the behavioral measures used in this study did not explore "types" of aggressive and prosocial behavior. The California Bullying Victimization Scale did not include different types of aggression and bullying to explore these potentially meaningful differences.

Additionally, the lack of attention to levels (e.g., individual, dyad, and school) in the assessment is noteworthy. Specifically, behaviors received and directed towards others was student reported (aggregates of dyadic) behavior among all classmates in their school, while the modifier of power used the "main person" as the reference person (i.e., a single dyad). The collection of sociometric data and evaluations using social network analysis (SNA; Scott, 2000) could provide relevant dyadic changes in relational and behavioral ties as a result of the intervention.

Prosocial behavior is an umbrella term for many types of actions that benefit others, including comforting, sharing, and cooperating. The current scale treated the five different types of prosocial behavior as a uni-dimensional construct, resulting in no

comparisons between types of prosocial behavior. It should also be noted that the prosocial items reflect frequency of prosocial action, rather than quality. Middle school students may have learned how to be more effective (i.e., high quality) even if the frequency of action did not change.

Theory-based and Practical Intervention

The completed intervention used research-based methods from applied behavior analysis and positive psychology. The approach was designed to be highly practical and straightforward for others to implement and adopt. However, future application of the intervention should include: 1) significant attention to the specific developmental level of adolescents, 2) involvement from additional stakeholders, including teachers and parents, and 3) more behavioral, rather than knowledge-based training for skill acquisition.

Additional research needs to explore the costs and benefits of the specific program components. For example, were the wristbands and point goals the ideal incentives? Did the wristbands motivate prosocial recognition and story writing, or did they facilitate exclusion when individuals only recognized their friends?

Effective Training of Implementers and Adoption

This intervention attempted to maximize efficacy and scalability, meaning almost any school could use the training powerpoint, scripts and lesson plans for coaching, activities for student engagement, and evaluation process outlined in the study. However, the scalability of the approach is dependent on the implementers and adopters. For this study, undergraduate research assistants served as implementers. This decision was both beneficial and costly to the intervention. Coaches were more beneficial than a teacher because coaches could be trained, would practice, and were volunteers. Specifically, the

coaches attended 21 hours of training throughout the semester to learn the curriculum. They practiced weekly in groups and received feedback from peers to improve their style and delivery. As volunteers, they delivered the intervention without expectation of financial compensation.

On the other hand, the use of coaches, compared to teachers, may have limited intervention effectiveness because coaches are inexperienced. For a skilled teacher, it's difficult to teach lessons and manage student behavior in the classroom; this would be extremely challenging for a college student with limited presentation and social skills.

The overall cost-benefit ratio of coaches remains unclear from the data in this study. Although the high intervention fidelity scores (i.e., mean score of 10 out of 11) suggest a high-quality implementation process, the intervention fidelity checklists were designed for this study and have not been validated. Therefore, the high scores could be a result of three effects: 1) an effective training process for coaches, 2) an ineffective measurement tool, or 3) a combination of training and measurement effects. When disentangling the complexity of the intervention into meaningful components, the meaningless or non-impactful program components could have been identified in the checklist.

As a result, school-based intervention studies using external implementers should consider assessing the learning and behavior levels of Kirkpatrick's four-level evaluation model (Kirkpatrick, 1959). For example, AC4P coaches should complete a pre-test and post-test on AC4P principles and specific MS applications in order to assess skill sets as an AC4P coach. Additionally, coaches should be independently observed using the fidelity checklists during their practice sessions to increase the probability of in-the-

classroom behavioral transfer. Finally, coaches should be pre and post-tested on similar character strength and behavioral measures as the students in order to explore the intervention-related impact of teaching AC4P on the implementers.

A Short and Long-term Evaluation Plan

The current study had two assessment phases, separated by five weeks. No follow-up assessments were included. Future measurement plans should include a multi-wave longitudinal design with subject codes used to track and explore intervention effects over time. Additionally, an event-sampling methodology could improve the measurement of frequency and accuracy of students' self-reported behaviors. Measures of students' perceptions of the intervention goals, process, and outcomes (i.e., social validity) should be included and analyzed by gender and grade.

Measures

Both predictor and outcome measurement caused concern. Dichotomizing the four continuous variables due to non-normality artificially restricted variance. The effect of this procedure is even more concerning for predictors. More than three-fourths of the students rated their coaches as a "perfect 4" on all three role model perception items, which created a "ceiling effect." Even though Royston, Altman, and Sauerbrei (2006) discuss the inflated Type I error rate caused by falsely dichotomizing continuous predictors, the procedure used here needed in order to avoid violating normality assumptions required for linear regression. As a result, the results of role model perceptions results should be interpreted with caution.

Entity prosocial mindset scores for coaches were mean scored among pairs of coaches. When a coach in a pair did not complete the measure, imputations were not

appropriate and thus only one coach's score was used for the analysis. The inconsistency between a paired score and individual scores across classrooms on the entity prosocial mindset measure raises concern. Additionally, even if every coach pair completed the measure, there is no theoretical justification for averaging coaches' entity prosocial mindset. Future studies assessing the impact of coaching or mentorship on students or mentees' behavior should use only one individual for intervention delivery in order to adequately capture this potential moderator.

Data Sources

Intervention outcomes were entirely self-report. Given that bullying is a perception, self-report is the ideal method for collection, but prosocial and aggressive behaviors could be observed and independently coded by others (e.g., teachers). Future evaluations of school-based interventions could use administrative reports to improve the objectivity of assessment, including office referrals, counselor visits, and parent-teacher conferences regarding student behavior. Additionally, teacher or administrative reports on student behavior and classroom climate would improve reliability of measures.

By the conclusion of the intervention, coaches spent approximately 100 minutes in their classroom. Given that all of their time was used for coaching rather than observing, their ratings may not have captured accurately the disciplinary practices and culture of the classroom. Future studies should employ independent observers to rate classroom climate measures after direct observation of the teacher's disciplinary and teaching methods.

4.3 – Benefits to Stakeholders

Wolf (1978) referred to social validity, as the acceptability or viability of an

intervention, with three primary judgments: 1) Are the goals socially significant?, 2) Are the processes and procedures acceptable to users, 3) Are the users satisfied with the intervention effects? The evidence for social validity was derived from quantitative data from direct consumers of the intervention (i.e., students) and qualitative anecdotes from indirect consumers (e.g., coaches and teachers).

Students' perceptions of the intervention goals, procedures, and effects were mostly positive. A majority of students reported high marks for all three social-validity measures, suggesting the viability of the approach from the perspective of the direct consumer (i.e., students). Although no quantitative pre-test and post-test data were available for the coaches, a few stories highlight the beneficial impact of this approach. Three coaches volunteered a year after graduation for no financial compensation to continue coaching. Additionally, all three students changed their career path to serve students in schools, from student affairs administration to school psychology.

This thesis began by discussing the detrimental consequences caused by character-less abusers and the need for prosocial action. Although the data reported in this final document does not provide evidence of objective beneficial change for students, the following story provides a powerful testament to a positive outcome.

When Rohan Cobb-Ozanne was asked to reflect on his two years of AC4P coaching while serving as a research assistant, he said:

> *"When you teach courage, you become more courageous. I learned alongside the students. The other day I realized why I no longer pass the wristband. AC4P transformed me. The wristband served its original purpose. I no longer need a*

wristband to reach out and positively affect others because Actively Caring became my moral compass."

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Table 1. Overview of Measures for Coaches and Students

Domain/ Outcome	Student (items) [Time]	Coach (items) [Time]
PERSON		
Demographic		
Teacher's Name	X (A) [T1,T2]	X [T2]
Subject ID	X (B) [T1,T2]	X [T2]
Gender	X (C) [T1,T2]	X [T2]
Time/ Date	X (D) [T1,T2]	X [T2]
Grade/ Year	X (E) [T1,T2]	X [T2]
School	X (F) [T1,T2]	
BEHAVIOR		
Aggression		
Victimization	X (1-7) [T1,T2]	
Performed	X (9-15) [T1,T2]	
Bullying		
Victimization	X (8) [T1,T2]	
Performed	X (16) [T1,T2]	
Prosocial		
Received	X (17-22) [T1,T2]	
Performed	X (24-29) [T1,T2]	
ADDITIONAL VARIABLES		
Respondents' seriousness	X (31) [T1,T2]	
INTERVENTION-RELATED		
Role Model Perceptions	X (32-34) [T2]	
Entity Prosociality		X (1-4) [T2]
Classroom Climate		X (5-13) [T2]
Intervention Fidelity		X [every team]

Table 2. Correlations Among All Variables at Pre-test and Post-test With Intervention Moderators

Variables	1	2	3	4	5	6	7	8	9	10
1. Grade	1									
2. Gender	-.068	1								
3. Prosocial Received (Pre)	.043	-.149**	1							
4. Prosocial Received (Post)	.026	-.256**	.296**	1						
5. Prosocial Performed (Pre)	.016	-.223**	.403**	.542**	1					
6. Prosocial Performed (Post)	.016	-.141**	.258**	.746**	.628**	1				
7. Aggressive Victimization (Pre)	-.050	-.031	-.004	.084	.153**	.175**	1			
8. Aggressive Victimization (Post)	-.014	-.030	.057	.024	.114*	.096	.654**	1		
9. Aggressive Perpetration (Pre)	-.061	.032	-.017	-.097	-.112*	-.064**	.176**	.110*	1	
10. Aggressive Perpetration (Post)	.016	.111**	.046	-.110*	-.087	-.126*	.207**	.443**	.196**	1

*Notes: * p < 0.05 level (2-tailed), ** p < .01.*

Variables	1	2	3	4	5	6	7	8	9	10
11. Bullying Victimization (Pre)	-.080	-.020	-.003	.084	.163**	.161**	.766**	.511**	.031	.147**
12. Bullying Victimization (Post)	-.050	-.040	.039	.041	.143**	.074	.589**	.787**	.052	.350**
13. Bullying Perpetration (Pre)	.011	.079	-.052	-.058	-.147**	-.056	.161**	.090	.515**	.114*
14. Bullying Perpetration (Post)	.019	.090	.092	-.047	-.054	-.074	.127*	.212*	.174**	.686**
15. Intervention	-.042	.107*	.063	.032	-.044	-.015	-.147**	-.124*	-.124*	-.080
16. Intervention Fidelity	.217**	-.078	.043	-.013	.101	.048	.103	.074	.081	.034
17. Classroom Climate	.161	.058	.078	.203*	.003	.112	-.063	-.016	.088	.076
18. Entity Prosocial Mindset	.220**	-.068	.128	.018	.076	.081	.021	-.007	.087	.010
19. Role Model Perceptions	.026	-.082	.099	.137	.192**	.191**	.010	-.182*	-.101	-.314**

*Notes: * p < 0.05 level (2-tailed), ** p < .01.*

Variables	11	12	13	14	15	16	17	18	19
11. Bullying Victimization (Pre)	1								
12. Bullying Victimization (Post)	.544**	1							
13. Bullying Perpetration (Pre)	.034	.029	1						
14. Bullying Perpetration (Post)	.027	.138**	.136**	1					
15. Intervention	-.144**	-.112*	.055	-.010	1				
16. Intervention Fidelity	.040	.004	.034	.038		1			
17. Classroom Climate	-.056	-.155	.038	.114		.146	1	.104	.130
18. Entity Prosocial Mindset	.006	-.074	.007	.063		.205**	.104	1	-.102
19. Role Model Perceptions	-.068	-.172*	-.139	-.079		.001	.130	-.102	1

*Notes: * p < 0.05 level (2-tailed), ** p < .01.*

Correlations with Intervention Fidelity, Classroom Climate, Entity Prosocial Mindset, and Role Model Perceptions were intervention students only (n=209).

Table 3. Mean Scores and Standard Deviations for Outcome Measures

	Baseline Measure	Post-Test Measure
Control		
Aggressive Victimization	4.14 (5.59)	3.93 (5.25)
Aggression Performed	1.03 (1.86)	.85 (1.86)
Bullying Victimization	2.61 (5.31)	2.52 (5.03)
Bullying Performed	.13 (.61)	.32 (1.39)
Prosocial Received	13.02 (6.85)	13.34 (6.44)
Prosocial Performed	16.64 (6.55)	15.58 (7.21)
Intervention		
Aggressive Victimization	2.70 (4.07)	2.72 (4.43)
Aggression Performed	.60 (1.54)	.59 (1.41)
Bullying Victimization	1.35 (3.23)	1.54 (3.73)
Bullying Performed	.24 (1.25)	.30 (1.06)
Prosocial Received	13.85 (6.52)	13.74 (6.01)
Prosocial Performed	16.04 (7.01)	15.37 (6.87)

Mean raw scores and standard deviations of the outcome measures for students across time and by condition.

Table 4. Shift in Group Membership for Non-Victims/ Victims, Non-Aggressor/ Aggressors, Non-victim of bullying/ Victim of Bullying, and Non-bully/ Bully from Baseline to Post-Test

		Post-Treatment			
		Control		Intervention	
		Non-victim	Victim	Non-victim	Victim
Baseline	Non-victim	48	15	67	28
	Victim	24	107	33	81
		Non-aggressor	Aggressor	Non-aggressor	Aggressor
Baseline	Non-aggressor	86	34	127	23
	Aggressor	45	29	29	30
		Non-victim of bullying	Victim of bullying	Non-victim of bullying	Victim of bullying
Baseline	Non-victim of bullying	106	27	145	17
	Victim of bullying	28	33	18	29
		Non-bully	Bully	Non-bully	Bully
Baseline	Non-bully	173	12	181	14
	Bully	5	4	9	5

Table 5. Shift in Group Membership from Non-Victims/ Victims to Non-Aggressor/ Aggressors and Non-Aggressor/ Aggressors to Non-Victims/ Victims from Baseline to Post-Test

		Control		Intervention	
		Non-aggressor	Aggressor	Non-aggressor	Aggressor
Baseline	Non-victim	41	22	86	9
	Victim	79	52	64	50
Post-Treatment	Non-victim	52	11	79	16
	Victim	79	52	77	37

Table 6. Hierarchical Regression Analysis Predicting Prosocial Behavior Received at Post-test

	Model 1			Model 2			Model 3			Model 4			Model 5		
										Intervention Classrooms Only					
Variable	*B*	*SE*	*β*	*B*	*SE*	*β*	*B*	*SE*	*β*	*B*	*SE*	*β*	*B*	*SE*	*β*
Pre-Test Outcome	.27*	.05	.29*	.24*	.04	.26*	.24*	.05	.25*	.50*	.07	.53*	.50*	.07	.53*
Gender				-2.71*	.60	-.22*	-2.78*	.60	-.22*	-2.2*	.90	-.18*	-2.41*	.90	-.20
Grade				.08	.59	.01	.15	.59	.01	-.04	.87	.00	-.30	.89	-.03
Intervention/Control							.55	.60	.04						
Fidelity													.02	.47	.00
Classroom Climate													2.00	.88	.17
Entity Mindset													-.33	.53	-.05
Role Model													-1.00	2	-.04
Perceptions														.17	
Adjusted R^2			.082*			.124*			.124			.354*			.362
F change in R^2			.042*			.000						.08			

Note: $*p < .05$.

Table 7. Hierarchical Regression Analysis Predicting Prosocial Behavior Performed at Post-test

	Model 1			Model 2			Model 3			Model 4			Model 5 Intervention Classrooms Only		
Variable	*B*	*SE*	*β*	*B*	*SE*	*β*	*B*	*SE*	*β*	*B*	*SE*	*β*	*B*	*SE*	*β*
Pre-Test Outcome	.65*	.04	.63*	.65*	.04	.63*	.65*	.04	.63*	.67*	.06	.70*	.66*	.06	.69*
Gender				.00	.57	0.00	-.01	.58	.00	.21	.89	.02	.16	.90	.01
Grade				.08	.56	.01	.08	.56	.01	-.16	.86	-.01	-.49	.90	-.04
Intervention/Control							.135	.56	.01						
Fidelity													.25	.48	.04
Classroom Climate													1.16	.89	.09
Entity Mindset													.33	.54	.04
Role Model Perceptions													-2.13	2.21	-.07
Adjusted R^2			.395*			.392			.391			.479*			.474
F change in R^2						-.003			-.001						-.005

Note: $*p < .05$.

Table 8. Logistic Regression Models Predicting Victim, Aggressor, Bully Victim, and Bully

	Victims Non-Victim	Aggressor Non-Aggressor	Bullying Victim Bullying Non-Victim	Bully Non-Bully
Variable	*b* (odds ratio) R^2	*b* (odds ratio) R^2	*b* (odds ratio) R^2	*b* (odds ratio) R^2
Model 1				
Outcome Measure at Pre-Test	2.25* (9.50) .229*	1.12* (3.06) .057*	2.05* (7.80) .157*	2.18* (8.87) .044*
Model 2				
Outcome Measure at Pre-Test	2.29* (9.88)	1.13* (3.10)	2.08* (8.03)	2.14* (8.52)
Gender	-.54 (.59)	.32 (1.38)	-.617 (.54)	.86 (2.36)
Grade	-.05 (.96) .239	.00 (1.00) .062	.02 (1.02) .17	.17 (1.19) .056
Model 3				
Outcome Measure at Pre-Test	2.27* (9.70)	1.10* (3.00)	2.07* (7.89)	2.16* (8.65)
Gender	-.52 (.59)	.36 (1.43)	-.60 (.55)	.88 (2.41)
Grade	-.05 (.95)	-.01 (.99)	.02 (1.02)	.16 (1.18)
Intervention/ Control Condition	-.15 (.86) .240	-.31 (.73) .066	-.21 (.81) .171	-.16 (.86) .056
Model 4 (Intervention classes only)				
Outcome Measure at Pre-Test	1.68* (5.36)	1.83* (6.26)	3.01* (20.34)	1.20* (3.33)
Gender	-.33 (.72)	-.09 (.92)	-1.30 (.27)	1.78 (5.92)
Grade	.27 (1.31) .153*	.40 (1.48) .137*	-.09 (.92) .262*	-.01 (.994) .082*
Model 5 (Intervention classrooms only)				
Outcome Measure at Pre-Test	1.62* (5.06)	1.68* (5.35)	3.03* (20.65)	.58 (1.78)
Gender	-.38 (.69)	-.03 (.97)	-1.40 (.247)	1.89 (6.64)
Grade	.06 (1.06)	.27 (1.31)	-.08 (.93)	-.21 (.81)
Fidelity	.23 (1.26)	.34 (1.40)	.10 (1.11)	.77 (2.16)
Classroom Climate	.71 (2.04)	.141 (1.15)	-.82 (.44)	.65 (1.92)
Entity Mindset	-.17 (.84)	-.05 (.95)	-.55 (.58)	.06 (1.06)
Role Model perceptions	-1.63 (.20) .206	-1.00 (.37) .166	-.46 (.63) .287	-1.09 (.34) .134

Note: R^2 = Cox & Snell statistic. * denotes significance at .017 level

Figure 1. A School-Based Intervention Framework for Addressing Positive (Promotion) and Negative (Prevention) Outcomes and Multiple Strategies within Each Domain

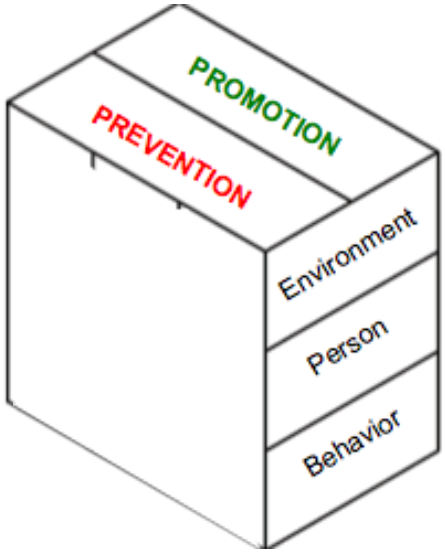


Figure 2. AC4P Wristband-Tracking Chart

Classroom	**Coaches**	**S.A.W./ H.A.W.**	**S.A.W./ H.A.W. Writer**	**Performer/ Teller**	…	**S.A.W./ H.A.W. Writer**	**Wristband Recipient**
	Week 1	*Week 1*	*…*	*Week X*	*We ek X*		
Mrs. Langston	Sophia	SAW	Claire	Jenna	…		
		SAW	Melissa	Elise	…		
		SAW	Rohan	Jimmy	…		
	Kyle	HAW	Lindsey	Eric	…		
		HAW	Laura-Beth	Kelsey	…		
		HAW	Latoshia	Christian	…		

Figure 3. AC4P Wristband with School Logo on Poster for an Intervention School

Figure 4. Conceptual Model for Level 1 and Level 2 Variables

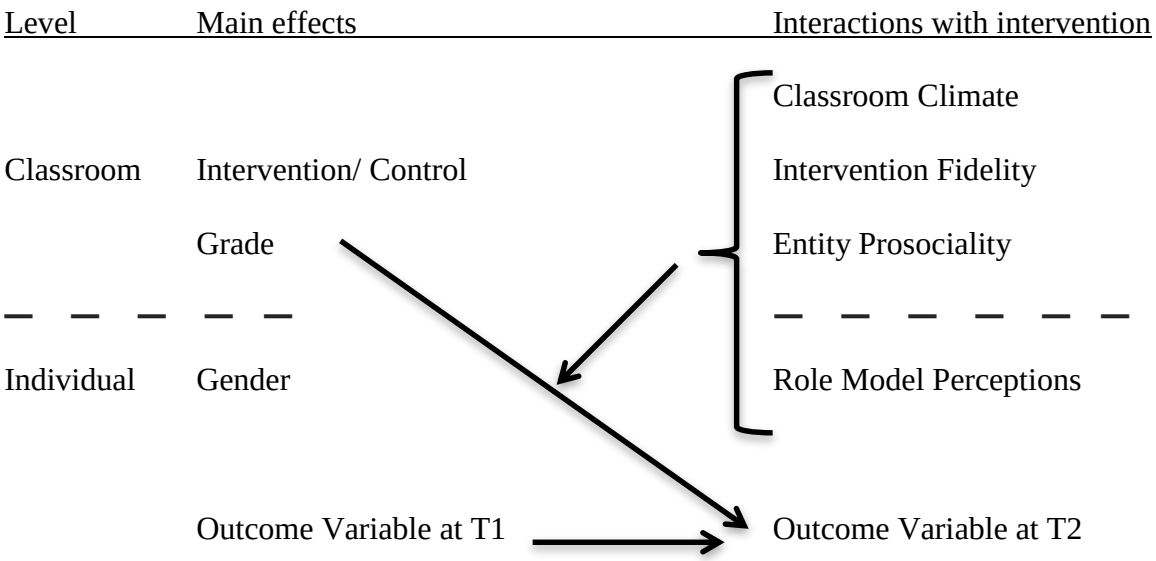


Figure 5. AC4P Triangle: Integrating AC4P Behaviors and Character Strengths

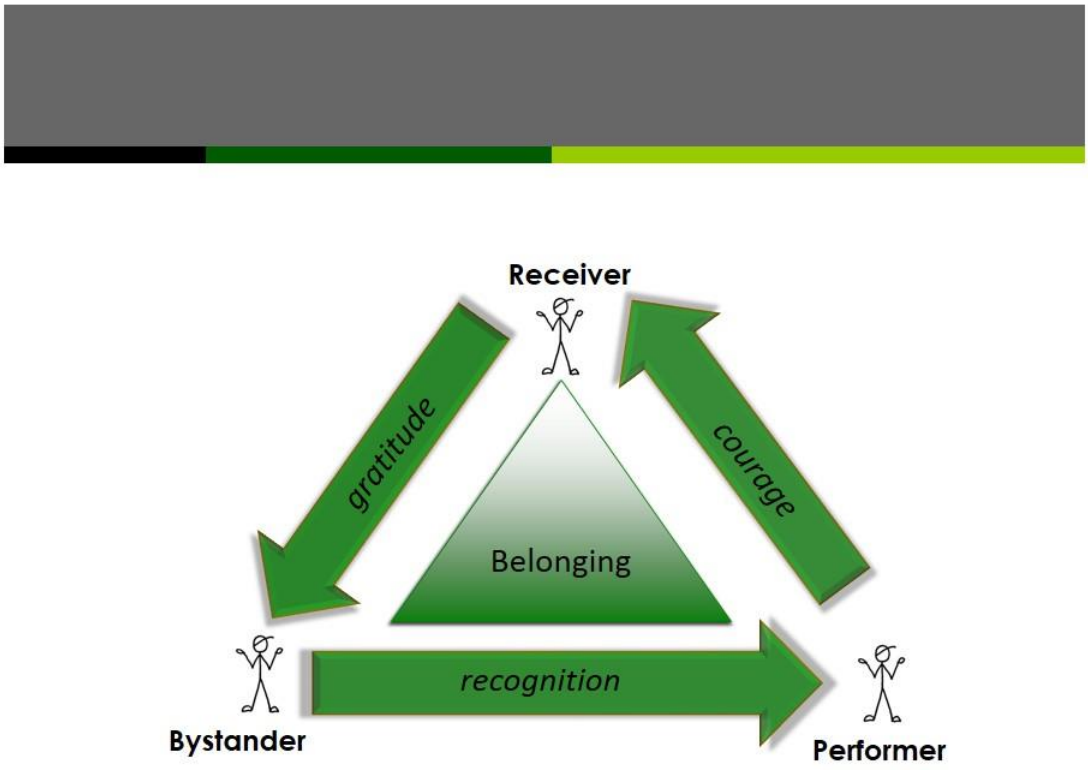


Figure 6. S.A.W. Card for Students' Observations and Stories of Prosocial Behavior

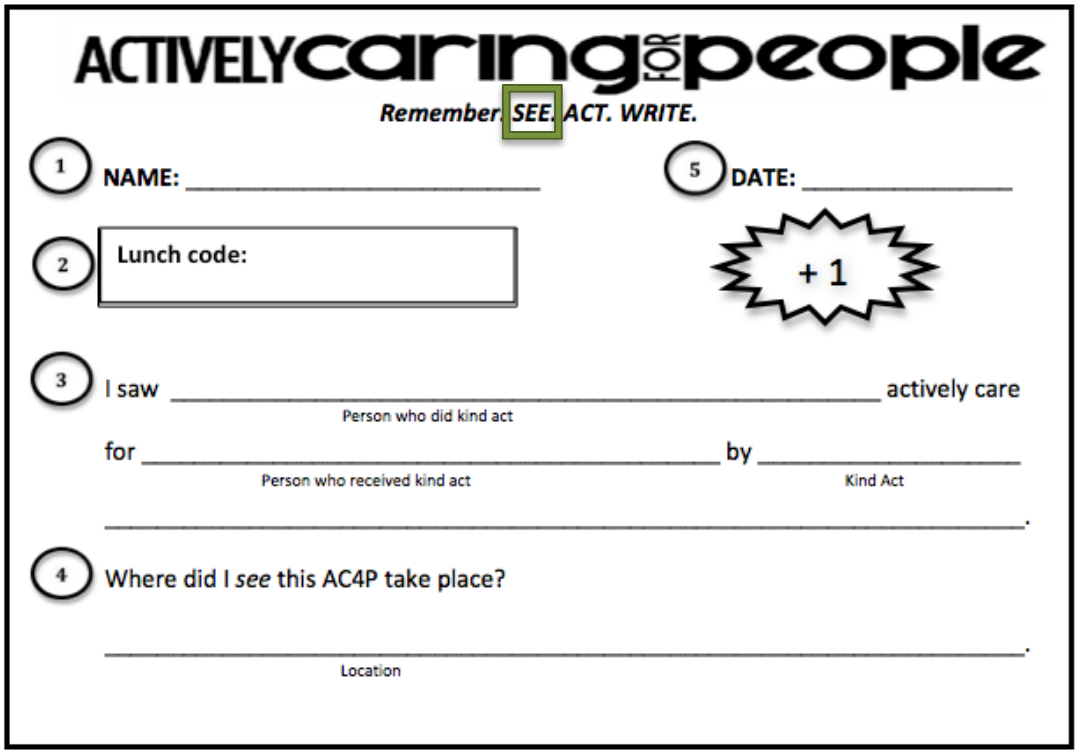
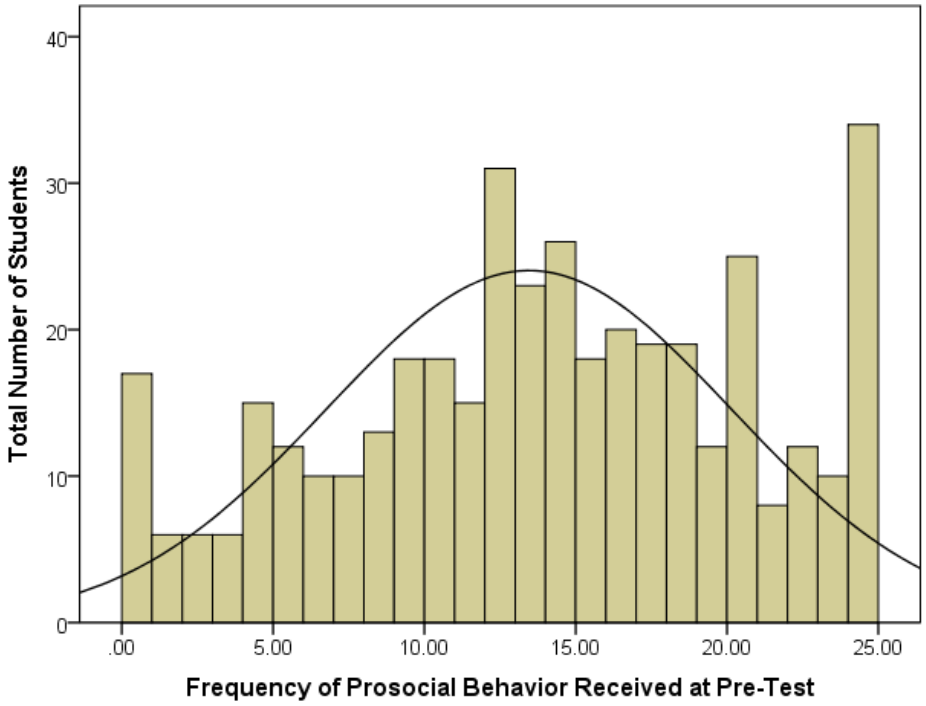


Figure 7. Non-normal Distribution of Prosocial Behavior Received at Pre-Test (Top Graph) and Post-Test (Bottom Graph)



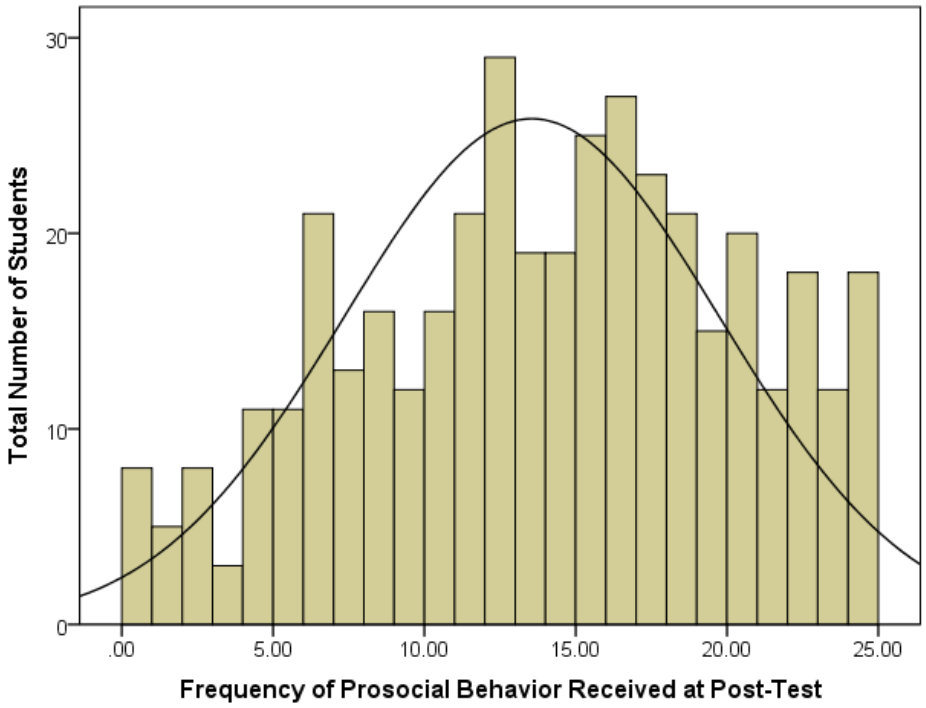
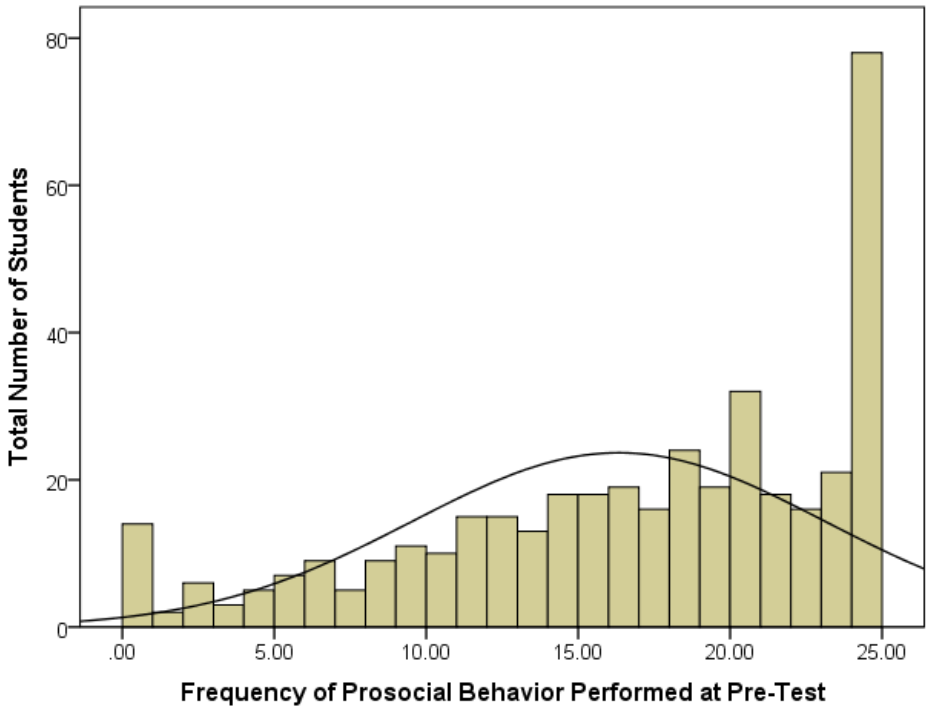


Figure 8. Non-normal Distribution of Prosocial Behavior Performed at Pre-Test (Top Graph) and Post-Test (Bottom Graph)



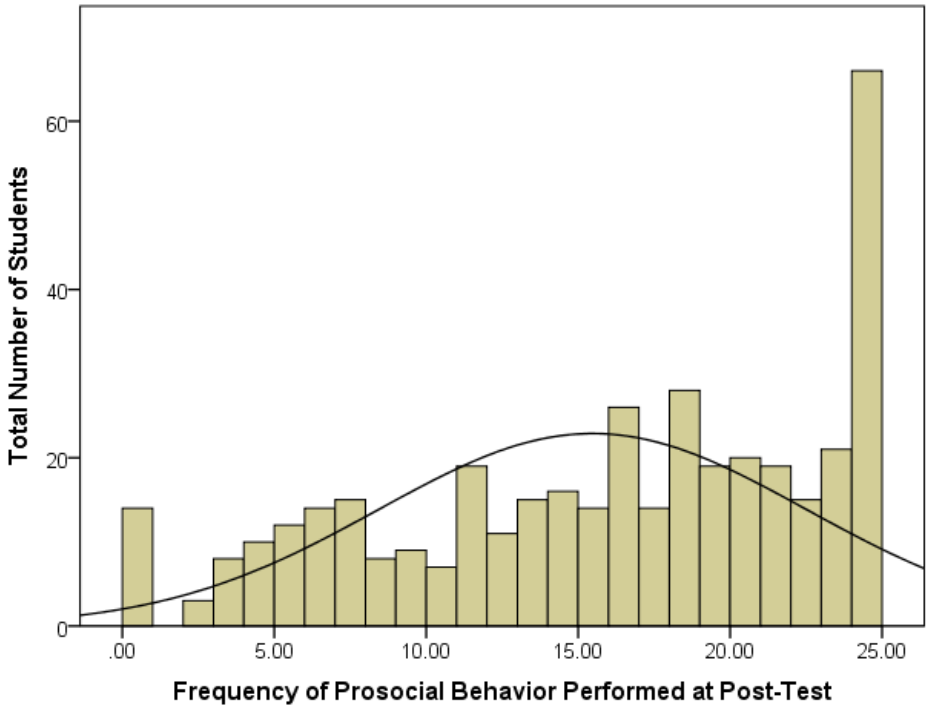


Figure 9. Non-normal Distribution of Aggressive Victimization at Pre-Test (Top Graph) and Post-Test (Bottom Graph)

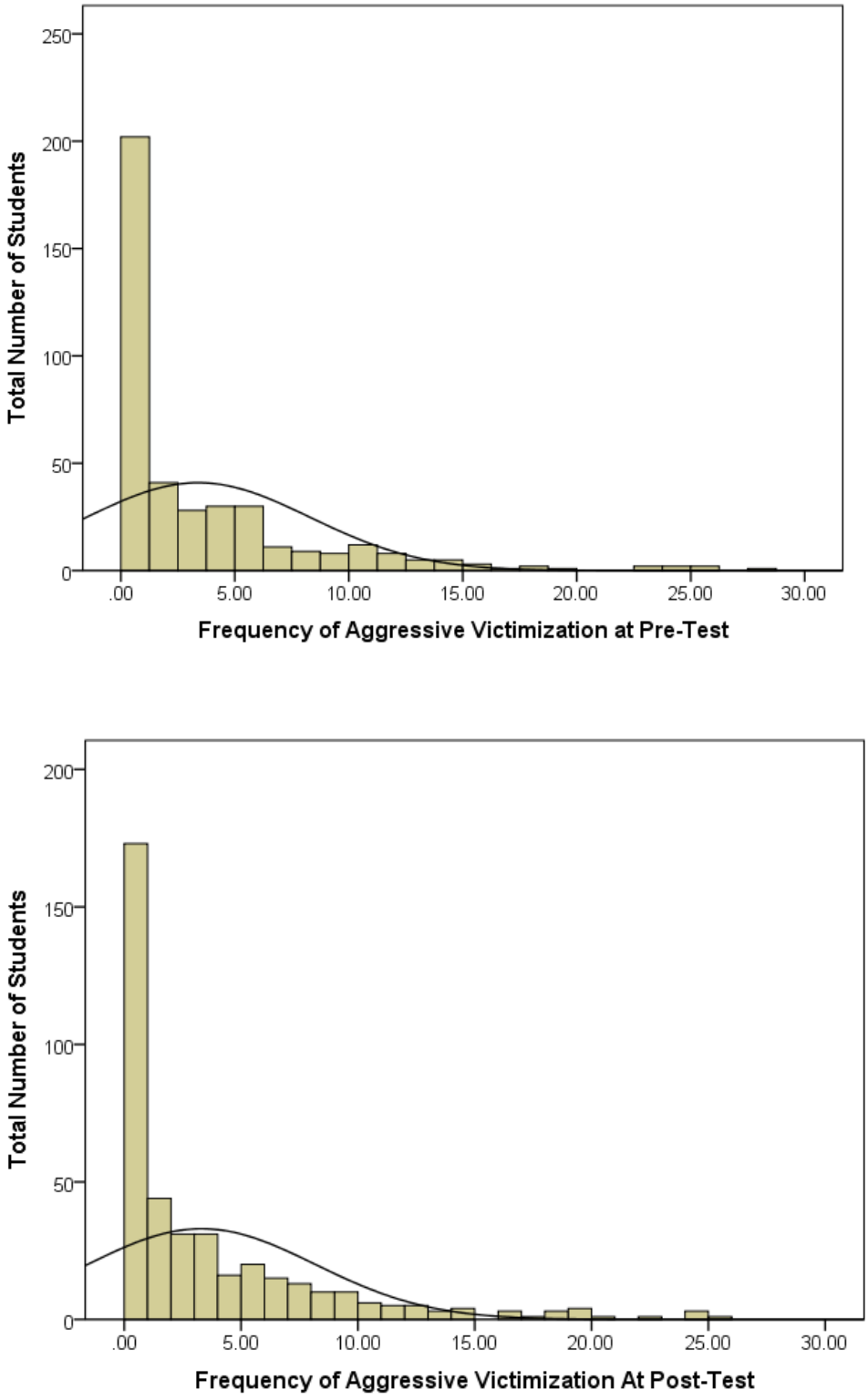
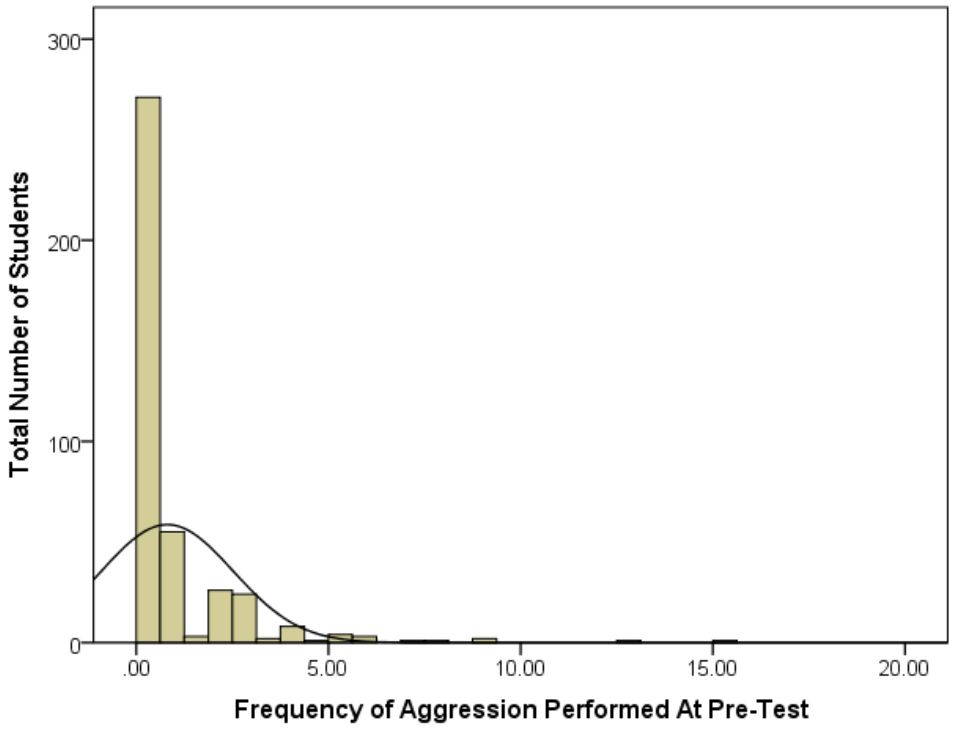


Figure 10. Non-normal Distribution of Aggression Performed at Pre-Test (Top Graph) and Post-Test (Bottom Graph)



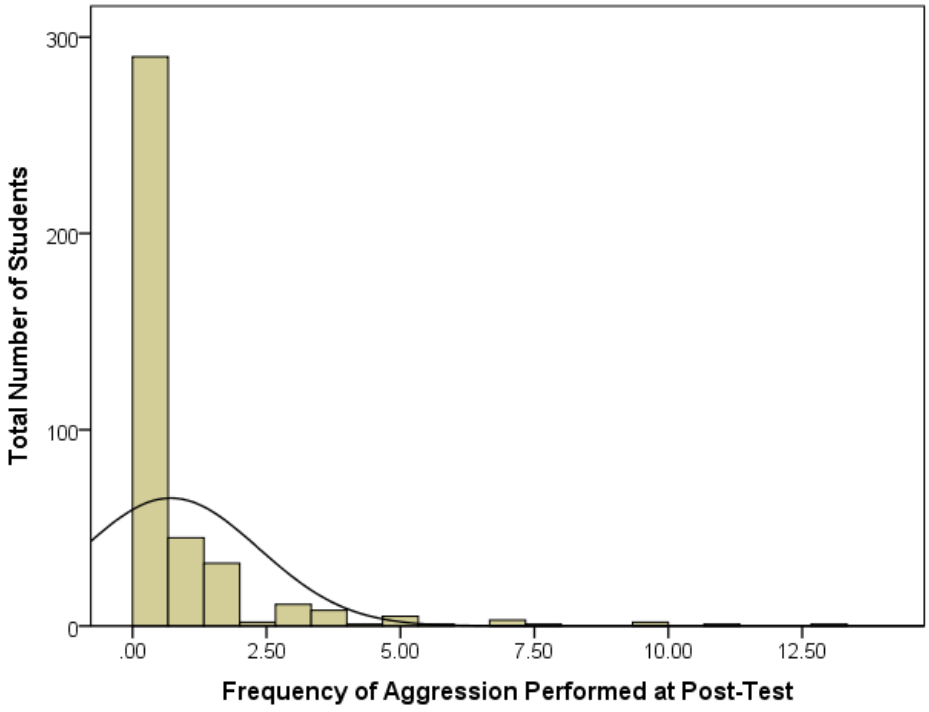
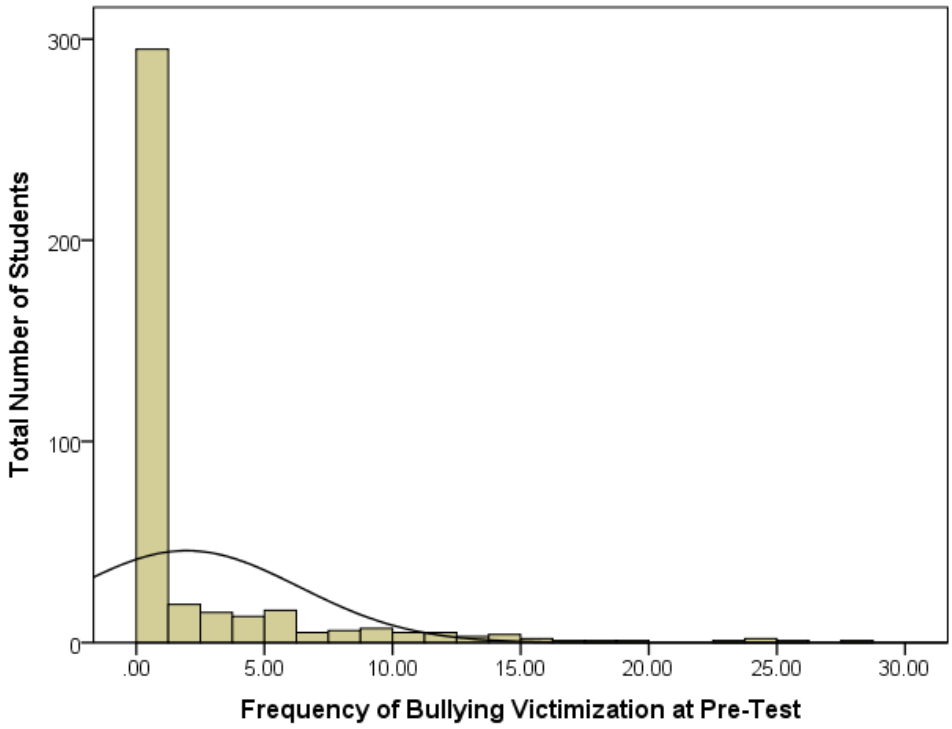


Figure 11. Non-normal Distribution of Victimization from Bullying at Pre-Test (Top Graph) and Post-Test (Bottom Graph)



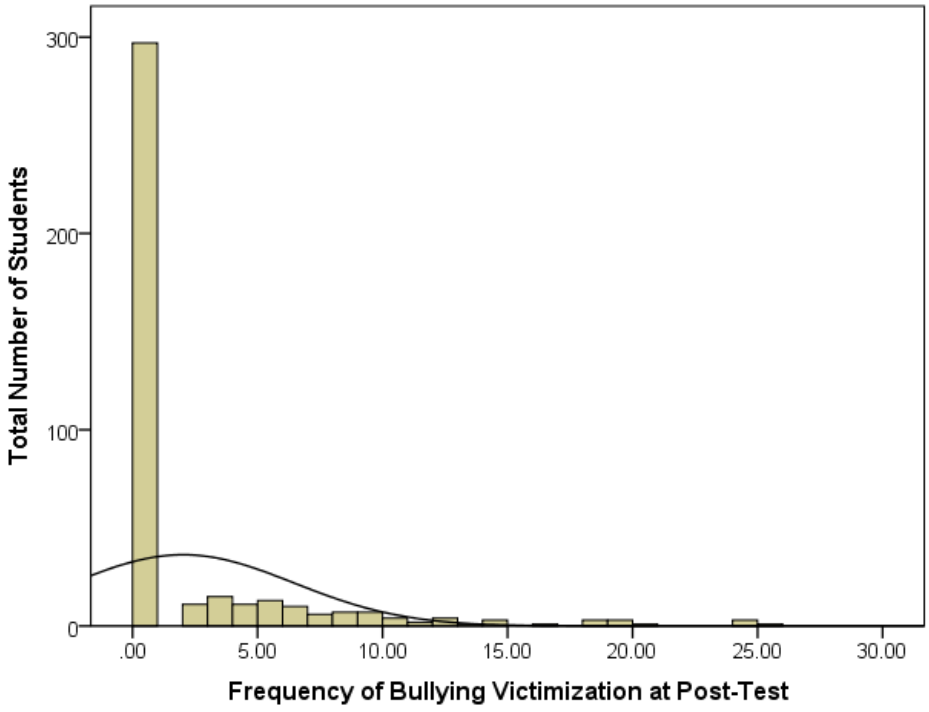
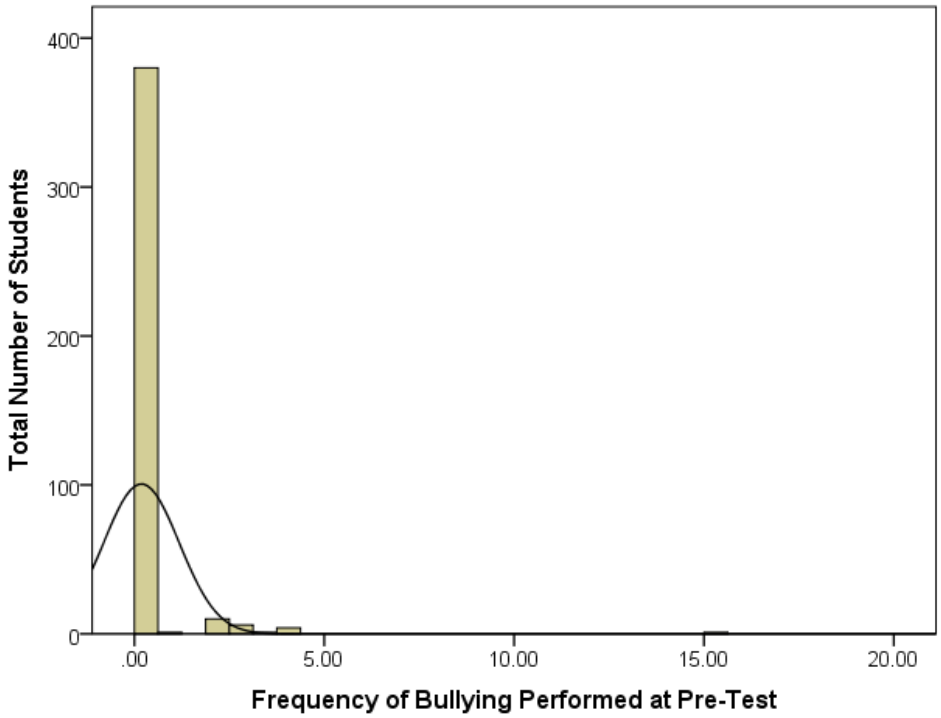
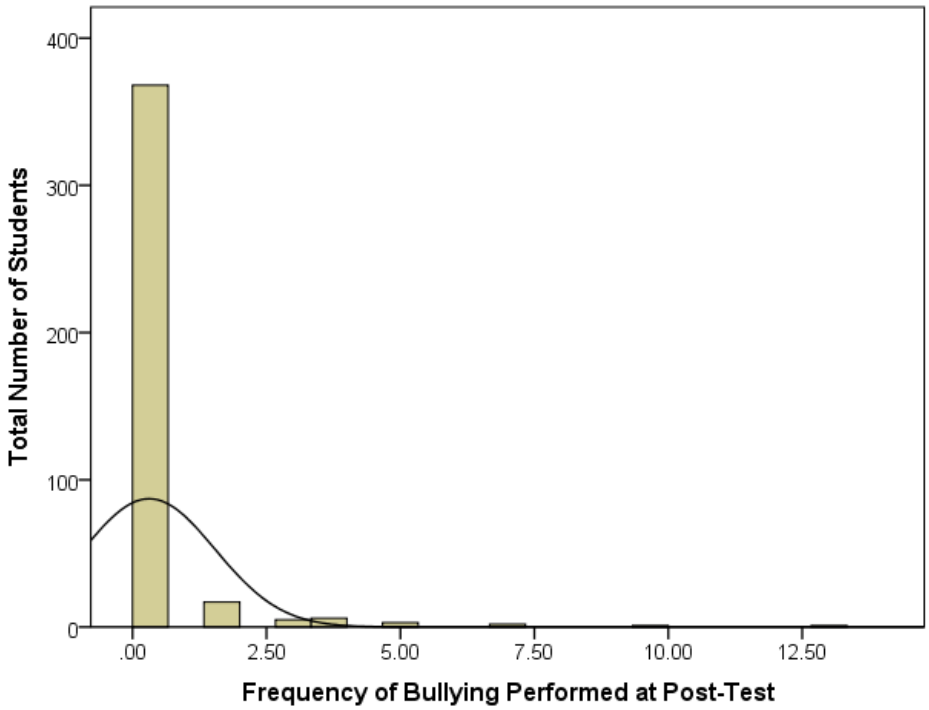


Figure 12. Non-normal Distribution of Bullying Performed at Pre-Test (Top Graph) and Post-Test (Bottom Graph)





Appendix A. Teacher Consent Form

Character Education Programs

Montgomery County Public Schools have been fortunate to have a broad-based community effort in support of character education for students. In conjunction with Virginia Tech and the Montgomery County Public Schools community, middle school students have the opportunity to be recognized for their many contributions to our community, highlighting the character strengths that influence a community of character.

Anonymity and Confidentiality

Surveys will never ask students for their name at any point during the program. In order to see the effect of the program on students' behaviors, the surveys will ask students three questions to define an 'I.D.' for the tracking. These questions are harmless and are: "What is your favorite animal?" "What is your month of birth?" and "What is your favorite color?"

At no time will the researchers release the surveys to anyone (other than individuals working at Virginia Tech on the project) without your written consent. Individuals allowed to access the results are trained undergraduate, graduate, and faculty researchers at Virginia Tech. It is possible the Institutional Review Board (IRB) at Virginia Tech may view this study's collected data for auditing purposes. The IRB is responsible for the oversight of the protection of human subjects involved in research.

How you can get involved

Thousands of green AC4P wristbands have been passed worldwide to others for performing acts of caring with the same instructions your students will receive in school: to "pay-it-forward." Your involvement in the AC4P movement can enhance an AC4P culture, not just within the classroom, but also in your local community and beyond.

I have read the Consent Form and conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent:

Name (printed) _____ Date _____

Signature _____

For more resources or questions on how to become more involved, please e-mail your thoughts or questions to us at bullying.ac4p@gmail.com. Additionally, if you would like to see the results of this study, please email us at the email address above.

If you have any questions about the protection of human research participants regarding this study, you may contact Dr. David Moore, Chair of Virginia Tech Institutional Review Board for the Protection of Human Subjects, telephone: (540) 231-4991; email: moored@vt.edu; address: Office of Research Compliance, 2000 Kraft Drive, Suite 2000 (0497), Blacksburg, VA 24060.

We are excited about this opportunity to engage your students in the Actively Caring program! The mutual gain between your school and Virginia Tech's Center for Applied Behavior Systems is very much appreciated. Your partnership provides our team with a greater understanding of actively-caring behavior in schools, which ultimately can help to create a kinder world.

Thank you for Actively Caring!
Shane McCarty
Graduate Research Assistant
Center for Peace Studies and Violence Prevention
Center for Applied Behavior Systems at Virginia Tech

Appendix B. Parental Consent Form

Community of Character Education: An MCPS & VT Partnership

Character Education Programs

Montgomery County Public Schools have been fortunate to have a broad-based community effort in support of character education for students. In conjunction with Virginia Tech and the Montgomery County Public Schools community, middle school students have the opportunity to be recognized for their many contributions to our community, highlighting the character strengths that influence a community of character.

Middle School Project-- Actively Caring for People (AC4P)

As part of Montgomery County Public School's continued character education efforts, students at _____ Middle School will participate in a project led by Virginia Tech volunteers to promote actively-caring behaviors in school. Students will be challenged to recognize their peers' kind behaviors and document caring stories they witness during the school day. During several advisory periods, Virginia Tech volunteers ("AC4P Coaches") will present activities to help students recognize and perform behaviors that go above and beyond for others. To facilitate belonging in the classroom and school community, AC4P Coaches will share actively-caring stories and present green AC4P wristbands to several "AC4P student heroes" each week, recognizing all participating students throughout the project with a wristband for their participation.

AC4P Project Assessment

A principle assignment of both the Center for Applied Behavior Systems and the Center for Peace Studies and Violence Prevention at Virginia Tech is to increase the quality and quantity of actively-caring behaviors in communities. Thus, surveys will be distributed to each student throughout the project to gain feedback to help the team improve their work. The surveys are designed to assess students' sense of well-being in the classroom as well as self-reported measures of actively-caring and bullying behavior. Students are free to refrain from answering any questions at any time without penalty, and student names will never be used in any reports.

At no time will researchers release surveys without your written consent to anyone other than individuals working at Virginia Tech on the project. Individuals allowed to access the results are trained undergraduate, graduate, and faculty researchers at Virginia Tech. It is possible the Institutional Review Board (IRB) at Virginia Tech may view this study's collected data for auditing purposes in their oversight of the protection of human research participants. You may contact Dr. David Moore, Chair of Virginia Tech Institutional Review Board for the Protection of Human Subjects if you have any questions about the protection of human research participants regarding this study.

Please sign and return the form to give your student permission to participate in the survey component of this AC4P project.

_____ (student name) has permission to complete surveys as part of the AC4P Middle School Project assessment.

Parent Signature _____ Date _____

Appendix C. Survey Scripts

Survey Script (Control Schools)

Pre-test

"Earlier in the school year you and your classmates participated in *"Actively Caring for People."*

For those of you who had returned permission forms, you still have the choice of filling out this survey.

[Distribute surveys]

Please complete this survey alone. And please do not write your name on this survey. Your teachers and classmates will not see your survey responses, so please be honest! There are no right or wrong answers. You may choose to complete one, some, or all of the questions on the survey. If there is a question you do not feel comfortable answering, you don't have to fill it out, just skip it.

When you are finished, please silently raise your hand so I can come around and pick it up. Then, after you've finished please remain quiet so other students can finish."

Post-test

"Earlier in the school year you and your classmates participated in *"Actively Caring for People."*

For those of you who had returned permission forms, you still have the choice of filling out this survey. This is the last survey you'll have to fill out from us!

[Distribute surveys]

Please complete this survey alone. And please do not write your name on this survey. Your teachers and classmates will not see your survey responses, so please be honest! There are no right or wrong answers. You may choose to complete one, some, or all of the questions on the survey. If there is a question you do not feel comfortable answering, you don't have to fill it out, just skip it.

When you are finished, please silently raise your hand so I can come around and pick it up. Then, after you've finished please remain quiet so other students can finish."

Survey Script (Intervention Schools)

Pre-test

"As you probably already know, you and your classmates get to participate in *"Actively Caring for People."*

For those of you who had returned permission form to your teacher earlier in the year, you have the choice of filling out this survey.

[Distribute surveys]

Please complete this survey alone. And please do not write your name on this survey. Your teachers and classmates will not see your survey responses, so please be honest! There are no right or wrong answers. You may choose to complete one, some, or all of the questions on the survey. If there is a question you do not feel comfortable answering, you don't have to fill it out, just skip it.

When you are finished, please silently raise your hand so I can come around and pick it up. Then, after you've finished please remain quiet so other students can finish."

Post-test

"As you probably already know, you and your classmates get to participate in *"Actively Caring for People."*

For those of you who had returned permission forms, you still have the choice of filling out this survey. This is the last survey you'll have to fill out from us!

[Distribute surveys]

Please complete this survey alone. And please do not write your name on this survey. Your teachers and classmates will not see your survey responses, so please be honest! There are no right or wrong answers. You may choose to complete one, some, or all of the questions on the survey. If there is a question you do not feel comfortable answering, you don't have to fill it out, just skip it.

When you are finished, please silently raise your hand so I can come around and pick it up. Then, after you've finished please remain quiet so other students can finish."

Appendix D: MS Student Survey

A. Teacher's Name: _____ **D. Date: _____**
B. Lunch Code Number: _____ **E. Grade (circle one):** 6th 7th
C. Gender (circle one): Male Female **F. School:** CMS BMS SMS AMS

There are no wrong answers. No one at your school will see your responses, so please answer honestly. For each statement/ question, please CIRCLE ONE of the numbers from below that best represent how you feel.

The following are some things that can happen at school. Please answer how often each of these things has happened to you **at your school during school hours.** **How often have you….**	**Not in the past month**	**Once in the past month**	**2 or 3 times in the past month**	**About once a week**	**Several times a week**
1. Been teased or called names in a mean or hurtful way?	A	B	C	D	E
2. Had rumors or gossip spread in a mean or hurtful way behind your back?	A	B	C	D	E
3. Been left out of a group or ignored on purpose in a mean or hurtful way?	A	B	C	D	E
4. Been hit, pushed, or physically hurt in a mean or hurtful way?	A	B	C	D	E
5. Been threatened in a mean or hurtful way?	A	B	C	D	E
6. Had sexual comments, jokes, or gestures made to me in a mean or hurtful way?	A	B	C	D	E
7. Had your things stolen or damaged in a mean or hurtful way?	A	B	C	D	E

Please think about the MAIN person or leader who did these things to you in the past month. If you responded "not in the past month" for all of questions 1-7, then circle "I circled all "A's" for items 1-7.

8. How does this person you are thinking about compare with you?				
a. How popular is this other student?	Less than me	Same as me	More than me	I circled all "A's" for items 1-7
b. How smart is this student in schoolwork?	Less than me	Same as me	More than me	
c. How physically strong is this student?	Less than me	Same as me	More than me	

Now, please answer some questions about <u>how you treat others at school during the school day.</u> **How often have YOU…**	**Not in the past month**	**Once in the past month**	**2 or 3 times in the past month**	**About once a week**	**Several times a week**
9. Teased or called another student names in a mean or hurtful way?	A	B	C	D	E
10. Spread rumors of gossip behind another student's back in a mean or hurtful way?	A	B	C	D	E
11. Left another student out of a group or ignored another student on purpose in a mean or hurtful way?	A	B	C	D	E
12. Hit, pushed, or physically hurt another student in a mean or hurtful way?	A	B	C	D	E
13. Threatened another student in a mean or hurtful way?	A	B	C	D	E
14. Made sexual comments, jokes, or gestures to another student in a mean or hurtful way?	A	B	C	D	E
15. Stole or damaged another student's things in a mean or hurtful way?	A	B	C	D	E

Please think about the <u>MAIN</u> person you did these things to in the past month. If you responded "not in the past month" for all of questions 9-15, then circle "I circled all "<u>A</u>'s" for items 9-15.

16. How does this person you are thinking about compare with you?				
a. How popular is this other student?	Less than me	Same as me	More than me	I circled all "<u>A</u>'s" for items 9-15
b. How smart is this student in schoolwork?	Less than me	Same as me	More than me	
c. How physically strong is this student?	Less than me	Same as me	More than me	

The following are some things that can happen at school. Please answer how often each of these things has happened to you at your school during school hours. **How often has a STUDENT IN YOUR SCHOOL…**	**Not in the past month**	**Once in the past month**	**2 or 3 times in the past month**	**About once a week**	**Several times a week**
17. Tried to make you happier when you were sad	A	B	C	D	E
18. Shared things they like with you	A	B	C	D	E
19. Included you into their group	A	B	C	D	E
20. Helped you with your homework	A	B	C	D	E
21. Thanked you for doing a kind act	A	B	C	D	E
22. Defended you when someone was calling you mean names	A	B	C	D	E

Please think about the MAIN person or leader who did these things to you in the past month. If you responded "not in the past month" for all of questions 17-22, then circle "I circled all "A's" for items 17-22.

23. How does this person you are thinking about compare with you?				
a. How popular is this other student?	Less than me	Same as me	More than me	I circled all "A's" for items 17-23
b. How smart is this student in schoolwork?	Less than me	Same as me	More than me	
c. How physically strong is this student?	Less than me	Same as me	More than me	

Now, please answer some questions about how you are treated by others at school during the school day. **How often have YOU…**	**Not in the past month**	**Once in the past month**	**2 or 3 times in the past month**	**About once a week**	**Several times a week**
24. Tried to make a sad person happier	A	B	C	D	E
25. Shared things you like with another student	A	B	C	D	E
26. Included another student into your group	A	B	C	D	E
27. Helped students with their homework	A	B	C	D	E
28. Thanked another student for a kind act	A	B	C	D	E
29. Defended someone who was being called mean names	A	B	C	D	E

Please think about the <u>MAIN</u> person you did these things to in the past month. If you responded "not in the past month" for all of questions 24-29, then circle "I circled all "<u>A</u>'s" for items 24-29.

30. How does this person you are thinking about compare with you?				
a. How popular is this other student?	Less than me	Same as me	More than me	I circled all "<u>A</u>'s" for items 24-29
b. How smart is this student in schoolwork?	Less than me	Same as me	More than me	
c. How physically strong is this student?	Less than me	Same as me	More than me	

31. I am taking this survey seriously. ❒ No ❒ Yes

Now, please tell us how you feel about your coaches.				
32. How often do your AC4P coaches treat other people with respect?	1	2	3	4
	Never	*Rarely*	*Sometimes*	*Often*
33. How often do your AC4P coaches help other people?	1	2	3	4
	Never	*Rarely*	*Sometimes*	*Often*
34. How often do your AC4P coaches take action to make the community better?	1	2	3	4
	Never	*Rarely*	*Sometimes*	*Often*

35. It is important to teach students how to care for others.	*(strongly disagree)*	1	2	3	4	5	6		*(strongly agree)*
36. I want the AC4P coaches to continue AC4P lesson plans.	*(strongly disagree)*	1	2	3	4	5	6		*(strongly agree)*
37. I learned how to actively care better from my coaches.	*(strongly disagree)*	1	2	3	4	5	6		*(strongly agree)*

Appendix E. Coach Survey

A. Teacher's name of the classroom(s) in which you teach: _____

B. Subject Code: _ _ _ _ _ _
(First two letters of your birth place, first two letters of your mother's maiden name, and the four digits of your month and day of birth. (e.g., Norfolk; Smith; March 7th = NOSM0307).

C. Gender: Male or Female

D. Date: _____

E. Academic Standing: Freshman Sophomore Junior Senior Other: ____
Completed Semesters in CABS: 0 1 2 3 4 5 6
Completed Semesters Coaching in Middle Schools: 0 1 2 3 4 5 6

I would like to ask you some questions about the **prosocial behavior of students in the AC4P classroom (of the teacher listed above)**. **Prosocial behavior** includes acts that show helpfulness, kindness, sensitivity, caring, compassion, or consideration for others. Please tell me how much you agree or disagree with the following ideas about your students' prosocial behavior with 1 being strongly agree and 6 being strongly disagree.

1. My students' prosocial behavior is something I cannot really change.	*(strongly disagree)*	1	2	3	4	5	6	*(strongly agree)*
2. Students' prosocial behavior tends to stay the way it is no matter what people do.	*(strongly disagree)*	1	2	3	4	5	6	*(strongly agree)*
3. My actions don't have any effect on my students' prosocial behavior.	*(strongly disagree)*	1	2	3	4	5	6	*(strongly agree)*
4. Anyone can change their students' prosocial behavior.	*(strongly disagree)*	1	2	3	4	5	6	*(strongly agree)*

The following questions assess your perception of the classroom climate. Rate each item below. For each item, there are 3 descriptions. Select the rating that best describes the current state of the classroom in which you teach – level 1 (high), 2 (middle), or 3 (low). If you feel that the practices for your classroom fall between two of the descriptions provided then select the middle-level option. **Please circle only one option** from the five response options displayed in the grey area for a particular question.

5.	*high*	*high-middle*	*middle*	middle-low	low
	Students feel a sense of community and the classroom is defined by a positive feeling among class members.		Students generally like the teacher but the class is just another place to learn some content.		Students feel little or no sense of affiliation with the teacher or the other students in the class.
6.	*high*	*high-middle*	*middle*	middle-low	low

	Various cultures and sub-groups blend, interrelate and feel like valid members of the classroom community.		Various sub-groups avoid each other and do not share the same sense of legitimacy.		Various sub-groups are hostile to one another.
7.	*high*	*high-middle*	*middle*	middle-low	low
	Students readily accept the purpose of zero tolerance for "put downs."		Students think put downs are just part of the common use of language.		Put downs are common and lead to conflict.
8.	*high*	*high-middle*	*middle*	middle-low	low
	Most students feel a responsibility to promote the collective success of all the students in the class.		Most students feel a sense of personal responsibility for their own learning.		Students feel little responsibility for their own success and/or see other students as competition.
9.	*high*	*high-middle*	*middle*	middle-low	low
	Popular students feel obliged but not entitled to act as leaders.		Popular kids treat the other popular kids in the class well.		Popular kids use their social capital to oppress the less popular students.
10.	*high*	*high-middle*	*middle*	middle-low	low
	It is readily apparent that an effort is made by the teacher to promote positive interactions among students, and there is evidence that it is making a real difference.		The teacher has made a sincere effort to promote positive interactions among students, and it has made some difference.		The teacher has made little or no deliberate effort to promote positive interactions among the students in his/her class.
11.	*high*	*high-middle*	*middle*	middle-low	low
	Most students in the class take on leadership roles willingly and regularly.		Leaders in the class come from a small clique of students.		Students avoid leadership for fear of being labeled as "goody goodies" or teacher's pets.
12.	*high*	*high-middle*	*middle*	middle-low	low
	Students in the class believe their gifts are validated and recognized in a meaningful and systematic way.		Students in the class believe there is some validation of uniqueness and individual recognition, but it is not a clear priority.		The class structure promotes the recognition of the smarter and more talented students.
13.	*high*	*high-middle*	*middle*	middle-low	low
	Most students expect to be given ownership over classroom decisions that affect them.		Most students are upset when classroom rights are withdrawn, but typically take little action.		Most students assume that they have few or no rights in the class.

Appendix F. Activities and Script

Intro Script

Preparation
Enter classroom a few minutes ahead of time and introduce yourself to the teacher/ set up PowerPoint, Videos, etc.

Place a growth mindset worksheet at every desk.

Introduction (30 seconds)
Begin lesson on time.
Introduce yourselves as AC4P Coaches:

- Hey everyone! My name is _____ and I will be your AC4P coach for the next couple of weeks. I am so excited to get to know all of you. First I'd like to thank Mr./Mrs. _____ for allowing us to come in and lead you all.

Remember to be enthusiastic and smile!

Heads Down/Hands Up Activity (3 Minutes)

- First off we are going to start out with a quick activity. So what I need you guys to do is to put your heads down on the table and raise one hand into the air. I'm going to ask that you keep your heads down the entire time we are presenting the activity. I will let you know when to look up.

Ask the class a number of prompt questions. You should ask the class to look up on a question that requires the entire class to have their hands raised.

- Keep your hand raised if you wish you had more friends…
- Keep your hand raised if you wish you had more school spirit…
- Keep your hand raised if you wish people were nicer to you…
- Keep your hand raised if you wish you saw more acts of kindness…

Etc.

Video (1 Minute 10 seconds)

Actively Caring Definition and Lesson 1 (4 minutes)

- Actively Caring is any act that goes above and beyond the call of duty on behalf of the safety, health, or welfare of another person.
- So how can you actively care?

Give examples listed on the slide of how someone can actively care and then ask for new ideas from the class. Facilitate discussion.
Show photo of Aly Neal.

- In Washington D.C. there was this girl and her name was Ally Neal. One day she was riding the train and notice a man sitting across from her who looked very sad. She could tell that he was just not having a good day. So she looked up at the man and gave him a simple smile. When the train stopped to let off passengers, the man got up to leave. Before he got off, the man came over to Ally and said, "I just wanted to let you know that

I've been stuck in a bad time and your smile is the most anyone has reached out to me in the past year. I want to give you one of these." And he pulled a green wristband off of his arm. (Pull your wristband off of your wrist) He gave her the bracelet and her story found it's way back to us.

Discuss the idea of SEE, ACT, PASS. (See an act of kindness, thank the person for actively caring, and pass the wristband on).

Video (3 minutes)

Lesson 2 (4 minutes)

Learning to Actively Care takes a lot of practice.

Tell the class to take out their Growth Mindset worksheet that was placed on their desk at the beginning of the class.

- Let's look at step number 1 and I want you think of something you are good at. Some examples are sports you may play, instruments you play, . Write it down.
- Now move on to step number 2. I need you to think of 3 things you need to know to be good at your activity from step 1. So if my item from step 1 says that I am good at soccer I would need to know how to run fast, kick strong, and understand the rules of soccer. Write these 3 things down.
- Lastly let's look at step number 3. What is one thing that you have to do to become good at all 3 skills from step number 2? (Facilitate discussion and prompt them towards the answer "PRACTICE". Once the get to they realize practice is what it takes tell them to flip over to the backside of the growth mindset worksheet where practice is already filled in for step 3).

Video (1 minute 16 seconds)

AC4P Skills (3 minutes)

Show whole AC4P triangle.

- When we actively care we create a whole world of actively caring behavior. This triangle shows how different activities can create an AC4P culture.

Show the slide with the photo of AC4P coaches.

- But don't worry if this seems too complicated! We are going to teach you the skills needed to do this in just a second!

The AC4P triangle.

For each of the 3 kinds of AC4P behavior give a mediocre form of AC4P (holding the door for someone with a large package) and then give a high quality form of AC4P (paying for a stranger's lunch)

- Actively Caring begins by recognizing someone for performing a caring act.
- This takes a lot of courage! To do something caring for someone takes courage and to recognize that someone else has done something caring can sometimes take even more courage.
- We must also share our gratitude or thankfulness that AC4P behavior is happening around us.
- You guys aren't the only ones learning to Actively Care. We, as coaches are learning from you too!

SAW & HAW Cards (2 minutes)

Explain the difference between See, Act, Write and Hear, Act, Write cards are.

- You will teach us to be active bystanders by using SEE, ACT, WRITE and HEAR, ACT, WRITE. When you see or hear an act of kindness you will thank that person for actively caring and then write your story down on a SAW or HAW card.

Tell them that they will use these cards to reach a weekly point goal.

- So where do you put the cards when you are finished filling them out?

Try and get the kids to guess. Stay enthusiastic. And then show them your beautifully decorated AC4P boxes! Let the class be involved in where they would like to keep the AC4P box. Try to make sure it is somewhere near the front of the room so that it is in clear view.

Challenge (2 minutes)

- The more SAW and HAW cards you write the more points you get to reach or go further than your point goal. When you reach your point goal you get to challenge us, your AC4P coach, to perform an actively caring act.
- For my weekly challenge, depending on how many points the class gets, you all get to challenge me to perform more and more Actively Caring activities outside of the classroom.

Show the Point Goal to Challenge chart and explain that the more points the class receives the more that you as a coach have to do outside of lessons.

- Also as a prize to you guys, every week that you beat the point goal, the students who turn in cards to the AC4P card box will get a chance to win one of these cool green wristbands. (Be sure to show off your wristbands).

Explain that the end goal is for every student to write an AC4P card and turn it in for the chance to win a wristband.

- Once every student has won a wristband the entire class will get a wristband to keep and later pass on. But remember...In order to get a wristband you have to have your story read out loud in class.

Lightning Round (30 seconds)

- How does the class earn points?
  - Answer: Writing SAW & HAW cards.
- How do you get a wristband?
  - Answer: Volunteering to have their stories read out loud.
- What can you challenge the coach to do if you meet the point goal?
  - Answer: AC4P behaviors.
- What is the point goal for next week?
  - Answer: Aim for the point goal to be 15.

Closing

Thank the class for being so amazing and for letting you come in and coach. Tell them how excited you are to be their coaches and thank the teacher in front of the class for giving you

their time. Remind the class to write plenty of AC4P cards and turn them into the box.

RECOGNITION

Introduction

- Introduce yourselves again (be super excited)
- Begin by reminding the students:
    - Since you guys have already learned a little about Actively Caring we, as coaches, want to know what you think an actively caring person would do to show that they care?
- Have students split up into groups to discuss. (30 seconds)
- After 30 seconds ask the kids what they came up with and write their suggestions on a large sheet of paper to be hung in the room. (This way they can see unique ways of actively caring)

Recognition Activity & Discussion (see in Packet)

- See Recognition Activity Sheet for instructions.
- During this activity DO NOT mention recognition (ex. Calling it a recognition activity, saying you will recognize someone, etc.). We want the kids to be able to figure this out on their own.
- Encourage discussion. **Ask the questions at the bottom of the Recognition Activity Sheet**. But keep it short - you will further this discussion after reading the definition of Recognition

Recognition Definition

- Our definition of Recognition (on slide)
    - ***Expressing appreciation toward someone who actively cares.***
    - ***Do you feel like you were recognized in the activity for actively caring?***
    - If you were selected, did you feel like you were recognized? How did that feel to you guys? Did it feel good to be selected?
    - If you were the one selecting, how did you feel that you got to recognize your peers? ….encourage discussion
- Bring up the slide displaying the AC4P triangle. They were exposed to this during the Intro lesson. Show how Recognition is the first step in the triangle of AC4P behavior.
    - When you see someone actively care or do something nice for someone else, as a bystander (point out bystander on the triangle) it is great to recognize that person (performer).

Story Time!

- Tell students that it is time to take a look at the stories they wrote last week!
- Pull out all the stories, get an idea of how many points, and then have kids offer to have their stories read aloud.
- **IF NECESSARY= be prepared to recruit story writers at this moment if you do not have enough stories/points in your box
- Check off on the tracking chart who had their story read out loud, and put a 1 in the box to note that they had their story read on the 1st week.

- Make it a big deal and a celebration when giving the wristbands to the kids who had their stories read out loud – have everyone clap.
- Make sure not to read the name of the person who was actively cared for, and only coaches read stories – not students.

AC4P Team Challenge

- Remind students that the more stories they write the more they get to challenge you to do outside of the classroom.
- Possibility for when presenting in the classroom= Have one coach act nervous about completing the goals (I don't usually do things like this but I will for all of you if you can get in lots and lots of points!)
    - Remember guys! Once everyone has had their stories read out loud and they receive a wristband everyone will be able to get a wristband to keep and possibly pass along to an actively caring person one day!
- Give the kids 3 options for a point goal. They should each be +5 points from each other, depending on the previous week's point goal. Remind kids that they are able to exceed their point goal. They aren't restricted.

Lightning Round

- What does SAW and HAW stand for?
- How do you earn points?
- How do you challenge your AC4P coach each week?
- Explain each answer and provide reminders.

Goodbye

- Remind them if they earn enough points, they get to challenge the coaches outside of the classroom.
- Tell class to practice recognition in order to write more cards.
- Make sure to collect AC4P Stories from box into plastic bag!
- Thank the Teacher!

COURAGE

Enter the classroom early and have the PowerPoint ready.
Greet the teacher with excitement.
Courage Activity
Toy Story Clip (1 minute 30 seconds)
Courage Definition & Discussion

· *Stepping outside of your comfort zone to actively care for people.*

So now do you guys kind of see how that activity we did earlier is an example of courage

· *Discuss ways that the characters in the video clip displayed courage. Where was courage present? How did it play an important part?*

· *Physical Courage – displaying courage in the face of physical pain, fear, or intimidation.*

- *What do you think physical courage means?*
- *Who in the clip displayed physical courage and how?*

· *Moral Courage – the courage to stand up in a situation for something you believe in or make a decision that may have emotional or non-physical consequences.*
  ○ *What do you think moral courage is?*
  ○ *Who in the clip displayed moral courage and how?*
· *Do you guys understand how you don't always have to use strength or put your body in harms way to be courageous? Actively caring requires you to display Moral Courage because sometime actively caring can be awkward or scary. Building up courage makes it easier to actively care! It can even make it really fun!*
· *Show examples of courage.*

AC4P Triangle

· Re-introduce the triangle. See if kids remember it from previous weeks.
· Remind them about recognition. Ask for examples of what it means to recognize someone.
· This week we will talk about Courage. It takes courage to perform an actively caring act and to RECOGNIZE someone who has actively cared.
· What are some examples of courage? (Think about the video and the activities)

Story Time

· *Introduce story time!*
· *Open the box and get an idea of how many points were earned.*
· *Have kids volunteer to have their stories read out loud.*
· *Check off on the tracking chart who had their story read by putting a 2 in the box beside their name.*
· *Celebrate when done reading each story as you pass out the wristband.*
· ***Make sure not to read the name of the person who was actively cared for.***

Coaches Challenge

· Remind students that if they have met their point goal that you will have to perform an AC4P challenge that represents courage (show chart).
· Count the points in the box and keep it exciting when telling kids which challenge you will have to accomplish.
· Don't forget! That once everyone earns a wristband and gets their name marked off on the tracking chart, then everyone gets a wristband to keep!

Point Goal & Closing

· Remind students of what their point goal was last week and whether or not they exceeded that point goal.
· Have the kids vote on what they believe their point goal should be. Try and make it higher than last weeks point goal. Tell them that you are encouraged by their progress and that you believe they can get even more points than last week.
· These are the challenges that we have in store for you next week. So keep up the good work!
· Show and explain tips for the kids to use while gaining points. Remind them of the activity and how if they help their partner with getting better at an activity then that is an act of courage and they may get a card written about them!
· Thank the teacher and students.
· If you have time continue on to the next few slides and review what SAW and HAW cards are used for.

Gratitude Script

Introduction:

- Introduce yourselves again!
- BE EXCITED!

Tangled Up Activity

- One coach will start out with the string.
- I will throw the ball of string to someone I am thankful for and either give them a compliment, thank them for something they've done, or give a reason why I respect them. When the string is passed to you I want you to hold onto a part of the string so that when we are done we will have created a giant web! You cannot pass the string to someone who has already received it.
- You (as the first person to throw the string) may want to throw the sting to a student who you think would be left out in a normal setting.

Definition and Discussion:

- Read the definition, "Seeing and appreciating the positive in everyday life, and expressing it through actions or words."
- Show two examples of gratitude (note that these are AC4P stories that were turned into us at Virginia Tech) and read them aloud to the class.
- Who are some people in your lives that you think you show gratitude for?
- Who are some people that you don't normally show gratitude for but think deserve it?
- How did the activity relate?
- Show AC4P triangle. (REMEMBER THIS??) Give a middle school example of gratitude and then a higher level.
- Show the photo of the burning house. Ask, "What are some things that you see in this photo?"
- But wait! Did you guys notice the person standing outside of the house? See, even in the darkest of moments, such as having your house burn down, you can still be grateful, such as still having your life or your family.

Video

- Show video and discuss how this relates to gratitude.

Letter Activity

- Have the students star their letters. Let them know that they do not have to finish them in class and that this is something for them to start here and finish at home. (Give a few minutes depending on your time)

Points and Wristbands

- Tell the class that you looked into the AC4P box and let them know if they reached their point goal, exceeded it, or didn't reach their goal.

- Explain that everyone must turn in a card and receive a wristband to reach the class's goal for the semester. Only students who have not had their stories read out load may have their story read aloud this week to receive a wristband.
- So who wants to volunteer to have their story read this week?!
- Remember that we won't read the person's name out loud that was actively cared for, so don't be embarrassed to volunteer your story.
- CELEBRATE!

Courage Challenge

- Explain to students which activity the coaches will be preforming that week depending on how many points they collected. (Remember that this is the challenge you will complete this week and report back to your class next week)

Point Goal

- If your class met their point goal last week make sure the point goal that is set is higher than the previous week.

Tips For Next Week

- Tell your friends about the letters you wrote (HAW).
- Tell someone how much they mean to you.

Review

- Show challenge chart and remind students that if they meet their point goal next week they get to challenge you to preform AC4P behaviors that go above and beyond.
- Remind students to work to reach their point goal so that all of the names on the chart can be marked off and they can eventually all receive wristbands.

THANK YOU EVERYBODY!!!!!!!!!
WE WILL SEE YOU NEXT WEEK!!!!!!!

BELONGING

Materials for Belonging packet

- copy of Courage script in case they need to recruit authors again
- Green wristbands
- Coach Copy of Tracking Chart
- Fidelity/Observer Checklists
- Poster for Class/activity

-story cards in each packet

For Week 5 (Belonging):

Before AC4P Time (5 mins BEFORE class)
● Coaches will look in AC4P Boxes and double check their Tracking Sheet

Intro (Less than 1 minute)
- Enthusiasm! Introduce yourselves again (maybe ask them if they remember your names--show them how you remember some of their names. This builds reciprocity!)
- Circle last week's students on the tracking chart who passed the wristband last week. Ask if anyone got a wristband passed to them this week and see if anyone will share that story. Express you're excited to see who will get the last round of wristbands, of the students on Tracking Chart yet to be marked.

Gratitude (2 mins)
- Definition
  - *Last we week talked about "gratitude"*
  - *This week, we are moving onto the fourth important part of actively caring--Belonging.*
  - *Where do you feel like you belong?*
  - *Our Belonging Definition:*
    - *Feeling a sense of togetherness because you people actively care for you and you care for them.*

- Discussion
  - *Many times, we don't feel like we belong anywhere. And the people around you probably feel the same way. The truth is, belonging is something we are all capable of creating. When we choose to focus on our similarities, recognize each other for good things we do for one another, and choose to be grateful for each other, it will create a sense of belonging for all.*

Belonging Activity (5-7 minutes)
a. Round 1 (1 minute)
b. Round 2 (1 minute)
c. Round 3 (1 Minute)
d. Round 4 (2 minutes)
e. Round 5 (2 minutes)

Discussion
a. *Now look at the circle that we've filled in! Look at everything that your class has in common! You guys all have something that connects you together.*
b. *Did you guys think you could all find something you had in common? Was it hard to find something in common sometimes? Aren't you glad you did?*
c. Your class can keep this as a reminder about how you all belong here, in [X]s classroom!

AC4P Time (5 mins)
1. Pass out story cards to everyone. Have them fill it out
2. Pass out wristbands to everyone to keep

• Tell them that their awesome.

Closing (Less than 1 min)

o *Great job everyone!!! Remember, we practiced recognition, courage, gratitude, and now belonging, which are all apart of actively caring, and all very important in passing along actively caring*

o *Keep your eyes peeled for AC4P when with each other and with those you meet!*

AC4P doesn't end here! That's why you have these wristbands! You can keep passing them on!

Thank you class!! Thank you [Teacher's name]!!! We have had a wonderful time being your coaches this semester and we appreciate you allowing us to be apart of your school! Remember to Actively Care!

- Remember to grab your tracking chart and the last filled out story cards!

Appendix G: Intervention Fidelity Checklist

A. Teacher's Name: _____ **D. Date: _____**

B. My Name: _____ **E. Grade (circle one):** 6th 7th

C. Gender (circle one): Male Female **F. School:** CMS BMS SMS AMS

G. Time: _____ **H. Lesson 1-5: _____**

Please circle ALL PEOPLE who completed a fidelity checklist for this lesson.

Coach 1 Coach 2 Observer 1 Observer 2

Please circle YOUR role.

Coach 1 Coach 2 Observer 1 Observer 2

Now, please circle 0 (did not complete) or 1 (completed) to indicate intervention adherence for each lesson component.	**Did not complete**	**Completed**
Read all S.A.W. and H.A.W. cards.	0	1
	Did not complete	*Completed*
Randomly select 6 S.A.W./ H.AW. cards.	0	1
	Did not complete	*Completed*
Recognize the authors of the S.A.W./ H.A.W. cards with AC4P wristbands	0	1
	Did not complete	*Completed*
Instruct wristband recipients to pass on their wristbands to: the kindness performer for S.A.W. and the teller for H.A.W.	0	1
	Did not complete	*Completed*
Tell the students about the challenge ("For every ten classroom points you earn each week through AC4P actions, I will perform an AC4P act before I return here next week")	0	1
	Did not complete	*Completed*
Share the point total with the class	0	1
	Did not complete	*Completed*
Tell the students how many AC4P actions the coaches intend to perform as part of their challenge for the week	0	1
	Did not complete	*Completed*
Present character-strengths definition	0	1
	Did not complete	*Completed*
Share AC4P stories related to the character strength	0	1
	Did not complete	*Completed*
Discuss how the character strength relates to the other character strengths in the AC4P triangle	0	1
	Did not complete	*Completed*
Lead the participative activity	0	1
	Did not complete	*Completed*
TOTAL (please sum the completed column)		
		SUM

Appendix H. IRB Approval Form

VirginiaTech

Office of Research Compliance
Institutational Review Board
North End Center, Suite 4120, Virginia Tech
300 Turner Street NW
Blacksburg, Virginia 24061
540/231-4606 Fax 540/231-0959
email irb@vt.edu
website http://www.irb.vt.edu

MEMORANDUM

DATE: March 17, 2014

TO: Scott Geller, Shane McCarty, Sophia Teie

FROM: Virginia Tech Institutional Review Board (FWA00000572, expires April 25, 2018)

PROTOCOL TITLE: Actively Caring for People: A Bullying-Prevention Program for Middle Schools

IRB NUMBER: **11-719**

Effective March 17, 2014, the Virginia Tech Institution Review Board (IRB) Chair, David M Moore, approved the Amendment request for the above-mentioned research protocol.

This approval provides permission to begin the human subject activities outlined in the IRB-approved protocol and supporting documents.

Plans to deviate from the approved protocol and/or supporting documents must be submitted to the IRB as an amendment request and approved by the IRB prior to the implementation of any changes, regardless of how minor, except where necessary to eliminate apparent immediate hazards to the subjects. Report within 5 business days to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

All investigators (listed above) are required to comply with the researcher requirements outlined at:

http://www.irb.vt.edu/pages/responsibilities.htm

(Please review responsibilities before the commencement of your research.)

PROTOCOL INFORMATION:

Approved As:	**Expedited, under 45 CFR 46.110 category(ies) 7**
Protocol Approval Date:	**September 28, 2013**
Protocol Expiration Date:	**September 27, 2014**
Continuing Review Due Date*:	**September 13, 2014**

*Date a Continuing Review application is due to the IRB office if human subject activities covered under this protocol, including data analysis, are to continue beyond the Protocol Expiration Date.

FEDERALLY FUNDED RESEARCH REQUIREMENTS:

Per federal regulations, 45 CFR 46.103(f), the IRB is required to compare all federally funded grant proposals/work statements to the IRB protocol(s) which cover the human research activities included in the proposal / work statement before funds are released. Note that this requirement does not apply to Exempt and Interim IRB protocols, or grants for which VT is not the primary awardee.

The table on the following page indicates whether grant proposals are related to this IRB protocol, and which of the listed proposals, if any, have been compared to this IRB protocol, if required.

Appendix I: Flowchart of Student Attrition from Potential to Final Participants