AN EXAMINATION OF THE INFLUENCE OF PRIMED CHARACTERISTICS OF

IDENTITY ON MOTIVATION TO LEARN CONFLICT RESOLUTION SKILLS

by

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In this study I examined whether priming salient characteristics in martial arts

students' martial arts identity would influence their motivation to learn conflict resolution

skills. Through a factorial, between-subjects experimental design I evaluated the effects

of priming three different characteristics of a martial arts identity on 242 martial arts

students, including 'peace' and 'competition' characteristics (experimental conditions)

and an exercise" characteristic (control condition). I also examined whether the strength

of the specific martial arts identity primed would moderate this relationship and assessed

the impact of the conditions on participants' value and self-efficacy for conflict resolution

skills, as these are theoretically related to motivation to learn.

By using both multivariate analyses of covariance and binary logistical analysis, I assessed for outcome differences among the conditions. Results demonstrated that participants primed with the notion that 'peaceful' characteristics were related to a martial arts identity were significantly more likely to want additional training in conflict resolution skills in comparison to participants primed with the notion that 'competitive' characteristics were related to a martial arts identity. When experimental conditions were compared to the control condition, effects differed by sex. The peace prime significantly predicted that men would want additional training in conflict resolution skills, but not women. The competition prime significantly predicted that women would *not* want additional training in conflict resolution skills, but this was not true for men. Contrary to hypotheses, strength of identity was not a significant moderator of these relationships, and significant differences between experimental and control conditions were not found for the outcome measures of participant value and self-efficacy of conflict resolution skills. Ceiling effects and measurement issues may explain the lack of significant findings on a continuous measure of motivation to learn, but the dichotomous motivation to learn outcome variable was significantly influenced by the prime conditions in the hypothesized directions.

Results of this study have the potential to improve the content and delivery of conflict resolution training with the purpose of improving participant participation and engagement. Study results, strengths, limitations, and implications for future research and practice are discussed.

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CHAPTER I

RATIONALE

Reducing violence and aggression is a top priority for our schools and

communities, many of which choose to reduce aggression through teaching individuals

conflict resolution skills (Bodine & Crawford, 1998; Deutsch, Coleman & Marcus, 2006;

Wilson, Lipsey, & Derzon, 2003). Unfortunately, motivation to learn and participate in

conflict resolution programs is inconsistent across different groups of participants (Artz

and Reikan, 1998; Artz, Riecken, MacIntyre, Lam, & Maczewski, 2000; Black, 2003;

Deutsch et al, 2006; Guerra & Smith, 2006; Spencer, 1999). Research on conflict

resolution training have identified the need to increase the personal relevance of these

curricula for participants, and have noted the failure of conflict resolution curricula to

address the influence of participant identity on both participation and motivation to learn

in conflict resolution programs (e.g., Artz, et al. 2000; Black, 2003; Bodine & Crawford,

1998; Deutsch et al., 2006; Guerra & Smith, 2006; Wilson, Lipsey, & Derzon, 2003).

At the same time, research on identity and social stereotypes has repeatedly

demonstrated the powerful effects of identity on cognitions and behavior (Dijksterhuis,

Aarts, Bargh & van Knippenberg, 2000, Levy, 1996; Shih, Richeson, Ambady, Fujita, &

Gray, 2002; Steele & Aronson, 1995; Zarrett, & Malanchuk, 2005). Social identity

research emphasizes the importance of self-relevance and salience of an identity and the

traits associated with that identity on motivation and behavior (Cohen & Garcia, 2005;

Haslam, O'Brien, Jetten, Vormedal & Penna, 2005; Pickett & Brewer, 2001; Sidanius,

Van Laar, & Levin, 2004). Eccles (1983) expectancy-value of motivation model and the research literature on identity and motivation give strong support to the theory that identity, and the characteristics attached to that identity, are motivating factors in an individual's choice to participate and engage in the learning of skills, such as conflict resolution skills.

To be clear, identity is a broadly used term both within and across the disciplines of sociology and psychology (Brubaker and Cooper, 2000). In this study, I focus on and use Eriksons' (1968, 1980) definition of identity, which conceptualizes identity as an ongoing process of establishment and evaluation of the self-in-context. This process continually interacts with the environment and includes the process of defining who one is, and who one is not, relative to others. A healthy sense of self is dependent on the ability to balance conflicts within this process, maintaining an individual self-concept while simultaneously adapting to changing social contexts. Erikson (1968; 1980) believed that everyone needs a viable social identity to function effectively in society, theorizing that the establishment of an identity separate from parents is the primary developmental task of adolescence and young adulthood.

While personal identity is based on a set of individual characteristics (personality, behavior, values), social identity is based on identification with a particular social group or role (Cohen & Garcie, 2005; Haslam, et al., 2005; Stryker and Serpe, 1994; Tajfel and Turner, 1986). Although identification with specific groups is fluid and varies in strength and consistency, the social identities in which a person strongly relates shapes personal values and creates socially shared meaning systems (Waters, 1996; Chatman, Eccles, & Malanchuck, 2005). These shared meaning systems and social norms are influenced by

peer affiliations within the social group culture (Barber, Stone, Hunt, & Eccles, 2005; Dishion, Poulin, and Burraston, 2001; Markus & Kitayama, 1991). Indeed, research suggests that public commitment to an identity increases behavior congruent with the characteristics associated with that identity (Schlenker, Dlegolecki and Doherty, 1994; Stets, & Burke, 2003).

Stryker's Identity Theory (1968, 1980) expands the concept of social identity and introduces the concept of identity salience, which refers to the importance of a specific identity that one has relative to one's other identities. According to Stryker (1968, 1980), a person's identity as a 'mother' will be more salient when she is thinking about her children and her identity as a 'teacher' will be more salient when she is preparing lesson plans. Identity salience strongly influences how individuals act in a given situation; the higher the salience of an identity, the greater the probability that behavior will be in agreement with the expectations associated with that identity (Stryker & Burke, 2000). Burke (1991) expanded on Stryker's Identity theory, introducing a 'cybernetics model of control' to explain the relationship between identity and behavior. According to this model, identities and their associated expectations serve as a standard of reference for behavior. When an identity activates in a situation that demands it, self-relevant meaning from the situation compares to the expectations and meanings associated with the identity. Differences between these two sets of expectations result in behavior modification in an attempt to bring about congruency between behavior and identity (Stets & Burke, 2003; Stryker & Burke, 2000).

Simon's (2004) Self-Aspect Model of Identity (SAMI) builds upon these two theories, integrating the saliency concepts of Stryker's Identity Theory and behavioral

components of Burke's cybernetic model of control into a model that places primary focus on self-schemas. Markus (1977) defined self-schemas as "cognitive generalizations about the self, derived from past experience, that organize and guide the processing of self-related information contained in the individual's social experiences." (p. 27). At its foundation, SAMI posits that people constantly engage in self-interpretation, defined as "the social-cognitive process whereby people give coherence and meaning to their own experiences, including their relations with the physical and social environment" (p. 64). Hence, self-interpretation is the way in which people gain understanding of themselves.

Simon (2004) posits that self-interpretation comprises multiple self-aspects, i.e. cognitive categories that assist the individual in processing and organizing information about the self. People have access to multiple self-aspects, with salience of a particular self-aspect varying with the immediate situational context. For example, the self-aspect of 'pacifist' should increase in salience when discussing the war, but not when discussing musical tastes. In SAMI, these self-interpretations guide an individual's perspectives and behavior. For example, identity can help people interpret or explain their experiences (e.g., I don't like to fight because I am a pacifist) and can increase the likelihood of certain experiences and behaviors (e.g., I'm a pacifist, so I should join this anti-war protest). In a longitudinal study, Sussman, Dent, and McCullar (2000) completed a one year prospective analysis looking at group self-identification as a predictor of adolescent drug use and violence. On the measures of violence, the high-risk identifying group was most likely to perpetrate violence, least likely to avoid dangerous persons or situation, and most likely to carry weapons. Eccles and Barber (1999) explored similar tenets in

their study of adolescent group identification and found that adolescents endorsing a 'Brain' identity exhibited lower alcohol and drug use, higher self-esteem and higher academics than adolescents who self-identified as 'Criminals.' In a similar study, Mak, Heaven, & Rummery (2003) found a significant positive correlation between delinquency and having a 'rebel' identity, and a significant negative correlation between delinquency and having a 'studious' identity.

In summary, social identity research (e.g., Cohen & Garcia, 2005; Haslam et al., 2005; Pickett & Brewer, 2001; Sidanius, Van Laar, & Levin, 2004; Simon, 2004; Stryker & Burke, 2000) posits that two factors facilitate the self-interpretation process: (1) the personal importance and salience placed upon the identity, and (2) the social, contextual fit of the identity. The social identity literature suggests that characteristics and meaning associated with a person's in-group social identity impact choices and behavior when this identity is contextually salient and the characteristics themselves are a part of the individuals' sense of self.

Social Stereotypes

The social stereotype literature has repeatedly demonstrated the powerful effects of identity on cognitions and behavior by exploring the impact of social stereotypes on both 'targets' (those for whom the identity is self-relevant) and 'non-targets' (Dijksterhuis, Aarts, Bargh & van Knippenberg, 2000, Levy, 1996; Shih, Richeson, Ambady, Fujita, & Gray, 2002; Steele & Aronson, 1995). For example, highlighting the salience of an 'elderly' stereotype has been shown to effect performance (Dijksterhuis, Spears, & Lépinasse, 2001), behavior (Bargh et al., 1996) and even memory (Levy,1996). Bargh et al. (1996) primed college-aged participants with words associated with the

elderly and found that those primed with the elderly stereotype walked significantly slower than control participants. Levy (1996) found that elderly participants primed with positive characteristics of the elderly showed improved memory while those primed with negative characteristics demonstrated more impaired memory. Interestingly, the positive prime did not impact the young participants in Levy's (1996) study, suggesting the importance of self-relevance in certain priming situations. Indeed, the social stereotype literature suggests that although the cognitions and behaviors of 'non-targets' (those who do not identify with the stereotype) can be primed, the impact of the priming is stronger for 'targets' (those for whom the identity is self-relevant) (Levy, 1996 & Shih, Richeson, Ambady, Fujita, and Gray, 2002). Shih et al. (2002) suggest that these differences are due to the presence of two activation routes, the activated stereotype and the person's self-representation. For both target and non-targets, the priming activates a stereotype, but it activates an additional self-representation for targets, producing stronger results.

A large body of research on social stereotypes has focused on negative stereotypes of identity and the phenomenon of stereotype threat. Stereotype threat occurs when a person becomes concerned about confirming a negative stereotype. Steele and Aronson (1995) best describe this concern: "The existence of such a stereotype means that anything one does or any of one's features that conform to it make the stereotype more plausible as a self-characterization in the eyes of others, and perhaps even in one's own eyes." The resulting mental representations of this stereotype and subsequent increased stress often result in a "self-fulfilling prophecy." For example, Steel and Aronson's 1995 experiment found that simply asking African American students to indicate their ethnicity before taking a test lead to poorer performance. Similar results

have been found for women's performance on math test when gender has been primed (Spencer, Steel, & Quinn, 1999) and for athlete's academic performance when an athletic 'jock' identity has been primed (Yopyk & Prentice, 2005).

Although there has been less research conducted on the impact of positive stereotypes of identity, such as the improved memory found in the Levy's (1996) elderly study, results to date suggest a similar process (Dijksterhuis and Bargh, 2001). Shih et al, (1999) found that Asian American females performed better on a quantitative reasoning test when their Asian identity (associated with positive stereotypes for math) was made salient, and performed worse when their gender identity (associated with negative stereotypes for math) was made salient, compared to a control group for whom no social identity was made salient. Similarly, Yopyk and Prentice (2005) found that college athletics completed more items and performed better when primed with an academic identity than when primed with an athletic identity.

Further research suggests it is the specific traits associated with a social identity, rather than the social identity itself, that primarily effects performance (Bargh, Chen and Burrows, 1996; Dijksterhuis and Bargh, 2001; Macrae and Johnson, 1998). For example, Dijksterhuis, Aarts, Bargh and van Knippenberg (2000) found that priming an elderly stereotype led to forgetfulness only when participants associated the elderly with the trait of forgetfulness. So, in short, and as suggested by this research, trait activation mediates the effects of stereotype activation on behavior (Dijksterhuis and Bargh, 2001).

Identity and Motivation to Learn

According to Noe and Schmitt (1986), 'Motivation to learn' is a desire to learn a set of specific skills or content. Research indicates that motivation to learn directly

influences decision-making processes such as an individual's direction, focus, and level of effort put forth towards learning a skill and plays a key role in the choices an individual makes to engage in, attend to, and persist in learning activities (Brophy, 2004; Colquitt, LePine, & Noe, 2000; Noe, Wilk, Mullen, & Wanek, 1997). Colguitt et al. (2000) conducted a meta-analytic path analysis of the past 20 years of motivation research and found support for both individual characteristics (e.g., self-efficacy, valence, locus of control, anxiety, relevance, and job/activity involvement) and situational characteristics (e.g., climate and environment) as significant predictors for motivation to learn. Interest theories in the field of motivation research stress the motivational role of relevance and personal values (Britt, 2005; Cothran & Ennis, 1999; Cothran & Ennis, 2000; Hidi & Baird, 1986; Schiefele, 1999; Wentzel and Wigfield, 2007; Hidi and Harackiewics, 2000), with research suggesting that individuals engage more in learning when their motivation is intrinsic (Britt, Adler, & Bartone, 2001; Brophy, 2004; Deci & Ryan, 1985, Eccles & Wigfield, 2002; Ryan and Deci, 2000), when they find the material relevant to their life outside of the classroom (Covington & Weidenhapt, 1997; Hernandex, 2000; Markus & Kitayama, 1991; Shernoff & Hoogstra, 2001; Shernoff, Schneider, Csikszentmihalyi, 2001), and when the material congruent with self-aspects of identity (Barber, Stone, Hunt, & Eccles, 2005; Guillet, Sarrazin, Fontayne, & Brostad; 2006; Petosa, Suminski, & Hortz, 2003; Roeser, Peck, & Nasir, 2006; Wegge, Van Dick, Fisher, Wecking, & Moltzen, 2006; Whitehead, 1996).

The field of sports psychology has contributed a large portion of the research exploring the relationships between identity and motivation. For example, Allender, Cowburn, Foster (2006) found that for adolescent girls, pressure to conform to the

stereotypes of their gender identity was a key motivating factor in their choice to not participate in sports. In other studies, exercise participation and the number of minutes of weekly exercise (Anderson & Cychosz, 1995; Anderson, Cychosz, Franke, 1998) all related to self-identification as an 'exerciser.' Sheeran and Orbell (2000) found that having a self-schema as an 'exerciser' played a moderating role in the relationship between a participants intention to exercise and their subsequent behavior.

Eccles' Expectancy x Value Model of Achievement Motivation

Eccles' Expectancy Value Model of Motivation posits that motivation is directly related to an individual's expectation for success, or "self-efficacy" and personal value for the task, or "subjective task value". *Self-efficacy* is defined as individuals' confidence in their ability to solve a problem or accomplish a task. Eccles' (1983) outlined the following components of *subjective task value:* attainment value (importance and relevance of a task), intrinsic value, usefulness of the task, and cost (e.g. performance anxiety and the amount of effort it takes to succeed in the task). Eccles model posits that self-efficacy and subjective value are influenced by what Eccles describes as a person's 'general self-schemata', which include factors related to identity-relevance, such as social role expectations and personal belief systems (Eccles, 1993, Hyde and Kling, 2001; Wigfield, & Eccles, 2000). Recent research by Verplanken & Holland (2002) supports this reasoning, with results demonstrating that a person's values energized and regulated behavior only if those values were central to the person's definition of self.

The majority of research using the Eccles model has centered on exploring four central constructs: Self-Schema and Goals, Self-Efficacy, Subjective Value and Motivational/Achievement-related choices. The expectancy-value model predicts a

positive relationship between identity (as a salient part of one's self-schema) and motivation. This model has been proven effective in predicting the relationship between motivation and a large range of identity-related constructs, such as gender (Hyde & Kling, 2001; Eccles, 1994; Eccles, 1985; Eccles, Wigfield, Harodl, and Blumenfeld, 1993, Fredricks, Simpkins, & Eccles, 2005), social stereotypes (Jussim, Eccles, & Madon. 1996), ethnicity (Eccles, 2006; Eccles, Wong, & Peck, 2006; Zarrett & Malanchuk, 2005), spiritual identities (Templeton & Eccles, 2006) and multiple social identities (Eccles and Barber, 1999; Barber, Stone, Hunt, & Eccles, 2005).

Two recent studies have focused on the influence of the identity related aspects of Eccles model on motivation to participate in an activity. Cox and Whaley (2004) investigated identity, motivation and participation in sports. They applied Eccles's (1983) model to a competitive sport context by examining the relationships among athletes' athletic identity and their expectancies for success, subjective task value, and achievement behavior. Cox and Whaley (2004) measured these variables in 189 high school basketball players and found identity to be a significant predictor of expectancies and task value. Guillet, Sarrazin, Fontayne, & Brostad (2006) examined Eccles Expectancy-Values Model as it pertained to the relationship between gender role and participation in the male dominated sport of handball. Like Cox and Whaley's 2004 study, Eccles concept of self-schema was the primary independent variable under investigation. The researchers posited that because of the perceived masculinity involved in participation of the sport of handball, individuals who have a masculine orientation to their gender identity, regardless of their identified sex or gender, would be more likely to participate in the sport and thus hypothesized a relationship between masculine

characteristics of gender identity and the intention to participate in sports. This

hypothesis was supported, with female athletes who identified strongly with masculinity

more likely to continue to participate in handball than those who did not identify with

masculinity.

Motivation to Learn Conflict Resolution Skills

While the structure and targets of violence prevention programs varies widely, the

majority of research on conflict resolution programming focuses primarily on the

individual level in a school-based setting (Gottfredson and Gottfredson, 2001; Howard,

Flora, & Griffin, 1999; Wright and Zimmerman, 2006). The actual formats and

components of these individual skills based conflict resolution curriculums vary widely,

but common features include teaching social skills, anger management, communication

strategies, negotiation and mediation skills, and empathy training (Bodine & Crawford,

1998; Johnson and Johnson, 1995; Johnson and Johnson, 2001; Jones, 2004; Wilson,

Lipsey, & Derzon, 2003). Overall, studies have found multiple benefits to skill-based

conflict resolution programming, including increased academic performance, cooperation

with others, and positive attitude toward school (Bodine & Crawford, 1998, D'Andrea,

2004; Johnson and Johnson, 2001; Jones & Kmitta, 2000; Jones, 2004; Jones, 2007;

Wilson, Lipsey, & Derzon, 2003).

At the same time, critiques of conflict resolution programming caution against

assuming these programs work equally for all participants (Deutsch & Coleman, 2006;

Lederach, 1995; Webster, 1993). Results from studies looking beyond overall

effectiveness highlight several areas of concern, including participation and engagement

(Deutsch et al., 2006; Guerra & Smith, 2006; Stoltz, 2005), cultural competence of

curricula (Cartledge & Feng, 1996; ChesneyLind, Artz, Nicholson, 2002; Deutsch et al., 2000; Lederach, 1995; Webster, 1993), and the impact of different conflict management and learning styles on participants' use of conflict resolution skills (Cartledge & Feng, 1996; Crothers, Field, & Kolbert, 2005; El-Shekh, Buckhalt, & Reiter, 2000; Irvine, 1990; Webster, 1993). Although the concern regarding participation and engagement in conflict resolution programming is voiced by several lead scholars in the violence prevention and conflict resolution literature (Artz & Reikan, 1998; Artz, et al. 2000; Black, 2003; Deutsch et al., 2000; Guerra & Smith, 2006), very little research has been conducted to examine these variables. The few studies that are available suggest further investigation is needed (Artz & Reikan, 1998; Artz et al, 2000; ChesneyLind, Artz, Nicholson, 2002; Spencer, 1999). Specifically, Spencer's (1999) research highlighted concern regarding the lack of engagement for African American youth participating current violence prevention programs, and Artz and colleagues (2000) found notable gender differences in participation, with lower rates for boys than for girls. These differences in participation and engagement suggest that current conflict education programming is not benefiting all populations with equal effectiveness.

Bernal and colleague (1991) wrote at length regarding the necessity of connecting socially desired behavior with a person's social identity. She proposed that in order for participants to be receptive to learning prosocial skills (such as new conflict resolution strategies) there must be an 'in-group' endorsement of the skills. For many participant's however, there is a dissonance between the content incorporated into conflict resolution programs (i.e. concepts of peace and cooperation) and the self descriptive traits with which many of them identity (French, et al, 2006; Stotz, 2005). Conflict resolution

curriculums often expect students to learn and adopt attitudes of peace and nonviolence without taking into account how this expectation fits into students' current salient identities or cultural norms (Cartledge & Feng, 1996; Deutsch et al., 2006; French et al., 2006; Lederach, 1995; Webster, 1993; Wright and Zimmerman, 2006). For example, after years of research on gender and violence prevention, Artz and colleagues (2000) concluded that there is an immediate need for programs to focus on the participant's masculine identity when teaching conflict resolution to males. Stotz's (2005) report on masculinity and school violence, however, concluded that violence prevention programs are still asking male youth to adopt attitudes and behaviors that contradict societal norms of masculinity without exploring how these factors currently shape their identity as males.

Other motivation research has investigated a process of "disidentification," and suggest this process plays a role in undermining achievement and motivation (Irving, 2008; Finn, 1989; Ogbu & Simon, 1998; Osyerman, Bybee, Terry, 2003; Taylor, Casten, Flickinger, Roberts, & Fulmore, 1994). Psychological disidentification, according to Ogbu & Simon (1998), is the process by which a minority individual frames his or her own cultural values in opposition to the values and practices of dominant culture (the oppressor), to preserve their own identity. McAdoo (2002) related psychological disidentification to responses to conflict resolution and violence prevention, finding that some African American males react to discrimination and oppression by identifying with "hyper-masculinity" and aggressiveness. Irving and Hudley's (2005) referred to this as reaction as forming a "oppositional identity" and in response encouraged educators to incorporate traditional African American values into core curricula and to highlight the

connection between identity and content. This echoes Spencer (1999) and Ward's (1995) research with African American youth stressing the necessity of focusing on identity formation when designing violence prevention programs. These studies, along with the motivation and social identity literature, suggest the need to attend to a participants' identity when presenting curriculum (Artz, et al., 2000; Bank & Banks, 2006; Bernal et al, 1991; Irving & Hutley, 2008; Osyerman,Yoder, & Fryberg's 2007; Spencer, 1999; Spencer, Dupree, Cunningham, Harpalani, Munoz-Miller, 2003; Ward, 1995).

Commensurately, researchers in the field of conflict resolution and violence prevention have identified several areas in need of further research. These areas include: (1) a stronger focus on process research in regarding factors impacting the effectiveness of CRE programming (Deutsch et al, 2006; Bodine & Crawford, 1998; Wilson, Lipsey, & Derzon, 2003); (2) further evaluation on use of theory to guide program development (Howard et al., 1999); (3) a focus on improved delivery methods for content (Gottfredson & Gottfredson, 2001); (4) the need to explore and explicate factors behind student motivation to learn and use the skills being taught in CRE programs (Stotz, 2005); and (5) an examination and improvement of multicultural competence in CRE programs, including the inclusion of identity within both content and process. (Diller & Moule; 2004; Guerra & Smith, 2006; Wright & Zimmerman, 2006). The exploration of the influence of identity and identity characteristics on motivation to participate in conflict resolution programming meets the needs of all five of these areas.

Martial Arts Identity

The role that certain characteristics of an identity plays in a person's motivation to participate and learn conflict resolution skills merits research attention. The dual nature of the martial arts offers a unique opportunity to examine the impact of identity on motivation to learn conflict resolution skills. At its foundation, the martial arts is about the resolution and management of conflict (Bolelli, 2003; Hobert, 2003; Mattson, 1963). Characteristics tied to specific identities are most likely to influence motivation and behavior in situations when this identity is salient (Shih, Ambady, Richeson, Fujita, and Gray, 2002; Stryker, 1980; Stryker & Burke, 2000; Verplanken and Holland, 2002). A martial arts identity is especially relevant in situations where conflict is present. The identity of a martial artist in western society is a paradox of two prominent images – that of the peacemaker and that of the competitive fighter (Bolelli, 2003; Hobert, 2003). The majority of martial arts schools in the United States today employ both of these images in their teaching, with a range of emphasis on each (Crudellli, 2008; Hobert, 2003). The presence of this dual image offers an opportunity to investigate the influence of opposing characteristics related to conflict within one identity.

Research has demonstrated that training in the martial arts has promise as an effective violence prevention and anti-bullying measure (Delva-Tauiliili, 1995; Glanz, 1994; Smith, Twemlow, & Hoover, 1999; Twemlow, Biggs, Nelson & Vernberg, 2008; Zivin, Hassan, DePaula, Monti, Harlan, & Hossain, 2001). Several studies have highlighted the psychological benefits of the martial arts in general, including enhanced self-esteem and concentration (Trulson, 1986; Weiser, Kutz, Kutz & Weiser, 1995), self confidence (Berry, 1991) and lower aggression (Layton, Higaonna, Arneil, 1993;

Trulson, 1986). To date (as of March, 2010), however, in a database search conducted in both PsychInfo and ERIC, no research has been conducted on either 'martial arts identity' or how different characteristics of a martial arts identity can influence participation in conflict resolution programs.

Summary

Motivation to learn and participate in conflict resolution programming is inconsistent across different groups of participants (Artz and Reikan, 1998; Artz, Riecken, MacIntyre, Lam, & Maczewski, 2000; Black, 2003; Deutsch et al., 2006; Guerra & Smith, 2006; Spencer, 1999) and the conflict resolution literature has emphasized the need to increase the personal relevance of curricula (Artz, et al. 2000; Black, 2003; Deutsch et al., 2006; Guerra & Smith, 2006, Wilson, Lipsey, & Derzon, 2003). Research on identity and social stereotypes has repeatedly demonstrated the powerful effects of identity on cognition and behavior (Dijksterhuis, Aarts, Bargh & van Knippenberg, 2000, Levy, 1996; Shih, Richeson, Ambady, Fujita, & Gray, 2002; Steele & Aronson, 1995) and the influence of self-relevance and salience of an identity in effecting motivation and behavior (Britt, 2005; Britt, Adler & Bartone, 2001; Cohen & Garcia, 2005; Haslam, O'Brien, & Jetten, 2005; Pickett & Brewer, 2001; Sidanius, Van Laar, & Levin, 2004). Eccles (1983) expectancy-value of motivation model predicts a positive relationship between identity (as a salient part of one's self-schema) and motivation, and motivation research has demonstrated that individuals are more likely to participate and maintain engagement in learning when they find the material personally relevant (Covington & Weidenhapt, 1997, Markus & Kitayama, 1991; Shernoff & Hoogstra, 2001; Shernoff, Schneider, Csikszentmihalyi, 2001). Eccles model (1983),

along with the current literature on identity and motivation, gives strong support to the theory that identity, and the characteristics attached to this identity, are motivating factors in an individual's choice to participate and engage in the learning of conflict resolution skills. The dual nature of a martial arts identity offer a unique opportunity to investigate the influence of two different characteristics of identity on motivation to learn conflict resolution skills.

Study Purpose

The purpose of this study is to examine the relationship between salient characteristics of a person's identity and motivation to learn conflict resolution skills. Specifically, three different priming conditions were executed, each priming different characteristics of a martial arts identity. Individuals engaged in martial arts were selected because of the dual images of martial artists as both peaceful and competitive. This study also examined whether the strength of a person's identity as a martial artist plays a moderating role in this relationship. Consistent with Eccles (1983) expectancy-value model, participants value of conflict resolution and the expected success in learning conflict resolution skills were also examined since these are theoretically related to a person's motivational choices (Eccles, 1983).

Research Questions and Hypotheses

Research Question one. Will participants' motivation to learn conflict resolution skills vary based on the primed condition received?

Hypothesis 1a. Participants receiving the peace characteristic prime will indicate higher motivation to learn conflict resolution skills in comparison with participants receiving the competition characteristic prime.

Hypothesis 1b. Participants receiving the peace characteristic prime will indicate higher motivation to learn conflict resolution skills in comparison with participants receiving the exercise characteristic prime.

Hypothesis 1c. Participants receiving the competitive characteristic prime will indicate lower motivation to learn conflict resolution skills in comparison with participants receiving the exercise characteristic prime.

Research Question two. Will participants' subjective value of conflict resolution skills vary based on the primed condition received?

Hypothesis 2a. Participants receiving the peace characteristic prime will indicate higher perceived value of conflict resolution skills in comparison with participants receiving the competition characteristic prime.

Hypothesis 2b. Participants receiving the peace characteristic prime will indicate higher perceived value of conflict resolution skills in comparison with participants receiving the exercise characteristic prime.

Hypothesis 2c. Participants receiving the competitive characteristic prime will indicate lower perceived value of conflict resolution skills in comparison with participants receiving the exercise characteristic prime.

Research Question three. Will participants' self-efficacy in conflict resolution skills vary based on the primed condition received?

Hypothesis 3. I hypothesize that self-efficacy will not vary based on primed condition received.

Research Question four. Is there a statistically significant interaction between primed condition and strength of martial arts identity in predicting motivation to learn conflict resolution skills?

Hypothesis 4. I hypothesized that strength of martial arts identity would play a moderating role in the relationship between the priming condition received and motivation to learn, with higher levels of strength of martial arts identity increasing the influence of the prime for each priming condition.

Hypothesis 4a. I hypothesize that higher levels of strength of martial arts identity will increase motivation to learn for participants in the peace condition

Hypothesis 4b. I hypothesize that higher levels of strength of martial arts identity will decrease motivation to learn for participants in the competition condition

Research Question five. Will participants' motivation to learn conflict resolution skills vary as a function of sex?

Hypothesis 5a. I hypothesize that motivation to learn conflict resolution skills will vary as a function of sex (with no directional hypothesis indicated due to conflicting literature).

Hypothesis 5b. I hypothesize no interaction effects between sex and primed group condition.

CHAPTER II

METHODOLOGY

This study employed a factorial between-subjects experimental design to examine the effects of priming specific characteristics of a martial arts identity. Participants for this study consisted of 242 self-identified martial art students. The first independent variable (factor A) is 'group" with three levels: (a) experimental peaceful characteristic prime, (b) experimental competitive characteristic prime, and (c) control exercise characteristic prime. The second independent variable (factor B) for this study is sex. The variable "strength of identity" was included as a possible moderating variable. The dependent variables for this study are: (a) motivation to learn conflict resolution skills, (b) subjective value of conflict resolution skills, and (c) self-efficacy for conflict resolution skills.

Independent Variables

Priming Conditions

Participants were randomly assigned to one of three different priming conditions. In the first experimental condition, a peacemaking characteristic of a martial arts identity was primed. In the other, a competitive characteristic of a martial arts identity was primed. The third condition served as a control. In this condition, an exercise characteristic of martial artists was primed. This characteristic was chosen because exercise is a conflict-neutral construct – it has neither a positive nor a negative relationship to conflict.

Sex

Sex was the second independent variable. Research on sex differences suggest a difference in men and women's styles of conflict resolution, with women using more relational strategies, such as negotiation and cooperation, and men using more competitive strategies (Bird, 1996; Brahnam, Margavio, Hignite, Barrier & Chin, 2005, Endreson and Olweus, 2005; Holt & DeVore, 2005; Lauzen & Dozier, 2008; Thomas, Thomas & Schaubhut, 2008). At the same time, some research suggests that some women participating in the martial arts endorse more competitive styles of conflict resolution than men (Björkqvist & Varhama, 2001).

<div align="center">

Moderating Variables

</div>

Strength of Identity

This variable refers to the degree to which being a martial artist is salient component of a person's self-schema. Research has found a relationship between role identities, such as "martial artist," and motivation to engage in activities. For example, several studies have found that the higher a person' athletic identity, the more likely they are to engage in athletic training (Brewer, Van Raalt, & Linder, 1993 & Sheeran and Orbell, 2000).

<div align="center">

Dependent Variables

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Motivation to Learn Conflict Resolution Skills

"Motivation to learn" refers to a desire to learn a set of specific skills or content. This specific variable refers to a person's motivation to learn conflict resolution skills. Motivation to learn plays a key role in the choices an individual makes to engage in,

attend to, and persist in learning activities (Colquitt, LePine, & Noe, 2000; Noe, Wilk, Mullen, & Wanek, 1997.)

Subjective Value for Conflict Resolution Skills

This variable refers to a person's feelings toward and attitudes about the value of nonviolent conflict resolution skills. Eccles' model of achievement and motivation (1983) theorizes this as a single concept comprising several aspects: attainment value (importance of doing well on a task), intrinsic value (interest in and enjoyment gained from doing the task), utility value (usefulness), and costs (spent efforts).

Self-Efficacy of Conflict Resolution Skills

The Eccles' model of achievement and motivation (1983) suggests that self-efficacy plays a prominent role in the motivation to learn and participate in an activity. Self-efficacy is defined as an individuals' confidence in their ability to produce designated levels of performance in order to solve a problem or accomplish a task (Bandura, 1997).

Design and Procedures

Following the recommendations of Bailey (1994) and Dillman (2000), I pretested all developed and adapted questionnaires before using them in the study. Dillman (2000) identified four stages of pretesting: (1) review by knowledgeable colleagues and analysts, (2) interviews with potential respondents to evaluate cognitive and motivational qualities, (3) a small pilot study, and (4) a final check. I had my peers in the DEEP seminar at the Child and Family Center review the developed surveys for feedback. I also had a specialist in the martial arts review the martial arts identity survey. I then conducted a small pilot study with 11 martial artists from the OKCD dojo.

Pilot Study

A small preliminary pilot study ($N = 11$) was conducted in order to examine whether (a) the priming stimulus was able to elicit a range of responses, (b) the responses to measures had enough variation measures across participants and priming condition, (c) the length of time it took to complete the survey, and (d) feedback and suggestions for improvement. The pilot study was conducted using 11 martial artists from the OKCD dojo in Dallas, Texas. The participants were given the MAIMS, one of the priming conditions (Appendix A), and then the following measures: the MTL, the AVS, the TCSES and the TNT (Appendix B.) Statistical analyses were not run due to small sample size, but trends were assessed through descriptive data and visual examination. Results suggested that the primed conditions did provide enough information and evoked a range of responses. Several participants suggested the addition of a description of "conflict resolution skills" on each page. This suggestion was implemented in the main survey. The average time to complete the survey was 25 minutes.

Main Study

Participant Recruitment. After approval from the Institutional Review Board I began to recruit participants. As the survey was internet based, much of the participant recruitment took place on-line. There are several advantages to this on-line methodology including efficiency, ease of data collection and cost (Gosling, Vazire, Srivastava and John, 2004; Wright, 2005). On-line data collection makes possible a larger sample size and a broader range of participation, increasing power and external validity. In order to maximize survey responses, Dillman (2000) suggests a method called 'tailored design,' which is a set of procedures that produces both high quantity and high quality response

rates. Dillman (2000) based this procedure on the components of social exchange theory and stresses the importance of respondent-friendly surveys, multiple contacts, ease of survey completion and return, and a token financial incentive.

Specific procedures were as followed. First, I ensured a respondent-friendly process through careful consideration of the order, layout and visual design of the web-based questionnaires. The survey included a token financial incentives in the form of a drawing for four $50.00 gift certificates for Amazon.com. I then made initial contact through emailing a recruitment email message to 13 martial art listserves and 36 martial art online community groups. The messages invited individual respondents who fit the age demographic to link directly to the survey. I emailed three reminders to all listserves and online community groups spaced apart first by 2 weeks and then 1 week. As the number of women participants was particularly low in the beginning half of the recruitment period, I followed up with two additional messages specifically encouraging women to participate and sent one additional reminder to listserves and community groups who had a high number of women participants.

Data Collection. I built an online survey using 'PsychData,' an internet-based program enabling researchers to collect data in a secure manner. This program enables researchers to create and edit surveys online, as well as keep track of participants and ongoing data. PsychData stores the data on a secure computer server and allows the user access through a private ID and password. PsychData enacts high standards for securing confidentiality of all participants. This program separates all identifying information the questionnaire data and stores it on a separate server, assuring complete confidentiality. In addition, all questionaire data is randomized before it is available for download. This

assures that no one is able to identify participant information with the questionnaire data. I was able to import the data secured by PsychData directly into SPSS.

The internet link provided in the participant introduction letter sent participants to an informed consent page. As outlined by human service subjects protocol, participants were informed of their right to not participate in the study, as well as their right to discontinue participation at any time without repercussions. Those who chose to continue the study were sent to a page explaining the amount of time they can expect the survey to take and that hitting the 'continue' button will begin the survey.

When participants finished the survey they were asked if they wanted to participate in a raffle to win a gift certificate. Those who clicked 'yes' were sent to a separate link in which they were asked for identifying information. As explained above, this information was kept separate from their survey responses to ensure continued confidentiality. The information in this second data set was used to randomly select the winners of the raffle.

Questionaire Format. After signing consent forms and clicking on the 'I agree' button, each participant was given the measure assessing strength of identity (MAIMS.) The PsychData program then randomly selected participants into one of three different priming conditions. Peace-Identity Prime (PIP), Competition-Identity Prime (CIP) and the Exercise Prime (EP.) After the reading the prime, participants were given the following measures in this order: the continuous motivation to learn scale (MTLCon), subjective value of conflict resolution skills (AVS), expectations for success in conflict resolution skills (TCSES), current behavioral tendencies towards conflict (TNT), martial

arts school environment (MASE), the categorical motivation to learn question

(MTLCat) and a demographic questionnaire.

Procedures for the primed group conditions

Each group condition required the participant to read a short sentence describing

difference characteristics of martial artists. They were then asked to write a short

response (approximately 1 minute) describing how they relate to this characteristic. In the

Peace-Identity Prime condition, where I attempt to increase the salience of the

peacemaking characteristic of a martial arts identity, the prime condition read:

> "Martial artists are known for their self-discipline and self-control. They
> train hard in non-physical techniques such as staying calm in the presence
> of conflict. Martial artists are known as 'peaceful warriors' due to their
> desire to promote peace over violence. "

In the Experimental Competition-Identity Prime condition, where I attempt to increase

the salience of the competitive characteristic of a martial arts identity, the prime condition

read:

> "Martial artists are known for their fighting abilities and self-defense
> skills. They train hard in techniques such as sparring, forms and
> weapons. Martial artists are known as warriors due to their competitive
> fighting ability."

The Exercise-Prime condition served as a control and no characteristics relevant to

conflict were primed. This condition read:

> "Martial artists are known for being healthy and in good athletic shape.
> They train hard in physical skills that increase their health and stamina.
> Martial artists are known for their physical fitness due to all of their hard
> work. "

Measures

Constructs and measures are presented in Table 1. Copies of all measures can be found in the appendix.

Table 1

Description of constructs and measures to be used in the study

Construct	Measure	# Items	Variable Type
Independent Variables			

(1) Primed characteristic
   a) peacemaking
   b) competitive
   c) control
	Primed Writing Exercises	--	Categorical

(2) Client Sex	Demographics Questionnaire	1	Categorical
Moderating Variable /Co-Variate			
(3) Strength of Identity	MAIMS	7	Continuous
Dependent Variables			
(4) Motivation to learn CR Skills	a. MTLCon b. MTLCat	a. 3 b. 1	a. Continuous b. Categorical
(5) Subjective Value of CR skills	AVS	7	Continuous
(6) Expectations for success of CR skills	TCSES	5	Continuous
Control Variables			
(8) Current Behavioral Tendencies towards Conflict	TNT	32	Continuous
(9) Martial Arts School Environment	MASE	4	Continuous

Note: MAIMS = Martial Arts Identity Measurement Scale; MTL = Motivation to Learn; AVS = Activity Value Scale; TCSES = Teen Conflict Self-Efficacy Survey; NBA: Normative Beliefs about Aggression and Alternatives; TNT = Teenage Nonviolence Test; MAS = Martial Arts School Environment

Demographics

A simple demographic questionnaire was developed for this study. The questionnaire included questions specific to respondents' age, gender, ethnicity, type of martial art currently practiced, and length of martial arts training. Questionaire format included open ended questions and selections from a predetermined list.

Moderating Variable

Martial Arts Identity Measurement Scale (MAIMS.): 'Strength of martial arts identity' was measured by the Athletic Identity Measurement Scale (AIMS, Brewer, Van Raalet, & Linder, 1993; Brewer & Cornelius, 2001). The AIMS was developed to assess the manner in which participants personally identified with their role a as high school athlete. This scale was altered for use in this study and is referred to as the Martial Arts Identity Measurement Scale (MAIMS). For example, items on the original scale with reference to 'athlete' (e.g. "I consider myself an athlete") was changed in this study to reflect 'martial artist' instead (e.g., 'I consider myself a martial artist'). In this 7-item scale, participants were asked to rate the extent to which they feel that each statement applies to them using a seven-point, Likert-type scale from "1 = strongly disagree" to "7 = strongly agree." Research demonstrates strong test-retest reliability over a two week period ($r=.89$) and high internal consistency (alphas = .81 to .93) for the 10–item scale version (Brewer, Van Raalet, & Linder, 1993; Good, Brewer, Petitpas, VanRaale, & Mahar, 1993). The 7-item scale strongly correlates with the original scale and has demonstrated internal consistency of $\alpha = .81$ (Brewer & Cornelius, 2001).

Dependent Variables

    Subjective value of conflict resolution skills is measured by the Activity Value Scale (Eccles, 1983). The Values Scale contains two items that assess perceived utility value (e.g., "I think I will be able to use conflict resolution skills in other domains of my life"), three items that assess perceived attainment value (e.g., "It's important for me to perform at a good level in my conflict resolution skills"), and two items that assess the intrinsic value of the activity (e.g., "Knowing conflict resolution skills are important to me.") Internal consistency was found to be greater than $\alpha = .70$ for all three subscales (Eccles and Wigfield, 1995). Sarrazine et al.'s research (1999) indicates that all three values (utility, perceived attainment, and intrinsic) constitute a single factor. As such, I used the measure as a uni-dimensional measure in this study.

    Self-Efficacy of conflict resolution skills is measured by the Teen Conflict Self-Efficacy Survey, a 5-item, likert-type questionnaire that measures an individual's confidence in his or her ability to control anger and resolve conflicts nonviolently. Responses range from "1 - not at all confident" to "5 - very confident" and includes items such as: "Understand another person's point of view," "talk out a disagreement," and "stay out of fights." Calculation of scores sums all responses, with a possible score range of $5 - 25$, with higher scores indicating more confidence in ability to use conflict resolution skills. This measure was validated on middle school students, grades 6-8, with an internal consistency of $\alpha = .85$ (Bosworth et al., 1995).

    Motivation to learn conflict resolution skills will be measured using two separate questionnaires. The first measure was adapted from a scale used in Benson & Mekolichich's (2007) research on academic identity and motivation to use digital

technology. This scale is a 3-item, 5-point, likert-type scale that includes questions such as '"Being in the forefront in the use of digital technologies is important to me;" and "I want to use digital technologies in my academic work." Questions were adapted to assess motivation to learn conflict resolution skills in this manner: "Being on the forefront in the use of conflict resolution skills is important to me," and "I want to learn conflict resolution skills." Internal consistency for this scale is $\alpha =.76$, with results of a factor analysis suggesting a single factor with good loadings (Benson & Mekolichich, 2007). The second measure was a dichotomous yes/no question asking participants to respond to the question "Would you like to have additional training in conflict resolution skills?" This question was added after consultation with my advisor, Benedict McWhirter, regarding the limited range of questions in the first questionnaire and after reviewing literature from priming research suggesting that short, less cognitively laden questions are more effective at capturing the effect of priming stimuli than longer measures (Bargh, 1996; Dovidio et al., 1997; Dovidio & Fazio).

Control Variables

Two other measures were included for control purposes in this study. These measures assessed martial arts school environment and participants' current behavioral tendencies towards conflict.

Martial arts school environment (Walters, 2009) is a 4 item, 4-point, Likert-type scale (responses ranging from "1-Never" to "4-Often ") designed to assess the martial arts school environment towards conflict resolution using the following items: (a) " Does your martial art school emphasize that martial arts should be used for self-defense only?" (b) " Does your martial arts school stress the importance of using non-physical conflict

resolution skills?" (c) " Does your martial arts school teach specific non-physical conflict resolution skills?" and (d) " Do students practice using specific non-physical conflict resolution skills in class?".

   Current behavioral tendencies toward conflict: The Teenage Nonviolence Test (TNT) was developed by Mayton and collegues (1998) to measure nonviolent tendencies. A 2002 study extended the test's reliability and validity to college-students, aged 18 to 22 (Mayton, Richel, Susnjic, & Majdanac, 2002). For measurement of conflict behavior I used the first 2 subscales, physical nonviolence and psychological nonviolence, consisting of 32 items. Physical nonviolence (16 items) is defined as abstinence from physical aggression; psychological nonviolence (16 items) is defined as abstaining from doing verbal or psychological harm of any kind. Internal consistency reliabilities was found to be α =.85 for physical nonviolence and α =.87 for psychological nonviolence in the college sample (Mayton, et al., 2002). The TNT requires respondents to select one of four responses that describe how an individual feels about each statement, such as "definitely true for me," "usually true for me," "usually not true for me, " or "definitely not true for me" in response to questions such as "When someone is rude to me, I am rude back."

CHAPTER III

RESULTS

Data Procedures

Data was examined using SPSS PASW Statistics (version 18.0). Only participants

who completed the survey in its entirety were included in the final analyses. I present

results in the following order: First, I present data from descriptive analysis of

demographic information. Second, I present data analysis examining the differences

between the experimental and control conditions on control variables. Third, I present

correlational data exploring relationships among study variables. Fourth, I present results

from a repeated measures multivariate analysis of co-variance, analyzing the effect of the

primed group conditions on the dependent variables. Fifth, I present results from a binary

logistic regression analyzing the predicting relationship between the primed group

conditions and the categorical dependent variable.

Descriptive Information

The total number of participants who completed the entire survey was N = 242.

Of the 242, 86 were given the first experimental prime (peaceful characteristic), 80 were

given the second experimental prime (competitive characteristic) and 76 were given the

control prime (exercise characteristic.) While a total of 346 people began the survey, 98

chose to discontinue the survey after the first page (directly after the priming prompt) and

2 chose to discontinue the survey about 1/3 of the way through. Given their very early

termination, no analyses were performed on the people who failed to finish the survey.

Demographic information for the 242 study participants in each priming condition is summarized in Table 2.

Age, Gender and Ethnicity

Participants for this study were 242 self-identified martial artist students, including 163 males (67.4%) and 79 females (32.6%) who were 18 years old or older. The demographic survey asked participants to chose one of 6 age ranges, summarized as followed: Ages 18-25 (N=65, 26%), 26-35 (N=58, 24%), 36-45 (N=53, 21%), 46-55 (N=44, 18%), 56-5 (N=21, 9%.) and 65 + (N=1, .4%). Of responding participants 71.5%, (N=65) self identified as white, 12.4% (N=30) as Asian or Asian American, 4% (N=7) as Latino/Hispanic, 2.5% (N=6) as Middle Eastern, 2% (N=5) as Native American, .4% (N=1) as Pacific Islander, .8% (N=2) as Black or African American, and 12% (N=30) as "Other." Further examination of the "other" category demonstrated that the majority of these participants identified as multi-racial.

Type of Martial Arts

Participants were asked to either identify their martial art style from a given list or write in their specific style of martial arts. Approximately half chose to write in their martial arts style, and of these, several identified multiple styles. Martial art styles are commonly categorized into three types: "soft", "mixed" or hard." "Soft" martial art types include styles such as Aikido and Tai Chi. "Mixed" martial art types include most styles from Okinawa and Japan, such as Shorin-Ryu, as well as Chinese Kung Fu. "Hard" martial art types include most styles from Korea, such as Tae Kwon Do, and newer combat styles such as Mixed Martial Arts. In the few cases where I was unsure as to what type of martial art a style fit into I referenced descriptions found on prominent

website resources for each particular style. Approximately 24 participants identified as practicing more than one style. If each of these styles was a "soft" type, I coded them as "soft." If each of the styles was a "hard" type, I coded them as "hard." If there were a mix of types (soft and hard, or mixed and soft), then I coded them as "mixed." For the 242 participants, 26 (11%) were coded as training in a "soft" type of martial arts, 132 (54%) were coded as "mixed," and 84 (35%) were coded as "hard." Random assignment resulted in an even distribution of participants in each primed group condition.

Length of Martial Arts Training

Exactly half of the participants (N=123) reported having engaged in training for over 10 years in the martial arts. More specifically, the demographic survey asked participants to choose one of 6 training ranges, and responses are summarized as followed: 0-1 years (N=19, 7%), 2-3 years (N=34, 14%), 4-5 years (N=33, 14%), 6-7 years (N=15, 6%), 7-9 years (N=20, 8%.) and 10+ years (N=123, 50%). Demographic data for each of the three primed condition are presented in Table 2.

Table 2

Participant Demographic Information by Frequency, Percentage and Means

Demographics	Primed Group Condition		
	Peace Characteristic	Competition Characteristic	Exercise (Control) Characteristic
Frequency and %			
# of participants	86 (35.5%)	80 (33.1%)	76 (31.4%)
Sex			
Male	56 (34.4%)	57 (35.0%)	50 (30.7%)
Female	30 (38.0%)	23 (29.1%)	26 (32.9%)
Martial Arts Type			
Soft	9 (10.5%)	11 (13.8%)	6 (7.9%)
Mixed	49 (57.0%)	41 (51.2%)	43 (55.3%)
Hard	28 (32.6%)	41 (35.0%)	28 (36.8%)
Range Mean			
Age	2.7	2.5	2.6
Length of Training	4.6	4.3	4.5

Note: Percentages given are within independent variable level.

Preliminary Analysis

First I conducted preliminary analyses to determine whether there were differences in participant characteristics by the primed condition received. I conducted a series of chi-square tests for the categorical demographic variables. Results indicated there were no significant group differences on age, χ^2 (10, $N = 242$) = 10.342, $p = .41$; sex, χ^2 (2, $N = 242$) = .833, $p = .66$; racial or ethnic group, (12, $N = 242$) = 18.97, $p = .78$; length of martial arts training, χ^2 (10, $N = 242$) = 13.796, $p = .182$, or type of martial arts training, χ^2 (4, $N = 242$) = 1.729, $p = .785$. I then performed a series of one-tailed ANOVAs to examine differences in the three groups on the control variables. Results indicate there were no significant differences on martial arts school environment F(2, .98) = .126, $p = .882$, behavioral tendencies towards conflict F(2, 99) = .774, $p = .462$, or strength of identity F(2, 81) = 1.22, $p = .296$.

Next, I conducted Pearson Product-moment Correlations to examine general relationships among all main study variables (See table 2.) There were several interesting findings, all of which fit the overall expectations and theoretical relationships between the variables. Subject value of conflict resolution skills was significantly correlated (p<.01) with self efficacy (r=.43), attitude towards conflict (r=.34), martial art school environment (r=.28), and the continuous (r=.86) and categorical (.30) motivation to learn measure. Similarly, self-efficacy for conflict resolution skills was significantly correlated (p<.01) with attitude towards conflict (r=.47), martial art school environment (r=.32), length of martial arts training (r.=.20) and the motivation to learn categorical measure

(r=.47). Attitude towards conflict was also significantly correlated (p<.01) with school environment (r=.35) and the motivation to learn categorical measure(r=0.36) at the .01 level. Martial arts school environment was significantly correlated (p<.01) with the motivation to learn categorical measure (.26). (See table 3).

Table 3

Correlation Matrix of main study variables

Variable	1	2	3	4	5	6	7	8	9
Strength of Identity	--								
Subjective Value	.130*	--							
Self - Efficacy	.192**	.432**	--						
Behavior towards conflict	-.088	.340**	.466**	--					
MA Type	.126	-.058	-.056	-.151*	--				
MA Environment	.144*	.283**	.323**	.354**	-.122	--			
MA Length	.177**	.122	.202**	.120	-.078	.100	--		
Motivation to Learn - Cat	.142*	.300**	.058	.136*	<.001	.120	.60	--	
Motivation to Learn - Con	.144*	.864**	.471**	.371**	-.072	.260**	.175*	.273*	--

Note. : Strength of Identity = Martial Arts Identity Measurement Scale (MAIMS) ; Subjective Value = Activity Value Scale (AVS) ; Self-Efficacy = Teen Conflict Self-Efficacy Survey (TCSES); Behavior towards conflict = Teenage Nonviolence Test (TNT) ***$p < .001$. **$p < .01$. *$p < .05$.

Main Data Analysis

Due to the presence of both categorical and continuous dependent variables for the construct motivation to learn, I utilized two different types of data analysis. In the first part of the analysis I used a multivariate analyses of covariance (MANCOVA) to assess for outcome difference among experimental group conditions on the following continuous dependent variables: motivation to learn conflict resolution skills, subjective value of conflict resolution skills and self-efficacy of conflict resolution skills. Strength of identity was included as a covariate due to its theorized role as a moderating variable between the priming one might receive and the motivation to learn conflict resolution skills. In the second part of the analysis I used logistic regression to analyze the effects of priming on the categorical question about motivation to learn conflict resolution skills.

Multivariate Analysis

I conducted a 3 (condition) X 2 (sex) between-subjects MANCOVA to examine group differences in motivation to learn conflict resolution skills, subjective value of conflict resolutions and self-efficacy for conflict resolution, with no interaction effects anticipated. All three of these dependent variables are related theoretically and as such were included in the same analysis. Strength of identity was included as covariate. Because the motivation to learn (MTL) scale) and the subjective value (AVS) scale violated the assumption of equal variance-covariance matrixes (homoscedasticity), the more conservative Pillai's Trace criterion was used to control for Type I error.

The following assumptions (Weinfurt, 1995) were assessed prior to the analysis: (a) independent observations and random sampling within each sample, (b) homogeneity of covariance for dependent measures, (c) linear relationships between dependent

variables and covariate, (d) normally distributed dependent variables, and (e) equal variances for dependent distributions. Random assignment to the three different groups assured the first assumption was tenable. Homogeneity of covariates was assessed using Box's Test of Equality of Covariance Matrices. Results indicate that the covariates did not violate the second and third assumption (Box M – 54.386, F 1.744. sig .007). I initially tested the last two assumptions by examining the box-plots and frequency distributions for the dependent variables. This visual screen suggested two of the dependent variables, motivation to learn and subjective value, were highly positively skewed and possibly violated this assumption. Skewness and kurosis for these variables were assessed and both motivation to learn (-1.289, 1.166) and subjective value (-1.368, 1.720), although both positively skewed, were found to be in the acceptable range of normal distribution (Tabachnick & Fidell, 2001). In addition, MANCOVA is robust to univariate normality when the cell size is over 20-30 observations (Tabachnick & Fidell, 2001). Scores were screened for the presence of outliers, with very few scores found to be greater than two standard deviations above the mean. A closer examination showed these scores to be within the acceptable range for each measure and not due to data entry errors. These outliers are assumed to be due to chance (Tabachnick & Fidell, 2001) and were kept in the final analysis.

Results and Hypotheses

Hypotheses 1, 2, and 3 posited that the group condition (that is, which priming was received) would significantly influence differences in the dependent variables of motivation to learn conflict resolutions skills, subjective value of conflict resolution skills and self-efficacy for conflict resolution skills. The within subjects multivariate results

indicated that there were not statistically significant differences in mean outcome scores for the three group conditions on these dependent variables (Pillai's Trace = .030, $F(6,464) = 1.163$, $p = .325$, $\eta2 = .015$, observed power = .461). This means that, contrary to expectations, Hypothesis 1, "Participants motivation to learn conflict resolution skills will vary based on the primed condition received," and Hypothesis 2, "Participants' subjective value of conflict resolution skills will vary based on the primed condition received" were not supported. As expected, Hypothesis 3, "Participants' self-efficacy for conflict resolution skills will not vary based on the primed condition received" was supported by these results. Means and standard deviations for the dependent variables can be found in Table 4.

Hypothesis 4 hypothesized "a significant interaction between group condition and strength of identity, with higher levels of strength of identity increasing the influence of the prime on motivation to learn conflict resolution skills in the expected direction hypothesized for each group condition." For Hypothesis 4, no statistically significant interactions between group condition and strength of identity was found (Pillai's Trace = .028, $F(6,464) = 1.086$, $p = .370$, $\eta2 = .014$, observed power = .431). However, a significant multivariate main effect was found for strength of identity on this groups of dependent variables (Pillai's Trace = .037, $F(3,231) = 2.949$, $p = .034$, $\eta2 = .037$, observed power = 695). Follow-up univariate between-subjects tests found strength of identity to be significantly related to motivation to learn conflict resolution skills ($p = .033$; $\eta2 = .019$) and self-efficacy for conflict resolutions skills ($p=.004$, $\eta2 = .035$), but not to subjective value ($p=.062$, $\eta2 = .015$). These results indicate that strength of participant identity did not interact with the group condition on their motivation to learn

conflict resolutions skills as expected. Instead, higher scores on strength of identity were significantly related to higher scores on motivation to learn, regardless of the primed condition received. Main and Interaction effects are summarized in Tables 5 and 6.

Hypothesis 5 was "motivation to learn conflict resolution skills, subjective value of conflict resolution skills and self-efficacy for conflict resolutions skills will vary as a function of gender," with no directional hypothesis indicated. There was not a significant multivariate effect for gender on this group of variables, Pillai's Trace = .031, $F(3,231)$ = 2.467, p = .063, $\eta2$ = .031, observed power = .608. Given the nature of these dependent variables, it is theoretically possible that sex differences may have appeared at the univariate level. Therefore, I conducted a series of post-hoc univariate tests between-subjects differences for each of these dependent variables. Results showed sex to be significantly related to motivation to learn conflict resolution skills (p = .016; $\eta2$ = .025) and subjective value (p=.007; $\eta2$ = .031), but not to self-efficacy (p=.308, $\eta2$ = .004). Follow-up univariate post-hoc comparisons between groups suggest that women demonstrated higher scores on motivation to learn conflict resolution skills and had higher subjective value of conflict resolution skills than men, regardless of the primed condition that they received. As hypothesized, there was not a significant interaction effect between group condition and sex, Pillai's Trace = .023, $F(6,464)$ = .903, p = .492, $\eta2$ = .012, observed power = .359 (see Table 6).

Table 4

Mean and Standard Deviations for Moderating and Dependent Variables

	Males		Females	
	Mean	*SD*	*Mean*	*SD*
Mot. to Learn	12.9	2.59	13.8	1.70
MA Identity	32.8	8.47	33.4	8.07
Subj. Value	29.9	5.98	32.0	3.99
Self-Efficacy	21.7	3.00	22.2	2.69
Conflict Beh.	49.9	5.50	52.2	4.48

Note: Strength of ID – MAIMS, CR Subj Value – AVS, CR Self Efficacy – TCSES, Attitude Conflict – TNT.

Table 5

MANCOVA results for Primed Condition, Sex and Strength of Identity

Source	*df*	F^I	η^2	*p*
Prime	6(464)	1.163	.015	.325
Sex	3(231)	2.467	.031	.063
MAIMS	3(231)	2.949	.037	.037*

Note. Values in parentheses are Error *df.* 1 = Calculated using Pillai's Trace. MAIMS = Martial Arts Identity Measurement Scale. *$p < .05$.

Table 6

MANCOVA Interaction Effects for Sex and Strength of Identity by Primed Groups

Source	df	F[1]	η^2	p
Group x Sex	6(464)	0.903	.012	.492
Grp x Strength of Identity	6(464)	1.086	.037	.72

Note. Values in parentheses are Error *df.* 1 = Calculated using Pillai's Trace.

Logistic Regression

Next I used logistic regression to examine the categorical dependent variable of 'motivation to learn," assessed by a dichotomous question "Would you like to take additional training in conflict resolution skills?" Logistic regression is a statistical tool used for predicting a categorical outcome variable and is more appropriate than other analysis used for this purpose, such as linear discriminant function analysis or multiway frequency analysis (Peng, Lee, & Ingersoll, 2002). There are no distributional assumptions about the independent variables in a logistic regression (Tabachnik & Fidell, 2001) and independent variables in a logistic regression can be continuous, categorical, or a combination. Logistic regression assesses (a) the overall relationship between the independent variables and the dependent variable, (b) the strength of this relationship if it exists, and (c) the importance of the individual predictor (Hosmer & Lemeshow, 2000, Peng, Lee, & Ingersoll, 2002). First, the overall relationship between independent and dependent variables, and whether a particular set of independent variable reliably predicts the outcome variable, is tested using model comparisons. Logistic regression compares the full model (all independent variables included) to a constant-only model (no

independent variables are included) in terms of how well each model can predict the outcome. A significant difference between the full and constant-only or null model indicates that the set of independent variables can be used to reliably predict the outcome (Hosmer & Lemeshow, 2000). Second, logistic regression assesses the strength of the overall relationship between the set of independent variables and the outcome variable. Two commonly used methods are through the use of the log-likelihood ratio and the Nagelkerke R^2. The log-likelihood ratio is a "goodness of fit" statistic and refers to the significance of the unexplained variance in the dependent variable. The log-likelihood ratio will decrease as the model fit increases. The Nagelkerke R^2 is similar to the "percentage of variance accounted for" measures that are used for linear regression models and will be used as the measure of association in this analysis (Tabachnik & Fidell, 2001). The Nagelkerke R^2 measure varies from 0 to 1, with values closer to 1 indicating a stronger relationship between the set of independent variables and the categorical dependent variable. Third, the significance of the individual independent variables in the model are tested with the Wald statistic. This statistic is calculated by comparing the estimate of the slope parameter β_1, to an estimate of its standard error (Hosmer & Lemeshow, 2000). The significant independent variables are then interpreted with odds ratios. The odds ratio is a probability estimate. In this study it estimates the change in odds of saying "yes" to additional training in conflict resolution skills for every one-unit change in the predictor.

Similar to all analysis, there are limitations and assumptions that must be kept in mind when fitting logistic regression models. As with standard linear regression, it is important to have a large sample relative to the number of predictor variables in the

model (Hosmer & Lemeshow, 2000). With a small sample size it is difficult to achieve

a stable logistic regression model, which can result in large standard errors and parameter

estimates (Tabachnik & Fidell, 2001). Multicollinearity, or high correlations between

predictor variables, can also make the effects of individual predictors in the model

difficult to interpret by inflating standard errors. The relationships between predictor

variables were assessed before including them in the logistic regression models and no

correlations were noted beyond .70 at either .01 or .05 levels. The first step in setting up

a logistic regression is selecting the independent variables to place in the model. For

logistic regression, Hosmer & Lemeshow (2000) recommends the data set have at least

10 times as many observations as independent variable. If there are categorical

independents, then the number of participants should be applied to lesser of the groups.

The mean number of observations for each of the three primed groups is 80, allowing for

4 additional predictors to be included in the model in addition to the planned independent

variables of experimental primed groups, sex and strength of identity. I chose three

additional variables. I included subjective value and behavioral tendencies towards

conflict because of their correlation with the dependent categorical variable motivation to

learn and I chose self-efficacy due to its theoretical relationships to the dependent

variable.

Logistic Regression Results and Hypotheses

The logistic regression model as a whole was significantly better than the

constant-only model, $\chi^2(7, n=242) = 51.498$, p<.001, indicating that this set of

independent variables can be used to reliably distinguish between participants on the

dependent measure. Approximately 25.6% of the variance in the DV was accounted for

by the model (Nagelkerke R^2=.256). The statistical significance of individual regression coefficients was tested using the Wald chi-square statistic. The exercise prime (control) condition was used as the reference category. Results indicated significant main effects for groups (p=.028) and sex (B=.887, p=.007, odds ratio=2.427) on participants' motivation to learn learning conflict resolution skills. There was also a significant effect of participants strength of identity on the categorical motivation to learn dependent variable (B=.047, p=.014, odds ratio=1.048). Because strength of identity is a continuous variable, this means for every one-unit increase in strength of identity (so, for every additional point on MAIMS total score), we expect a 1.048 increase in the log-odds of choosing 'yes' to additional training in conflict resolution skills, holding all other independent variables constant. Subjective value of conflict resolution (B=.178, p=<.001, odds ratio=1.195), self-efficacy for conflict resolution (B=-.177, p=.009, odds ratio=.838) and behavioral tendencies towards conflict (B=.035, p=.033, odds ratio=1.035), were also found to be significant predictors on the dependent variable. Higher scores on strength of identity, subjective value of conflict resolution skills and behavioral tendencies towards conflict were associated with an increase in the likelihood of motivation to learn conflict resolution skills. Lower scores on self-efficacy for conflict resolution were associated with a decrease in the likelihood of motivation to learn conflict resolution skills.

In the following paragraphs I present the results of the above preliminary main effects model, as well as follow-up analysis, listed by study hypothesis. Table 7 shows the raw frequencies of participants who answered "yes" to the dichotomous question "Do

you want to participate in additional training in conflict resolution skills?" These

frequencies allow for directional interpretation of the effects from the logistic regression.

Table 7

Frequency of participants wanting additional training in conflict resolution skills

	Peace Characteristic	Competition Characteristic	Exercise Characteristic
Yes	51	33	39
No	35	47	37
Total	86	80	76

Research Question 1. Will participants' motivation to learn conflict resolution

skills vary based on their group condition (that is, based on the priming they received)?

Since the omnibus main effects analysis demonstrated this model was significantly better

than a constant only model and the individual regression coefficients demonstrated a

significant main effect for primed groups (p=.028), individual contrasts between group

conditions were assessed to explore hypothesis 1a – 1c.

Hypothesis 1a: I hypothesized that participants primed with a 'peaceful'

characteristic of martial art identity would show greater motivation to learn conflict

resolution skills from those primed with a 'sport/competition' characteristic of martial art

identity. As hypothesized, results of the binary logistic regression indicates that members

of the peace primed group where significantly more likely to say that they would

participate in further conflict resolution training as compared to the competition primed

group (B=-.445, p=.012, Exp(B)=1.560). The odds ratio indicates that a member of the peace primed group is 1.56 times more likely to say that they will participate in further conflict resolution training as compared to the competition group.

Hypothesis 1b: I hypothesized that participants primed with a 'peaceful' characteristic of martial art identity would show greater motivation to learn conflict resolution skills from those primed with an 'exercise characteristic' of martial art identity. As hypothesized, results of the binary logistic regression indicates that members of the peace prime group where significantly more likely to say that they would participate in further conflict resolution training compared to the exercise prime group, (B=-.370, p=.036, Exp(B)=1.448; see Table 8). The odds ratio indicates that a member of the peace primed group is 1.49 times more likely to say that they will participate in further training as compared to the exercise characteristic control group.

Hypothesis 1c: I hypothesized that participants primed with a 'competition' characteristic of martial art identity would show less motivation to learn conflict resolution skills than those primed with an 'exercise characteristic' of martial art. Contrary to hypothesis, results of the binary logistic regression indicated that members of the competition characteristic group were not significantly less likely to say that they would participate in further conflict resolution training as compared to the exercise characteristic group (B=-.081, p=.646, Exp(B)=.922; see Table 7).

Table 8

Logistic Regression Results for Comparisons between Priming Conditions

Comparisons	B	S.E	WALD	df	Sig	Exp(B)
Peace vs. Competition	-.445	.177	6.358	1	.012*	1.560
Peace vs Exercise	-.349	.176	4.395	1	.036*	1.448
Competition vs Exercise	.081	.176	.211	1	.646	.922

Note. **$p < .01$. *$p < .05$.

To test for interaction effects, two interactions: (a) "Strength of identity by experimental groups" and (b) "Sex by experimental groups" were included in a logistic regression model, along with the control variables of subjective value of conflict resolution, self-efficacy for conflict resolution and behavioral tendencies towards conflict. Compared to the first model, in this second model the - 2 log likelihood statistic decreased from 283.985 to 276.409, indicating a reduction in the unexplained variance for the dependent variable. In comparison, the Nagelkerke R increased from 25% to 29%, indicating an increase in the explained variance accounted for in second model. These two statistics indicate that the second model, with the interaction variables included, is a better fit than the preliminary main effect model.

Hypothesis 4: I hypothesized a significant interaction between group condition and strength of identity, with higher levels of strength of identity increasing the influence of the prime on motivation to learn conflict resolution skills in the expected direction hypothesized for each group condition. Contrary to hypothesis, however, the interaction

between primed group condition and strength of identity was not significant (WALD = 1.540, p=.454).

Hypothesis 5: I hypothesized that motivation to learn would vary by sex, but did not specify a directional hypothesis (hypothesis 5a). I also hypothesized there would not be an interaction effect for "sex by group" for motivation to learn conflict resolution skills (hypothesis 5b). Contrary to hypothesis, individual regression coefficients demonstrated a significant main effect for primed group by sex (WALD = 6.046, p=.049). As such, individual contrasts between group conditions were assessed. When the peace condition was compared with the competition condition, main effects were found for both group condition (WALD = 6.676, p=.01) and sex (WALD = 4.692, p=.031), with no significant group by sex interaction effects (B=-.377, WALD = .242, p=.622). Significant group by sex interaction effects were found, however, for the other two comparisons: the peace condition compared to the control (exercise) condition (B=1.464, WALD = 3.996, p = .046) and the competition condition compared to the control (exercise) condition (B=1.841, WALD = 5.616, p = .018). This means that in comparison to the control condition, the impact of the experimental priming conditions on motivation to learn were dependent on the sex of the participant. Specifically, in comparison to the control prime, when primed with either a peaceful or competitive characteristic of the martial arts, the odds of a participant choosing to say 'yes' to conflict resolution training strongly depends on the participants' sex (see table 9).

Table 9

Logistic Regression Results for Group by Sex Interaction Effects

Comparisons	B	S.E	WALD	df	Sig	Exp(B)
Contrast 1 (PvC) by Sex	-.337	.767	.242	1	.622	.686
Contrast 2 (PvE) by Sex	1.464	.732	3.995	1	.046*	4.321
Contrast 3 (CvE) by Sex	1.841	.777	5.616	1	.018*	6.303

Note. **$p < .01$. *$p < .05$. PvC: Peace condition versus Competition condition, PvE: Peace condition versus Exercise condition; CvE: Competition condition versus Exercise condition.

Since the omnibus main effects analysis demonstrated that the inclusion of the "sex by group" interaction significantly improved the model and the individual regression coefficients demonstrated a significant interaction effect for "sex by group" for the experimental conditions compared to the control condition, separate logistic regressions were run for men and women to obtain specific odds ratios for these comparisons by sex (see Table 10 & 11), with the exercise group (control condition) used as the reference category. In Table 10, I show the raw frequencies of participants, separated by sex, who answered "yes" to the dichotomous question "Would you like to have additional training in conflict resolution skills?" The frequencies presented in Table 10 allow for directional interpretation of the results from the logistic regressions.

Table 10

Frequencies of yes/no responses for the question "Would you like to have additional training in conflict resolution skills?"

	Peace Characteristic	Competition Characteristic	Exercise Characteristic	Total
Female	15/15	6/17	15/11	36/47
Male	36/20	27/30	22/28	63/78
Total[1]	51/35	33/47	37/39	121/121

Note: frequencies reported are: (number of yes/no)

Running logistic regressions for men and women separately reduces our power and thus limits the amount of covariates we can add to the model. Although step-wise regression is not recommended as a primary means to fit variables into a model, step-wise procedures can be used to identify the "importance" of variables, those that most significantly reduce the residual *chi²* (Hosmer and Lemeshow (2000), pp 116-128). Results of a step-wise logistic regression indicate that the variable subjective value for conflict resolution explained the highest amount of the variance in the model (Exp(B)=1.183, p=<.001). Thus, I conducted logistic regressions for men and women using subjective value of conflict resolution as the primary co-variate. Because of the higher number of male participants (N=163) self-efficacy for conflict resolution and strength of identity were added into the model for males but not for females. I present

summaries of the significance, odds ratios and Nagelkerke R^2 variance accounted for in each model in Tables 11 & 12.

For women, the model as a whole was significantly better than the constant-only model (χ^2(3, n=79) = 10.805, p<.013), indicating that this set of variables can be used to reliably distinguished between participants on the dependent measure. Approximately 17% of the variance in the DV was accounted for by the model (Nagelkerke R^2=.171). The exercise prime condition was the reference group chosen for this the contrast between groups. In this comparison, the peace condition was not a significant predictor (ExpB=.742, p = .594). The competition condition, however, *was* significant (Exp(B) = .221, p = .026). Women primed with the competition condition were 4.154 times *less* likely as those in the exercise (control) condition to want additional training in conflict resolution skills, controlling for subjective value. Results are summarized in Table 10.

For men, the model as a whole was significantly better than the constant-only model χ^2(5, n=79) = 39.671, p<.001), indicating that this set of variables can be used to reliably distinguished between participants on the dependent measure (see Table 9). Approximately 29% of the variance in the DV was accounted for by the model (Nagelkerke R^2=.288). The exercise condition was the reference group chosen for this contrast between groups. In this comparison, the peace condition was a significant predictor (ExpB=3.612, p = .005.) Men primed with peaceful characteristics were 3.612 times *more* likely as those in the exercise (control) prime condition to want additional training in conflict resolution skills, controlling for subjective value, self efficacy and strength of identity. The competition condition was not a significant predictor for men (Exp(B) = 1.520, p = .330). Results are summarized in Table 12.

Table 11

Logistic Regression Results for Women

	B	S.E	WALD	df	Sig	Exp (B)
Group Condition						
Peace	-.299	.560	.285	1	.594	.742
Competition	-1.424	.639	4.972	1	.026*	.241
Variables						
CR Subjective Value	.150	.071	4.479	1	.034*	1.162

Note. CR Subjective Value – AVS, **$p < .01$. *$p < .05$.

Table 12
Logistic Regression Results for Men

	B	S.E	WALD	df	Sig	Exp (B)
Group Condition						
Peace	1.284	.560	.7.839	1	.005**	3.612
Competition	.419	.639	.950	1	.330	1.520
Variables						
Strength of Identity	.043	.022	3.681	1	.055	1.044
CR Subjective Value	.193	.043	20.179	1	<.001**	1.213
CR Self Efficacy	-.083	.078	1.122	1	.289	.921

Note. Strength of Identity– MAIMS, CR Subj Value – AVS, CR Self Efficacy – TCSES, **$p < .01$. *$p < .05$.

Due to the sex differences found in the logistic regression analysis, I conducted Pearson Product-moment Correlations separately on men and women for exploratory purposes. For men, the results of the correlational analyses presented in Table 13 show that strength of identity was significantly correlated ($p<.05$ level) with self-efficacy for conflict resolution skills (.13), motivation to learn categorical variable (.17) and motivation to learn continuous variable (.11). Subjective value was significantly correlated ($p<.01$ level) with self-efficacy (.45), behavior towards conflict (.36), martial arts school environment (.30), the categorical motivation to learn variable (.39) and the continuous motivation to learn variable (.87). Self efficacy for conflict resolution skills was significantly correlated ($p<.01$) with behavior towards conflict (.49), martial arts school environment (.33), length of martial art training (.21) and the motivation to learn continuous variable (.48). Martial art type was significantly correlated at the $p<.01$ level with only one variable, the martial arts school environment (-.21), while martial arts school environment was significantly correlated with the additional variables of subjective value of conflict resolution skills (.30), self-efficacy of conflict resolution skills (.33), behavior towards conflict (.36), and the continuous motivation to learn variable (.28) at the $p<.01$ level and the categorical motivation to learn variable (.17) at the $p<.05$ level.

The results of the correlational analyses demonstrated that the significance of the main variables are of lower magnitude for women than for men (see Table 14). For women strength of identity was significantly correlated at the $p<.01$ level for self-efficacy in conflict resolution skills and at the $p<.05$ level for length of martial art training. Subjective value of conflict resolution skills was significantly correlated at the $p<.01$

level for self-efficacy of martial arts training (.38) and the motivation to learn

continuous variable (.80) and at the p<.05 level for the motivation to learn categorical

variable (.24). Self-efficacy was also significantly correlated (p<.01) with behavior

toward conflict and the motivation to learn continuous variable. For women, martial art

type was significantly correlated (p<.05) with self efficacy (-.23). Martial arts school

environment was also significantly correlated (p<.05) with self-efficacy.

Table 13

Correlation Matrix of Main Study Variables for Men

Variable	1	2	3	4	5	6	7	8	9
Strength of Identity	--								
Subjective Value	.133*	--							
Self - Efficacy	.134	.451**	--						
Behavior towards conflict	-.105	.357**	.498**	--					
MA Type	.153	-.075	.036	-.215*	--				
MA Environment	.153	.300**	.329**	.365**	-.219**	--			
MA Length	.112	.153	.215**	.147	-.100	.132	--		
Motivation to Learn - Cat	.170*	.388**	.112	.252*	.036	.168*	.145	--	
Motivation to Learn - Con	.112*	.872**	.483**	.397**	-.107	.282**	.162*	.289*	--

Note. : Strength of Identity = Martial Arts Identity Measurement Scale (MAIMS) ; Subjective Value = Activity Value Scale (AVS) ; Self-Efficacy = Teen Conflict Self-Efficacy Survey (TCSES); Behavior towards conflict = Teenage Nonviolence Test (TNT) ***$p < .001$. **$p < .01$. *$p < .05$.

Table 14

Correlation Matrix of Main Study Variables for Women

Variable	1	2	3	4	5	6	7	8	9
Strength of Identity	--								
Subjective Value	.116	--							
Self - Efficacy	.312**	.377**	--						
Behavior towards conflict	-.094	.097	.406**	--					
MA Type	.071	-.059	-.238	-.102	--				
MA Environment	.118	.124	.288*	.143	.012	--			
MA Length	.317*	.033	.171	.058	-.039	.030	--		
Motivation to Learn - Cat	.087	.242*	-.040	-.067	.056	.074	-.119	--	
Motivation to Learn - Con	.240*	.809**	.440**	.117	.024	.087	.223**	.299*	--

Note. : Strength of Identity = Martial Arts Identity Measurement Scale (MAIMS) ; Subjective Value = Activity Value Scale (AVS) ; Self-Efficacy = Teen Conflict Self-Efficacy Survey (TCSES); Behavior towards conflict = Teenage Nonviolence Test (TNT) ***$p < .001$. **$p < .01$. *$p < .05$.

CHAPTER IV

DISCUSSION

In this study I investigated whether priming salient characteristics in a person's martial arts identity would influence martial arts students' motivation to learn conflict resolution skills. Based on previous research I hypothesized that participants would be more motivated to learn conflict resolution skills when primed with a peaceful characteristic of a martial arts identity than with a competitive or an exercise martial arts identity. I also hypothesized that participants would be less motivated to learn conflict resolution skills when primed with a competitive characteristic of a martial arts identity compared to a peace or exercise martial arts identity. In addition, I hypothesized that strength of identity would play a moderating role in the relationship between the priming condition received and motivation to learn, with higher levels of strength of identity either increasing or decreasing motivation to learn conflict resolution skills, depending on the expected direction hypothesized for each priming condition.

Study findings partially support these hypothesis. For the main effects, I found that participants who were primed with the notion that "peaceful" characteristics were related to a martial arts identity (peace condition) were, in fact, more likely to want to have additional training in conflict resolution skills in comparison with participants who were primed with the notion that "competitive" characteristics were related to a martial arts identity (competitive condition.) Results also revealed a significant interaction effect for condition by sex. The peace prime significantly predicted a greater desire to have

additional training in conflict resolution skills for men but not for women, when compared to the control condition. Conversely, the competition prime significantly predicted a lower desire to have additional training in conflict resolution skills for women but not for men, compared to the control condition. I also found that although strength of identity did not play a moderating role between primed condition and motivation to learn conflict resolution skills, it did prove to be an additive main effect for participants wanting to have additional training in conflict resolution skills. Finally, subjective value of conflict resolution skills was strongly correlated with a higher likelihood of wanting to take additional training in conflict resolution skills. Logistic regression demonstrated that, for both men and women, higher levels of subjective value for conflict resolutions skills predicted an increased desire to have additional training in conflict resolution skills. The following is a more detailed discussion of study results, organized by construct and corresponding hypothesis.

Peace Prime Experimental Condition

The hypothesis that participants would be more motivated to learn conflict resolution skills in the peace condition compared to the exercise control condition was supported, further confirming research on the potential of priming to modify belief or attitudes (Dijksterhuis, Aarts, Bargh & van Knippenberg, 2000, Levy, 1996; Shih, Richeson, Ambady, Fujita, & Gray, 2002). Also, there was a significant main effect for sex in this comparison. Regardless of condition, men were more likely to say that they would participate in further conflict resolution training than women. The interaction between this contrast (peace vs. competition) and sex was not significant, indicating that both men and women participants in the peace condition were more likely to say yes to

further conflict resolution training when compared to participants in the competition condition. These results should be interpreted with caution and in conjunction with the condition by sex interaction effects found in the subsequent analysis (peace condition vs. exercise condition and competition condition vs exercise condition). Closer review suggests that although women in the peace condition were more likely to say "yes" to additional conflict resolution training than women in the competition condition, these frequencies seem to reflect the decreased motivation to learn conflict resolution skills given the competition prime rather than an increased motivation to learn conflict resolution skills given the peace prime.

Regarding the hypothesis that participants would be significantly more motivated to learn conflict resolution skills in the peace condition compared to the exercise control condition, there was a significant interaction effect for this contrast by sex. The peace condition significantly predicted motivation to take additional training in conflict resolution skills for men, but not for women, when compared with the exercise control condition. Specifically, men were three times more likely, and women 1.3 times less likely, to want to take additional training in conflict resolution skills when primed with a peaceful characteristic of a martial arts identity compared to the exercise control prime. Hence it seems that priming peaceful characteristics of a martial arts identity was effective in increasing male martial artists' motivation to learn additional conflict resolution skills, but not women's. The literature suggests that for males, the perception of peaceful conflict resolution as weak and unmasculine may be a barrier in their motivation to learn these skills (Artz et al, 2000 & Spencer, 1999). It may be that connecting peaceful characteristics to a martial arts identity broke down this barrier and

allowed men to consider these skills as complementing, as opposed to conflicting with, their identities as males and martial artists. This interpretation is supported also by social stereotype research which suggests that priming is more likely to be effective when identities are enhanced instead of threatened (Kray, Galinsky & Thompson, 2004 & Stone, Lynch, Sjomeling & Darley, 1999). These results are similar to previous research in the effectiveness of connecting positive traits to relevant identities and the benefits of this when there are conflicting characteristics attached to a single identity, such as Levy's 1996 study demonstrating that priming positive characteristics of the elderly increased memory for those who self-identity as elderly. This finding also provides support for the motivational role of identity in Eccles' (1983) Expectancy-Value model and related research suggesting that characteristics attached to an identity are motivational factors in an individual's choice to participate in activities and learn specific content (Dijksterhuis, Aarts, Bargh & van Knippenberg, 2000; Dijksterhuis & Bargh, 2001; Yopyk & Prentice, 2005).

Contrary to hypotheses, the peace prime did not significantly predict motivation to take additional training in conflict resolution skills for women when compared with the exercise control prime. One possible explanation for these findings may have to do with the interaction of individual and group identity. For women, aspiring to resolve conflict in a non-violent manner is a commonly taught social message (Holt & DeVore, 2005, Lauzen & Dozier, 2008; Thomas et al, 2008). Moreover, Endreson and Olweus (2005) highlight how common social depictions of women in many settings (home, work, school, etc.) often portray women as peacemakers and nurturers, while portraying a more combative, argumentative, competitive, and even 'warrior' stereotype for men. The

peace prime may have simply reinforced 'more of the same' for this social message, and was not strong enough to make a difference in women's motivation to learn conflict resolution skills. The lack of significance may also be due to the personal motivation behind women's martial arts training, as many women take martial arts primarily for self-defense purposes (Angleman, Shinzato, Hasselt, & Russo, 2009; Leung, 1992; Wiley, 1995). In such instances nonviolent conflict resolution seems irrelevant and/or counter-productive, the very antithesis of why some of the women may have enrolled in martial arts training in the first place. Hence, when presented with the priming description of a 'peaceful warrior,' women may not have perceived this as a salient characteristic of how they viewed themselves as martial artists.

An alternative to the aforementioned explanation is that the peace prime *did* influence women, just not in the expected direction. The percentage of women saying "yes" to the question "do you want additional training in conflict resolution" was actually *lower* in the peace condition compared to the control condition. Findings suggests the possibility that the peace prime, by highlighting peaceful conflict resolution, may have caused a 'stereotype reactant' response in some women martial artists. While women are often socialized to respond to conflict with more cooperation and care-taking than men (Endreson and Olweus, 2005, Holt & DeVore, 2005, Lauzen & Dozier, 2008; Thomas et al., 2008), the martial arts by its very nature emphasizes a more aggressive approach to dealing with conflict (Bjorkqvist and Varhama, 2001; Bolelli, 2003; Doest, 1992; Wiley, 1995). In other words, some women martial artists may have perceived the prime as reflection of a traditional female stereotype and may have 'pushed back' against this type of categorization. Stereotype reactance occurs when a perceived negative

stereotype is blatantly primed and an individual responds by explicitly rejecting the stereotype (Kray, Galinsk, & Thompson, 2004). This reactance effect seems to be strongest when individuals are primed with a traditional stereotype and when these primes are explicit and of high valance (Aronson, Lustina, Good & Keough, 1999; Oswald and Harvey, 2000/2001; Kray, Reb, Galinsky, & Thompson, 2004).

Competitive Prime Experimental Condition

Regarding the hypothesis that participants would be significantly less motivated to learn conflict resolution skills in the competition condition compared to the exercise control condition, there was a significant interaction effect for sex. Results supported this hypothesis for women but not for men. Women were four times less likely, and men as equally as likely, to want additional training in conflict resolution when presented with the competition condition in comparison to the exercise control condition. Hence, priming competitive characteristics of a martial art identity was effective in significantly decreasing motivation to learn conflict resolution skills for women martial artists but not for men. If characteristics attached to an identity play a motivational role in a person's choice to participate in activities and learn specific content, then this result suggests the possibility that competitive characteristics are an especially motivating aspect of a female martial artist's identity (e.g., see Dijksterhuis, Aarts, Bargh and van Knippenberg, 2000; Dijksterhuis & Bargh, 2001; Yopyk & Prentice, 2005). This results may also support research in the priming literature suggesting that blatant priming is most effective when the priming involves non-dominant images and expectations (Shih, Ambady, Richeson, Fujita & Gray, 2002). The competition condition explicitly highlighted a message that is

non-stereotypical message for women (that of valuing competition instead of and over cooperation).

Another explanation for this finding could lie in the male dominated environment that characterizes the much of the martial arts, regardless of style. In many martial arts schools, it has been found that women feel the need to act in an extra aggressive manner be seen as equal to men (Angleman, Shinzato, Hasselt & Russo, 2009; Bjorkqvist & Varhama, 2001; Doest, 1992). While both the exercise and competition primes highlighted a martial arts identity, only the competitive prime increased the saliency of the competitive aspects of the martial arts. This increased saliency may have reminded women about this common pull to portray oneself as competitive and aggressive in a martial arts training environment (Bjorkqvist & Varhama, 2001; Doest, 1992). Indeed, Bjorkqvist and Varhama's (2001) research found that women martial artists had a more positive view of violent conflict resolution than men martial artists, compared wrestlers and boxers.

Contrary to hypothesis, for men the competition prime did not result in a lower likelihood of wanting additional training in conflict resolution skills when compared with the exercise control prime. In both the exercise and competition condition, men said "no" to the question "do you want additional training in the martial arts" more often than "yes." One explanation is that since the competition prime repeated a pervasive societal message of men as 'competitors,' the prime simply was not strong enough to add any additional influence in men's responses (Bird, 1996; Glicke & Fiske, 2001; Holt & DeVore, 2005). The fact that men responded similarly in both the exercise and competition prime supports this suggestion.

Strength of Identity

I hypothesized that participant responses to the primed conditions would vary by participant strength of identity, with stronger identity directly related to greater influence of the specific prime. Interaction effects were not significant and this hypothesis was not supported. The initial hypothesis was based on social identity literature describing identity's impact on motivation and the influential role of the importance and salience a person places upon this identity (e.g., Cohen & Garcia, 2005; Haslam, O'Brien, & Jetten, 2005; Sidanius, Van Laar, & Levin, 2004; Simon, 2004; Stryker & Burke, 2000). However, some social stereotype research suggests that priming may operate as an all-or-nothing mechanism regarding social identity (Dijksterhuis, Aarts, Bargh & van Knippenberg, 2000; Levy, 1996). Hence, the strength of an identity may not be as important to motivational choices as much as whether or not one self-identifies with that identity (i.e. considers oneself to be a member of that particular social group).

Strength of martial arts identity, however, did prove to be significant as a main effect, demonstrating that regardless of the condition received, the stronger the participant identified as a martial artist, the more likely he or she was to respond that they were interested in taking additional training in conflict resolution. This implies that strength of identity had a direct influence on motivation to learn conflict resolution skills, as opposed to indirectly influencing motivation to learn through a moderating interaction with the priming condition. Since both the Eccles (1983) expectancy-value model and identity research (Bargh, Chen and Burrows, 1996; Dijksterhuis and Bargh, 2001; Macrae and Johnson, 1998) posit that the characteristics a person attaches to an identity play a motivation role in their choices, this result suggests the possibility that participants who

identify strongly as martial artists may view peaceful characteristics as more relevant
to their martial arts identity than those who do not identify strongly as martial artists.
Another explanation could be that those who identity strongly with a martial arts identity
have trained longer in the martial arts. Length of martial arts training has been correlated
with increased self-control, decreased aggression, and increased use of positive conflict
resolution strategies (Layton, Higaonna, Arneil, 1993, Twemlow, 2008, & Zivin, 2001).
The correlation between length of marital arts training and participants strength of
identity ($r = .18$) supports this connection. Although length of training did not correlate
directly with motivation to learn conflict resolution skills, this may have been related to
measurement limitations. Further research is needed to clarify the specific role of strength
of martial art identity in motivating participants to learn conflict resolution skills.

Subjective Value

As an independent variable, results of the logistic regression indicted that, for
both men and women, higher scores on subjective value were associated with an increase
in the motivation to learn conflict resolution skills. In other words, regardless of what
characteristic a person was primed with, the more an individual valued conflict resolution
the more likely they were to want to take additional training. Subjective value was
included in the logistic regression analysis as a control variable due to the theoretical
relationship between this construct and motivation to learn, as well as the high correlation
found between subjective value and motivation to learn ($r = .864$). Out of all the
constructs assessed in this study, the relationship between subjective value and
motivation to learn has proven to be the strongest. For example, simply reviewing
relationships between constructs, the .864 correlation between subject value and

motivation to learn was substantially stronger than the next highest correlated relationship at $r = .443$ (between self-efficacy and behavior towards conflict.) The results of the logistic regression offer further support for the strength of this relationship, with subjective value proving to be a significant main effect for men ($p < .001$) and women ($p < .05$) in their choice to take additional training in conflict resolutions skills. The strength of this relationship is supported by Eccles (1983) expectancy-value model, as well as current literature on motivation, suggesting that motivation to learn is strongly related to a person's values regarding the content being presented (Hidi and Harackiewics, 2000, Feather, 1992, Verplanken and Holland, 2002, & Wentzel and Wigfield, 2007) and research suggesting that individuals engage more when motivation is intrinsic (Britt, Adler, & Bartone, 2001; Brophy, 2004; Deci & Ryan, 1985, Eccles & Wigfield, 2002; Ryan and Deci, 2000).. The significance of this relationship, combined with the fact that strength of identity did not prove to have significant moderating effect, presents the possibility that the priming condition actually primed values instead of identity. In other words, instead of the prime highlighting competitive or peaceful aspects of a martial arts identity, the prime may have simply highlighted the values of "competition" or "cooperation."

As a dependent variable, results indicated no significant difference for participants value of conflict resolution skills between the primed conditions. Contrary to the hypothesis that subjective value would significantly vary by primed groups, priming specific aspects of a martial arts identity did not influence the degree to which participants valued conflict resolution skills. These results raise the possibility that the value a person places on an activity may not be as susceptible to priming as a person's

behavior towards an activity. However, this lack of significance between primed groups for the construct of subject value may also be due to measurement issues. Although the AVS measure used to assess this construct has strong internal consistency (Eccles and Wigfield, 1995) the structure of the measure may have been ill equipped to capture the effects of the priming conditions. Literature on the use of primes in social science research (Dovidio, Kawakami, Johnson, Johnson & Howard, 1997, Gilbert and Hixon, 1991, & Shih et al., 2002) suggests that the effect of priming, which aims at highlighting a subtle, almost unconscious connection, is not assessed well in measures which are either too obvious or that involve self-report with high levels of thought and reflection. Dovidio and Fazio (1992) suggest that this may be especially true with measures assessing socially sensitive issues in priming research. As such, this measure may have been heavily influenced by social desirability and unable to detect true differences in the variables of interest. The large skew in responses to this measure (-1.368) gives support to this possible explanation.

Study Limitations

Although the hypothesis and results of this study are consistent with the theoretical predictions that were derived from Eccles (1983) expectancy-value model, these findings are preliminary and the results of this study should be interpreted with caution. It is difficult to define and measure motivation to learn and although this study took care to control for variables known to influence motivation, such a subjective value and self-efficacy for the specific behavior under investigation, this construct may involve other dimensions as well. In addition, a participant's statement of interest in, or intention

to behave in a certain way, does not represent the actual behavioral choice that may occur in real time.

One limitation had to do with measurement. While two dependent measures were used for the variable of interest, "motivation to learn conflict resolution skills," the first of these (the MTL, which was adapted specifically for this study) did not find significant differences between the primed conditions. The MTL was a continuous measure asking participants to rate their motivation to learn conflict resolution skills on a 5-point, Likert-type scale. As described in the discussion section earlier, this type of measure may have been heavily influenced by social desirability and unable to effectively capture the effect of the primed conditions (Dovidio & Fazio, 1992; Dovidio, et al. 1997; Gilbert and Hixon, 1991; Shih et al., 2002). The other measure of motivation was a dichotomous yes/no question given at the end of the survey asking participants if they would be interested in participating in additional training in conflict resolution skills. Literature in priming research suggests that this type of measure, which is less cognitively intensive and more removed from the prime itself, would be more sensitive to changes influenced by the priming conditions. Several studies have found this type of spontaneous response measure to more effectively measure the dependent variable than self-report measures when using priming methods (Bargh, 1996, Dovidio et al., 1997, Dovidio & Fazio, 1992). This was true in the case of the present study as well.

An additional limitation may relate to the imbalance of the sample, which included relatively few women compared to men. After finding overall sex interaction effects, separate logistic regression were run for men and women to identify specific significance and odd ratios for each sex. Although groups for men and women had

enough participants to meet the recommendation of 10 participants for each variable included in a regression analysis, the number of women just barely met this requirement and may have resulted in a failure to detect existing but smaller effect size differences. A greater number of women participants and a more balanced sample would have improved this study.

Finally, although there are many strengths of online data collections, there are also several limitations including low sample representiveness, low response rate and technical difficulties (Wright, 2005). The primary limitation for this study is the low representativeness of the sample of martial artists. While demographics of internet users are becoming increasingly diverse, communities of color and lower socioeconomic status are still underrepresented online (Raine, 2010). In addition, because the percentage of martial artists who are active in online community groups and email list-serves is unknown but most likely a small number, the results of this study can not be assumed to generalized to all martial artists. Low response rate was also a limitation in this study, but was more apparent for women than men. This could also be a result of a lower participation of women overall in the martial arts online community. Although technical difficulties have historically created barriers to online data collection ((Gosling, Vazire, Srivastava and John, 2004; Wright, 2005), new software such as the psych-data program used in this study overcomes some of these difficulties through a platform designed to be accessible to a wide range of internet users, from from dial-up to broadband.

Implications for Future Research and Practice

Despite its limitations, this study offers important contributions to the field of conflict resolution education and the motivation to learn literature. To date (database search, Psycinfo, ERIC and Dissertation Abstracts, January 1970 – April, 2010), this study was the first to examine if motivation to learn conflict resolution skills could be influenced through priming (see also a review by Jones, 2004). Results suggest that increasing the relevance of conflict resolution skills by connecting these skills to a salient aspect of a person's identity has the potential to influence a person's motivation to learn. These results give support to current motivational research demonstrating that motivation increases when participants find the material to be relevant (Hernandex, 2000; Shernoff & Hoogstra, 2001; Shernoff, Schneider, Csikszentmihalyi, 2001), and when the material is congruent with salient aspects of participants identity (Barber, Stone, Hunt, & Eccles, 2005; Guillet, Sarrazin, Fontayne, & Brostad; 2006; Wegge, Van Dick, Fisher, Wecking, & Moltzen, 2006). This study also supports the strong influence of subjective value on motivation to learn, as posited by the Eccles Expectency-Value model. At the same time, the complexity of these results highlight a need for further research. As suggested earlier, it is possible that the priming condition actually primed values instead of identity. The structure of this study limits the ability to tease apart which aspects of the prime – value or identity - influenced participant's motivation to learn. Further research is needed to explore the influence of both value and identity, as well as their possible interdependence. For example, Verplanken and Holland (2002) found that priming values was only effective in influencing behavior when the value itself was central to the person's self-concept.

It would also be beneficial to explore the generalization of these results to identities other than the martial arts. The literature on conflict resolution programming in schools suggests that men and African American youth are two groups who have lower participation and engagement rates in conflict resolution training (Irving & Hudley, 2008 & Stotz, 2005). Further research could explore the effect of priming peaceful conflict resolution characteristics and values relevant to specific identities on motivation to participate in conflict resolution programming. For example, a study could focus on a male identity and values of masculinity related to peaceful conflict resolution.

The sex differences found in this study demonstrate the potential complexity behind the construct of motivation and suggest further research into men and women's values and choices regarding the learning conflict resolution skills. Literature exploring sex differences in conflict resolution and in the martial arts point to macro-systemic factors such as stereotyped social messages and gender-role expectations to explain these differences (Holt & DeVore, 2005, Lauzen & Dozier, 2008 & Thomas, 2008). No studies to date, however, have specifically examined the interaction of sex and identity on motivation to learn conflict resolution skills (database search, Psycinfo, ERIC and Dissertation Abstracts, January 1970 – April, 2010). The present study suggests that possibility that gender-based social messages and stereotypes regarding conflict resolution may exert a strong influence on participant's motivational choices even when alternative identities are salient (in this case, a martial arts identity). Further research could illuminate this relationship in closer detail. The sex differences in response to the priming conditions also highlights the importance of recognizing and addressing the

complexity of multiple identities when considering the application of this research to actual curriculum training.

Further research also needs to be completed to see how this higher level of motivation translates to actual participation in training programs of such skills. Results of this study suggest that increasing the relevance of learning conflict resolution skills may improve participant participation and engagement in conflict resolution training programs. The next steps in applying this research would be to increase this relevance during actual implementation of a conflict resolution curriculum and assess the impact on participant's motivation, participation, and skill development. In this study, both high levels of subjective value and priming relevant aspects of identity increased the relevance of the content and were predictive of improved motivation. Implementation studies would benefit from emphasizing the connection between conflict resolution skills and either 1) a salient aspect of a person's identity or 2) a personal value of conflict resolution. Given the difficulties in highlighting relevant self-aspects of each participant's identity, as well as the sex differences found in the influence of identity, it may be more prudent to emphasize common personal values congruent with conflict resolutions skills rather than focus on identity.

Although the purpose of this study was to examine the ability to influence motivation through priming characteristics of an identity, the correlational relationships found among constructs, especially in regards to the interaction between martial arts training and sex, are fascinating and merit further investigation. This study did not have the number of participants necessary for a more thorough investigation of the relationships between multiple sets of variables, such as structural equation modeling

might have provided. A study with a larger sample might explore these relationships further by examining the constructs in this study, such as environment of martial arts school, martial arts style, and attitude towards conflict, along with additional constructs such as personal goals for martial arts training and individual conflict resolution style, on motivation to learn conflict resolution skills.

The sex differences found for the influence of martial art school environment illuminate another interesting area for further study. For men, martial arts school environment was significantly related to subjective value of conflict resolution skills, self efficacy of conflict resolution skills, behavioral tendencies towards conflict, martial arts type, and both the continuous and categorical motivation to learn conflict resolution skills variables (see Table 12). For women, martial arts school environment was only significantly related to one variable, self-efficacy of learning conflict resolution skills (see Table 13). This suggests that the martial arts school environment is a much more highly influential factor for men than women in regards to behavior, values, and motivation regarding conflict resolution skills.

Summary and Conclusions

Conflict resolution skills are taught to youth and adults across the country in a wide range of contexts, from high schools to community settings to large organizations, with little attention to the impact that a participant's identity may have on the motivation to participate in the learning of these skills (Cartledge & Feng, 1996; Deutsch & Coleman, 2000; French, Kim, Pillado, 2006; Lederach, 1995; Webster, 2001; Wright and Zimmerman, 2006).. At the same time, research shows that the personal relevance attached to learning these skills is low for many participants (Artz, et al., 2000; Bernal et

al, 1991; Irving & Hutley, 2008; Osyerman,Yoder, & Fryberg's 2007; Spencer, 1999). The purpose of this experimental study was to examine the influence of priming certain characteristics of a person's identity (specifically, characteristics of a martial arts identity) relevant to conflict resolution on participants' motivation to learn conflict resolution skills.

Results revealed that when comparing the peace and competition conditions to the control condition, significant interaction effects for condition by sex were found, with the peace condition predicting a higher interest in taking additional conflict resolution training for men, but not for women, and the competitive condition predicting a lower interest in taking additional conflict resolution training for women, but not for men. For men and women, the group condition was the one that primed a non-stereotypical gender characteristic regarding conflict resolution. Subjective value of conflict resolution skills was also found to be a significant predictor of a participants motivation to learn conflict resolution skills.

As posited by Eccles (1983) Expectancy-Value model, results provide support for the position that characteristics attached to a martial arts identity are motivational factors in person's desire to learn conflict resolution skills. Sex differences found in this study suggest the need for further research on interaction between gender and an individual's interest in participating in a training in conflict resolution skills, and on the influence of other constructs such as individual training goals, the environmental milieu, and reactions to social messages and stereotypes relevant to the training environment. This study also highlighted the strong relationship between the value a person places on an activity and their motivation to learn. Although this research supports the inclusion of identity into

future conflict resolution programming, it also emphasizes the need to do so with

caution. It is essential to recognize that individuals have multiple identities and values

and that priming the characteristics of a salient identity may interact with not only the

norms and expectations of other identities but also the training mileu and the value a

participant has for the content. This study represented a first step in understanding

identity and its potential influence on motivation to learn within this more complex set of

relationships.

APPENDIX A

MEASURES

Martial Arts Identity Measurement Scale: Adapted from the Athletic Identity
Measurement Scale (AIMS, Brewer, Van Raalet, & Linder, 1993; Brewer & Cornelius,
2001).

Directions: For each of the following items, indicate the extent to which you agree with
the following statements with "1" indicating "strongly disagree" and "7" indicating
"strongly agree".

I consider myself a martial artist.
*

     1   2   3   4   5   6   7

I have many goals related to martial arts.
*

     1   2   3   4   5   6   7

Most of my friends are martial artists
*

     1   2   3   4   5   6   7

Martial arts is the most important part of my life.
*

     1   2   3   4   5   6   7

I spend more time thinking about martial arts than anything else.
*

     1   2   3   4   5   6   7

I feel bad about myself when I do poorly in martial arts.
*

     1   2   3   4   5   6   7

I would be very depressed if I were injured and could not participate in martial arts
*

     1   2   3   4   5   6   7

Activity Value Scale (Eccles, 1983). Adapted for conflict resolution skills.

For each of the following items, indicate the extent to which you agree with the following statements with "1" indicating "strongly disagree" and "5" indicating "strongly agree". **Conflict resolution skills, also known as peacemaking skills, refer to non-physical skills that help a person avoid or manage conflicts and get along well with others.**

I enjoy learning about non physical ways to manage conflicts.

Strongly Disagree   **Strongly Agree**

$\bigcirc_1 \quad \bigcirc_2 \quad \bigcirc_3 \quad \bigcirc_4 \quad \bigcirc_5$

In general, I find learning conflict resolution skills very interesting.

Strongly Disagree   **Strongly Agree**

$\bigcirc_1 \quad \bigcirc_2 \quad \bigcirc_3 \quad \bigcirc_4 \quad \bigcirc_5$

Knowing conflict resolution skills will be helpful to me.

Strongly Disagree   **Strongly Agree**

$\bigcirc_1 \quad \bigcirc_2 \quad \bigcirc_3 \quad \bigcirc_4 \quad \bigcirc_5$

I will be able to use conflict resolution skills in other domains of my life.

Strongly Disagree   **Strongly Agree**

$\bigcirc_1 \quad \bigcirc_2 \quad \bigcirc_3 \quad \bigcirc_4 \quad \bigcirc_5$

It is important for me to learn conflict resolution skills.

Strongly Disagree   **Strongly Agree**

$\bigcirc_1 \quad \bigcirc_2 \quad \bigcirc_3 \quad \bigcirc_4 \quad \bigcirc_5$

It is important for me to use conflict resolution skills.

Strongly Disagree   **Strongly Agree**

$\bigcirc_1 \quad \bigcirc_2 \quad \bigcirc_3 \quad \bigcirc_4 \quad \bigcirc_5$

It's important for me to good at using conflict resolution skills.

Strongly Disagree   **Strongly Agree**

$\bigcirc_1 \quad \bigcirc_2 \quad \bigcirc_3 \quad \bigcirc_4 \quad \bigcirc_5$

Conflict Self-Efficacy Survey (Bosworth & Espelage, 1995)

For each of the following items, indicate the extent to which you agree with the following statements with "1" indicating "Not at all Confident" and "5" indicating "Very Confident".

Stay out of fights?

* **Not at all Confident** **Very Confident**

  ○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Understand another person's point of view?

* **Not at all Confident** **Very Confident**

  ○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Calm down when you are mad?

* **Not at all Confident** **Very Confident**

  ○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Talk out a disagreement?

* **Not at all Confident** **Very Confident**

  ○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Learn to stay out of fights?

* **Not at all Confident** **Very Confident**

  ○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Motivation to learn conflict resolution skills – continuous scale: Adapted from Benson & Mekolichich's (2007) motivation to learn digital technologies scale.

*For each of the following items, indicate the extent to which you agree with the following statements with "1" indicating "strongly disagree" and "5" indicating "strongly agree". **Conflict resolution skills, also known as peacemaking skills, refer to non-physical skills that help a person avoid or manage conflicts and get along well with others.***

I am interested in learning non physical ways to manage conflicts.

* **Strongly Disagree**   **Strongly Agree**

      $\bigcirc_1$ $\bigcirc_2$ $\bigcirc_3$ $\bigcirc_4$ $\bigcirc_5$

I would like to use conflict resolution skills in my daily life.

* **Strongly Disagree**   **Strongly Agree**

      $\bigcirc_1$ $\bigcirc_2$ $\bigcirc_3$ $\bigcirc_4$ $\bigcirc_5$

Being good at the use of conflict resolution skills is important to me.

* **Strongly Disagree**   **Strongly Agree**

      $\bigcirc_1$ $\bigcirc_2$ $\bigcirc_3$ $\bigcirc_4$ $\bigcirc_5$

Motivation to learn conflict resolution skills – dichotomous question

Would you like to have additional training in conflict resolution skills?

$\bigcirc$ Yes
$\bigcirc$ No

Martial arts school environment (Walters, 2009)

The following items refer to your specific martial arts experience. In these statements.
Conflict resolution skills, also known as peacemaking skills, refer to non-physical skills
that help a person avoid or manage conflicts and get along well with others.

	Never	Rarely	Sometimes	Often
* Does your martial art school emphasize that martial arts should be used for self-defense only?	○	○	○	○
* Does your martial arts school stress the importance of using non-physical conflict resolution skills?	○	○	○	○
* Does your martial arts school teach specific non-physical conflict resolution skills?	○	○	○	○
* Do students practice using specific non-physical conflict resolution skills in class?	○	○	○	○

The Teenage Nonviolence Test (Mayton, 1998). Measuring current behavioral tendencies toward conflict variable.

Please read each statement and decide whether it is true or not for you. *Choose the response which best describes how you feel about the statement. If the statement is definitely true or nearly always true for you, choose the response 'definitely true for me". If the statement is generally true for you but not always true, circle the response "usually true for me." If the statement is occasionally true for you but generally not true, circle the response "usually not true for me". If the statement is definitely false or nearly always not true for you circle the response "definitely not true for me."*

<u>Physical Nonviolence Scale:</u>

1. If someone insulted me in front of my friends, I would smack them. *

○	○	○	○
definitely true for me	usually true for me	usually not true for me	definitely not true for me

2. I don't get mad, I get even. *

3. Everyone has the right to injure another to protect their property. *

4. If someone gets in my face, I push them away. *

5. Violence on television bothers me.

6. I won't fight if people call me names.

7. If someone shoves me,, I would just keep walking.

8. I have been known to pick fights. *

9. If someone cute in front of me, I shove them out of line. *

10. If someone pushes me, I push them back. *

11. I sometimes bring weapons to work. *

12. It is okay to carry weapons on the street. *

13. If someone spit on me, I would hit them. *

14. I don't like to watch people fight.

15. It is often necessary to use violence to prevent violence. *

16. A good way to get me to fight is to tease me. *

Psychological Nonviolence Scale

1. Reasoning helps me avoid fights.

2. When someone is rude to me, I am rude back *

3. Yelling at someone makes them understand me. *

4. Some people respect me because they fear me. *
5. Sometimes I make fun of others to their face. *

6. I can scare people into doing things for me. *

7. I like the look of defeat on people's faces when I beat them in competition. *

8. I don't like to make fun of people

9. I often call people names when they make me angry. *

10. I humiliate people who make me feel bad. *

11. When someone calls me a name, I ignore it.

12. I like to laugh when others make mistakes. *

13. If someone disagrees with me, I tell them they are stupid. *

14. I enjoy saying things that upset people. *

15. Starting a nasty rumor is a good way to get back at someone. *

16. I tease people I don't like. *

* items are reverse scored.

Demographic Questionnaire

Your Current Type of Martial Arts style:

○ Aikido

○ American Karate

○ Capoeira

○ Jeet Kune do

○ Judo

○ Jujitstu

○ Kendo

○ Krav Maga

○ Kung Fu

○ Okinawan Karate

○ Tae Kwon Do

○ Other (Please specify)

*
How many years have you been training in the martial arts?

○ 0-1 years

○ 2-3 years

○ 4-5 years

○ 6-7 years

○ 7-9 years

○ 10 + years

Did you have experience in learning conflict resolution skills prior to entering your current martial arts training program?

○ Yes

○ No

*
Please indicate the number of lectures or presentations you have attended in which the focus was conflict resolution or violence prevention

○ 0

○ 1

○ 2

○ 3
○ 4
○ 5
○ 6 or more
*
Please indicate your age range.

○ 18-25
○ 26-35
○ 36-45
○ 46-55
○ 56-65
○ 65 and older
*
Please indicate your gender.

○ Male
○ Female
○ Transgender
○ Other (Please specify)

Race/Ethnicity: Please mark all that apply

☐ Asian or Asian-American
☐ Black or African-American
☐ Chicano(a)
☐ Hispanic
☐ Latino(a)
☐ Native American or Alaskan Native
☐ Middle Eastern
☐ Pacific Islander
☐ White or European-American
☐ Other (Please specify)

APPENDIX B

IRB MATERIALS

Email Request to Owners/Facilitators of listserves

Dear Listserv Facilitator/Owner,

Hello. My name is Karrie Walters and I am a doctoral Counseling Psychology candidate at the University of Oregon. I am writing to request permission to post an email to your listserv requesting participation in a research study I am conducting as part of my dissertation project. I have attached the Introductory Email for your review.

Thanks for your time,

Karrie Walters

Introductory Email

Dear Listserv Members,

Hello! My name is Karrie Walters and I am a doctoral Counseling Psychology candidate at the University of Oregon. I am writing to request your participation in a research study I am conducting as part of my dissertation project. This study is intended to further our development of effective training programs. Specifically, the survey asks questions about different aspects of your experience while in your martial arts program, as well as your thoughts and feelings about conflict.

My doctoral advisor, Dr. Benedict McWhirter, in the Department of Counseling Psychology at The University of Oregon, is supervising this project. This research is approved by The University of Oregon Institutional Review Board, Office of Human Subjects, #X110-10.

To qualify for this study, you must:
* Be currently training as a student in a martial arts school.
* Be 18 years of age or older
* Speak English fluently

Below is a link to the online survey. Your responses will be kept completely confidential. The maximum time needed to complete the entire survey is approximately 25 minutes.

At the end of the survey, you will have the opportunity to participate in a random selection of one $50 Amazon.com gift card for every 100 participants.

If you are interested in participating you can access the survey by clicking this link: **https://www.psychdata.com/s.asp?SID=131130**

If you have any questions or concerns, please do not hesitate to email me at kwalters@uoregon.edu

Thank you in advance for your participation. It is greatly valued and appreciated!

Sincerely,

Karrie Walters, M.Ed., M.A.
Counseling Psychology Doctoral Candidate

Department of Counseling Psychology
University of Oregon

Informed Consent Form

You may print a copy of this form for your records.

You are invited to participate in a research study conducted by Karrie Walters, a doctoral candidate in the counseling psychology program at the University of Oregon. The purpose of the study is to expand current knowledge and awareness about the martial arts and attitudes towards conflict.

You are eligible to participate in this study if you are 18 years or older, currently training in the martial arts, and able to write and speak English. You will be asked to fill out a survey which will take approximately 20-25 minutes. Participation in the study is completely voluntary, and you may discontinue participation at any time without penalty. Only the researcher will have access to survey materials.

By participating in the study, you are making a significant contribution to research that may enhance future training programs based on findings from this study. A potential benefit from participating in this study is increased awareness about yourself as a martial artist and how you respond to conflict.

As a participant in this study, you will have the opportunity to participate in a confidential drawing in which you may enter to win one of four $50 gift certificates for Amazon.com. If you choose to participate in this drawing, you will submit your contact information (phone number and email address) in addition to the answers on your survey battery. Your identifying and contact information will *not* be linked in any way to your answers in the survey battery. You will have an approximately 1 in 100 chance of winning.

If you have any questions or concerns about the survey or your participation, please feel free to contact the primary researcher or her research advisor:

Karrie Walters, MA   Benedict McWhirter, PhD
Doctoral Candidate   Associate Professor, Counseling Psychology
University of Oregon   University of Oregon
541.346-2456   541.346.5501
kwalters@uoregon.edu   benmcw@uoregon.edu

If you have questions regarding your rights as a research subject, contact the Office for Protection of Human Subjects, University of Oregon, Eugene, OR 97403, (541) 346-2510. This Office oversees the review of the research to protect your rights and is not involved with this study.

Selecting the consent box indicates that you have read and understand the information provided above, and that you willingly agree to participate with the option to withdraw your consent at any time and discontinue participation without penalty.

REFERENCES

Allender S., Cowburn G. & Foster C. (2006). Understanding participation in sport and physical activity amongst children and adults: A systematic review of qualitative studies. *Health Education Research: Child Obesity Prevention Special Issue, 21*(6), 826-835.

Altschul, I., Oyserman, D. & Bybee, D. (2006). Racial-ethnic identity in mid-adolescence: Content and change as predictors of grades. *Child Development, 77,* 1155-1169.

Anderson, D.E., & Cychosz, C.M. (1995). Exploration of the relationship between exercise behavior and exercise identity. *Journal of Sport Behavior 18* (3), 159-166.

Anderson D.F., Cychosz, C.M., & Franke, W.D. (1998). Association of exercise identity with measures of exercise commitment and physiological indicators of fitness in a law enforcement cohort. *Journal of Sport Behavior, 21*, 233-241.

Angleman, A.J., Shinzato, Y., Hasselt, V., & Russo, S. (2009). Traditional martial arts versus modern self-defense training for women. *Aggression and Violent Behavior, 12* (2), 89-93.

Aronson, J., Lustina, M., Good, C., Keough, K., Steele, C. & Brown, J. (1999). When white men can't do math: Necessary and sufficient factors in stereotype threat. *Journal of Experimental Social Psychology, 35,* 29-46.

Artz, S. & Riecken, T. (1998). Rethinking the gender neutral curriculum: Male and female differences in receptivity to violence prevention. *Health and Disease Surveillance, 7* (7/8), 74-79.

Artz, S., Riecken, T., MacIntyre, B., Lam, E. & Maczewski, M. (2000). Theorizing gender differences in receptivity to violence prevention programs in schools. *BC Counselor, 22* (1), 7-36.

Bailey, K.D. (1994). *Methods of social research.* New York, NY:The Free Press.

Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York: Freeman.

Banks, J.A. & Banks, C.M. (2006). *Multicultural education: Issues and perspectives.* Hoboken, NJ: Wiley.

Barber, B. L., Stone, M. R., Hunt, J. & Eccles, J. S. (2005). Benefits of activity participation: The roles of identity affirmation and peer group norm sharing. In J. L. Mahoney, R. W. Larson, & J. S. Eccles (Eds.) *Organized activities as contexts of development: Extracurricular activities, after-school and community programs* (pp. 185-210). Mahwah, NJ:Erlbaum.

Bargh, J. A., Chen, M., & Burrows, L. (1996). Automaticity of social behavior: Direct effects of trait construct and stereotype activation on action. *Journal of Personality and Social Psychology, 71*, 230-244.

Benson D.E. & Mekolichick, J. (2007). Comparisons of self and the use of digital technologies in a learning environment. *Education. 127* (4), 498-510.

Berry, J. (1991, Nov.). Yoshuki karate: Curriculm innovation for at risk youths. Presented at the Annual Meeting of the Mid-South Educational Research Association. Lexington, KY. (ERIC Document Service NO ED 340 678)

Bird, S. (1996). Welcome to the men's club: Homosociality and the maintenance of hegemonic masculinity. *Gender & Society, 10 (2)*, 120-132.

Bjorkqvuist, K. & Varhama, L. (2001). Attitudes toward violent conflict resolution among male and female karateka in comparison with practitioners of other sports. *Perceptual and Motor Skills, 92,* 586-588.

Black, S. (2003). Engaging the disengaged. *American School Boards Journal, 190.* Retrieved March 2008, from http://www.asbj.com/2003/12/1203research.html

Bodine, R. & Crawford, D. (1998). *The handbook of conflict resolution education: A guide to building quality programs in schools*. San Francisco, CA: Jossey-Bass.

Bolelli, 2003. On the warrior's path: Philosophy, fighting and martial arts mythology. Berkely, CA: Blue Snake Books.

Bosworth, K., Espelage, D., Dahlberg, L.L., Toal, S.B. & Behrens, C.B. (1995). Teen Conflict Self-Efficacy Survey. In *Measuring violence-related attitudes, beliefs and behaviors among youths: A compendium of assessment tools.* Atlanta, Ga.: Division of Violence Prevention, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. (pp.53,122).

Brahnam, S., Margavio, T., Hignite, M., Barrier, T., & Chin, J. (2005). *Journal of Management Development, 24(3), 197-208.*

Brewer, B. W., & Cornelius, A. E. (2001). Norms and factorial invariance of the Athletic Identity Measurement Scale. *Academic Athletic Journal, 16*, 103-113.

Brewer, B. W., Van Raalte, J. L., & Linder, D. E. (1993). Athletic identity: Hercules' muscles or achilles heel? *International Journal of Sport Psychology, 24*, 237-254.

Britt, T. W. (2005). The effects of identity-relevance and task difficulty on task motivation, stress, and performance. *Motivation and Emotion, 29*, 189-202.

Britt, T.W., Adler, A.B., & Bartone, P.T. (2001). Deriving benefits from stressful events: The role of engagement in meaningful work and hardiness. *Journal of Occupational Health Psychology, 6,* 53-63.

Brophy (2004). *Motivating students to learn (2nd Ed.).* Lawrence Erlbaum Associates.

Brubaker, R. & Cooper, F (2000). Beyond 'Identity'. *Theory and Society, 29*, 1-47.

Burke, P. (1991). Attitudes, behavior and the self. In J.A. Howard & P.L. Callero (Eds.) *The self society dynamic: Cognition, emotion, and action* (pp. 189-208). Cambride University Press.

Cartledge, G., & Feng, H. (1996). The relationship of culture and social behavior. In Cartledge, G. (Ed.). *Cultural diversity and social skills instruction* (pp. 13-44). Champaign, IL: Research Press.

Chatman, C.M., Eccles, J.S., & Malanchuk, O. (2005). Identity negotiation in everyday settings. In G. Downey, J.S. Eccles, & C.M. Chatman (Eds). *Navigating the future: Social identity, coping and life tasks* (pp.116-139). New York: Russell Sage Foundation.

ChesneyLind, M., Artz, S., & Nicholson, D. (2002). Violence patterns in girls' delinquency and gender responsive programming in the United States and Canada. In Rapp-Paglicci, L., Roberts, A. & Wodarski, J. (Eds.), Handbook of Violence (pp. 278-320). New York, NY: Wiley & Sons Inc.

Cohen, G. L. & Garcia, J. (2005). "I am us": Negative stereotypes as collective threats. *Journal of Personality and Social Psychology, 89*, 566-582.

Colquitt, J. A., LePine, J. A., & Noe, R. (2000). Toward an integrative theory of training motivation: A meta-analytic path analysis of 20 years of research. *Journal of Applied Psychology, 85*, 678-707.

Cothran, D.J., & Ennis, C.D. (1999). Alone in a crowd: Meeting students' needs for relevance and connection in urban high school physical education. *Journal of Teaching in Physical Education, 18*, 234-247.

Cothran, D.J., & Ennis, C.D. (2000). Building bridges to student engagement: Communicating respect and care for students in urban high schools. *Journal of Research and Development in Education, 23*, 106-117.

Covington, M. V., & Weidenhaupt, S. (1997). Turning work into play: The nature and nurturing of intrinsic task engagement. In R. Perry & J. C. Smart (Eds.). *Effective teaching in higher education: Research and practice*. New York: Agathon Press.

Cox, A.E., & Whaley, D.E. (2004). The influence of task value, expectancies for success, and identity on athletes' achievement behaviors. *Journal of Applied Sport Psychology, 16*, 103-117.

Crothers, L.M., Field, J.E. & Kolbert, J.B. (2005). Navigating power, control, and being nice: Aggression in adolescent girls' friendships. *Journal of Counseling & Development, 83(3)*, 354-359.

Crudelli, C. (2008). The way of the warrior: Martial arts and fighting styles from around the world. DK publishing.

D'Andrea, M. (2004). Comprehensive school-based violence prevention training: A developmental- ecological training model. *Journal of Counseling and Development, 82*(3), 277-286.

Deci & Ryan, 1985. Intrinsic motivation and self-determination in human behavior. New York, NT: Phelum. Deci, E. L., & Ryan, R. M. (Eds.), (2002*). Handbook of self-determination research.* Rochester, NY: University of Rochester Press.

Delva-Tauiliili, J. (1995). Does brief Aikido training reduce aggression of youth? *Perceptual and Motor Skills, 80*, 297-298.

Deutsch, M., Coleman, P. T., & Marcus, E. (Eds.) (2006). *The Handbook of Conflict Resolution: Theory and practice* (2nd Ed.) San Francisco: Jossey-Bass.

Diller, J.D. & Moule, J. (2004). Cultural Competence: A primer for educators. Belmont, CA: Waldsworth.

Dillman, D. A. (2000). *Mail and Internet surveys: The tailored design method.* (2nd ed.) New York, NY: John Wiley & Sons.

Dijksterhuis, A., Spears, R., & Lépinasse, V. (2001). Reflecting and deflecting stereotypes: Assimilation and contrast in impression formation and automatic behavior. *Journal of Experimental Social Psychology, 37,* 286-299.

Dijksterhuis, A., Aarts, H., Bargh, J.A., & van Knippenberg, A. (2000). On the relation between associative strength and automatic behavior. *Journal of Experimental Social Psychology, 36,* 531-544.

Dijksterhuis, A., & Bargh, J.A. (2001). The perception-behavior Expressway: Automatic effects of social perception on social behavior. *Advances in Experimental Social Psychology, 33,* 1-40.

Dishion, T.J., Poulin, F., & Burraston, B. (2001). Peer group dynamics associated with iatrogenic effects in group interventions with high-risk young adolescents. In C. Erdley and D.W. Nangle (Eds.). *Damon's new directions in child development: The role of friendship in psychological adjustment* (pp. 79-92). San Francisco: Jossey-Bass.

Doest, M. (1992). Oppression and a warrior's way. In C. Wiley (Ed.) *Women in the martial arts* (pp. 54-46). Berkeley, CA: North Atlantic Books.

Dovidio, J.F., Kawakami, K., Johnson, C., Johnson, B., & Howard, A. (1997). On the nature of prejudice: Automatic and controlled processes. *Journal of Experimental Social Psychology: Special Issue on Unconscious Processes in Stereotyping and Prejudice,* 33, 510-540.

Dovidio, J. & Fazio, R (1992). New technologies for the direct and indirect assessment of attitudes. In J. M. Tanur (Ed.) *Questions about questions: Inquiries into the cognitive bases of surveys* (pp. 204-237). New York: Sage, 204-237.

Eccles, J. (1983). Expectancies, values, and academic behaviors. In J.T. Spence (Ed.). *Achievement and achievement motivations* (pp. 75-121). San Francisco, CA: W. H. Freeman & Co.

Eccles, J. (1985). Why doesn't Jane run? Sex differences in educational and occupational patterns. In F.D. Horowitz & M. O'Brien (Eds.). *The gifted and talented: Developmental perspectives* (pp. 251-295). Washington, DC: American Psychological Association.

Eccles, J. S. (1994). Understanding women's educational and occupational choices: Applying the Eccles et al. model of achievement-related choices. *Psychology of Women Quarterly, 18,* 585-609.

Eccles, J.S. (2006). A motivational perspective on school achievement: Taking responsibility for learning, teaching, and supporting. In R.J. Sternberg & R.F. Subontnik (Eds.), *Optimizing student success in school with the other three Rs* (pp. 199-224). Greenwich, CT: Information Age Publishing.

Eccles, J. S. & Barber, B.L. (1999). Student council, volunteering, basketball, or marching band: What kind of extracurricular involvement matters? *Journal of Adolescent Research, 14,* 10-43.

Eccles, J. S. & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual Review of Psychology, 53,* 109-132.

Eccles, J.,Wigfield, A., Harold, R.D., & Blumenfeld, P. (1993). Age and gender differences in children's self- and task perceptions during elementary school. *Child Development (64),* 830-847.

Eccles, J.S., Wong, C.A., & Peck, S.C. (2006). Ethnicity as a social context for the development of African American adolescents. *Journal of School Psychology, (44),* 407-426.

El-Sheikh, M., Buckhalt, J.A., & Reiter, S.L. (2000). Gender-related effects in emotional responding to resolved and unresolved interpersonal conflict. *Sex Roles, 43*, 719-734.

Endreson, J. & Olweus, D (2005). Participation in power sports and antisocial involvement in preadolescent and adolescent boys. *Journal of Child Psychology and Psychiatry, 46,* 468-478.

Erikson, E.H. (1968). *Identity: Youth and Crisis.* NewYork: Norton.

Erikson, E.H. (1980). *Identity and the Life Cycle.* New York: Norton.

Feather N.T. (1992). Values, valences, expectations, and actions. *J. Soc. Issues* 48:109–24.

Finn, J. D. (1989). Withdrawing from school. *Review of Educational Research,* 29, 141-162.

Fredricks, J.A., Simpkins, S.D., & Eccles, J.S. (2005). Family socialization, gender, and participation in sports and instrumental music. In C.R. Cooper, C.T. Garcia Coll, W.T. Bartko, H. Davis, & C. Chatman (Eds.), *Developmental pathways through middle childhood: Rethinking contexts and diversity as resources* (pp. 41-62). Mahwah, NJ: Lawrence Erlbaum Associates.

French, Sabine E., Kim, Tia E., & Pillado, Olivia (2006). Ethnic identity, social group membership, and youth violence. In N. G. Guerra (Ed); E. P. Smith (Ed). *Preventing youth violence in a multicultural society.* (pp. 47-73). Washington, DC, US: American Psychological Association.

Gilbert, D. T., & Hixon, J. G. (1991). The trouble of thinking: Activation and application of stereotypic beliefs. *Journal of Personality and Social Psychology, 60*, 509-517.

Glanz, J. (1994). *A school/curricular intervention martial arts program for at risk students* (Speech/conference report, Orlando, Florida, May 15, 1994). (ERIC Document Reproduction Service, No. ED 375 347).

Glick, P., & Fiske, S. T. (2001). An ambivalent alliance: Hostile and benevolent sexism as complementary justifications of gender inequality. *American Psychologist, 56* (2), 109-118.

Gosling, S. D., Vazire, S., Srivastava, S., & John, O. P. (2004). Should we trust Web-based studies? A comparative analysis of six preconceptions about Internet questionnaires. *American Psychologist, 59*, 93-104.

Gottfredson, G. D., & Gottfredson, D. C. (2001). What schools do to prevent problem behavior and promote safe environments. *Journal of Educational and Psychological Consultation, 12,* 313-344.

Good, A. J., Brewer, B., Petitpas, A. J., Van Raalte, J. L., & Mahar, M. T. (1993). Identity foreclosure, athletic identity, and college sport participation. *Academic Athletic Journal, Spring*, 1-12.

Guerra & Smith (2006). *Preventing youth violence in a multicultural society.* American Psychological Association.

Guillet, E., Sarrazin, P., Fontayne, P., & Brustad, R.J. (2006). Understanding female sport attrition in a stereotypical male sport within the framework of Eccles's expectancy-value model. *Psychology of Women Quarterly, 30(4)*, 358-368.

Haslam, S. A., O'Brien, A, Jetten, J., Vormedal, K., & Penna, S. (2005). Taking the strain: Social identity, social support and the experience of stress. *British Journal of Social Psychology, 44*, 355-370.

Hernandez, H. (2000). *Multicultural Education: A teacher's guide to linking context, process, and content (2nd ed.).* Englewood Cliffs, NJ: Prentice Hall.

Hidi, S., & Baird, W. (1986). Interestingness--A neglected variable in discourse processing. *Cognitive Science, 10*, 179-194.

Hidi, S., & Harackiewicz J. (2000). Motivating the academically unmotivated: A critical issue for the 21st century. *Review of Educational Research, 70*, 151–179.

Howard, K.A., Flora, A., & Griffin M. (1995). Violence-prevention programs in schools: State of the science and implications for future research. *Applied and Preventive Psychology, 8(3)*, 197-215.

Holt, J. L. & Devore, C. J. (2005). Culture, gender, organizational role, and styles of conflict resolution: A meta-analysis. *International Journal of Intercultural Relations, 29*, 165-196.

Hosmer, D.W. & Lemeshow, S. (2000). Applied Logistic Regression, 2nd ed. Wiley & Sons.

Hyde, S. J., & Kling, K. L. (2001). Women, motivation, and achievement. *Psychology of Women Quarterly, 25*, 364-378.

Irvine, J. J. (1990). *Black students and school failure: Policies, practices and prescriptions.* Westport, CT: Greenwood Press.

Irving, M. A., & Hudley, C. (2005). Cultural mistrust, academic outcome expectations and outcome value among African American males. *Urban Education, 40(5)*, 1-21.

Irving, M.A. (2008). Cultural mistrust, academic outcome expectations, and outcome values among African American adolescent males. In C. Hudley (Ed.) *Adolescents of Color in School: Achievement Motivation and the Culture of Schooling.* (pp. 146-164). New York: Oxford Press.

Irving, M.A. & Hudley, C. (2008). Oppositional identity and academic achievement among African American males. In J.U. Ogbu (Ed). *Minority status, collective identity and schooling* (pp. 374-394). Mahwah, N.J.: Lawrence Erlbaum and Associates.

Johnson, D.W. & Johnson, R.T. (1995). *Teaching students to be peacemakers.* Edina, MN: Interaction Book Company.

Johnson, D.W. & Johnson, R.T. (1996). Conflict Resolution and Peer Mediation Programs in Elementary and Secondary Schools: Review of the Research. *Review of Educational Research, 66*, 459-506.

Johnson, D. W., & Johnson, R.T. (2001). Peer mediation in an inner city elementary school. *Urban Education, 36(2)*, 165-178.

Jones, T. S., & Kmitta, D. (Eds.) (2000). *Does it work? The case for conflict resolution education in our nation's schools.* Washington, DC: Conflict Resolution Education Network.

Jones, T. S. (2007). Teach your children well: Promising progress in conflict resolution education and peace education. *Conflict Resolution Quarterly, 25*(1), 1-8.

Jones, T. S. (2004). Enhancing collaborative tendencies: Extending the single identity model for youth conflict education. *New Directions in Youth Development, 102*, 11-34.

Jones, T. S. (2004). Conflict Resolution Education: The field, the findings, and the future. *Conflict Resolution Quarterly, 22*(1/2*),* 233-267.

Jussim, L., Eccles, J., & Madon, S. J. (1996). Social perception, social stereotypes, and teacher expectations: Accuracy and the quest for the powerful self-fulfilling prophecy. *Advances in Experimental Social Psychology, 29*, 281-388.

Kray, L.J. Reb, J., Galinsky, A.D., and Thompson, L. (2004). Stereotype reactance at the bargaining table: the effect of stereotype activation and power on claiming and creating value. *Personality and Social Psychology Bulletin. 30*, 399-411.

Layton, C., Higaonna, M. & Arneil, S. (1993). Karate for self-defense: An analysis of Goju-ryu and Kyokushinkai kata. *Perceptual and Motor Skills. 77*, 829-830.

Lauzen, M. M., Dozier, D. M., & Horan, N. (2008). Constructing gender stereotypes through social roles in prime-time television. *Journal of Broadcasting & Electronic Media, 52*(2), 1-15.

Lederach, J.P. (1995). *Preparing for peace: Conflict transformation across cultures.* Syracuse, New York: Syracuse University Press.

Levy, B., (1996). Improving memory in old age through implicit self-stereotyping. *Journal of personality and social psychology, 71 (6),* 1092-1107.

Leung, D. (1992). Martial arts and women's self-defense: Two perspectives. In C. Wiley (Eds.), Women in the martial arts (pp. 54-46). Berkeley, CA: North Atlantic Books.

Macrae, C. N. and Johnston, L. (1998). Help, I need somebody: Automatic action and inaction, *Social Cognition* 16:400-417.

Mak, A., Heaven, P. C. L. and Rummery, A. (2003). The role of group identity and personality domains as indicators of self-reported delinquency. *Psychology Crime & Law, 9,* 9-18.

Markus, H. (1977). Self-schemata and processing information about the self. *Journal of Personality and Social Psychology, 35*, 63-78.

Markus, H., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98*, 224-253.

Mattson (1963). *The way of karate.* Tokyo, Japan: Tuttle.

Mayton, D.M., Nogle, K.S., Mack, J.L., Maxcy, R.T., Weeks, R.G., Hamilton, D.L., Morton, C.M. Mineshita, T., & Nawata, A. (1998, August). Teenage Nonviolence Test: A new measure of nonviolence. A paper presented at the annual meeting of the American Psychological Association, San Francisco, CA.

Mayton, D., Richel, T., Susnjic, S., & Majdanac, M. (2002.) Measuring the Nonviolent Tendencies of College Students. Paper presented at the Annual Meeting of the American Psychological Association, Chicago, IL, August 22-25.

McAdoo, H. (2002). Diverse children of color. In H.P. McAdoo (Ed.) *Black children* (pp. 13-26). Thousand Oaks: Sage.

Noe, R. A., & Schmitt, N. (1986). The influence of trainee attitudes on training effectiveness: Test of a model. *Personnel Psychology, 39,* 497-523.

Noe, R.A., Wilk, S.L., Mullen, E.J., Wanek, J.E. (1997). Employee development: issues in construct definition and investigation of antecedents. In Ford, J.K. (Eds), *Improving training effectives in work organizations.* Lawrence Erlbaum Associates Publishers, Mahwah, NJ, pp.153-89.

Ogbu, J., & Simons, H. (1998). Voluntary and involuntary minorities: A cultural-ecological theory of school performance with some implications for education. *Anthropology and Education Quarterly, 29*, 155-88.

Oswald, D. L., and Harvey R. D. (2000-2001). Hostile environments, stereotype threat, and math performance among undergraduate women. *Current Psychology: Developmental, Learning, Personality, Social, 19,* 338-356.

Oyserman, D., Yoder, N., & Fryberg, S. (2007). Identity-based motivation and health. *Journal of Personality and Social Psychology, 93*(6), 1011-1027.

Oyserman, D., Bybee, D, & Terry, K. (2003). Gendered racial identity and involvement with school. *Self and Identity, 2,* 1-18.

Peng, C. J., Lee, K. L., & Ingersoll, G. M. (2002). An introduction to logistic regression analysis and reporting. *The Journal of Educational Research, 96,* 3-14.

Petosa, R., Suminski, R, & Hortz, B.(2003). Predicting vigorous physical activity using social cognitive theory. *American Journal of Health Behavior. 27*(4), 301-310.

Pickett, C.L., & Brewer, M.B. (2001). Assimilation and differentiation needs as motivational determinants of perceived ingroup and outgroup homogeneity. *Journal of Experimental Social Psychology, 37,* 341-348.

Raine, L. (2010, Jan. 5). Internet, broadband, and cell phone statistics. *Pew Research Center.* Retrived June, 2010, from http://www.pewinternet.org/Static-Pages/Trend-Data/Whos-Online.aspx.

Roeser, R.W., Peck, S.C., & Nasir, N.S. (2006). Self and identity processes in school motivation, learning, and achievement. In P.A. Alexander & P.H. Winne (Eds.), *Handbook of educational psychology* (pp.391-424). Mahwah, NJ: Lawrence Erlbaum Associates.

Ryan, R., & Deci, E. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55,* 68-78.

Schiefele, U. (1999). Interest and learning from text. *Scientific Studies of Reading, 3,* 257-280.

Schlenker, B.R., Dlugolecki, D.W., & Doherty, K.J. (1994). The impact of self-presentations on self-appraisals and behaviors: The power of public commitment. *Personality and Social Psychology Bulletin, 20,* 20-33.

Simon, B. (2004). *Identity in modern society: A social psychological perspective.* Oxford: Blackwell.

Sidanius, J., Pratto, F., Van Laar, C., & Levin, S. (2004). A comprehensive analysis of group-based oppression: Social dominance theory, its agenda and method, *Political Psychology, 25*(6), 845-880.

Sheeran, P., & Orbell, S. (2000). Self-schemas and the theory of planned behaviour. *European Journal of Social Psychology, 30,* 533-550.

Shernoff, D. J., & Hoogstra, L. (2001). Continuing motivation beyond the high school classroom. *New Directions in Child and Adolescent Development, 93,* 73-87.

Shernoff, D.J., Schneider, B., & Csikszentmihalyi, M. (2001). Assessing multiple influences on student engagement in high school classrooms. Paper presented at the Annual Meeting of the American Educational Research Association, Seattle, Washington.

Shih, M., Richeson, J., Ambady, N., Fujita, K., & Gray, H. (2002). Stereotype performance boosts: The impact of self-relevance and the manner of stereotype activation. *Journal of Personality and Social Psychology, 83* (3), 638-647.

Smith, J., Twemlow, S. W., & Hoover, D. W. (1999). Bullies, victim and by-standers: A method of in-school intervention and possible parental contributions. *Child Psychiatry and Human Development, 30*(1), 29-37.

Spencer, M.B. (1999). Social and cultural influence in school adjustment: The application of and identity-focused cultural ecological perspective. *Educational Psychologist, 34,* 43-57.

Spencer, M.B., Dupree, D., Cunningham, M., Harpalani, V., Munoz-Miller, M. (2003). Vulnerability to violence: A contextually-sensitive developmental perspective on African American adolescents. *Journal of Social Issues, 59,* 33-49.

Spencer, S. J., Steele, C. M., & Quinn, D. M. (1999). Stereotype threat and women's math performance. *Journal of Experimental and Social Psychology, 35,* 4-28.

Steel, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology, 69,* 797-811.

Stets, J. E., & Burke, P. J. (2003). A sociological approach to self and identity. In M. R. Leary & J. P. Tangney (Eds.), *Handbook of self and identity* (pp. 128-152). New York: Guilford Press.

Stryker, S. (1968). Identity salience and role performance. *Journal of Marriage and the Family, 4,* 558-564.

Stryker, S. (1980). *Symbolic interactionism: A social structural version.* Menlo Park: Benjamin Cummings.

Stryker, S., & Serpe, (1994). Identity salience and psychological centrality: Equivalent, overlapping, or complementary concepts. *Social Psychology Quarterly, 51,* 16-35.

Stryker, S. and Burke, P. (2000).The past, present, and future of an identity theory. *Social Psychology Quarterly, 63*(4), 284-297.

Stoltz, A. D. (2005). *The relationship between peer mentoring program participation and successful transition to high school.* Unpublished dissertation, University of California at Davis, California.

Stone, J., Lynch, C. I., Sjomeling, M., & Darley, J. M. (1999). Stereotype threat effects on Black and White athletic performance. *Journal of Personality and Social Psychology, 77,* 1213-1227.

Sussman S., Dent C.W., & McCullar W.J. (2000). Group self-identification as a prospective predictor of drug use and violence in high-risk youth. *Psychology of Addictive Behaviors, 2,* 192-196.

Tabachnick & Fidell, (2001). *Using Multivariate Statistics , 5th ed.* Boston: Allyn and Bacon.

Tajfel, H. and Turner, J. C. (1986). The social identity theory of inter-group behavior. In S. Worchel and L. W. Austin (eds.), *Psychology of intergroup relations.* Chigago: Nelson-Hall.

Taylor, R., Casten, R., Flickinger, S., Roberts, D., & Fulmor, C. (1994). Explaining the school performance of African-American adolescents. *Journal of Research on Adolescence, 4,* 21-44.

Templeton, J. L., & Eccles, J. S. (2006). The relation between spiritual development and identity processes. In E. C. Roehlkepartain, P. E. King, L. Wagener, & P. L. Benson (Eds.) *The handbook of spiritual development in childhood and adolescence,* (pp. 252-265). Thousand Oaks, CA: Sage Publications, Inc.

Thomas, K. W., Thomas, G. F., & Schaubhut, N. (2008). Conflict Styles of Men and Women at Six Organization Levels. *International Journal of Conflict Management, 19,* 148-166.

Trulson, M. E. (1986). Martial arts training: A novel "cure" for juvenile delinquency. *Human Relations, 39*(12), 1131-1140.

Twemlow, S. W., Biggs, B. K, Nelson,,T. D., Vernberg, E. M., Fonagy, P., & Twemlow, S. W. (2008). Effects of participation in a martial arts based antibullying program on children's aggression in elementary schools. *Psychology in the Schools.*

Verplanken, B., & Holland, R., (2002). Motivated decision-making: Effects of activation and self-centrality of values on choices and behavior. *Journal of Personality and Social Psychology, 82* (3), pp. 434-447.

Ward, J.V. (1995). Cultivating a morality of care in African American adolescents: A culture-based model of violence prevention. *Harvard Educational Review, 65,* 175-188.

Waters, M. C. (1996). Ethnic and racial identities of second generation Black immigrants in New York City. In A. Portes (Ed.), *The new second generation* (pp. 171-196). New York: Russell Sage Foundation.

Webster, D.W. (1993). The unconvincing case for school-based conflict resolution programs for adolescents. *Health Affairs, 12*, 126-40.

Wegge, J., Van Dick, R., Fisher, G.K., Wecking, C. & Moltzen, K. (2006). Work motivation, organizational identification, and well-being in call centre work. *Work & Stress, 20*(1), 60-83.

Weinfurt K. (1995). Multivariate analysis of variance. In LG Grimm & PR Yarnold (Eds). *Reading and understanding multivariate statistics*. Washington: American Psychological Association. p 245–276.

Weiser, M., Kutz, I., Kutz, S.J. & Weiser, D. (1995). Psychotherapeutic aspects of the martial arts. *American Journal of Psychotherapy, 49*(1), 118-127.

Wentzel, K. R., & Wigfield, A. (2007). Motivational interventions that work. Special Issue. *Educational Psychologist, 42*(4), 60-83.

Whitehead, J.M. (1996). Sex stereotypes, gender identity and subject choice and A-level. Educational Research, 38(2), 147-160.

Wigfield, A., & Eccles, J. S. (2000). Expectancy-value theory of motivation. *Contemporary Educational Psychology, 25*, 68-81.

Wiley, C.A. (1995). *Martial arts teachers on teaching.* Berkley, CA: Frog, Ltd.

Wilson, S.J., Lipsey , M. W., & Derzon, J.H. (2003). The effects of school-based intervention programs on aggressive behavior: A meta-analysis. *Journal of Consulting & Clinical Psychology, 71*, 136-149.

Wright, J. C. & Zimmerman, M. A. (2006). Culturally Sensitive Interventions to Prevent Youth Violence. In N. G. Guerra & E. Phillip-Smith (Eds)., *Preventing youth violence in a multicultural society.* (pp. 221-247). Washington, DC, US: American Psychological Association.

Wright, K. B. (2005). Researching Internet-based populations: Advantages and disadvantages of online survey research, online questionnaire authoring software packages, and web survey services. *Journal of Computer-Mediated Communication, 10*(3), article 11. Retrieved July, 2010 from http://jcmc. indiana.edu/vol10/issue3/wright.html.

Yopyk, D. and Prentice, D. (2005). Am I an Athlete or a Student? Identity Salience and Stereotype Threat in Student Athletes. *Basic and Applied Social Psychology 27 (4)*, 329-336.

Zarrett, N. & Malanchuk, O. (2005). Who's computing?: Gender and race differences in young adults' decisions to pursue an IT career. In W. Damon (Series Ed.) & J. Jacobs and S. Simpkins (Vol. Eds.) New Directions for Child and Adolescent Development. *Math and science courses, grades and career goals: Longitudinal perspectives on the influence of gender and beliefs.* San Francisco: Jossey-Bass.

Zivin, G., Hassan, N. R., DePaula, G. F., Monti, D. A., Harlan, C., & Hossain, K. D. (2001). An effective approach to violence prevention: Traditional martial arts in middle school. *Adolescence, 36*(143), 443-459.