WOMEN’S SELF DEFENSE TRAINING:
AN EXAMINATION OF ASSERTIVENESS, SELF-EFFICACY,
HYPERFEMININITY, AND ATHLETIC IDENTITY

DISSERTATION
Presented in Partial Fulfillment of the Requirements for
the Degree of Doctor of Philosophy in the Graduate School
of The Ohio State University

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2004

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ABSTRACT

This study examined the effects of a 10-week women’s self-defense course on levels of assertiveness, hyperfemininity, and three types of self-efficacy: interpersonal, activities, and self-defense among college students who register for a self-defense course at a large Midwestern University. A post-test only control group design was utilized. Students in the treatment group (n = 68) completed a questionnaire at the end of their training period that consists of demographic information, including information about perceived athletic identity, the Rathus Assertiveness Schedule (RAS), the Hyperfemininity Scale (HFS), and an unpublished instrument that measures interpersonal, activities, and self-defense self-efficacy. The control group (n = 75) completed the same instruments prior to receiving self-defense training. It was hypothesized that students in the treatment group would evidence an increase in assertiveness and interpersonal, activities, and self-defense self-efficacy. Additionally, it was hypothesized that women with higher levels of hyperfemininity would have lower scores on the RAS and lower self-efficacy scores, and that women who report higher levels of athletic identity will report lower levels of hyperfemininity, higher levels of assertiveness, and higher levels of self-efficacy. A multivariate analysis of variance (MANOVA) examined the effects of the treatment on the dependent variables and two MANCOVAs examined hyperfemininity and athletic identity as covariates. Following
the multivariate analysis, univariate t-tests were run to examine the relative effects of each independent variable.

Results indicated that the women’s self-defense course significantly affected women’s levels of assertiveness, activities self-efficacy, self-defense self-efficacy, and interpersonal self-efficacy. Hyperfemininity and athletic identity were not significant covariates. The implications of these results are discussed.
Dedicated to Deborah Schipper

To validate your reality.
ACKNOWLEDGMENTS

I would like to first thank my husband and best friend Bob Heine. Thank you for your love, support and patience throughout this process. I appreciate everything you have done to try to make this process easier for me. You listened when I complained, took me out for wings when I was cranky, and hugged me when I cried and didn’t think I could finish. You’re the best!

My parents, Rich and Joan Hinkelman, have offered every ounce of their love and prayers to assist me in finishing my degree. You have been spiritually, physically and emotionally available to me and your kindness has not gone unnoticed. Thank you for instilling in me persistence and a hard work ethic; without these things I certainly would not be at this point of my life.

Richie, my loving brother, if it weren’t for you I would have thrown my computers out the window. You are always there for me in a pinch and I know I can count on you for anything. Thank you for you for always being available to me. I’m so glad that you are my brother and my friend.

Thanks to Deborah Schipper for assisting me in the conceptualization of this dissertation and all of your editorial and emotional support along the way. You are the strongest woman I know and I admire you very much. Your passion for the work that you do is amazing. You have made the world a safer place for hundreds of women. Cheers to our dissertation!
To the faculty members I have been lucky enough to work with throughout this process: Dr. Darcy Granello, Dr. Joe Wheaton, and Dr. James Moore III. Thank you for your guidance and support throughout this process. You have challenged me and inspired me to become a better writer, a better researcher, and a critical thinker and I thank you for that.
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CHAPTER 1

INTRODUCTION

1.1 Statement of the Problem

The incidence of sexual violence in the lives of women and children in the United States is a problem of epidemic proportions (Russell & Bolen, 2000). It is estimated that most women victimized by sexual assault are between the ages of 15 and 24, with the highest number of women in college, where frequent dating tends to take place (Koss, Gidycz, & Wisniewski, 1987). Fifty percent of college women are the victims of sexual abuse or rape and nearly 80% of college women will experience some form of sexual aggression on a date (Koss et al., 1987). At some point in their lives, nearly 25% of women will be the victim of rape or attempted rape (Russell & Bolen, 2000).

Researchers have sought to understand the characteristics that are associated with completed raped, and also the characteristics that are associated with resisting sexual assault. This research, however, is in its infancy. The thoughts regarding what women should do in attack situations have evolved over the past twenty-five years, and it is only very recently that data has been collected in order to substantiate any type of resistance training or techniques (Bart, 1981; Bart & O'Brien, 1984; Berkowitz, 2000; Ullman, 2002; Zoucha-Jensen & Coyne, 1993). The identification of clear risks, characteristics associated with resistance, and behaviors that reduce the incidence of completed rape attacks are beginning to be understood by individuals who work in the field of rape
prevention. However, the empirical support that is necessary to substantiate anecdotal
data does not yet exist regarding specific personality characteristics and effects of
socialization that lead to an increased vulnerability to rape supportive attitudes and
behavior. A thorough examination of the evolution of rape prevention training material,
and a parallel examination of the progression of women’s status in society is necessary to
identify the rationale for the way in which women have been historically taught to resist
sexual assault situations.

1.2 Background and Significance

An examination of literature on rape prevention begins primarily in the 1970’s.
Researchers and authors began to increase their understanding of the incidence and
prevalence of sexual violence, and immediately prevention literature emerged (Peterson,
1979; Pickering, 1979; Storaska, 1975; Women Against Rape, 1978; Wyness, 1975).
Much of this literature was written by men, specifically martial artists, police officers,
and psychologists, and consisted of prevention information that was not based on
research. Rather, it was based anecdotal evidence, conventional gender roles, and on
how the authors perceived rape to occur in society. Amir (1971) reported that nearly
75% of rapes are victim-precipitated because women harbor unconscious, and fairly
common, desires to be raped; therefore, they act in ways to elicit such sexual behavior.
Women also were thought to precipitate their own rapes because they wanted to have
sexual relations with a man, yet did not want to assume responsibility for it (Amir, 1971).

In his book on rape prevention for women, How to say no to a rapist and survive,
Frederic Storaska (1975) taught women that acting in violent or aggressive ways in attack
situations is “worthless” because the rapist is a human being, a person that can be related
to and communicated with under “any” circumstances. Rapists are men who are seeking sexual fulfillment, female companionship, and ego enhancement. In this view, women who react in an aggressive manner, such as by screaming, running, or struggling, are “asking for trouble” (Storaksa, 1975, p.36). He rendered self-defense “just about worthless in the assault situation” (p.40) and advised women to treat their rapist as a human being, ease his fears, and apologize to him if they initially act in an aggressive manner. Storaksa (1975) advocated for women to tell potential rapists that they are on their period, are lesbians, are pregnant, or have a sexually transmitted disease in an attempt to induce empathy or to sexually turn-off the attacker.

These early approaches to rape prevention were very influential and are responsible for strategies that control and restrict women’s behavior while emphasizing the biological predisposition and inherent nature of men to rape (Thornill & Palmer, 2000). Much of the focus of sexual assault prevention for women traditionally has focused on instilling higher levels of perceived vulnerability in women and has led to an increased sense of confidence, control and power in men (Community Action Strategies to Stop Rape, 1978; Storaska, 1975). Programs have focused on the ways in which rape is an inevitable fear and fundamental susceptibility for all women and imply that if a man truly wants to commit a sexual assault there is little a woman can do to prevent or stop the process (Peterson, 1979; Pickering, 1979; Wyness, 1975). This school of thought did not stop in the 1970’s, and even in the present, police, martial artists, crisis intervention workers, psychologists, and lay people offer strategies and tips for women’s safety based on the notion that sexual assault must be “avoided”, since once begun, rape is very nearly inevitable. Some such tips include warnings for women to “Avoid the wrong kind of
men”, or offer tactics for women who are being followed to go to the nearest well-lit home to call a friend, to record the license number of a car that is following them and call the police, or to yell “Fire” or blow a whistle and run to the nearest lighted place if in danger (Creer, 1997).

These types of strategies have been taught to women for many years, and are consistent with much of the prevention information that is offered to women. The traditional messages essentially teach women that they should engage in elaborate self-protective behaviors, but do not offer further information regarding escaping a physical confrontation or avoiding an attack. In essence, these types of messages work to reiterate to women their responsibility for restricting their behaviors or following a regimented routine of checks and balances in order to keep themselves safe. This is epitomized by the message to women: “Don’t walk alone at night”. However, there has been no research that correlates walking alone at night to increased likelihood of rape. The available research is to the contrary, indicating that the majority of sexual assaults occur either in the home of the victim or the perpetrator and take place between people that already know one another (Russell & Bolen, 2000). Thus, these traditional prevention strategies have no validation of effectiveness, yet are continually taught to women. The detriment that this causes is that women often develop misplaced fears in that they may be afraid to walk alone at night, yet are not fearful of being alone with a date.

One study that examined commonly held perceptions of options for defending oneself against an assault explored the ideas that women, men, and individuals identified as sexual assault experts, held regarding effective strategies for rape-prevention (Furby, Fischhogg, & Morgan, 1992). A full one-third of the identified experts, including martial
artists, police officers, and psychologists, endorsed the notion of making oneself less attractive to the potential rapist by vomiting or urinating on oneself in hopes of reducing the assailant’s propensity to rape. Forty-two percent of the experts reported that women would be likely to talk their way out of the situation. However, the strategies that these individuals endorse are inconsistent with researched prevention strategies, and in fact, many of the advocated strategies correlate with rape completion and increased injury in attack situations (Zoucha-Jensen & Coyne, 1993). Zoucha-Jensen and Coyne (1993) found that women who pleaded with their attacker or did not engage in assertive verbal or physical resistance endured a higher percentage of completed rapes and sustained more injuries than the women who were attacked and fought back physically. In one of the first examinations of effective rape resistance, Bart & O’Brien (1984) found that women who use two assertive responses to a physical attack have an 86% chance of escaping the situation without being raped. In the 2001 United States Department of Justice report, “The Sexual Victimization of College Women”, it was discovered that unequivocally, the women who responded to sexual aggression with assertive and aggressive responses had an increased likelihood of avoiding rape. In fact, physical resistance was the only predictor of rape avoidance among this sample (Fisher, Cullen, & Turner, 2001).

Women have been told to be responsible for their own actions and that their behavior is often the catalyst for the actions of those around them. The notion that men are oversexed and biologically predisposed to commit sexual assaults has been present in much of the literature on the subject (Thornill & Palmer, 2000). The responsibility is then placed upon women to modify and restrict their own behaviors so as not to “entice”
men by wearing revealing clothing, or by walking around alone at night, despite the fact that these behaviors have not been empirically related to sexual assault.

Many traditional analyses of rape and sexual assault view the crime as nothing more than any typical assault that takes place between two people and as an act that is clearly preventable based on precautionary measures taken by the woman. Often rape is viewed as “rough sex” and clichéd as the “woman who changed her mind afterward.” Feminist perspectives on rape have introduced discussion that rape exists within a larger political and societal structure and serves to reinforce male dominance and female subservience in a most blatant way (Burkhart, Bourg, & Berkowitz, 1994; Flores & Hartlaub, 1998; Kenway & Fitzclarence, 1997).

The women’s movement of the 1970’s confronted the issue of rape in the United States from a political and social perspective that initially identified the abuse of power as the key component in rape behavior in individuals (Women Against Rape, 1978). Rape, in this perspective, is viewed as the result of a personal and institutional power differential between men and women in a society where women’s power is tenuous and tightly controlled. Society and culture condone violence against women through media, advertising, music, sexual harassment, and strict gender role expectations (Women Against Rape, 1978).

This early examination was initiated by Women Against Rape, a grassroots feminist organization that introduced an approach to rape prevention that focused on women’s status in society and the way in which societal conditions contribute to the vulnerability of women. Women Against Rape introduced a reduction of vulnerability theory to rape prevention in 1978 that focused on eliminating the societal conditions that
make women easy targets for rape (Community Action Strategies to Stop Rape, 1978), rather than focusing on the restriction of women’s behavior. These areas of vulnerability include: a lack of information and understanding about rape, women’s subordinate relationship to men, the characteristics that women develop that contribute to their vulnerability, and women’s isolation from one another in the community (Community Action Strategies to Stop Rape, 1978). This approach to rape prevention focuses on the societal and cultural conditions that support a rape culture. It challenges society’s traditional expectations of women to be passive recipients of maltreatment and supports attempts to engage in dialogue, activism, and training that confront the power imbalance that supports sexually violent behavior (Women Against Rape, 1978).

From this initial introduction, the feminist movement continued to encourage women to become active participants in changing the social norms, through asserting control over their physical and sexual selves; thus, rape prevention programming and self-defense for women were introduced. However, even 25 years later, the notion of a woman successfully fighting off a male attacker is difficult for many women to envision, or believe themselves capable of, therefore many women fail to consider the possibility of their power or control in such situations (Easton & Summers, 1997). Socialized to believe in submission, consideration, femininity, and passivity, many women fail to imagine themselves engaging in aggressive or physical confrontations, especially with men (Easton & Summers, 1997; McCaughey, 1997).

Although traditional messages of rape prevention are exceedingly pervasive in society, empirical testing of various methods of rape prevention indicates that all forms of resistance are associated with substantially lower odds of rape completion, with non-
resistance seemingly increasing the individuals’ chance of being the victim of a completed rape (Fisher et al., 2001; Kleck & Sayles, 1990; Quinsey & Upfold, 1985). Effective rape prevention for women can focus on the behaviors and skills that are associated with successful resistance, and address a woman’s belief about her ability to be successful in warding off the attack (McCaughey, 1998; Ozer & Bandura, 1990; Smith, 1999; Weitlauf, Cervone, & Smith, 2000; Weitlauf, Cervone, Smith, & Wright, 2001).

Self-efficacy theory addresses an individual’s belief about his or her ability to have the power to produce desired results in specific situations (Bandura, 1997). This is a key construct in rape prevention for women, as it hones in on the socialized belief that women cannot be successful in a physical attack situation. Self-efficacy theory examines the impact of efficacy perceptions on behavior and also the way that personal experience can affect self-efficacy beliefs (Weitlauf et al., 2000). Individuals who believe strongly in their ability to be successful engaging in a difficult task are more likely to attempt the task and will experience less anxiety than individuals who have low efficacy beliefs (Bandura, 1997). Thus, in order for women to be successful in resisting an attack, they must know how to engage in the effective physical skills and techniques, and must also believe themselves capable of success in the confrontation. Enactive mastery experiences, such as practicing the skill in an in-vivo situation, provide individuals the opportunity to succeed at engaging in a specific behavior, thereby producing stronger efficacy beliefs (Bandura, 1997).

In much the same way that the physical responses employed in an attack situation impact the result of the confrontation, personal factors and individual personality
characteristics contribute to levels of vulnerability to sexual violence. Understanding the personal, behavioral, and sociocultural factors that are associated with the presence and acceptance of sexual violence is imperative in order to develop appropriate and relevant prevention education. Of particular interest is the identification of the personal characteristics associated with decreased acceptance of sexually violent behavior coupled with an understanding of the behavioral and physical skills associated with rape resistance.

1.3 Purpose of the Study

This study will critically examine the characteristics that have been associated with rape resistant behavior, such as the use of assertive and/or physical responses, and the adoption of a non-traditional gender ideology. Specifically, this research will seek to understand if these characteristics can be taught or strengthened in a self-defense course. It will additionally examine whether extreme feminine gender role identification or athletic role identification has an impact on women’s levels of assertiveness and self-efficacy as it relates to rape resistant behavior.

Extreme adherence to traditional gender roles is correlated with a greater acceptance of rape-supporting attitudes (Flores & Hartlaub, 1998; Murnen & Byrne, 1991; Rosenthal, Heesacker, & Neimeyer, 1995). Possessing rape-supportive attitudes increases the chances of raping or being raped, especially in dating situations (Rosenthal, Heesacker, & Neimeyer, 1995), as these individuals tend to embrace traditional ideology regarding initiation of sexual activity and power, control, and force in sexual situations. Additionally, the personality constellation that occupies assertion, physicality, non-traditional gender role, and physical self-efficacy, is quite similar to that of an athlete
(Blinde, Taub, & Han, 1994; Salminen, 1990; Wrisberg, Draper, & Everett, 1988). These traits are associated in varying degrees to rape resistance. Therefore, an examination of the influence of sport socialization and athletic identity on these characteristics is relevant in the understanding of the impact of differential socialization versus educational and training opportunities on the ability to acquire effective resistance behavior. This research study will ascertain the impact of athletic experience on participants’ levels of assertiveness, self-efficacy, and hyperfemininity, and if a self-defense course differentially impacts athletes and non-athletes on these variables.

1.4 Research Questions & Hypotheses

Research Question 1. Does participation in a women’s self-defense course affect levels of assertiveness, self-defense self-efficacy, activities self-efficacy, interpersonal self-efficacy, and hyperfemininity?

H-0a: There will be no difference in participant’s levels of assertiveness, self-defense self-efficacy, activities self-efficacy, interpersonal self-efficacy, and hyperfemininity.

H-1a: Women who complete a self-defense course will have increased levels of assertiveness, self-defense self-efficacy, activities self-efficacy, interpersonal self-efficacy, and lower levels of hyperfemininity at the end of training.

Research Question 2. Does hyperfemininity affect measures of assertiveness, self-defense self-efficacy, activities self-efficacy, and interpersonal self-efficacy among women who complete a women’s self-defense course?
H-0f: Hyperfemininty has no effect on measures of assertiveness, self-defense self-efficacy, activities self-efficacy, and interpersonal self-efficacy, and athletic identity among women who complete a women’s self-defense course.

H-1f: Hyperfemininty has an effect on measures of assertiveness, self-defense self-efficacy, activities self-efficacy, and interpersonal self-efficacy, and athletic identity among women who complete a women’s self-defense course.

Research Question 3. Do women who have higher levels of athletic identity differ from women with little or no athletic identity on measures of assertiveness, self-defense self-efficacy, activities self-efficacy, and interpersonal self-efficacy among women who complete a women’s self-defense course?

H-0g: Athletic identification has no impact on measures of assertiveness, self-defense self-efficacy, activities self-efficacy, and interpersonal self-efficacy, and athletic identity among women who complete a women’s self-defense course.

H-1g: Athletic identification has an impact on measures of assertiveness, self-defense self-efficacy, activities self-efficacy, and interpersonal self-efficacy, and athletic identity among women who complete a women’s self-defense course.

1.5 Definition of Terms

The following terms are offered for clarification:

1. **Sexual Abuse/Assault**: A range of behaviors that includes vaginal, anal, or oral penetration, fondling, exhibitionism, prostitution, and photographing a child for pornography (Searles & Berger, 1987). Offenses are often labeled as “sexual battery, criminal sexual penetration, criminal sexual conduct, gross sexual imposition, and sexual abuse,” (Searles & Berger, 1987, p. 26)
2. **Rape**: “Nonconsensual sexual penetration of an adolescent or adult obtained by physical force, by threat of bodily harm, or when the victim is incapable of giving consent by virtue of mental illness, mental retardation, or intoxication,” (Searles & Berger, 1987, p. 26).

3. **Traditional Gender Roles**: The attitudes and behaviors that are consistent with the roles that men and women have historically filled in society and an adherence to the societal expectation of gendered activities. “Traditional ideologies…tend to be non-egalitarian, view men as more important than women, and accept as given that men exert control and dominance over women,” (Hamburger, Hogben, McGowan, & Dawson, 1996, p. 158). Examples may include: Man as breadwinner and woman as homemaker; man as physical and competitive and woman as docile and compliant.

4. **Assertiveness**: Showing respect for oneself and others by stating one’s opinion and letting others know how you feel and what you want (NiCarthy, Gottlieb, & Coffman, 1993). Assertive people demonstrate the following traits: “Uses give and take in conversation; Listens and talks; Speaks with moderate voice volume and tone; Looks the other person in the eye; Does not intrude into another’s physical space, nor shrink away” (NiCarthy et al., 1993, p. 157).

5. **Hyperfemininity**: Exaggerated attitudinal adherence to stereotypical feminine gender ideology (Murnen & Byrne, 1991).

6. **Self-Efficacy**: The beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (Bandura, 1997, p. 3).
7. **Athletic Identification**: The degree to which a person identifies with the athlete role and finds personal significance in their involvement with sport and exercise (Brewer, Van Raalte, & Linder, 1993).

1.6 Limitations of the Study

There are several limitations to this study. The first is that the participants in the research constitute a self-selected collective. The women who will complete the instruments have registered for a University women’s self-defense class for credit. Therefore, it is likely that differences exist between women who choose to take a self-defense course, and those who do not. The ability to generalize the results of this research will be limited to women who register for a self-defense course.

There are three professional female self-defense instructors that teach the courses. Although they have identical syllabi, handouts, and evaluation procedures, instruction is likely to vary somewhat and may affect the results. Additionally, participants will be completing self-report instruments. The accuracy, honesty, and realistic self-appraisal of the women in the course may limit this study. Additionally, the findings in this research will not indicate a decreased incidence of sexual victimization in the participants, rather the outcome will determine whether the women are capable of learning the information and skills presented in the course.

1.7 Summary

In sum, the issue of violence against women is a significant problem in our society and has been addressed from various perspectives over the last thirty years. Identification of the societal conditions that promote conflicting approaches to rape prevention is relevant to understanding the beliefs that women hold regarding effective
resistance behavior. Attempts to increase understanding of the factors associated with the acceptance or resistance of sexual violence are important for teaching prevention education.
CHAPTER 2

REVIEW OF THE LITERATURE

2.1 Introduction

College is a time where many students move away from home and experience levels of freedom that they have never had before. Students often experiment with alcohol, drugs, and sex, as these behaviors are consistent with the “partying” aspect of the college experience. Whereas many individuals will engage in such behaviors and have little long-term negative consequences, a significant percentage of college students find themselves tremendously affected by the atmosphere that college fosters and become involved in situations of dating violence, alcohol and drug abuse, and sexual assault. Researchers have attempted to identify the degree to which students are affected by these situations; however, the ability to successfully measure and understand the prevalence of sexual assault is limited (Bohmer & Parrot, 1993). Researchers estimate that between 18% and 33% of women are victims of rape or attempted rape by the age of 18 (Koss et al., 1987; Russell, 1983; Tjaden & Thoennes, 1998). Koss, Gidycz, and Wisniewski’s (1987) research study also concluded that 1 in 12 college men have engaged in behaviors that meet the legal definition of sexual assault, yet the majority did not believe their actions to be illegal. Additionally, 33% of the college men surveyed in this study revealed that they would engage in sexual assault if they knew they would not be punished for their actions (Koss et al., 1987).
2.1.1 Effects of Sexual Assault Victimization

The physical and psychological effects of sexual assault are often devastating to the victim. Those who have experienced sexual assault report tremendous difficulties following an assault including: post-traumatic stress disorder, nightmares, difficulty sleeping, suicidal thoughts, alcohol and drug use and abuse, difficulty with sex and intimacy, an increased startle response, and on-going fear and triggering of the incident (Bass & Davis, 1988). Ongoing symptoms can include fear and avoidance of particular situations, affective constriction, depleted self-concept and feelings self-efficacy, and sexual dysfunction (Koss, 1990). These symptoms are in addition to any physical injuries sustained during the assault such as lacerations to the rectal or vaginal lining (Kleck & Sayles, 1990).

2.1.2 Government Educational Mandates

Koss, Gidycz, and Wisniewski (1987) found that the prevalence of sexual assault victimization of women in college is approximately three times greater than the level of victimization of the general public. In recognizing the prevalence of sexual assault on college campuses, college administrations, violence prevention groups, and the federal government have implemented sexual assault educational programming on many college campuses. The United States Department of Justice has called on institutions of higher learning to provide educational programming to teach students about sexual assault. The government’s educational efforts began with the passage of the Crime Awareness and Campus Security Act of 1990. This bill was an amendment of the Higher Education Act of 1965 and mandates federally funded colleges and universities to report violent crime statistics, including sexual assault, to the public and provide educational and safety
programming to students. The Campus Security Act was revised in 1992 following the brutal rape and murder of a college woman, Jeanne Clery, at Lehigh University. This revision, known as the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act of 1992 requires federally funded institutions of higher education to regularly provide current crime statistics that must be published and distributed to potential students, current students, parents, and employees of the institution. The Act requires that criminal offenses that are reported to campus officials are to be included in the report including: murder, sex offenses, robbery, aggravated assault, burglary, motor vehicle theft, manslaughter, arson, and others. The Campus Security Act was amended once again in 1998 in order to address sexual assault more specifically with the addition of the Campus Sexual Assault Victims’ Bill of Rights. This required institutions to develop policies regarding the disclosure of, and procedures for handling reports of sexual assault, and mandates educational programs that promote “awareness of rape, acquaintance rape, and other sex offenses” (SOC, 1998, p.4).

The Violence Against Women Act of 1994 introduced Grants to Combat Violent Crimes Against Women On Campus in 1999. These competitive grants were made available to colleges and universities and provided funds of up to $500,000 for universities to design and implement educational programs, crisis intervention services, and safety education to students in a comprehensive campus wide effort. Receipt of these funds was accompanied by specific guidelines delineating the parameters of the educational efforts and stated what types of educational programming and campus collaboration was acceptable.
With the introduction of the aforementioned legislations, colleges and universities increased their sexual assault prevention programming efforts. Such programs generally focus on assessing attitudes such as: rape myth acceptance, sex role stereotyping, adversarial sexual beliefs, acceptance of interpersonal violence, sexual conservatism and attitudes toward women (Brecklin & Forde, 2001). As colleges and universities attempted to implement educational programs for their students, several basic modes of information transmission ensued including programming provided in new-student orientation, campus police demonstrations, dramatic skits, and male and female specific informational programming (Flores & Hartlaub, 1998). However, as noted by Yeater and O’Donohue (1999), few sexual assault prevention programs have undergone empirical evaluation.

2.1.3 Educational Efforts

Sexual assault prevention education has been presented in various formats, including both single and mixed-gender venues. A primary focus of sexual assault prevention programming has been on changing attitudes about sexual assault and rape myths (Brecklin & Forde, 2001; Gidycz, Layman et al., 2001; Lonsway & Fitzgerald, 1994). Rape myths are defined as, “attitudes and beliefs that are generally false but are widely and persistently held, and that serve to deny and justify male sexual aggression against women,” (Lonsway & Fitzgerald, 1994, p. 134). Through the use of the Rape Myth Acceptance Scale (Burt, 1980), several researchers have demonstrated a decrease in reports of acceptance of rape myths in both men and women after various types of sexual assault prevention programming (Fonow, Richardson, & Wemmerus, 1992; Heppner, Humphrey, Hillenbrand-Gunn, & DeBord, 1995; Heppner, Neville, Smith, Kivlinghan, &
Gershuny, 1999; Rosenthal et al., 1995), however, the changes were not maintained in follow-up measures. Rape myth acceptance in men has been associated with self-described likelihood of raping and likelihood of using sexual force (Briere & Malamuth, 1983; Malamuth & Check, 1985).

Brecklin and Forde (2001) assert that the underlying assumptions of sexual assault prevention programs that measure rape supportive attitudes are: that education can impact the rape-supportive attitudes; and, that attitude change will facilitate decreased levels of sexual aggression and decreased sexual victimization. However, this behavioral link has not been empirically supported and researchers suggest that rape prevention program evaluations include more behavioral outcomes (Lonsway & Fitzgerald, 1994; Schewe & Bennett, 2002; Yeater & O'Donohue, 1999).

The behavioral outcomes that are desired from participation in a rape prevention program differ for men and women, and it is because of this that researchers recommend single-gender audiences (Berkowitz, 1994, 2000; Foubert & Marriott, 1997). The desired outcome of men’s programming is to prevent the perpetration of sexual violence, while women’s programming generally focuses on reducing risk and vulnerability (Rozee & Koss, 2001).

Women’s sexual assault prevention efforts have fallen into two categories: prevention that addresses environmental modification through planned social change and prevention that strengthens individual capacity and reduces vulnerability (Koss, 1990). However, most sexual assault prevention programs for women devote little, if any, time to teaching actual resistance strategies (Ullman, 1997). As researchers endorse the
measurement of behavioral outcomes for sexual assault prevention programming, an examination of the empirical evidence that supports specific rape prevention education is warranted.

2.2 Rape Prevention Programming for Women

Measuring the efficacy of rape prevention programming for women is difficult as programs rarely assess the effectiveness of reducing the actual prevalence of sexual assault (Lonsway & Fitzgerald, 1994). A small number of studies have attempted to address the impact of prevention programming on rates of sexual victimization in participants and have had mixed results.

Hanson and Gidycz’s (1993) research examined the effectiveness of a sexual assault prevention program with college students. Using videotaped vignettes of potential date rape situations, and researcher led discussions regarding strategies for dealing with risky situations, Hanson and Gidycz (1993) evidenced a decrease in the rates of sexual assault over a 9-week period among the women who participated in the research who did not have a previous history of sexual victimization. This program did not reduce sexual victimization among female participants with a history of sexual victimization (Hanson & Gidycz, 1993). Follow-up research (Breitenbecher & Gidycz, 1998; Breitenbecher & Scarce, 1999) that examined the outcomes of additional sexual assault prevention programs for women showed no significant changes in the prevalence of sexual assault victimization was noted after the interventions. These prevention programs included information on previous sexual assault victimization, prevalence of sexual assault, existence of rape myths, sex-role socialization, and an emphasis of rape as an act of violence. Breitenbecher and Scarce (1993) conclude that there is little evidence
that this type of sexual assault prevention program is effective in reducing the incidence of sexual assault.

Most recently, Gidycz and colleagues (2001), sought to evaluate the effectiveness of a revised rape prevention program for female college students. The goals of this program were to, “evaluate the effectiveness of this revised program with respect to participants’ feelings of rape empathy, self-blame, dating behaviors, sexual communication, sexual victimization, and revictimization” (Gidycz, Rich et al., 2001, p. 1074.) Using a three-hour multimedia interactive presentation discussion, and handouts participants were educated on various topics related to sexual assault. At the 2-month follow up there was no difference in the sexual assault victimization rates between the women who completed the educational program and those who did not. Gidycz et al., (2001) call for further attention to the processes through which sexual assault risk reduction programs impact rates of sexual victimization.

2.2.1 Rape Resistant Behavior

One method of examining what programmatic approaches might be effective in reducing the rate of sexual victimization among college women is to identify what strategies have been found to be effective in resisting rape. In one of the first examinations of rape resistance, Pauline Bart (1981) discovered through in-depth interviews with women who had been raped and had avoided rape, that women were more likely to be raped when they were attacked by men that they knew, when they used talking or pleading with the attacker as their only strategy, when the assault happened in their own home, when their primary concern was not to be killed or mutilated, and when they experienced a threat of force. Conversely, Bart (1981) reports that women are more
likely to avoid rape when they were attacked by strangers, when they used more than one resistance strategy such as screaming and physically struggling, when the assault took place outdoors, and when their primary concern was not being raped. The presence of a weapon and the relationship between the victim and offender also impact the completion rate of sexual assault attacks (Bart & O'Brien, 1984; Quinsey & Upfold, 1985).

Ullman and Knight utilized a sample of raped women and rape avoiders (n=274) that were selected from the files of 732 rape cases of 174 convicted rapists in a treatment center. Through analyzing the situational characteristics, level of offender aggression, resistance strategies used by the women, and level of injury sustained by the victim, it was determined that women who pleaded, cried, or tried to reason with the perpetrator experienced more severe sexual abuse than women who did not plead or cry. Additionally, forceful fighting, screaming, and fleeing were related to less severe sexual abuse and were more effective in avoiding rape (Ullman & Knight, 1993). These findings corroborated Quinsey and Upfold’s (1985) examination of rapists in treatment facilities. They found that rapists completed their attacks when the attack took place indoors, and when there was a weapon involved. Both verbal and physical resistance of any kind was associated with incomplete rape attacks, although physical resistance was only effective when used outdoors (Quinsey & Upfold, 1985).

Of 150 women who filed police reports after a rape or attempted rape attack, 64.7% were raped and 35.3% avoided rape (Zoucha-Jensen & Coyne, 1993). An analysis of the resistance strategies used by the women revealed that forceful verbal resistance, physical resistance, and fleeing were associated with rape resistance. No resistance and non-forceful verbal resistance were associated with being raped.
Two studies that analyzed data from national surveys found similar results. Kleck and Sayles (1990) utilized the National Crime Surveys from 1979 to 1985 to examine the consequence of victim resistance to rape and rape resistance. The women in the study (n=378) were less likely to be raped if they resisted than if they did not resist. The most effective form of resistance among this sample was the use of a weapon such as a knife or a gun (Kleck & Sayles, 1990). A second study examined the data from the Bureau of Justice Statistics National Crime Victimization Survey (NCVS), a national probability survey of reported and unreported cases of crime victimization in the United States, Clay-Warner (2002) assessed 434 cases of attempted rape (n=162) and completed rape (n=272) between the years 1992 and 1998. She found that women’s use of protective actions is one of the most important factors in rape avoidance as women who used protective strategies were more likely to avoid rape than those who did not. Physical protective action, including physical fighting and attempts to flee, significantly reduced risk of completed rape. When controlling for the use of additional resistance strategies (e.g. verbal resistance, begging, pleading, etc.) the link between physical protective actions remained, indicating the physical strategies account for the reduced risk. Her results additionally indicated that of the women who reported using resistance strategies, the use of non-forceful verbal action as a resistance strategy was associated with rape completion (Clay-Warner, 2002).

2.2.2 Women’s Self-Defense Training

Rozee and Koss (2001) report that the majority of rape prevention programs devote little or no time to victim resistance strategies despite evidence of their effectiveness in resisting sexual assault. The clearest benefit of self-defense training for
women is that it teaches them to use the most effective means to reduce their risk of rape (Heyden, Anger, Jackson, & Ellner, 1999). Schewe (2002) reports, “there is strong evidence concerning the types of strategies that are effective in deterring an attacker,” (p. 114). Women’s self-defense training attempts to teach women the skills and strategies that are consistent with rape resistant behavior.

To date, there are no longitudinal studies on the efficacy of self-defense training in successfully resisting rape (Ullman, 2002); however, there are a number of studies that have examined short-term effects, psychological benefits, and outcomes of self-defense training (Cummings, 1992). Ozer and Bandura (1990) assessed the impact of a self-defense course in which participants (n=43) mastered the physical skills to defend themselves successfully against unarmed sexual attackers. Women received 5 sessions, each 4-½ hours long, over a period of 5 weeks. The self-defense training used was a mastery-modeling program in which the instructor modeled various skills to disable an attacker and subjects practiced the techniques until they mastered them. These initial skills were then transferred into specific potential threat situations and the subjects had to deliver the techniques at full force and disable the attacker. The attacker was an instructor wearing a fully padded suit. Subjects in this study were additionally taught attitudinal and verbal skills for interrupting coercive or harassing behavior. The researchers determined that training women in physical self-defense skills significantly enhanced their levels of self-efficacy regarding their interpersonal ability to handle harassment or coercion, their ability to engage in a variety of activities, and their ability
to effectively physically defend themselves. The training reduced participants’ perceptions of vulnerability to sexual victimization and increased their ability to distinguish safe from risky situations.

Weitlauf, Smith, and Cervone (2000) examined the broader psychological impact of self-defense training on women’s efficacy beliefs, assertiveness, and aggression. Based on Ozer & Bandura’s (1990) research on perceptions of self-efficacy, these researchers sought to understand how self-defense training affected women’s beliefs about themselves as efficacious in their abilities to defend themselves, and also to explore the possibility of the development of generalization effects as a result of improving perceptions of self-efficacy. Weitlauf and colleagues (2000) utilized a 16-hour physical self-defense program that addressed resistance to assault on three levels: emotional and psychological resistance, verbal resistance, and physical resistance. Participants (n=80) in this research experienced a significant change in self-efficacy both on task-specific measures (e.g. self-defense self-efficacy) and on more global measures of general self-efficacy. They believed themselves to be more competent and reported significant increases in assertiveness.

An extension of this research was conducted in order to further examine the generalization effects of the self-defense training. After completing a 16-hour self-defense course, participants (n=125) experienced increased self-defense self-efficacy, increased perceptions of sports competencies, and improved coping skills. However, participants did not evidence significant changes in levels of assertiveness or in global perceptions of self-efficacy (Weitlauf et al., 2001). The authors assert that women’s self-
defense training not only enhances women’s beliefs about their ability to physically defend themselves in assault situations, but also positively influences other life domains.

The research supports positive outcomes for women who participate in self-defense training (Ozer & Bandura, 1990; Weitlauf et al., 2000; Weitlauf et al., 2001). Resistance training emphasizes women’s agency and ability to resist victimization (Rozee & Koss, 2001). It is effective in preparing women to know how to respond appropriately in crisis situations (Fein, 1993), and teaches girls and women to use the most effective means available to reduce their risk of being raped (Heyden et al., 1999). Self-defense training has been demonstrated to improve levels of confidence, assertiveness, and perceived self-efficacy (Cummings, 1992; Fein, 1993; Gidycz, Layman et al., 2001; Ozer & Bandura, 1990; Quinsey & Upfold, 1985). Additionally forceful verbal and physical responses to assault situations clearly enhance rape avoidance (Ullman, 1997). The goals of women self-defense training are to:

“(1) to identify the realities and myths regarding sexual assault and violence against women; (2) to provide information that will support the basic attitudes and attributes of self-defense, including assertiveness, awareness, self-reliance, confidence, and physical fitness; (3) to establish ways for students to learn how to identify threatening and high-risk situations; (4) to provide skill-building activities that incorporate mental, vocal, and physical self-defense techniques; (5) to provide strategies for specific situations that may occur on campus; and (6) to provide information about resources available to women who have been or may be abused or assaulted” (Cummings, 1992, p. 185).

Rentschler (1999) purports that additional goals of women’s self-defense training are to change women’s relationships with their bodies to make their inherent fears of violence manageable and to enact women’s rights and abilities to defend themselves.

Women’s self-defense training encourages the participants to uncover their own personal
power and agency (Fein, 1993) and view themselves as valuable and worth fighting for (McCaughey, 1997).

2.3 Components of Women’s Self-Defense Training

The content of women’s self-defense classes varies; however, recent literature has detailed several components of instruction have been included in successful women’s self-defense courses. Rozee and Koss (2001) argue that a challenge to teaching women self-defense is that physical resistance behaviors may be at odds with the traditional gender role expectations for women. Some authors purport that sexual assault results from normal societal socialization (Berkowitz, Burkhart, & Bourg, 1994) where men and women are expected to follow social and sexual scripts for behavior. Such social scripts include men as the initiator of sexual intercourse, and women as the resistor. However, researchers assert that when women resist sexual advances, men often believe that the woman really wants to have sex but is resisting so as not to appear promiscuous (Check & Malamuth, 1983). This perception by men of token resistance to sexual interest from women has been associated with men’s adherence to traditional gender roles and attitudes toward women (Fisher & Walters, 2003). Specifically Fisher and Walters (2003) found that traditional attitudes toward women and hypermasculinity predicted men’s perceptions of sexual interest regardless of the behavior of the woman.

Teaching women to physically fight with an attacker is inconsistent with the traditional socialization of women (Bart & O’Brien, 1984; McCaughey, 1997; Rentschler, 1999; Rozee & Koss, 2001). As women are socialized to be passive, quiet, and polite, they rarely have the opportunity to engage in assertive or aggressive behaviors, as these behaviors are historically unfeminine (Cummings, 1992; McCaughey, 1997). The
dominant culture has tremendous difficulty with girls’ and women’s resistance to
traditional stereotypes and oppression (Brown, 1999). Martha McCaughey states, “Self-
defense helps women undo the enslaving feminine identity of deference, kindness, and
weakness that men so often take advantage of, by getting them to imagine and practice
aggressively refusing men’s advances” (p. 15).

Many advocates of women’s self-defense training endorse the notion of female-
only classes (Berkowitz, 2000; Cummings, 1992; McCaughey, 1997; Ozer & Bandura,
1990; Rozee & Koss, 2001). Classes designed for and taught by women allow women to
experience physical and emotional challenges in a supportive environment and to behave
in ways that society has deemed “unfeminine”, such as yelling and hitting (Cummings,
1992). In their research, Fraser and Russell (2000) found that female self-defense
participants (n=59) found that the all-female group format was crucial to their success in
the training. They reported cohesiveness, altruism, emotional containment, witnessing,
modeling, boundaries, and shifts in their relationships with other women as most
influential in their experience (Fraser & Russell, 2000). Cummings (1992) reports that
the solidarity of the group experience and the recognition of the threat of, and incidence
of, ongoing violence that exists in women’s lives would be disrupted if men were present
in the group.

As reported earlier in this literature review, women who can raise their voices
assertively at the start of a potential attack situation are more likely to avoid an assault
(Zoucha-Jensen & Coyne, 1993). However, years of speaking softly and abstaining from
arguments can make assertive verbal responses difficult for women (Cummings, 1992).
Cummings (1992) supports an emphasis on using the voice through yelling and engaging
in assertive vocalizations. Effective self-defense training has focused on attitudinal and verbal techniques for stopping potentially threatening encounters through conveying a confident demeanor, responding to harassment with firm verbal warnings and yelling to frighten off an attacker (Ozer & Bandura, 1990; Weitlauf et al., 2000; Weitlauf et al., 2001; Zoucha-Jensen & Coyne, 1993). Verbal resistance allows the voice to be used as an active tool of resistance. According to Weitlauf and colleagues (2001) participants in women’s self-defense training can practice saying, “No!” shouting and expressing anger, and becoming used to hearing their voice used in assertive and forceful ways.

In their research on situation-specific assertiveness and sexual victimization, Greene and Navarro (1998) found that sexual assertiveness was a significant protective factor that was negatively correlated with victimization among 274 female college students. These researchers recommend that teaching assertiveness with the opposite gender may be an important component in sexual victimization reduction programming (Greene & Navarro, 1998).

Physical self-defense training for women is not generally martial arts based, rather fighting techniques that offer women advantages over bigger and more powerful attackers have been taught (Fein, 1993; Ozer & Bandura, 1990; Weitlauf et al., 2000; Weitlauf et al., 2001). Regardless of the size or musculature of an attacker, there are vulnerable points on the body that are not easily protected. Teaching women to identify these vulnerable points (e.g. eyes, nose, throat, groin, knees) and to learn the appropriate disabling techniques for each the points is imperative (Fein, 1993). Physical skills such as striking, kicking, breaking out of holds, ground fighting have been taught to allow
participants to practice full-force until the techniques are mastered (Ozer & Bandura, 1990; Rentschler, 1999; Smith, 1999; Weitlauf et al., 2000; Weitlauf et al., 2001).

Although women’s vulnerability to incidence of sexual violence has been discussed in the literature (Bohmer & Parrot, 1993; Easton & Summers, 1997; Flores & Hartlaub, 1998; Heppner et al., 1995; Heppner et al., 1999); the identification of specific personality and behavioral characteristics associated with rape completion and rape resistance has been tentative. This research attempts to make a link in the literature between personality characteristics and behavioral actions that can assist women in the prevention and avoidance of sexual assault. Through an examination of the specific behaviors that are associated with rape resistance, and the specific personality characteristics necessary to engage in protective behaviors, a gap in the research on this topic may begin to be explained. The remainder of this chapter critically reviews the literature regarding personal characteristics that have been associated with rape resistance. As knowledge regarding effective rape prevention methods increases, and empirically based studies are conducted in this field, researchers are increasing their understanding of the characteristics, behaviors, and attitudes associated with efficacious rape resistance. Isolation of specific characteristics and behaviors associated with rape resistance including: assertiveness, hyperfemininity, and self-efficacy are discussed next, followed by an examination of athletic identity in women. The review concludes with a summary and purpose of the present research study.

2.3.1 *Assertiveness*

Morokoff (2000) claims that women’s assertiveness and empowered participation in sexual decision-making is restricted in our society, and women are often victimized
due, in part, to their feelings of obligation to accept sexual activities. Including assertiveness in self-defense training for women can assist women in increasing their abilities to state their needs regarding unwanted sexual activity (Morokoff, 2000).

Assertive responses have been associated with rape resistance (Bart, 1981; Bart & O'Brien, 1984; Bateman, 1978; Cummings, 1992; Heyden et al., 1999; Kleck & Sayles, 1990; McCaughey, 1997; Rozee & Koss, 2001; Zoucha-Jensen & Coyne, 1993); however, there is little information on how women develop assertiveness skills. Assertiveness training for women was introduced initially in the 1970’s and became a popular feminist group therapy program (Phelps & Austin, 1997). Assertiveness training programs assumed that once women were educated about their interpersonal rights and social and psychological barriers to change, they would change their behavior to meet their needs. Assertiveness training encourages women to stand up for their rights, challenge their stereotypes, speak for themselves and adopt new behaviors (Enns, 1992).

The difficulty for many women in developing assertive skills is that many women are not accustomed to articulating clearly what they want and need (NiCarthy et al., 1993). Assertiveness has been defined as showing respect for oneself and others by stating one’s opinion and letting others know individual feelings, wants, and needs (NiCarthy et al., 1993). It is standing up for one’s personal rights and freely expressing ideas, feelings, and opinions (Twenge, 2001). Assertiveness requires a person to attempt to ensure her rights or to, “actualize an internalized view of self thorough interaction with others” (Morokoff, 2000, p.307). According to NiCarthy, Gottlieb and Coffman (1993) an assertive person demonstrates the following traits: “Uses give and take in conversation; Listens and talks; Speaks with moderate voice volume and tone; Looks the
other person in the eye; Does not intrude into another’s physical space, nor shrink away” (NiCarthy et al., 1993, p. 157). Being sure of oneself and being a leader are additional traits thought to be possessed by assertive people (Twenge, 2001).

Assertive responses to various situations communicate confidence and can de-escalate situations (Telsey, 1988). Assertive speech provides a foundation for conflict-management as it disrupts cycles of victimization and unhealthy power dynamics that exist in social and personal relationships (Strain, 2001). Assertive verbalizations require an individual to state, not ask, the individual to change their behavior and are free of excuses, apologies and explanations (Telsey, 1988).

Assertiveness has been correlated with academic self-efficacy, adjustment, and decreased levels of loneliness among international graduate students (Poyrazli, Arbona, Nora, McPherson, & Pisecco, 2002). Although assertiveness is not a characteristic that is esteemed in all cultures, it appears that the existence of assertiveness for both men and women in American society has personal, social, academic, and health benefits. Highly assertive individuals possess greater levels of internal locus of control and report experiencing fewer health problems than people with lower levels of assertiveness (Williams & Stout, 1984).

There is some evidence that changes in self-reports of assertiveness can be influenced by education on the status of women in society and on psychological theory and concepts of women’s development. Specifically, it was found that participation in a Psychology of Women college course positively impacted female undergraduate students’ reported levels of assertiveness and attitudes toward women (O’Connell, 1989).
In a study conducted by Adams-Roy and Barling (1998) of 802 women, nearly 18% reported being sexually harassed at work at some prior time. Using the shortened version of the Rathus Assertiveness Schedule (Rathus, 1973), the researchers concluded that a woman’s level of personal assertiveness predicted her decision to confront a sexual harasser in the workplace (Adams-Roy & Barling, 1998).

Assertive verbalizations are important components of women’s self-defense training as perpetrators will often initially “test” victims through verbal harassment (Bolon, 2000). Responses that are strong and confident minimize the appearance of vulnerability in an individual and can increase a woman’s power to control the situation (Bolon, 2000). Through making eye contact, using a strong, clear voice and naming the behavior and demanding it to stop, women can evidence assertive behavior (Bolon, 2000; Strain, 2001; Telsey, 1988).

Although assertiveness in an important variable in effective self-defense training, there have been mixed results as to the ability to impact women’s levels of assertiveness through training in women’s self-defense. Only a few studies examined women’s levels of assertiveness before and after a self-defense training course and determined that in one study, (Weitlauf et al., 2000) self-reports of assertiveness as measured by the Rathus Assertiveness Schedule (Rathus, 1973) increased, while a second study by the same authors (Weitlauf et al., 2001) did not reveal increases in assertiveness.

2.3.2 Hyperfemininity

Hyperfemininity is a construct that is applied to women who adhere to traditional attitudes and beliefs regarding the rights and roles of women that, in turn, impacts their relationships with men. It has been more specifically defined as, “exaggerated adherence
to a stereotypic feminine gender role.” (Murnen & Byrne, 1991, p. 480). Murnen and Byrne (1991) assert hyperfeminine women can be described with the following: they place great emphasis on the importance of relationships with men, they utilize sex to gain or sustain romantic relationships, and they prefer traditional masculine behavior in their partners.

The Hyperfemininity Scale (Murnen & Byrne, 1991) is a 26-item forced choice instrument that is designed to assess exaggerated attitudinal adherence to stereotypical feminine gender ideology. Validity of the scale was established through conducting correlations of the Hyperfemininty Scale and several other measures of attitudes and behavior including the Sexual Opinions Survey, which measures personal feeling about sex (Fisher, Byrne, & White, 1983), Rosenberg’s self-esteem measure (Rosenberg, 1965), the Rape Myth Acceptance Scale (Burt, 1980), and a measure of Locus of Control (Rotter, 1986). These findings are as follows: Hyperfemininty was found to be unrelated to feelings about sex according to the Sexual Opinions Survey (Fisher et al., 1983) and the self-esteem measure (Rosenberg, 1965). However, Hyperfemininity was related to Rape Myth Acceptance, indicating that hyperfeminine women are likely to believe rape myths, such as “Men should initiate sex and be in control during sex” and “Many women have an unconscious wish to be raped, and may then unconsciously set up a situation in which they are likely to be attacked.” The relationship between hyperfemininity and traditional family values and attitudes about the rights and roles of women was also examined (Murnen & Byrne, 1991). Utilizing the Work and Family Orientation Scale (Spence & Helmreich, 1972) career achievement was assessed, and it was discovered that the hyperfeminine women were more likely to have negative attitudes toward women.
Hyperfemininity was negatively associated with personal ratings of the importance of job competitiveness, and having a job. Additionally hyperfeminine women placed a higher level of importance on their spouse having a prestigious and high paying job.

Further examination of the concept of hyperfemininity took place by exploring the relationship between hyperfemininity and several social, psychological, and sexuality related measures. McKelvie and Gold (1994) specifically sought to examine hyperfemininity’s relationship to: rationalization for men’s sexually aggressive behavior, sexual attitudes and sexually consenting and coercive experiences, age of first intercourse, use of contraception, antisocial tendencies, psychological symptoms, assertive behavior, and age. Using a sample of college women ($n=270$) and nursing students ($n=56$), the researchers found that women who had high hyperfemininity scores self-reported being a victim of more non-consensual sexual experiences than other women and rated situations of coercive sexual behavior as more excusable if the man was of high prestige. They purport that hyperfeminine women may be coerced into sex through verbal pressure by a man, specifically if he professes interest in a romantic relationship with her. The authors also contend that hyperfemininity may be a risk factor for being a victim of sexual aggression (McKelvie & Gold, 1994). DeGregoria’s (1987) findings regarding traditional and non-traditional women indicate that traditional women who are in abusive relationships rate the power differentials in their relationships as less abusive than nontraditional women. They additionally reported greater acceptance of the abusive behavior than women who possessed non-traditional gender roles (DeGregoria, 1987).
Research on correlates with hyperfemininity include an examination of the relationship between women’s adherence to an extreme gender role and their acceptance of violence in dating situations (Maybach & Gold, 1994). Specifically, these researchers examined the construct of hypermasculinity, defined as engaging in exaggerated masculine-typed activities and strict adherence to a stereotypic masculine gender role (Mosher & Skirkin, 1984). They defined this as a “macho” personality constellation which views violence as manly, possesses callous sexual attitudes, and perceives danger as exciting. Such a personality has been related to sexual aggression, use of alcohol and other drugs, and the use of sexual threats, including using verbal manipulation to coerce women to have sex (Mosher & Skirkin, 1984). Utilizing a group of female undergraduate college students (n=126), the researchers examined scores on the Hyperfemininity Inventory and responses to three scenarios depicting dating situations in which varying levels of force and coercion were used to achieve sexual activity. The results indicated that women who scored low on the Hyperfemininity Inventory has less attraction toward a hypermasculine man in a nonconsensual sexual scenario than did the women who scored high on the inventory. Additionally, women with low hyperfemininty had more anger regarding the nonconsensual sex scenario than women with high hyperfemininity scores, indicating that lower levels of hyperfemininity are related to decreased levels of tolerance for nonconsensual sexual behavior (Maybach & Gold, 1994). Hyperfeminine women have been found to perceive greater levels of sexual interest from men than less hyperfeminine women (Fisher & Walters, 2003), which may be due to the level of importance that hyperfeminine women place on relationships with men. Women who subscribe to strict models of femininity seek out male partners who, likewise, subscribe
to the constructs of hypermasculinity (Hamburger, Hogben, McGowan, & Dawson, 1996) and maintenance of these traditional beliefs may indirectly increase the risk of being a victim (Ray & Gold, 1996).

2.3.3 Self-Efficacy

Self-efficacy theory examines the way in which people attempt to exercise control over how they live their lives and provides a conceptual framework that addresses the origins of efficacy beliefs, the structure and function of the beliefs, and the processes through which these beliefs produce effects (Bandura, 1997). An individual’s belief about their own capabilities and personal efficacy affects the activities in which they choose to engage. If an individual feels unable to handle a specific situation, he or she is likely to then avoid the encounter, consequently, efforts are often made to exert power and influence over specific spheres of life in an attempt to maintain control (Bandura, 1997). If an individual feels capable of handling an activity, the individual will readily engage in the event (Ozer & Bandura, 1990). Perceived self-efficacy “refers to the beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (Bandura, 1997, p. 3). Through self-defense training, a woman is able to empower herself with the skills that will provide her with an increased capacity to control and resist an assault situation. Without such training, it is likely to assume that the woman’s ability and perception of herself as adequate and capable of effectively defending herself is lower than women who have been trained in self-defense, as first-hand experiences of mastery of a specific skill is the most effective way of increasing individual perceptions of efficacy for coping with challenges involving that skill (Bandura, 1997). Therefore, it can be asserted that a woman who encounters an
assault situation and lacks the ability, skills, and belief that she can exert some control over the situation will evidence increased levels of distress and impaired functioning, which may result in an inability to effectively resist the attack.

Women’s self-defense training has been demonstrated to have a significant impact on task specific self-efficacy measures (Ozer & Bandura, 1990) as well as on broader aspects of psychological impact. Physical self-defense training impacts women’s levels of physical and general self-efficacy as they begin to view themselves as increasingly capable persons (Weitlauf, Smith, & Cervone, 2000).

When an individual’s performance on a particular task determines the outcome, efficacy beliefs account for most of the variance in the anticipated, or expected, outcome (Bandura, 1997). However, just because someone knows what to do and is motivated to do it, does not mean they will be efficacious at the task. A level of integrated cognitive, social, emotional, and behavioral skills are necessary to execute a particular task appropriately (Bandura, 1997). Efficacy beliefs concern both the exercise of control over action and the self-regulation of thought process, motivation, and affective and physiological states (Bandura, 1997).

Relating this to instances of potential threat or danger, Ozer & Bandura (1990) assert that people who believe that they can exert some level of control over a dangerous situation do not have as high levels of anxiety as those individuals who do not believe they can effectively handle the situation. Levels of subjective distress and autonomic arousal are increased when a person perceives their coping as ineffective. This psychological and physiological arousal and distress is directly related to the individual’s perceived self-efficacy, such that through strengthening the levels of self-efficacy, one is
able to decrease levels of distress and physiological arousal (Ozer & Bandura, 1990) in situations of perceived threat. If an individual believes that they possess no power to produce a result, he or she will not try to make anything happen. The perception of self-efficacy is not a measurement of the actual skills that an individual possesses, but their belief about what they can do in different circumstances with the skills that they possess (Bandura, 1997).

The concept of self-efficacy has been thoroughly examined in many areas of research, including women’s self-defense. Ozer and Bandura (1990) examined the concepts of perceived coping and cognitive control self-efficacy as they relate to personal empowerment over physical threats. The research was focused on addressing the issue of sexual violence from a personal self-protection perspective that promotes the development of efficacious means of control to reduce the fear and likelihood of sexual victimization (Ozer & Bandura, 1990).

Weitlauf, Cervone and Smith (2000) sought to assess the effects of women’s self-defense training on perceptions of self-efficacy, assertiveness, and aggression (Weitlauf et al., 2000). Research suggests that first-hand mastery experience in a specific domain of functioning increases an individual’s perception of personal efficacy for coping with challenges the domain (Bandura, 1997). The self-defense training offered women the opportunity to engage in powerful mastery experiences through practicing new behaviors and skills which, in turn, increased their reported levels of self-defense efficacy, self-referent generalization measures, and assertiveness, while decreasing their reported levels of hostility (Weitlauf et al., 2000).
Perceived self-efficacy is a belief about what one can do under various conditions with the skills that he or she possesses (Bandura, 1997). Perceptions of self-efficacy are not related to the actual skills one has, but rather on the beliefs that he or she holds, and can be generalized to similar situations (Weitlauf et al., 2001). In their research on the generalization of perceived self-efficacy developed in a women’s self-defense course, Weitlauf, Cervone, Smith and Wright (2001) examined a 16-hour intensive women’s self-defense training course that taught emotional and physical resistance to rape. In addition to the actual self-defense training, participants engaged in an additional 2 hours of group discussion and writing exercises designed for participants to examine the way in which the training impacted other aspects of their life. Their findings determined that women’s self-defense training enhanced women’s beliefs about their ability to defend themselves from physical attacks and also influenced other domains of generalized self-efficacy (Weitlauf et al., 2001).

Enactive mastery processes produce stronger and more generalized efficacy beliefs than other types of instruction. Vicarious instruction, cognitive simulations, and verbal instruction are all secondary to personal performance successes (Bandura, 1997). Therefore, it can be asserted that a woman who encounters an assault situation and lacks the ability, skills, and belief that she can exert some control over the situation will evidence increased levels of distress and impaired functioning, which may result in an inability to effectively resist the attack.

2.3.4 Athletic Identity

In the same way that resistance to sexual violence for women requires digression from traditional feminine norms, sports for women requires significant deviation from
societal expectations of femininity. Effective resistance requires a woman to challenge her own beliefs about a woman’s capacity for aggression, and a woman’s ability to inflict pain on another human being. This premise clearly challenges women’s perceptions of femininity and involves a cultural shift such that women can have the ability to set boundaries, be verbally and physically assertive, aggressive with men, and effectively defend themselves (McCaughey, 1997).

Although no specific groups of women have been identified in the research as possessing an increased ability to resist sexual violence, there does appear to be an overlap between characteristics associated with rape resistance, and the characteristics that non-traditional women and female athletes possess. Female athletes, particularly those who participate in aggressive sports, report higher levels of masculinity (Andre & Holland, 1995), perceived self-competence, and assertive abilities. Additionally, these women have increased levels of comfort engaging in physical contact with others as evidenced by their sport choice. Therefore, an examination of the differential effects that sport participation may have on measures of femininity, assertiveness, self-efficacy, as it relates to self-defense and rape prevention is necessary.

Gender socialization exists for children from the time they are infants. An examination of sex stereotyping in infants found that adults act differently toward boys and girls (Stern & Karraker, 1989). They found that adults play in masculine ways with children whom they think are boys, and in feminine ways with children whom they think are girls. As a society, we learn that there are appropriate ways to interact with a baby girl and a different way in which to interact with a baby boy. These gender specific
expectations are present throughout one’s development, and result in pressure to conform to socialized expectations of “normal” behavior.

This concept is perhaps most evident within the sporting arena. It is here that gender differences are over-emphasized, and the behaviors and attitudes associated with traditional masculinity or traditional femininity become paramount (Oglesby, 1978). As sport popularity increased for women, the challenges and critiques of female participation increased as well. A tremendous pressure existed for women to maintain their femininity and sexuality, and to note their identity as women before their identity as athletes (Krane, 2001). Society is much more comfortable with female athletes who fit into the traditional definition of feminine than they are with athletes who possess characteristics that are congruent with successful athleticism, such as power, strength, aggression, toughness and achievement (Die & Holt, 1989; Miller & Heinrich, 2001).

Through the process of socialization into sport, and participation in athletics, individuals begin to identify themselves as athletes. This athletic identity is the degree to which a person identifies with the athlete role and finds personal significance in his or her involvement with sport and exercise (Brewer et al., 1993). Researchers have found an interest in the concept of athletic identity, as they have found the development of an athletic identity contributes to other personality and social phenomena. Individuals with strong athletic identities give great importance to sport and exercise and are very cognizant of self-perceptions regarding sport (Brewer et al., 1993).

In their research, Lantz & Schroeder (1999) sought to understand the relationship between sport participation, level of identification with the athletic role, and gender role endorsement. Using the Bem Sex Role Inventory (Bem, 1974) and the Athletic Identity
Measurement Scale (Brewer et al., 1993), they found that athletes and individuals who endorsed a high level of athletic identification had a greater endorsement of masculine gender role characteristics. Conversely, non-athletes and those individuals who had lower levels of athletic identification endorsed feminine gender role characteristics. Lantz & Schroeder (1999) also found that those individuals who endorsed either high or low levels of athletic identity had the greatest disparity between their Bem Sex Role Inventory Scores. This research suggests that it is not exclusively the participation, or lack thereof, in sport that is related to one's gender role orientation, but rather it is the identification with the athletic role that has the greater impact (Lantz & Schroeder, 1999).

The majority of research implies that the degree of gender role conflict that exists among female athletes and non-athletes is nearly similar, and more recently (Allison, 1991) argued that gender role conflict does not presently exist among many female athletes, and perhaps is more salient among female non-athletes (Miller & Heinrich, 2001). To the degree that an individual who has been socialized into sport has adopted an athletic identity, he or she values the role of himself or herself as an athlete. Therefore, women who have undergone this socialization process attach tremendous importance to their athletic identity. They recognize that gender role discrepancies exist, they identify themselves as possessing more masculine characteristics than their non-athlete peers, and they consequently embody the role of athlete without internalizing the negative messages of society (Miller & Heinrich, 2001).

Athletic girls and women report greater self-perceptions in ambition and competition (Die & Holt, 1989), a more positive self-concept and body image self-concept (Miller & Levy, 1996), and increased levels of academic achievement (Videon,
Through an examination of the female athletes’ perceptions of the role of sports in enhancing the status of women in society, the results indicated that the athletes viewed themselves as strong, competent, and independent (Blinde et al., 1994). Girls and women who participate in sport have increased levels of self-confidence (Sleap, 1998), and particularly the athletes with the lowest levels of femininity and the women who were participants in the low femininity status sports had the highest levels of self-esteem among female athletes (Hall, Durborow, & Progem, 1986).

Through this development of a strong and competent self, female athletes, in effect, have developed personality characteristics and worldviews that may be markedly different than their non-athletic counterparts. Research indicates that women who have high levels of self-esteem and who are assertive are able to voice their thoughts and opinions with significant others in their lives, in relationships, and in the workplace (Kawakami, White, & Langer, 2000).

Women who have adopted an athletic identity have greater comfort in their bodies, enjoy their personal strength, and report lower levels of femininity than their non-athlete counterparts (Salminen, 1990; Wrisberg et al., 1988). Therefore the adoption of the athletic identity, and the androgynous or masculine gender role that is found among athletic women, may serve to promote greater levels of social awareness as well as a lowered acceptance of sexually inappropriate behavior. Additionally, athletes, with their increased levels of comfort with their physicality and strength may have less dissonance regarding engaging in assertive or aggressive behaviors in order to protect or defend themselves in a personal threat situation. Bart and O’Brien (1985) report that women
who have never experienced contact sport participation have missed an opportunity to assess their physical capacity to withstand injury.

Female athletes, and the personality and bodily characteristics that they posses, may be equipped to engage in a functional response to the threat of violence. Due to the socialization that they have experienced, shouting, yelling, and hitting in order to escape does not have the same level of dissonance as it would for a women who has never engaged in any of these behaviors. This relationship has not been examined in the literature; therefore, more research is necessary in order to infer a correlative relationship.

2.4 Conclusion

This was a review of the literature related to rape resistance, women’s self-defense training, and characteristics associated with rape resistant behavior. Few empirical studies have examined the outcome effects of women’s self-defense training on variables related to rape resistant behavior. The current study will examine the impact of women’s self defense training on self-efficacy, hyperfemininity, an assertiveness among a population of college women.(Blinde et al., 1994; Salminen, 1990; Wrisberg et al., 1988).
CHAPTER 3

METHOD

3.1 Research Questions

Research Question 1. Does participation in a women’s self-defense course affect levels of assertiveness, self-defense self-efficacy, activities self-efficacy, interpersonal self-efficacy, and hyperfemininity?

Research Question 2. Does hyperfemininity affect measures of assertiveness, self-defense self-efficacy, activities self-efficacy, and interpersonal self-efficacy among women who complete a women’s self-defense course?

Research Question 3. Do women who have higher levels of athletic identity differ from women with little or no athletic identity on measures of assertiveness, self-defense self-efficacy, activities self-efficacy, and interpersonal self-efficacy among women who complete a women’s self-defense course?

3.2 Participants

3.2.1 Population

The participants in this study were 143 college women, ages 18 and over, who enrolled in a ten-week women’s self-defense course offered by the department of Physical Activity and Educational Services (PAES) at the Ohio State University. This one-credit course is available to all registered Ohio State female students, staff, and faculty.
3.2.2 **Sampling Method**

Due to the self-selective nature of the self-defense course, the participants are a convenience sample and constitute naturally assembled collectives (Campbell & Stanley, 1963) of women who choose to enroll in a self-defense course. The course was listed in the Ohio State course bulletin and three sections are offered quarterly.

Women registered for the course utilizing the on-line course registration, and the course is filled on a first come basis. Each section of the course can accommodate 30 participants. Therefore each section of the course becomes full after 30 women sign up. The remaining women were assigned to a waitlist and had the opportunity to enroll in the course if other students dropped out.

Each section of the course met separately on a different day and time. During the last class session, the treatment group was administered the instruments. Participants were informed that their participation does not affect their grade in any way and their instructor will not be present during the testing period. They were informed of their right to decline participation in the research and were also be informed of their right to confidentiality and anonymity. All students agreed to participate and received an incentive for their participation.

Due to the ethical issues that arise in withholding self-defense training from any individual, the control group consisted of women who registered for the subsequent self-defense course. No women completed the test instruments outside of the context of the women’s self-defense course. The control group participants completed their instruments
on the first day of their course, which began shortly after the last day of the treatment
group. They were introduced to the course instructor; and were informed of the data
collection phase.

3.2.3 Sample Size

Due to the impossibility of collecting a random or systematic nonrandom sample
for this research, a convenience sample was utilized. Fraenkel and Wallen (2000)
suggest a minimum of 30 individuals per group in experimental studies, but also state that
groups of 15 can be adequate under the appropriate conditions. The treatment group
consisted of 68 women, and the control group consisted of 75 women.

In order to conduct a power analysis to determine sample size requirements more
precisely, information regarding effect size is required. The researcher was unable to
conduct a power analysis, as each of the constructs of interest were not previously
examined specifically in this context. Therefore, specific effect size information is not
available. However, an estimation of effect size information was available by consulting
Cohen’s (1988) sample size planning tables. In general terms, sample size and effect size
information can be garnered by examining the type of effect size anticipated. The
utilization of a product moment correlation allows a researcher to select a desired level of
power, and effect size as measured by r, and determine completely the number of paired
observations required in the sample (Cohen, 1988). The sample size tables are primarily
used for planning experiments and determining sample size information. Specifying
$a_2=.05$ and a desired power level of $.80$, a medium effect size ($r = .30$) requires 85
subjects (Cohen, 1988). Therefore, the sample size previously specified for the study is
within the parameters desired for a medium effect size.
3.2.4 Demographic Information

Demographic information was collected from each of the participants and included basic information including age, ethnicity, year in school, and reasons for taking a self-defense class. Participants were asked if they have had previous rape prevention classes, self-defense or martial arts training. They were asked to identify their level of athletic identity. The degree to which a person identifies with the athlete role and finds personal significance in their involvement with sport and exercise (Brewer et al., 1993) was the definition used to describe the meaning of athletic identity. Participants chose a number between zero and ten that is representative of their perceived level of identification with the athlete role. Zero (0) indicates an individual who does not identify in any way with the athlete role, and ten (10) indicates an individual who identifies very strongly with the athlete role. Participants additionally chose a number between zero and ten that is representative of their personal significance with sport and exercise. Zero (0) indicates an individual who finds no significance with sport and exercise, and ten (10) indicates an individual who finds great personal significance with sport and exercise. These two scores were averaged to comprise an athletic identity index score that ranged from zero to ten. Demographic information was examined to describe the sample. Participants’ reports of athletic identity were examined with scores on other instruments to determine correlations and relationships with other variables. Specifically, scores on the athletic identity index were examined in relation to their scores on the Hyperfemininity Scale, the Rathus Assertiveness Schedule, and the self-defense self-efficacy, activities self-efficacy, and interpersonal self-efficacy scales.
3.3 Variables

3.3.1 Independent Variables

The independent variable (IV) in the study is the ten-week women’s self-defense course. The women’s self-defense course met for 10 consecutive weeks and each session lasted approximately two hours, for an approximate total of 20 hours of self-defense training. Participants who missed a scheduled class session were permitted to make up the class by attending the class in one of the other scheduled courses. Due to the anonymity of the surveys, it was impossible to match the students’ instruments with the instructors’ grade sheets or course attendance sheets. Participants were asked in the questionnaire if they have attended every class session, or if they have made up the class or assignments for missed classes. They were also asked to indicate the number of classes missed without being made-up. The course policy indicated that students that miss more than three classes will earn a failing grade, therefore it can be assumed that the large majority of students missed fewer than three classes.

A professional female self-defense instructor, with 12 to 25 years experience teaching women’s self-defense and rape prevention, taught each course. The course was held in a large, private space in Ohio State University’s Larkins Hall, a facility designated for athletic courses and participation. The room was private and able to be closed off completely. This allowed for feelings of safety among the participants. A private space allows for participants to yell loudly without fear of disrupting others, as well as a comfortable area to practice physical skills that may make participants initially self-conscious. The participants had access to locker rooms, shower facilities, vending machines and restroom facilities.
The women’s self-defense training began with introductions and an overview of the course. The teachings of this self-defense course consist of five levels of prevention: awareness, body language, trusting intuition, verbal responses, and physical skills. Information regarding the social conditions that cultivate a rape culture and statistics and incidence of sexual violence are relayed to the participants. An overview of definitions and laws, as well as myths and stereotypes related to sexual assault, was included in this introduction.

Awareness refers to an individual’s ability to accurately assess their environment. Awareness of the environment is tied to many situations such as being followed, running vs. hiding, and dealing with aggressive people. Learning to assess comfort levels and develop safety plans was included in this phase of the training.

Body language was addressed in the second phase. When individuals are uncomfortable or fearful, they may shrink from a situation or avoid making eye contact, which can be interpreted as fear and vulnerability (Furby, Fischhoff, & Morgan, 1989). Therefore, teaching strategies that convey an awareness of one’s surroundings, such as making eye contact, and recognizing potential attackers, can assist an individual in eliciting appropriate reactions to stressful situations. Participants practiced these skills in the group setting and also with a partner.

The third level of prevention is learning to trust individual intuition. Situations that evoke an uncomfortable or fearful response may cause women to rationalize the feelings they are having and not react assertively in such situations. Socialization teaches women to trust others and not speak up when feeling overwhelmed; therefore, women learn to attribute their discomfort to over-sensitivity (McCaughey, 1997). Trusting
intuition teaches women that their fearful reactions are legitimate, and that through
trusting their instincts they can effectively diffuse or avoid a potential threatening
situation.

The verbal response phase seeks to teach women confrontation and assertiveness
skills that they can utilize with strangers, acquaintances, dates, and family members.
Women often have difficulty asserting themselves and utilizing their verbal self-defense
skills (Fein, 1993; Rozee & Koss, 2001). Socialization has taught women that talking
back to others or hurting other people’s feelings is unattractive and not ladylike (Lawler,
2002; McCaughey, 1997). Therefore, many women have difficulty standing up for
themselves in simple situations and fear being perceived as mean. Participants practiced
engaging in verbal self-defense skills with partners. They made assertive verbal
statements to one another and observed their feelings as they utilized these developing
skills.

Research indicates that 86% of potential attack situations can be avoiding through
the utilization of yelling and running (Bart & O'Brien, 1984), however, many women
have difficulty yelling. Portrayals of women in attack situations often depict a woman
giving a feminine scream that emphasizes her fear. Teaching women to yell is a
technique that instills a sense of control and anger over the situation and additionally
draws public attention to the situation at hand (Fein, 1993; McCaughey, 1997, 1998;
Rentschler, 1999). Loud yelling can also serve to startle the attacker and open an escape
opportunity. Participants practiced yelling loudly various words and phrases such as,
“NO!” “Get out of my house!” and “Back off!”
The final level consists of physical self-defense skills that are to be utilized when the previous strategies are ineffective and the situation escalates. Participants were taught an effective self-defense stance as well as techniques that can disable an attacker. They were taught the vulnerable points on an attacker’s body and practiced the techniques using hitting targets. A syllabus for the course can be found in Appendix G.

3.3.2 Dependent Variables

The dependent variables (DV) in this study are hyperfemininity, assertiveness, and activities self-efficacy, self-defense self-efficacy, and interpersonal self-efficacy. Hyperfemininity was measured using the Hyperfemininity Scale (Murnen & Byrne, 1991) assertiveness was measured using the Rathus Assertiveness Schedule (Rathus, 1973), and self-efficacy was measured using a self-efficacy measure designed by Ozer & Bandura (1990) that measures interpersonal, activities, and self-defense self-efficacy.

Hyperfemininity. Hyperfemininity has been designated as constellation of characteristics that are indicative of traditional attitudes and beliefs regarding the rights and roles of women and adherence to exaggerated or the extreme feminine gender role (Murnen & Byrne, 1991). Hyperfeminine women demonstrate the following characteristics: extreme importance on relationships with men, the use of sex to gain or maintain romantic relationships, and preference of traditional male behavior in male partners (Murnen & Byrne, 1991).

Assertiveness. Assertiveness has been defined as a communication skill that is used to state our wants and needs to others (Mauro-Cochrane, 1993). Assertive responses have been linked to effective rape resistance (Bart & O'Brien, 1984; Fisher et al., 2001; Ullman, 2002). However, engaging in assertive behavior is often difficult for women
(Mauro-Cochrane, 1993), thus assertiveness training is an imperative component of rape
prevention training.

*Self-Efficacy.* Self-efficacy has been defined as possessing the requisite
knowledge, skills, and resilient self-beliefs of efficacy to alter aspects of life over which
there is some control (Ozer & Bandura, 1990). The focus of self-efficacy research is on
the cognitions one has regarding their individual competency and degree of personal
control in a situation (Bandura, 1997). The self-efficacy expectancies that an individual
holds regarding his or her ability to execute goal-directed behaviors in specific situations
promotes constructive behavior change (Bandura, 1997). Increasing self-efficacy occurs
through mastery experiences that demonstrate to an individual that they have acquired the
necessary skills and effective coping behaviors to successfully manage the situation
(Smith, 1999). Self-efficacy theory addresses the impact of perceptions of efficacy of
specific tasks and behaviors, and also examines the impact of social experiences on self-
efficacy beliefs (Weitlauf et al., 2000). Perceptions of self-efficacy affect an individual’s
belief of her own capabilities to ultimately engage in the course of action necessary to
exert control over a particular situation (Ozer & Bandura, 1990).

Weitlauf, Cervone, Smith, and Wright (2001) examined the impact of self-defense
training on multifaceted aspects of perceived self-efficacy and found that participation in
women’s self-defense training increased self-efficacy perceptions for self-defense skills,
self-defense abilities, sports competencies, and coping skills. Additionally, participants
in this research reported increased in perceptions of physical self-efficacy and
assertiveness.
3.4 Instruments

3.4.1 *Hyperfemininity Scale*

The Hyperfemininity Scale (Murnen & Byrne, 1991) is a 26-item forced choice instrument that is designed to assess exaggerated attitudinal adherence to stereotypical feminine gender ideology. Participants are asked to “choose the statement that is more characteristic of you”, with pairs of statements such as: a.) I like to flirt with men, or b.) I enjoy an interesting conversation with a man (Murnen & Byrne, 1991). Each hyperfeminine choice receives on this interval scale receives a score of 1, with a total score possible of 26. Higher scores on the instrument indicate greater hyperfemininity.

Development of the scale took place utilizing 145 undergraduate women from the University at Albany and originally consisted of 65 items. Item analysis was conducted through randomly splitting the sample in half, with the 26 final items demonstrating significant correlations \((p < .06, n=145)\) with the total scores. Initial validation of the scale yielded mean score ranges of endorsement of 7 to 9 items, with standard deviations the range from 3 to 5 (Murnen & Byrne, 1991).

Validity of the scale was established through conducting correlations of the Hyperfemininity Scale and several other measures of attitudes and behavior including the Sexual Opinions Survey, which measures personal feeling about sex (Fisher et al., 1983), Rosenberg’s self-esteem measure (Rosenberg, 1965), the Rape Myth Acceptance Scale (Burt, 1980), and a measure of Locus of Control (Rotter, 1986). These findings are as follows: The hyperfemininity scale, in addition to participants ratings of sexual coercion in various vignettes of dating situations, was used to determine how hyperfeminine attitudes were related to responses to the scenarios (Murnen & Byrne, 1991).
correlation coefficients indicated that differences in hyperfemininity were negatively correlated with perceptions of how the woman should react to the sexual coercion situation \((r = -.24, p < .05)\), meaning that the higher in hyperfemininity the greater acceptance of the sexual coercion situation. The hyperfeminine women supported a less harsh reaction to the incidence of sexual coercion, and believed that the woman had increased responsibility for the incident \((r = .20, p < .05)\). Hyperfeminine women also had a higher coercion score as measured by the Sexual Experiences Survey (Koss & Oros, 1982) \((r = .24, p < .05)\), indicating an increased likelihood being involved in sexual coercion situations.

Hyperfemininity was found to be unrelated to feelings about sex according to the Sexual Opinions Survey (Fisher et al., 1983) and the self-esteem measure (Rosenberg, 1965). However, Hyperfemininity was related to Rape Myth Acceptance (Burt, 1980) \((r = .38, p < .001)\) and to Locus of Control (Rotter, 1986), \((r = .39, p < .001)\). These results indicate that hyperfeminine women are likely to believe rape myths, such as “Men should initiate sex and be in control during sex”.

Correlational analyses were conducted to determine the relationship between hyperfemininity and traditional family values, and attitudes about the rights and roles of women (Murnen & Byrne, 1991). Utilizing the Work and Family Orientation Scale (Spence & Helmreich, 1972) career achievement was assessed. It was discovered that the hyperfeminine women were more likely to have negative attitudes toward women \((r = -.38, p < .05)\). Hyperfemininity was negatively associated with personal ratings of the
importance of job competitiveness \((r=-.32, p<.05)\) and having a job \((r=-.22, p<.05)\).

Additionally hyperfeminine women placed a higher level of importance on their spouse having a prestigious and high paying job \((r=.46, p<.05)\).

Murnen and Bryne (1991) report that the alpha coefficient of internal consistency of the scale in the original sample was \(.76\), and was between \(.80\) and \(.90\) in additional samples. A principle components analysis was conducted and indicated 10 factors with eigen values greater than one, with the combination of factors accounting for 63% of the variance. It is reported that 25 of the 26 items loaded significantly on the first factor \((r’s >.30)\), and half of the items also loaded significantly on one of the remaining nine factors. It is recommended that the total score on the scale be considered rather than separate factors. Temporal reliability of \(.89 (p<.001)\) was computed with a test-retest coefficient, with two-weeks between the administrations, indicating consistency over the testing period (Murnen & Byrne, 1991).

**Rathus Assertiveness Schedule**

Assertive responses have been identified as effective in resisting rape. Therefore, increasing levels of assertive behavior is a relevant outcome of self-defense training. The Rathus Assertiveness Schedule (RAS) (Rathus, 1973) is a 30-item instrument scored on a summated rating scale designed to measure likeliness of assertive behaviors. Participants read statements and then indicate the degree to which they believe the statement to be characteristic or uncharacteristic of themselves. Individual item ratings range from \(+3\) (very characteristic of me, extremely descriptive) to \(-3\) (very uncharacteristic of me,
extremely nondescriptive). Scores for each item are summated with total scores ranging from –90 to +90. Sample items include: “Most people seem to be more aggressive and assertive than I am.”, and “I am open and frank about my feelings.”

Test-retest reliability was established by administering the instrument to 68 college students, ranging in age from 17 to 27, and retesting them after eight weeks. A Pearson product moment correlation yielded \( r = .78, n=68 \), indicating moderate to high stability over the testing period. Split-half reliability yielded an \( r = .77 \), and was computed by utilizing a Pearson product moment correlation between the total odd and total even item scores in an additional sample of 67 students (Rathus, 1973).

Validity of the RAS was established through the comparison of RAS scores with two external measures of assertiveness. The first validation study required 18 college students to administer the RAS to individuals that they knew well, and then rate the subjects on a 17-item schedule that listed opposing characteristics such as, bold and timid, and aggressive and withdrawing. Pearson product moment correlation coefficients were run between the 67 RAS scores and the student raters’ impressions of the personality traits on the 17 scales and found the RAS scores to correlate significantly \( p<.01 \) with all the five scales that comprise the assertiveness factor: boldness \( r=.61 \), outspokenness \( .62 \), assertiveness \( .34 \), aggressiveness \( .54 \), and confidence \( .33 \) (Rathus, 1973).

A second validation study compared 47-college student’s RAS scores to ratings of their responses to five scenarios in which assertive behavior is warranted. A sample item is, “You are trying to take a nap. Your roommate is talking to a friend on the other side of the room. They are trying to speak softly, but you are being kept awake. What would
you do?” Responses were audiotaped and played for raters who determined if the response was “very poor” (would say or do nothing), to “very good” (appropriate assertion shown with good expressiveness). Interrater reliability of $r = .94 \ (p < .01)$ was calculated, and the subjects RAS scores and audiotaped sessions yielded an $r = .70 \ (p < .01)$.

3.4.3 Self-efficacy Instrument

Self-defense self-efficacy was measured utilizing an unpublished instrument designed by Ozer and Bandura (1990) that was developed specifically to measure women’s self-efficacy as it relates to self-defense. Through personal communication, the researcher has obtained the instrument and permission to use the instrument from Elizabeth Ozer. Perceived self-efficacy is measured in three domains, as determined by a principal component analysis that was performed on that data from the pretest and posttest phases: self-defense self-efficacy, activities self-efficacy, and interpersonal self-efficacy. Each item in each scale requires subjects to rate the strength of their perceived self-efficacy in their ability to engage in a specific coping mechanism using a scale ranging from (0) complete uncertainty, to (10) complete certitude. The strength of self-efficacy is computed by summing the magnitude scores and dividing by the total number of items. The instrument yields three scores that range from 0 to 10. Self-defense self-efficacy, activities self-efficacy, and interpersonal self-efficacy will each have a score between 0 and 10 with higher scores indicating higher levels of perceived self-efficacy in that domain.

Self-defense self-efficacy was measured using 12 efficacy questions. Each question describes an individual’s perceived capabilities to execute various disabling self-
defense techniques on acquaintances and strangers in particular attack situations. A sample item is: “You are walking on a public street when a man grabs you from behind. At the moment that this happens you do not see any other people close by. How confident are you that you can, as of now: (a) Scream loudly more than once; (b) Struggle in any physical way; (c) Stomp to the instep of the foot to cause pain; (d) Use your elbow to forcefully strike him; (e) Pull his finger back and release his arms; (f) Come back quickly with another strike if one was not effective; (g) Get out of his hold in some way; (h) Disable the assailant so that he can not run after you; (i) Get away if he had blind-folded you as he grabbed you”. Participants rate each response (a) through (i) on how confident they are that they can presently engage in the activities. This item makes up one of the twelve items on the self-defense self-efficacy scale. Items are summed and divided by the total number of items for a total score ranging from 0 to 10.

Activities self-efficacy was measured with 17 items addressing various activities including: walking, jogging, bicycling, attending evening events, and traveling or attending events alone. Participants rate their level of confidence engaging in specific behaviors by themselves. A sample item is: “How confident are you that you can, as of now: (a) Go to the beach by yourself; (b) Go hiking by yourself; (c) Go camping with a female friend; (d) Go camping by yourself; (e) Go to a restaurant by yourself at night; (f) Go to an unfamiliar party by yourself; (g) Go to a movie by yourself at night; (h) Go to a bar by yourself; (i) Go to a night club (e.g. jazz) by yourself; (j) Go to a night rock concert by yourself.” Participants rate each response (a) through (j) on how confident
they are that they can presently engage in the activities. This item makes up one of the 17 items on the activities efficacy scale. Items are summed and divided by the total number of items for a total score ranging from 0 to 10.

Interpersonal self-efficacy was measured using eight scales that addressed coping with potential social threats, hassles, and coercive encounters in a variety of situations, such as: dating, work, parties, on the street, on public transportation, in parking lots, and in elevators. Participants read a brief scenario and then indicate their level of confidence in engaging in various responses. A sample question is, “You arrive home after work and, before going in, sense that something is not right. How confident are you that you can, as of now: (a) Go over to a neighbor’s house; (b) Call the police.” Participants rate their level of confidence from (0) cannot do at all to (10) certain can do on each item. Items are summed and divided by the total number for a total interpersonal self-efficacy score ranging from 0 to 10.

Principal components analysis indicated that interpersonal self-efficacy accounted for 48% of the variance, activities self-efficacy for 16%, and self-defense self-efficacy for 8%. The perception of self-defense self-efficacy correlated .45 with the interpersonal factor and .41 with the activities factor, with the interpersonal and activities factors correlating .59 (n=43), suggesting that the scales assess similar, but not mutually exclusive domains. Internal consistency reliability was computed using Cronbach’s alpha for each domain and yielded the following reliability coefficients: .96 for activity efficacy, .97 for self-defense efficacy, and .88 for interpersonal efficacy.
3.5 Data Collection Procedures

Data was obtained in the following manner:

1. Participants registered for and participated in the autumn self-defense course.
2. Researcher attended the last class session of the course to administer the instruments to the treatment group.
3. Participants registered for the winter self-defense course.
4. Researcher attended the first class session of the course to administer the instruments to the control group prior to any instruction.
5. Data was entered and analyzed in SPSS v 11.5.

3.6 Research Design

The research design is the posttest-only control group design, (Figure 1), (Campbell & Stanley, 1963). Two groups received the posttest measures. At the time of data collection one group completed the women’s ten-week self-defense course; the second group had not yet received the treatment.

<table>
<thead>
<tr>
<th>Group 1</th>
<th>R</th>
<th>X</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 2</td>
<td>R</td>
<td></td>
<td>O</td>
</tr>
</tbody>
</table>

R = Random assignment       O = Observation       X = Treatment

Figure 3.1: The Posttest-Only Control Group Design
3.7 Threats to Validity

The nature of human subjects research limits the ability to control the behavior of the participants in the study and provides an imperfect setting that is subject to validity concerns. Although the researcher should take every precaution available to ensure the highest level of research integrity, validity concerns must be adequately addressed (Black, 1993).

3.7.1 Internal Threats to Validity

The design is a true experimental design and some threats to internal validity are controlled inherently in the design choice. Internal validity ensures that the observed differences on the dependent variable are due to the effects of the independent variable (Fraenkel & Wallen, 2000). The factors that affect internal validity can produce changes that could be mistaken for the results of the treatment (Campbell & Stanley, 1963). The utilization of this true experimental design provides control for the following internal validity threats: history, maturation, testing, instrumentation, selection, and mortality (Campbell & Stanley, 1963).

The history confound refers to an independent variable that is not the treatment that occurs between the pretest and posttest and has a differential effect on the two groups (Bernard, 2000). Because all groups during each period of measurement received the instrumentation within a reasonable timeframe, the effects of history will influence each group simultaneously.

The threat of maturation, is observed when the participants in the experiment grow older or become more experienced throughout the length of the experiment (Bernard, 2000). Although not directly controlled for in the experimental design the
effects of maturation was limited due to the fact that the length of treatment is only ten weeks, and each section of the treatment groups receive the treatments within the same time frame. The growth that may be experienced during this time frame will be similar for all of the treatment and control groups.

Control for the testing confound is achieved through the administration of a posttest only; therefore, the participants did not experience test sensitization. Thus, it is assumed that differences in test scores can be attributed to the treatment rather than the completion of the instruments a second time.

Selection bias is often a major confound to validity in natural experiments; however, due to the random selection into the courses by the participants, the possibility that differences in the groups caused differences in the outcomes of the dependent variables was reduced, therefore diminishing the threat to the internal validity of the experiment (Bernard, 2000). Participants had an equal opportunity to self-select into sections of the course, thus the groups were equivalent and selection into courses was based on scheduling preferences, not differences in the classes.

Mortality is controlled in the posttest only control group design, if there were a substantial mortality difference between groups, it must be thoroughly examined (Campbell & Stanley, 1963). However, this experimental design was not affected by differential mortality.

3.7.2 External Threats to Validity

The external validity in research refers to the generalizability of the research results to the larger population (Campbell & Stanley, 1963). Threats to external validity are considered interaction effects that involve the treatment and some other variable,
however, these threats cannot be controlled without altering the research’s internal validity (Campbell & Stanley, 1963).

The external threats to validity that exist in this research design include: the interaction of testing and X and the interaction of selection and X. Due to the fact that participants completed only posttests, the observed effects can be attributed to the treatment, rather than test sensitization (Campbell & Stanley, 1963).

A second threat to external validity is the interaction of selection and the treatment. The participants in this study are a convenience sample of women who voluntarily enrolled in a self-defense class; therefore, they are a unique population. There are likely differences that exist between women who enroll in a self-defense course, and those who do not. Therefore, the representative nature of the sample must be considered, as the participants in this research are not representative of other groups of women or of women in general. However, the women who participated in the research can be considered equivalent as the choice of courses can be considered completely random. The results of the research can be generalized to college women who voluntarily enroll in a women’s self-defense course.

3.8 Statistical Analysis

Multivariate statistical analyses were used in examine differences between groups on the dependent variables. Multivariate tests allow for simultaneous analysis of several dependent variables and examinations of the relationships between variables (Newton & Rudestan, 1999). The advantages of utilizing MANOVA include its ability to provide a structured method for describing the comparisons of group differences on the dependent measures while maintaining statistical efficiency and its ability to account for differences
in the responses due to unique characteristics of the respondents (Hair, Anderson, Tathan, & Black, 1998). Additionally the full power of the MANOVA is able to be utilized to assess the dependent measure’s collective effect across groups, as it is able to measure the combinations of measures that would not be readily apparent otherwise (Hair et al., 1998).

The decision to utilize the MANOVA in lieu of multiple ANOVAs was made because the statistical analysis that the MANOVA provides is more appropriate in this particular research. The MANOVA examines the presence of overall effects in a study, and can assess the relative contribution of the outcome variables to the group differences. This type of analysis allows the researcher to identify the emerging variables and interpret the underlying constructs (Huberty & Morris, 1989). Whereas the ANOVA is appropriate when examining conceptually independent variables, the MANOVA is suitable for understanding variables that may be interrelated. Additionally, the use of fragmented univariate tests results in an inflated type I error and ignores the correlations among the variables (Stevens, 2002). The constructs of assertiveness, self-defense self-efficacy, activities self-efficacy, interpersonal self-efficacy, hyperfemininity, and athletic identity are arguably interrelated and likely are not conceptually independent variables; therefore, the MANOVA can explore the intercorrelations and the relative contributions among the variables.

Additional analysis included two MANCOVA’s that tested the dependent variables while using hyperfemininity and athletic identity as covariates. As hyperfemininity appears to be an engrained set of beliefs and attitudes that remain generally constant over time, it is unlikely that there will be a significant change in the
participant’s levels of hyperfemininity after participating in the ten-week self-defense course. The specification of hyperfemininity as a covariate allows for adjustment to be made for the influence of this factor on the dependent measures and additionally allows for more sensitive tests of treatment effects. The use of athletic identity as a covariate will allow the researcher to equate the groups on level of athletic identity and note significant changes among the dependent variables.

Multivariate significance indicates a significant linear combination of dependent variables exists that separates the groups (Stevens, 2002). However, an interest in the specific variables that contribute to the treatment differences is of interest as well. Thus, following the multivariate analysis, univariate t-tests were run.

3.9 Research Questions

3.9.1 Research Question One

Does participation in a women’s self-defense course affect levels of assertiveness, self-defense self-efficacy, activities self-efficacy, interpersonal self-efficacy, and hyperfemininity?

The independent variable in this research questions is participation in the women’s self-defense course. The dependent variables are assertiveness, self-defense self-efficacy, activities self-efficacy, interpersonal self-efficacy, and hyperfemininity. The dependent variables were entered in to the dependent variables box of the General Linear Model – Multivariate tests in the Statistical Package for the Social Sciences (SPSS) program. The independent variable, participation in the self-defense course, was be dummy coded (0) for no treatment and (1) for treatment. It was entered into the fixed factors box. Means, power, and effect sizes were requested. Intercept outputs and
between-subjects factors outputs were given and indicated overall statistical significance. The between-subjects factor Wilks’ Lambda was examined to determine significance and the null hypotheses will be rejected. This concluded that participation in the women’s self-defense course had some impact on assertiveness, self-defense self-efficacy, activities self-efficacy, interpersonal self-efficacy, and hyperfemininity.

Additionally, power for the multivariate test was reported and indicates that the sample sizes and effect sizes were sufficient to warrant the determination that the significant differences were not due to sampling error (Hair et al., 1998). The univariate outputs were given and the between-subjects factors were examined to identify significance of individual dependent variables.

3.9.2 Research Question Two

Does hyperfemininity affect measures of assertiveness, self-defense self-efficacy, activities self-efficacy, and interpersonal self-efficacy among women who participate in a women’s self-defense course?

The independent variable in this research question is participation in the women’s self-defense course. The dependent variables are assertiveness, self-defense self-efficacy, activities self-efficacy, and interpersonal self-efficacy. Hyperfemininity was used as a covariate. A multivariate analysis of covariance (MANCOVA) was conducted because the assumption is that there is a significant relationship between the set of dependent variables and the covariate. A MANCOVA also provides a way to statistically equate groups that have different values on the covariate and reduces unexplained variability (Page, Braver, & MacKinnon, 2003). Adjusting for a covariate ensures proper conclusions regarding the effects of the treatment. Hair, et al. (1998) suggests running
the analysis both with and without the covariates, as effective covariates will improve the statistical power of the test and reduce the within-group variance. The analysis without the covariate was run for research question one; therefore this analysis will determine the impact of the covariate. The dependent variables were entered into the dependent variables box of the General Linear Model – Multivariate tests in the Statistical Package for the Social Sciences (SPSS) program. The independent variable, participation in the self-defense course, was dummy coded (0) for no treatment and (1) for treatment and was entered into the fixed factors box. Hyperfemininity was entered into the covariate box. Outputs controlled for the effects of hyperfemininity and determined if the strict adherence to traditional gender roles has an impact on the dependent variables.

3.9.3 Research Question Three

Do women who have higher levels of athletic identity differ than women with little or no athletic identity on measures of assertiveness, self-defense self-efficacy, activities self-efficacy, and interpersonal self-efficacy among women who participate in a women’s self-defense course?

The independent variable in this research question is participation in the women’s self-defense course. The dependent variables are assertiveness, self-defense self-efficacy, activities self-efficacy, and interpersonal self-efficacy. Athletic identity was used as a covariate. A multivariate analysis of covariance (MANCOVA) was conducted because the assumption was that there is a significant relationship between the set of dependent variables and the covariate. All of the preceding rationale for this statistical approach with hyperfemininity as the covariate is relevant for use of athletic identity as a covariate.
The dependent variables were entered in to the dependent variables box of the General Linear Model – Multivariate tests in the Statistical Package for the Social Sciences (SPSS) program. The independent variable, participation in the self-defense course, was dummy coded (0) for no treatment and (1) for treatment, and entered into the fixed factors box. Athletic identity was entered into the covariate box. Outputs controlled for the effects of athletic identity and determined if the degree to which a person identifies with the athlete role and finds personal significance in their involvement with sport and exercise has an impact on the dependent variables.
CHAPTER 4
RESULTS

Included in this section are the demographic and statistical analyses for each of the examined variables. The statistical tests used and the major findings are discussed. The following research questions were examined in this study:

Research Question 1. Does participation in a women’s self-defense course affect levels of assertiveness, self-defense self-efficacy, activities self-efficacy, interpersonal self-efficacy, and hyperfemininity?

Research Question 2. Does hyperfemininity affect measures of assertiveness, self-defense self-efficacy, activities self-efficacy, and interpersonal self-efficacy among women who complete a women’s self-defense course?

Research Question 3. Do women who have higher levels of athletic identity differ than women with little or no athletic identity on measures of assertiveness, self-defense self-efficacy, activities self-efficacy, and interpersonal self-efficacy among women who complete a women’s self-defense course?

4.1 Participants

The total number of participants in the research was 143. Sixty-eight women were in the treatment group and completed the self-defense training and 75 women were
in the control group and did not have the self-defense training. The majority of the participants in this research were Caucasian (74.1%). Asian American women made up 11.2% of the sample, African American women comprised 9.8% of the participants, Hispanic women 2.1%, and 2.8% of the women reported being of another ethnicity (see Table 4.1).

<table>
<thead>
<tr>
<th>Race of the Respondent</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>14</td>
<td>9.8</td>
</tr>
<tr>
<td>Caucasian</td>
<td>106</td>
<td>74.1</td>
</tr>
<tr>
<td>Asian American</td>
<td>16</td>
<td>11.2</td>
</tr>
<tr>
<td>Hispanic</td>
<td>3</td>
<td>2.1</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>2.8</td>
</tr>
<tr>
<td>Total</td>
<td>143</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 4.1: Race of the Respondent (n=143)

Race of the respondent was also examined between the treatment and control groups. Table 4.2 displays the ethnicity of participants in the treatment and control groups.
Table 4.2 Race of the Respondents in the Treatment and Control Groups (n=143)

<table>
<thead>
<tr>
<th></th>
<th>African American</th>
<th>Caucasian</th>
<th>Asian American</th>
<th>Hispanic</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>9</td>
<td>56</td>
<td>9</td>
<td>1</td>
<td>4</td>
<td>68</td>
</tr>
<tr>
<td>Control</td>
<td>5</td>
<td>50</td>
<td>7</td>
<td>2</td>
<td>0</td>
<td>75</td>
</tr>
</tbody>
</table>

Participants were on average 21.4 years of age (SD=3.80) at the time of the course and ranged in age from 18 to 47. College seniors made up 26.6% of the participants with juniors at 25.2%, sophomores 21.7%, and freshman 11.2%. Graduate students and staff comprised 15.3% of respondents (see Table 4.2). Approximately one-fifth (n = 30) of the respondents reported previously attending a rape prevention program, a martial arts class, or a self-defense class (see Table 4.3). Descriptions of responses ranged in intensity and duration (e.g. “Someone came to a high school assembly to talk about rape prevention” to “I have trained in Tae Kwon Do for five years”).
<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>16</td>
</tr>
<tr>
<td>Sophomore</td>
<td>31</td>
</tr>
<tr>
<td>Junior</td>
<td>36</td>
</tr>
<tr>
<td>Senior</td>
<td>38</td>
</tr>
<tr>
<td>Graduate</td>
<td>12</td>
</tr>
<tr>
<td>Faculty/Staff</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>143</td>
</tr>
</tbody>
</table>

Table 4.3: Year in School of the Respondent (n=143)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>30</td>
</tr>
<tr>
<td>No</td>
<td>113</td>
</tr>
<tr>
<td>Total</td>
<td>143</td>
</tr>
</tbody>
</table>

Table 4.4: Previous Attendance at a Rape Prevention Program, a Martial Arts Class, or a Self-Defense Class (n=143)
The pooled mean of the following questions comprised the athletic identity score. Participants rated their responses on a scale of 1 to 10. Responses to the question, “To what degree are sports and exercise of personal importance to you?” yielded a mean score of 7.09. Responses to the question, “To what degree do you identify with the athletic role?” yielded a mean score of 6.01, with an overall athletic identity score of 6.55 (SD=2.22) (see Figure 4.1).
Figure 4.1: Frequency Chart of Athletic Identity Scores of Respondents (n=143)
Participants in the treatment and control group were similar on demographic variables and no statistically significant differences existed on the demographic variables of age, year in school, previous experience at rape prevention, martial arts, or self-defense courses, and athletic identity of the treatment and control group (see Table 4.5).

<table>
<thead>
<tr>
<th></th>
<th>Mean (SD, n) Treatment</th>
<th>Mean (SD, n) Control</th>
<th>t(df)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>21.33(2.93, 66)</td>
<td>21.53(4.45, 74)</td>
<td>.300(138)</td>
</tr>
<tr>
<td>Year in School</td>
<td>3.18(1.10, 68)</td>
<td>3.26(1.70, 75)</td>
<td>.543(141)</td>
</tr>
<tr>
<td>Previous Experience</td>
<td>1.79(.41, 68)</td>
<td>1.86(.83, 75)</td>
<td>.655(141)</td>
</tr>
<tr>
<td>Athletic Identity</td>
<td>6.59(2.28, 68)</td>
<td>6.52(2.17, 75)</td>
<td>-.183(141)</td>
</tr>
</tbody>
</table>

Table 4.5: Univariate t-tests for Age, Year in School, Previous Experience at Rape Prevention, Martial Arts, or Self-Defense Course, and Athletic Identity of the Treatment and Control Group

4.2 Assumptions of Multivariate Analysis of Variance

Prior to the statistical analysis, the assumptions of the general linear model multivariate analysis of variance were tested to determine if the following assumptions of MANOVA were valid: (a) the observations must be independent, (b) the variance-covariance matrices must be equal for all treatment groups, and (c) the set of dependent variables must follow a multivariate normal distribution.
4.2.1 *Assumption 1: The observations must be independent.*

The data collected for this research took place on different days with different groups of women. All necessary precautions were taken to ensure standard procedures were followed among data collection phases and the participants completed their instruments independent of one another. The space in which the instruments were completed was private and quiet and the instructions for completion were straightforward and succinct.

4.2.2 *Assumption 2: The variance-covariance matrices must be equal for all treatment groups.*

An examination of substantial differences in the amount of variance of between groups for each dependent variable determines the approximate equality of treatment groups. Evidenced in Table 4.6, the results of the Box test indicate that a significant difference exists as $p<.05$. However, according to Hair, Anderson, Tathan, and Black (1998), “a violation of this assumption has minimal impact if the groups are of approximately equal size,” (p.348). In the MANOVA analysis the control group =52 and the treatment group =53.
Table 4.6: Box’s Test of Equality of Covariance Matrices

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Box’s M</strong></td>
<td>36.482</td>
</tr>
<tr>
<td><strong>F</strong></td>
<td>2.305</td>
</tr>
<tr>
<td><strong>Df1</strong></td>
<td>15</td>
</tr>
<tr>
<td><strong>Df2</strong></td>
<td>42680.736</td>
</tr>
<tr>
<td><strong>Sig.</strong></td>
<td>.003</td>
</tr>
</tbody>
</table>

4.2.3 *Assumption 3: The set of dependent variables must follow a multivariate normal distribution.*

Observations of each dependent variable reveal that each generally follow a normal distribution. Multivariate normality assumes normal distribution of the joint effect of two variables (Hair et al., 1998). Boxplots in figures 4.2, 4.3, 4.4, 4.5, and 4.6 demonstrate the approximate normal distribution on measures of assertiveness, hyperfemininity, self-defense self-efficacy, activities self-efficacy, and interpersonal self-efficacy.
Figure 4.2: Boxplots of mean scores on the Rathus Assertiveness Schedule
Figure 4.3: Boxplots of mean scores on the Hyperfemininity Scale
Figure 4.4: Boxplots of mean scores on the Interpersonal Self-Efficacy Scale
Figure 4.5: Boxplots of mean scores on the Activities Self-Efficacy Scale
Figure 4.6: Boxplots of mean scores on the Self-Defense Self-Efficacy Scale
4.3 Data Analysis

SPSS version 11.5 was used for analysis. Total N of 143 was reduced to 105 with the deletion of cases that had missing data. Cases were not used in the MANOVA that had any missing data on any of the dependent measures. Due to the fact that there were more than the suggested number of cases for adequate power (n = 80), the reduction of the cases with missing data did not impact the statistical power. For the multivariate tests, cases that were missing data on any of the instruments were not included in the analysis. A correlation analysis indicated that hyperfemininity was significantly negatively correlated with interpersonal self-efficacy ($r = -.24$). Assertiveness was moderately, but significantly correlated to the three self-efficacy scales ($r = .42, .27, .50$), and to athletic identity ($r = .27$). Athletic identity was also significantly correlated to activities self-efficacy ($r = .19$). Self-defense self-efficacy, activities self-efficacy, and interpersonal self-efficacy were all positively correlated and significantly significant (see Table 4.7).
<table>
<thead>
<tr>
<th></th>
<th>Hyperfemininity</th>
<th>Assertiveness</th>
<th>Self Defense S. E.</th>
<th>Activities S. E.</th>
<th>Interpersonal S. E.</th>
<th>Athletic Identity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hyperfemininity</td>
<td>.672&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assertiveness</td>
<td>-.113</td>
<td>.842&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Defense S. E.</td>
<td>-.138</td>
<td>.422**</td>
<td>.994&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activities S. E.</td>
<td>-.076</td>
<td>.272**</td>
<td>.501**</td>
<td>.707&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpersonal S. E.</td>
<td>-.244**</td>
<td>.497**</td>
<td>.641**</td>
<td>.403**</td>
<td>.918&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Athletic Identity</td>
<td>.147</td>
<td>.266**</td>
<td>.073</td>
<td>.187**</td>
<td>.048</td>
<td>.855&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed) (n= 105).

<sup>a</sup> Internal reliabilities (Cronbach’s alpha coefficients) are written on the diagonal.

Table 4.7: Intercorrelations and Internal Reliabilities of the Hyperfeminity Scale, Rathus Assertiveness Schedule, Self-Defense Self-Efficacy Scale, Activities Self-Efficacy Scale, Interpersonal Self-Efficacy Scale and Athletic Identity Score
A between-subjects multivariate analysis of variance was performed on five dependent variables: assertiveness, hyperfemininty, self-defense self-efficacy, activities self-efficacy, and interpersonal self-efficacy. The independent variable was participation in the ten-week women’s self-defense course, a dichotomous variable. Effect sizes were generated from the MANOVA, PARAMETER subcommand, within SPSS. Effect size was estimated by eta, and power was estimated from the MANOVA program.

Tabachnick and Fidell (2001) report that Wilks’ Lambda is the “the criterion of choice” (p. 348) for use with MANOVA, as it is the criterion provided in all MANOVA programs and most research reports. Wilks’ Lambda revealed that the combined dependent variables were significantly affected by the treatment, $F(5, 99) = 42.85, p < .001$. The results reflected a moderately strong association between the treatment and the dependent variables, $\eta = .68$. Women who participated in the self-defense course had significantly higher scores on the Rathus Assertiveness Schedule, the self-defense self-efficacy scale, the interpersonal self-efficacy scale and the activities self-efficacy scale (see Table 4.8).
### Instrument Treatment

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Treatment (n=53) M(SD)</th>
<th>Control (n=52) M(SD)</th>
<th>F(5,99)</th>
<th>Effect Size (η)</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assertiveness</td>
<td>17.66(23.28)</td>
<td>2.94(22.54)</td>
<td>11.56</td>
<td>.318**</td>
<td>.920</td>
</tr>
<tr>
<td>Hyperfemininity</td>
<td>5.51(2.92)</td>
<td>5.96(3.77)</td>
<td>.47</td>
<td>.070</td>
<td>.105</td>
</tr>
<tr>
<td>Interpersonal Self-Efficacy</td>
<td>8.12(.99)</td>
<td>7.02(1.57)</td>
<td>18.49</td>
<td>.390**</td>
<td>.989</td>
</tr>
<tr>
<td>Activities Self-Efficacy</td>
<td>5.71(1.17)</td>
<td>4.73(.97)</td>
<td>21.64</td>
<td>.417**</td>
<td>.996</td>
</tr>
<tr>
<td>Self-Defense Self-Efficacy</td>
<td>9.04(1.07)</td>
<td>4.75(1.95)</td>
<td>197.13</td>
<td>.810**</td>
<td>&gt;.99</td>
</tr>
</tbody>
</table>

**p < .01


#### 4.3.1 Research Question One

Does participation in a women’s self-defense course affect levels of assertiveness, self-defense self-efficacy, activities self-efficacy, interpersonal self-efficacy, and hyperfemininity?

**Assertiveness**

There was a significant difference between the control groups’ scores and treatment groups’ scores on the Rathus Assertiveness Schedule. A t-test revealed significance between the means. The control group scored a mean of 4.15 (SD = 22.94), and the treatment group scored a mean of 18.83 (SD = 21.88) at the p<.01 level, $t = -3.85, r = .312$ (see Table 4.9). The null hypothesis of no increase was rejected.

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Self-Defense Self-Efficacy

There was a significant difference between the control groups’ scores and treatment groups’ scores on the Self-Defense Self-Efficacy Scale. A t-test revealed significance between the means. The control group scored a mean of 4.75 (SD = 1.79), and the treatment group scored a mean of 8.89 (SD = 1.12) at the $p<.01$ level, $t = -16.40$, $r = .810$ (see Table 4.9). The null hypothesis of no increase was rejected.

Activities Self-Efficacy

There was a significant difference between the control groups’ scores and treatment groups’ scores on the Activities Self-Efficacy Scale. A t-test revealed significance between the means. The control group scored a mean of 4.71 (SD = .98), and the treatment group scored a mean of 5.65 (SD = 1.23) at the $p<.01$ level, $t = -4.90$, $r = -.395$ (see Table 4.9). The null hypothesis of no increase was rejected.

Interpersonal Self-Efficacy

There was a significant difference between the control groups’ scores and treatment groups’ scores on the Interpersonal Self-Efficacy Scale. A t-test revealed significance between the means. The control group scored a mean of 6.92 (SD = 1.42), and the treatment group scored a mean of 8.19 (SD = .95) at the $p<.01$ level, $t = -6.31$, $r = .465$ (see Table 4.9). The null hypothesis of no increase was rejected.

Hyperfemininity

There was not a significant difference between the control groups’ scores and treatment groups’ scores on the Hyperfemininity Scale. A t-test revealed significance
between the means. The control group scored a mean of $5.98 (SD = 3.68)$, and the
treatment group scored a mean of $5.53 (SD = 2.92)$ at the $p < .01$ level, $t = -3.85,
r = -.069$ (see Table 4.9). The null hypothesis of no increase was accepted.

<table>
<thead>
<tr>
<th></th>
<th>Mean (SD,n) Treatment</th>
<th>Mean (SD,n) Control</th>
<th>t (df)</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assertiveness</td>
<td>18.83(21.88,65)</td>
<td>4.15(22.94, 73)</td>
<td>-3.85 (136) **</td>
<td>.312</td>
</tr>
<tr>
<td>Hyperfemininity</td>
<td>5.53(2.92, 59)</td>
<td>5.98(3.68, 57)</td>
<td>0.74 (114)</td>
<td>-.069</td>
</tr>
<tr>
<td>Interpersonal Self-Efficacy</td>
<td>8.19(.95, 68)</td>
<td>6.92(1.42, 74)</td>
<td>-6.31 (140) **</td>
<td>.465</td>
</tr>
<tr>
<td>Activities Self-Efficacy</td>
<td>5.65(1.22, 65)</td>
<td>4.71(.98, 68)</td>
<td>-4.90 (131) **</td>
<td>.395</td>
</tr>
<tr>
<td>Self-Defense Self-Efficacy</td>
<td>8.90(1.12, 66)</td>
<td>4.75(1.79, 72)</td>
<td>-16.40 (136) **</td>
<td>.810</td>
</tr>
</tbody>
</table>

** p < .01

Table 4.9: Univariate t-tests of Assertiveness, Hyperfemininity, Interpersonal Self-Efficacy, Activities Self-Efficacy and Self-Defense Self-Efficacy

4.3.2 Research Question Two

Does hyperfemininity affect measures assertiveness, self-defense self-efficacy, activities self-efficacy, and interpersonal self-efficacy, and athletic identity among women who complete a women’s self-defense course? A MANCOVA was run to factor out the effects of the hyperfemininity score and to determine its impact on the observed changes in assertiveness, self-defense self-efficacy, activities self-efficacy, and
interpersonal self-efficacy. MANCOVA results using Wilks’ Lambda revealed that there was statistical significance, $F(4,99) = 53.21$, $p<.05$. However, hyperfemininity did not affect the significance level of any of the dependent variables (see Table 4.10).

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Treatment M (n=53)</th>
<th>Control M (n=52)</th>
<th>F(4, 99)</th>
<th>Effect Size ($\eta$)</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assertiveness</td>
<td>17.47&lt;sub&gt;a&lt;/sub&gt;</td>
<td>3.14&lt;sub&gt;a&lt;/sub&gt;</td>
<td>10.99**</td>
<td>.311</td>
<td>.907</td>
</tr>
<tr>
<td>Interpersonal Self-Efficacy</td>
<td>8.10&lt;sub&gt;a&lt;/sub&gt;</td>
<td>7.04&lt;sub&gt;a&lt;/sub&gt;</td>
<td>17.91**</td>
<td>.386</td>
<td>.987</td>
</tr>
<tr>
<td>Activities Self-Efficacy</td>
<td>5.70&lt;sub&gt;a&lt;/sub&gt;</td>
<td>4.74&lt;sub&gt;a&lt;/sub&gt;</td>
<td>20.97**</td>
<td>.414</td>
<td>.995</td>
</tr>
<tr>
<td>Self-Defense Self-Efficacy</td>
<td>9.03&lt;sub&gt;a&lt;/sub&gt;</td>
<td>4.77&lt;sub&gt;a&lt;/sub&gt;</td>
<td>195.80**</td>
<td>.811</td>
<td>&gt;.99</td>
</tr>
</tbody>
</table>

**p < .01
Note: <sub>a</sub>Covariates appearing in the model are evaluated at the following values: Hyperfemininity = 5.7333.

Table 4.10: Estimated Marginal Means, F, Effect Sizes, and Power Estimates of MANCOVA with Hyperfemininity as the Covariate

4.3.3 Research Question Three

Do women who have higher levels of athletic identity differ than women with little or no athletic identity on measures of assertiveness, self-defense self-efficacy, activities self-efficacy, and interpersonal self-efficacy among women who complete a women’s self-defense course? A MANCOVA was run to factor out the effects of the
athletic identity score and determine whether athletic identity score and to determine its impact on the observed changes in assertiveness, self-defense self-efficacy, activities self-efficacy, and interpersonal self-efficacy. MANCOVA results using Wilks’ Lambda revealed that there was statistical significance, $F(4, 119) = 64.39, p < .001$ (see Table 4.11). However, athletic identity did not affect the significance of the dependent variables.

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Treatment (n=61) M</th>
<th>Control (n=64) M</th>
<th>F(4, 119)</th>
<th>Effect Size ($\eta$)</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assertiveness</td>
<td>17.67$_{a}$</td>
<td>2.91$_{a}$</td>
<td>12.20**</td>
<td>.327</td>
<td>.933</td>
</tr>
<tr>
<td>Interpersonal Self-Efficacy</td>
<td>8.12$_{a}$</td>
<td>7.02$_{a}$</td>
<td>18.31**</td>
<td>.390</td>
<td>.989</td>
</tr>
<tr>
<td>Activities Self-Efficacy</td>
<td>5.71$_{a}$</td>
<td>4.73$_{a}$</td>
<td>21.83**</td>
<td>.414</td>
<td>.996</td>
</tr>
<tr>
<td>Self-Defense Self-Efficacy</td>
<td>9.04$_{a}$</td>
<td>4.75$_{a}$</td>
<td>196.61**</td>
<td>.811</td>
<td>&gt;.99</td>
</tr>
</tbody>
</table>

** p<.001

Note:$_{a}$ Covariates appearing in the model are evaluated at the following values: Athletic Identity = 6.6190.

Table 4.11: Estimated Marginal Means, $F$, Effect Sizes, and Power Estimates of MANCOVA with Athletic Identity as the Covariate
4.3.4 Additional Analyses

Affect of Previous Training

Additional statistical analyses were conducted after each of the initial research questions were addressed. Specifically, the impact of previously attending a rape prevention program, a martial arts class, or a self-defense class was examined to determine if any type of previous training had a significant affect on the control groups’ levels of assertiveness, activities self-efficacy, self-defense self-efficacy, and interpersonal self-efficacy. Univariate t-tests indicated that the previous training had no statistically significant impact on the participants’ scores on these variables (see Table 4.12).

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Mean (SD,n) Previous Training</th>
<th>Mean (SD,n) No Previous Training</th>
<th>df</th>
<th>t</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assertiveness</td>
<td>9.37(23.34,16)</td>
<td>2.20(22.72,56)</td>
<td>70</td>
<td>1.11</td>
<td>.130</td>
</tr>
<tr>
<td>Interpersonal Self-Efficacy</td>
<td>7.27(1.19,16)</td>
<td>6.78(1.46,57)</td>
<td>71</td>
<td>1.23</td>
<td>.145</td>
</tr>
<tr>
<td>Activities Self-Efficacy</td>
<td>5.09(.94,14)</td>
<td>4.63(.97,53)</td>
<td>65</td>
<td>1.60</td>
<td>.195</td>
</tr>
<tr>
<td>Self-Defense Self-Efficacy</td>
<td>5.25(1.98,15)</td>
<td>4.65(1.73,56)</td>
<td>69</td>
<td>1.15</td>
<td>.138</td>
</tr>
</tbody>
</table>

Table 4.12: Univariate t-tests Assessing the Impact of Previous Attendance at a Rape Prevention Program, a Martial Arts Class, or a Self-Defense Class on Measures of Assertiveness, Interpersonal Self-Efficacy, Activities Self-Efficacy and Self-Defense Self-Efficacy
Asian American Women and Caucasian Women

Asian American women comprised 11.2% of the population in this sample. An examination of the differences between Asian American women and Caucasian women who have not completed a self-defense course (i.e. in the control group) on measures of assertiveness, interpersonal self-efficacy, activities self-efficacy and self-defense self-efficacy was conducted. The results indicate that the Asian American women had significantly lower levels of activities self-efficacy than their Caucasian counterparts, $t = -3.84, df = 58, p = .008, r = .451$ (see table 4.13).

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Mean (SD, n)</th>
<th>Mean (SD, n)</th>
<th>df</th>
<th>t</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assertiveness</td>
<td>4.22(12.37,9)</td>
<td>4.89(23.65,55)</td>
<td>62</td>
<td>-.128</td>
<td>.017</td>
</tr>
<tr>
<td>Interpersonal Self-Efficacy</td>
<td>7.11(2.02,9)</td>
<td>6.91(1.42,55)</td>
<td>62</td>
<td>.371</td>
<td>.045</td>
</tr>
<tr>
<td>Activities Self-Efficacy</td>
<td>3.65(1.00,8)</td>
<td>4.93(.86,52)</td>
<td>58</td>
<td>-3.84*</td>
<td>.451</td>
</tr>
<tr>
<td>Self-Defense Self-Efficacy</td>
<td>5.31(2.39,9)</td>
<td>4.46(1.64,53)</td>
<td>60</td>
<td>1.03</td>
<td>.130</td>
</tr>
</tbody>
</table>

* p<.05

Affect of Missed Class Sessions

In an attempt to understand if the number of class sesion attended had an affect on levels of assertiveness, interpersonal self-efficacy, activities self-efficacy, and self-defense self-efficacy, univariate t-tests were run comparing students who did not miss any classes to students who missed one or more classes. The results indicated that there were no significant differences between groups on any of these variables (see Table 4.14).

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Mean (SD,n) Missed no classes</th>
<th>Mean (SD,n) Missed one or more classes</th>
<th>df</th>
<th>t</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assertiveness</td>
<td>17.12(21.87,28)</td>
<td>20.11(22.10,37)</td>
<td>63</td>
<td>-.538</td>
<td>.071</td>
</tr>
<tr>
<td>Interpersonal Self-Efficacy</td>
<td>8.16(1.11,29)</td>
<td>8.21(1.12,39)</td>
<td>66</td>
<td>-.219</td>
<td>.026</td>
</tr>
<tr>
<td>Activities Self-Efficacy</td>
<td>5.79(1.28,29)</td>
<td>5.53(1.17,36)</td>
<td>63</td>
<td>.884</td>
<td>.110</td>
</tr>
<tr>
<td>Self-Defense Self-Efficacy</td>
<td>9.14(1.07,27)</td>
<td>8.71(1.14,39)</td>
<td>64</td>
<td>1.54</td>
<td>.190</td>
</tr>
</tbody>
</table>


4.4 Summary

Women who were participants in a self-defense course and women who did not complete a self-defense course were compared on their levels of assertiveness,
hyperfemininity, self-defense self-efficacy, activities self-efficacy, and interpersonal self-efficacy. The athletic identity of the participants was also investigated. Overall there were significant differences in the participants’ levels of assertiveness, self-defense self-efficacy, activities self-efficacy, and interpersonal self-efficacy. The following chapter will address the implications of these results.
CHAPTER 5
DISCUSSION

5.1 Purpose of the Study

The purpose of this study was to determine if women’s self-defense training had an impact on participants’ levels of assertiveness, hyperfemininity, activities self-efficacy, self-defense self-efficacy, and interpersonal self-efficacy. In addition, the level of athletic identity of the participants was examined in relation to the variables. Previous empirical research on women’s self-defense and rape prevention has demonstrated many benefits to women including increases in assertiveness, self-efficacy, perceived competence, and self-defense skills (Gidycz, Layman et al., 2001; Heyden et al., 1999; Weitlauf et al., 2000; Weitlauf et al., 2001). Although these results are encouraging, there has been little examination of the personality and lifestyle characteristics that contribute to an ability to effectively engage in rape resistant behavior. This is the first study to examine the impact of hyperfemininity and athletic identity on variables examined in self-defense and rape prevention programming including: assertiveness, activities self-efficacy, self-defense self-efficacy, and interpersonal self-efficacy. The following will discuss the results of this research and provide a summary of the main findings. Limitations regarding generalizability will be discussed as well as suggestions for future research.
5.2 Significant Findings

As expected there were several significant findings in this research. Of particular interest are the significant changes that were experienced by the women who completed the self-defense course and the relationship to the existing research on rape resistant behavior.

5.2.1 Assertiveness

As predicted, women who completed the self-defense training had significantly higher levels of assertiveness than the women who did not have the training. In previous examinations of women who were raped and women who resisted rape it was found that assertive verbal and physical responses were effective in reducing the incidence of completed rapes (Bart, 1981; Bart & O'Brien, 1984; Kleck & Sayles, 1990; Quinsey & Upfold, 1985; Ullman & Knight, 1993; Zoucha-Jensen & Coyne, 1993); however, previous women’s self-defense research has had mixed results regarding impacting assertiveness. Weitlauf and colleagues (2000, 2001) evidenced a significant change in assertiveness in one study, and no significant change in a second study.

The course was effective in teaching women assertiveness skills as measured by the Rathus Assertiveness Schedule. This instrument was internally consistent with this sample and had a Cronbach’s alpha coefficient of .842. Assertiveness was also significantly positively correlated with activities self-efficacy, self-defense self-efficacy, interpersonal self-efficacy and athletic identity. Indicating that women who are more assertive have greater perceptions of self-efficacy on the three efficacy scales and also report higher levels of athletic identity. Assertiveness was negatively correlated with hyperfemininity, although not significantly.
Assertiveness has been linked to many positive health and interpersonal benefits for women including academic self-efficacy, adjustment, and decreased levels of loneliness (Poyrazli et al., 2002). Additionally assertive women report greater levels of internal locus of control and report experiencing fewer health problems (Williams & Stout, 1984). Women who develop assertiveness skills can stand up for themselves and not allow themselves to be taken advantage of (Adams-Roy & Barling, 1998). Thus, in addition to developing a skill that is related to rape resistant behavior, women who develop assertiveness skills may also improve other aspects of their lives.

There is little in the existing research that identifies concrete methodology for teaching women how to be assertive; however, the results of this research indicate that women who completed this training evidenced increased levels of assertiveness. Women had the opportunity to practice being assertive in a variety of situations and were required to utilize their voice to stand up for themselves in the class. Homework assignments required to students to actively practice their newly developing skills and report back to the class how they stood up for themselves. This active rehearsal component that has previously been associated with the acquisition of physical self-defense skills may be a key strategy in the development of assertiveness skills. Some sexual assault prevention programs report addressing the importance of assertive responses for women in their educational sessions (Gidycz, Layman et al., 2001; Gidycz, Rich et al., 2001; Weitlauf et al., 2001), but do not report requiring the women to practice the behaviors or engage in a rehearsal component. Ozer and Bandura (1990) reported that participants in their research were taught, “attitudinal and verbal techniques for halting coercive and potentially assultive encounters,” and “how to deal assertively with inappropriate
personal encroachments” (p. 475); however, there was no systematic assertiveness measure utilized to assess the acquisition of such skills. This research indicates that the combination of teaching assertiveness skills, practicing assertive behaviors, and measuring assertive responses is effective in demonstrating a change in levels of assertiveness of participants.

Assertiveness had a small but significant correlation ($r = .266$) with athletic identity indicating that women who reported higher levels of athletic identity also reported higher levels of assertive behavior. Due to the fact that sports generally require competitive and assertive behavior, female athletes may engage in this type of behavior more readily than their non-athletic counterparts. Sport engagement often involved physical and mental challenges with oneself and setting limits with a competitor. This active process of accepting challenges while maintaining limits is part of the training and competition of an athlete. Perhaps these behaviors are generalizable from the playing field to the personal arena; however, more research on this topic is necessary to make such inferences.

Assertiveness was significantly correlated with the three self-efficacy scales, with the strongest correlation with interpersonal self-efficacy ($r = .422$); a shared variance of nearly 18%. Assertiveness and interpersonal self-efficacy are concerned with the interactions that one has with others in various settings and environments. Reporting an increased likelihood of standing up for oneself with a supervisor at work (assertiveness) is demonstrated to be related to believing in one’s ability to adequately handle an uncomfortable or possible threat situation, such as being followed by a man (interpersonal self-efficacy).
5.2.2 Self-Efficacy

When an individual’s performance on a particular task determines the outcome, efficacy beliefs account for most of the variance in the anticipated, or expected, outcome (Bandura, 1997). The wide body of literature on self-efficacy examines the way in which people attempt to exercise control over how they live their lives and the processes through which these beliefs produce effects (Bandura, 1997). As this relates to women’s self-defense, efficacious beliefs about one’s ability to engage in specific behaviors can have an effect on the way that women live their lives and the way that they behave in potentially threatening situations. This course had a significant impact on each of the three self-efficacy scales: self-defense, activities, and interpersonal and paralleled the outcomes of Ozer and Bandura’s (1990) research. The Cronbach’s alpha coefficients on each scale for this sample were .994, .707, and .918 respectively. As predicted, women who completed the self-defense training reported significantly higher levels of self-defense self-efficacy indicating a belief in their ability to effectively engage in self-defense skills and techniques in an attack situation. Many women have reported that they would not know what to do if they were in a potential threat situation and are afraid of “freezing up” and being unable to do anything (Bateman, 1978). Self-defense self-efficacy demonstrates a woman’s belief in her capacity to utilize her body to successfully defend herself. The effect size of .810 indicates that there is a large difference between the treatment and control groups on self-defense self-efficacy. Self-defense self-efficacy was also significantly positively correlated to both activities self-efficacy and interpersonal self-efficacy, suggesting that this self-defense training affected women’s beliefs about themselves in a variety of situations and circumstances. Although not
examined in this study, the effects of teaching women self-defense skills has been associated with increases in global self-efficacy. Specifically, Ozer and Bandura (1990) found that through teaching women self-defense skills they not only observed increases in activities, interpersonal, and self-defense self-efficacy, but also report that self-efficacy beliefs benefit cognitive, affective, and behavioral outcomes of personal empowerment. Weitlauf and colleagues (2000, 2001) reported that through teaching women self-defense and increasing participant’s perceptions of self-efficacy, global self-efficacy was affected as well. The women who took the course reported an increase in their perceived ability to defend themselves and also in their ability to be successful in a variety of other life situations. Therefore, the development of the efficacy skills in the self-defense class related to self-protection may also generalize into other aspects of ones’ life.

Also as predicted, women who completed self-defense training reported significantly higher levels of activities self-efficacy, indicating their ability to engage in a variety of activities by themselves, and with others, during the day and night. This significant difference indicates that the participants’ avoidant behavior is reduced and they are engaging in a higher level of freedom of action (Ozer & Bandura, 1990). Self-defense participants will more readily choose to engage in a variety of activities that they may have previously avoided due to concerns over personal safety, such as riding a bus or attending an evening lecture alone. Activities self-efficacy is important because it directly refutes many of the messages that women have traditionally received regarding how to protect themselves from sexual assault, such as by restricting their activities. Walking alone at night and riding public transportation have never been correlated with increased sexual assault; however, these are activities women have avoided due to the
messages that they have received about personal safety and harm avoidance. Activities self-efficacy was also positively significantly correlated with assertiveness, self-defense self-efficacy, interpersonal self-efficacy, and athletic identity. Although difficult to assess, the relationship between each of the self-efficacy scales likely not conceptually independent. As feelings of efficacy increase on one of the scales an increase in seen on the other two scales. Perhaps it is due to an increased perceived ability to defend oneself and stand up for oneself that women feel capable of altering the types of activities in which they engage.

The statistically significant correlation between activities self-efficacy and athletic identity suggests that the women who reported higher levels of athletic identity are more efficacious at participating in a variety of activities. This scale does not measure physical activities per se, rather attendance at various events and social situations is examined. Thus, athletic endorsement is related to perceptions of efficacy.

Highly correlated to activities self-efficacy is interpersonal self-efficacy. The women who participated in the women’s self-defense course endorsed significantly higher levels of interpersonal self-efficacy indicating their perception of their ability to engage in various self-protective activities in a variety of situations, such as walking purposefully if you are feeling followed, or asking for help if you are being harassed at a bus stop.

5.2.3 Hyperfemininity and Interpersonal Self-Efficacy

A small but statistically significant correlation was found between hyperfemininity and interpersonal self-efficacy \( (r = -.244) \). This indicates that women who are more hyperféminine have decreased perceptions of their ability to engage in a variety of
behaviors in dating and social situations. Previous research on hyperfemininity has indicated that hyperfeminine women have an increased acceptance of sexually aggressive behavior in men and also believe that they need a man in their life to be fulfilled (Mosher & Skirkin, 1984; Murnen & Byrne, 1991). As it relates to interpersonal self-efficacy, hyperfeminine women would be less likely to refuse sexual advances from men or engage in behaviors that could make men feel uncomfortable. Hyperfeminine women have difficulty saying no to men, and generally expect men and women to fill specific social roles. Thus, more hyperfeminine women would not engage in gender atypical behaviors such as driving to a date, telling a date to go home, or refusing to kiss a date goodnight (Murnen & Byrne, 1991). Whereas self-defense self-efficacy relates almost entirely to physical defense skills and activities self-efficacy relates to attending various activities, interpersonal self-efficacy examines the interactions that are had with others and the perceived confidence in one’s ability to effectively control these situations. In the instance of physical assault, self-defense self-efficacy would be of primary importance. However, in everyday situations and hassles, an individuals’ level of interpersonal self-efficacy is tested. Interpersonal self-efficacy is more concerned with how an individual interacts with others and moves through the world than how they physically defend themselves. Many items of the interpersonal self-efficacy scale are associated with how a person interacts with hassles and confrontations from men. As the research on hyperfemininity suggests that hyperfeminine women are less likely to confront men or behave in ways contradictory to traditional gender expectations, the significant relationship between interpersonal self-efficacy and hyperfemininity is illuminated.
5.2.4 *Asian American Women and Caucasian Women*

Asian American women comprised over 11% of the sample in this research a greater percentage than is found in the University as a whole (4.2%). Asian Americans were the second largest group in the study. For this reason, an examination was done to determine if any significant differences existed between Asian American women and Caucasian women. An additional finding, that was not initially hypothesized, was that Asian American women and Caucasian women differ significantly on activities self-efficacy. Caucasian women report higher efficacy regarding engaging in various activities.

It was unclear whether the women who identified themselves as Asian American were Asian American or were international Asian students. The race categories that women had available to identify with were somewhat limiting. International or first generation Asian students may have identified themselves as Asian American instead of identifying as Other. For this reason it is difficult to assert why there is difference between these groups. It is not unrealistic to think that international Asian women would be less inclined to engage in a wide variety of activities in a town and country that is new and unfamiliar. Riding on buses alone and traveling to unknown cities alone at night would be especially difficult for an individual who is relatively new to the country. Asian may be perceived as vulnerable in United States society due to their smaller stature, quiet voice, and unfamiliarity with the culture. The women who chose to enroll in this course may have identified themselves as vulnerable and chose to take an active role in reducing their vulnerability. However, without further investigation, it is difficult to make
assertions of this kind. Future investigations should allow for a more in depth examination of racial categories and offer more categories from which the women can choose.

5.3 Non-Significant Findings

5.3.1 Hyperfemininity

There was not a significant difference between the women who completed the self-defense course and the women who did not on measures of hyperfemininity. This finding is not surprising due to the fact that hyperfeminine ideology develops over a lifetime of gender socialization and is unlikely to change significantly over a period of ten weeks. Additionally, when hyperfemininity served as a covariate and was statistically controlled, there was no significant affect on the dependent variables. Hyperfemininity has previously been related to rape myth acceptance (Murnen & Byrne, 1991) indicating that hyperfeminine women are likely to believe rape myths, such as “Men should initiate sex and be in control during sex” and “Many women have an unconscious wish to be raped, and may then unconsciously set up a situation in which they are likely to be attacked.” To the extent that this is true, it is likely that women with higher levels of hyperfemininity would not consider attending a self-defense course as it may inherently contradict their world views and views of appropriate behavior for women. If hyperfeminine women believe that women have an unconscious desire to be raped, then it would not make sense for them to take preventative action to avoid sexual assault. An examination of a control group of women who did not register for a self-defense course would likely render different results, as there would likely be a greater concentration of hyperfeminine women.
4.3.2 Athletic Identity

Athletic identity, although correlated to assertiveness and activities self-efficacy did not account for any of the variance in the dependent variables in the multivariate analysis. Although never previously examined in the context of rape prevention or self-defense, research on athletic identity and the athletic personality indicate that there are differences between female athletes and non-athletes on various indices, such as masculinity, perceived self-competence, power, strength, and aggression (Andre & Holland, 1995; Die & Holt, 1989; Miller & Heinrich, 2001). Such characteristics have been associated with rape resistant behavior; however, the relationship was not fully established in this research study. The use of a psychometric athletic identity measure instead of two questions regarding athletic identity may yield different results. Due to the fact that the women’s self-defense course was housed in the Physical Activity and Educational Services School, participants were perhaps more likely to identify the course as a physical fitness course and in turn identify sports and exercise as important to them, regardless of their status as an athlete. Engaging in exercise and fitness, although important, was not the desired construct to measure. It cannot be clear from the two questions asked whether athletic identity was properly assessed.

5.4 Limitations

There are several limitations to this study that are important to note. The first is the self-selected sample that was utilized in this research. Although the women had an equal opportunity to be in any of the sections of the course, the results of this research are only generalizable to women who choose to take a women’s self-defense course. As previously mentioned in the discussion on hyperfemininity, it is likely that differences
exist between women who choose to take a self-defense course and those who do not. Although it is not feasible to have a true random sample because taking a self-defense class is a personal choice, the utilization of a control group of women who did not register for self-defense would illuminate the differences between these groups.

The demographics of this sample restrict the ability to generalize the findings of this research. Although there was greater ethnic diversity than many previous examinations of women’s self-defense with only 73% (Ozer & Bandura, 1990; Weitlauf et al., 2000; Weitlauf et al., 2001) of the women identifying as Caucasian, the fact that only 14 of the participants were African American and 16 were Asian American makes generalization of these results to these groups tentative. The majority of the women in this sample were traditional college-aged women, and all reside in a large Midwestern town. Thus generalizing to women of various ages or locations about the country is limited.

A final limitation is the issue of social desirability, particularly as related to the Hyperfemininity Scale. Several questions on this instrument clearly have socially desirable responses, such as, “It’s okay for a man to be a little forceful to get sex, or Any force used during sex is sexual coercion and should not be tolerated.” Particularly in the context of a women’s self-defense course, these responses may have not been a true measure of participants’ attitudes. However, this may be mitigated because the participants knew that their responses were anonymous.

5.5 Implications for Future Research

The research questions in this study have duplicated and extended previous research on women’s self-defense training. Further research that addresses the
limitations to this study and assesses personality and behavioral characteristics related to rape resistance is warranted, as is rigorous research that examines attitudinal and skill acquisition resulting from self-defense participation. Although this training is consistent with the research on rape resistant behavior, there has been no research that examines whether women are able to engage in these skills in a real rape attack situation. Longitudinal studies have been undertaken that examine the effects of rape prevention training on sexual victimization rates (Gidycz, Layman et al., 2001; Gidycz, Rich et al., 2001), however, no published research has examined the victimization rates of women trained in self-defense. Additionally, a longitudinal inquiry as to the maintenance of changes in assertiveness and self-efficacy is warranted. Follow-up research questions could include: (a) Did the women in the study report altering their behaviors or activities? (b) Were the significant changes in the dependent variables maintained at follow-up? (c) Did the changes in interpersonal self-efficacy, activities self-efficacy, and self-defense self-efficacy result in changes in global self-efficacy?

Of additional interest is the impact of previous sexual victimization on women’s choice to engage in self-defense, and in turn, effectively resist victimization in the future. Previous sexual victimization is highly correlated with future victimization (Gidycz, Layman et al., 2001), however teaching prevention strategies to survivors is a difficult prospect. The introduction of prevention skills to sexual assault survivors can be interpreted as blaming the victim for not engaging in such behaviors during their victimization. Therefore, this topic must be addressed in a specific context and with trained counseling professionals.
In future studies, an exploration of the characteristics of women who choose to take self-defense classes would assist researchers in marketing their programs, and also assist in understanding the differences that exist between women who choose to register for and participate in self-defense courses and women who do not evidence an interest in self-defense. A research question might be: Are women who sign-up for self-defense classes different than women who do not sign-up for self-defense classes on measures of assertiveness, hyperfemininity, self-efficacy, ethnicity, etc?

Finally, future research should examine the impact of the active rehearsal and practice component in prevention programs. This research indicates that it is the active engagement and practice of new behaviors and skills that results in significant change. Many prevention programs adopt a lecture or discussion format, however very few implement a training session in which participants engage actively in the process. An examination of the effects of rape prevention programming both with and without the active rehearsal would indicate whether this argument is plausible.

5.6 Conclusion

In general it appears that women who complete women’s self-defense training increase their assertiveness, activities self-efficacy, self-defense self-efficacy, and interpersonal self-efficacy. Hyperfemininity and athletic identity did not significantly impact the effects of the self-defense training, indicating that varying types of women can learn the techniques and skills associated with self-defense training and improve their levels of assertiveness and self-efficacy.


Krane, V. (2001). We can be athletic and feminine, but do we want to? challenging hegemonic femininity in women's sport. *Quest, 53*, 115-133.


Spence, J. T., & Helmreich, R. L. (1972). The attitudes toward women scale: An objective instrument to measure attitudes toward the rights and roles of women in contemporary society. *JSAS Catalog of Selected Documents In Psychology, 2*, 66.


APPENDIX A

INSTITUTIONAL REVIEW BOARD APPROVAL
<table>
<thead>
<tr>
<th><strong>Co-Investigator</strong></th>
<th>Name: Lisa Hinckelman</th>
<th>Phone: 893-8787</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Status:</td>
<td>Faculty</td>
<td>E-mail: <a href="mailto:hinkelman.1@osu.edu">hinkelman.1@osu.edu</a></td>
</tr>
<tr>
<td></td>
<td>Graduate Student</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Staff</td>
<td></td>
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<tr>
<td></td>
<td>Undergraduate Student</td>
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<tr>
<td></td>
<td>Other. Please specify.</td>
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<tr>
<td>Campus Address (room, building, street address) or Mailing Address:</td>
<td></td>
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<tr>
<td>Room 356 Arps Hall</td>
<td>1945 North High Street</td>
<td></td>
</tr>
<tr>
<td>Signature:</td>
<td>6/5/03</td>
<td>Date:</td>
</tr>
<tr>
<td>Fax:</td>
<td>292-4255</td>
<td></td>
</tr>
</tbody>
</table>

| **Protocol Title** | Self-defense training: An examination of assertiveness, hyperfemininity, self-efficacy, and athletic identity in women |

| **Source of Funding** | none |

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</thead>
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<tr>
<td>X Approved.</td>
<td>Research has been determined to be exempt under these categories: # 7. Research may begin as of the date of determination listed below.</td>
</tr>
<tr>
<td>□ Disapproved.</td>
<td>The proposed research does not fall within the categories of exemption. Submit an application to the appropriate Institutional Review Board for review.</td>
</tr>
</tbody>
</table>

Date of determination: 11/25/03  Signature: [Signature]
APPENDIX B

SCRIPT READ TO RESEARCH PARTICIPANTS
You are being asked to participate in a research project that is intended to help us better understand the impact of women’s self-defense training. Your participation in this study is voluntary and will not affect your grade in this class. The survey will take 30-45 minutes to complete. If you agree to participate, please stay while I pass out the surveys. If you do not wish to participate, you may leave now. You may decide not to participate at any time, even after you have received the survey.

Do NOT put your name on any of the surveys. Simply start with the page one and fill in the responses you see fit.

If you have any questions or concerns, please contact:

Darcy Haag Granello
688-4605
(write on board)
APPENDIX C

DEMOGRAPHIC QUESTIONNAIRE
What is your age? _____

What is your current year in school? (Circle one)

1st  2nd  3rd  4th  5th  Graduate Student  Faculty  Staff

What is your race?

________ African American
________ Caucasian
________ Asian American
________ Hispanic American
________ Other, please indicate _____________________

Prior to taking this self-defense course, have you ever attended a rape prevention program, a martial arts class, or a self-defense class (circle one)

Yes    No

If yes, please describe the type of course and the length of the training:

Why did you take this self-defense course?

To what degree are sports and exercise of personal importance to you?

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<th>9</th>
<th>10</th>
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<tbody>
<tr>
<td></td>
<td>Not at all Important</td>
<td>Somewhat Important</td>
<td>Extremely Important</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

To what degree do you identify with the athletic role?

<table>
<thead>
<tr>
<th></th>
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<th>3</th>
<th>4</th>
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<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I do not identify at all with the athletic role</td>
<td>I identify somewhat with the athletic role</td>
<td>I identify very much with the athletic role</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tbody>
</table>

How many class sessions in this self-defense course (EDU PAES 172) did you miss and did not make up by attending a class in a different section of the course? (Circle one)

<table>
<thead>
<tr>
<th></th>
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<th>2</th>
<th>3</th>
<th>more than 3</th>
</tr>
</thead>
</table>
APPENDIX D

RATHUS ASSERTIVENESS SCHEDULE
Directions: Indicate how characteristic or descriptive each of the following statements is of you by using the code given below.

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<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>+3</td>
<td>very characteristic of me, extremely descriptive</td>
</tr>
<tr>
<td>+2</td>
<td>rather characteristic of me, quite descriptive</td>
</tr>
<tr>
<td>+1</td>
<td>somewhat characteristic of me, slightly descriptive</td>
</tr>
<tr>
<td>-1</td>
<td>somewhat UNcharacteristic of me, slightly nondescriptive</td>
</tr>
<tr>
<td>-2</td>
<td>rather UNcharacteristic of me, quite nondescriptive</td>
</tr>
<tr>
<td>-3</td>
<td>very UNcharacteristic of me, extremely nondescriptive</td>
</tr>
</tbody>
</table>

1. Most people seem to be more aggressive and assertive than I am.
   
   -3  -2  -1  +1  +2  +3

2. I have hesitated to make or accept dates because of "shyness".
   
   -3  -2  -1  +1  +2  +3

3. When the food served at a restaurant is not done to my satisfaction, I complain about it to the server.
   
   -3  -2  -1  +1  +2  +3

4. I am careful to avoid hurting other people's feelings, even when I feel that I have been injured.
   
   -3  -2  -1  +1  +2  +3

5. If a salesman has gone to considerable trouble to show me merchandise that is not quite suitable, I have a difficult time in saying "no".
   
   -3  -2  -1  +1  +2  +3

6. When I am asked to do something, I insist upon knowing why.
   
   -3  -2  -1  +1  +2  +3

7. There are times when I look for a good, vigorous argument.
   
   -3  -2  -1  +1  +2  +3
8. I strive to get ahead as well as most people in my position.

-3  -2  -1  +1  +2  +3

9. To be honest, people often take advantage of me.

-3  -2  -1  +1  +2  +3

10. I enjoy starting conversations with new acquaintances and strangers.

-3  -2  -1  +1  +2  +3

11. I often don't know what to say to attractive persons of the opposite sex.

-3  -2  -1  +1  +2  +3

12. I will hesitate to make phone calls to business establishments and institutions.

-3  -2  -1  +1  +2  +3

13. I would rather apply for a job or for admission to a college by writing letters than by going through with personal interviews.

-3  -2  -1  +1  +2  +3

14. I find it embarrassing to return merchandise.

-3  -2  -1  +1  +2  +3

15. If a close and respected relative were annoying me, I would smother my feelings rather than express my annoyance.

-3  -2  -1  +1  +2  +3

16. I have avoided asking questions for fear of sounding stupid.

-3  -2  -1  +1  +2  +3
+3 very characteristic of me, extremely descriptive  
+2 rather characteristic of me, quite descriptive  
+1 somewhat characteristic of me, slightly descriptive  
-1 somewhat UNcharacteristic of me, slightly nondescriptive  
-2 rather UNcharacteristic of me, quite nondescriptive  
-3 very UNcharacteristic of me, extremely nondescriptive

17. During an argument I am sometimes afraid that I will get so upset that I will shake all over.

   -3   -2   -1   +1   +2   +3

18. If a famed and respected lecturer makes a statement which I think is incorrect, I will have the audience hear my point of view as well.

   -3   -2   -1   +1   +2   +3

19. I avoid arguing over prices with clerks and salesmen.

   -3   -2   -1   +1   +2   +3

20. When I have done something important or worthwhile, I manage to let others know about it.

   -3   -2   -1   +1   +2   +3

21. I am open and frank about my feelings.

   -3   -2   -1   +1   +2   +3

22. If someone has been spreading false and bad stories about me, I see him (her) as soon as possible to "have a talk" about it.

   -3   -2   -1   +1   +2   +3

23. I often have a hard time saying "No."

   -3   -2   -1   +1   +2   +3

24. I tend to bottle up my emotions rather than make a scene.

   -3   -2   -1   +1   +2   +3
25. I complain about poor service in a restaurant and elsewhere.

-3   -2   -1   +1   +2   +3

26. When I am given a compliment, I sometimes just don't know what to say.

-3   -2   -1   +1   +2   +3

27. If a couple near me in a theatre or at a lecture were conversing rather loudly, I would ask them to be quiet or to take their conversation elsewhere.

-3   -2   -1   +1   +2   +3

28. Anyone attempting to push ahead of me in a line is in for a good battle.

-3   -2   -1   +1   +2   +3

29. I am quick to express an opinion.

-3   -2   -1   +1   +2   +3

30. There are times when I just can't say anything.

-3   -2   -1   +1   +2   +3
APPENDIX E

HYPERFEMININITY SCALE
Choose the response that is more characteristic of you by circling (a) or (b):

1. a. These days men and women should each pay for their own expenses on a date.
   b. Men should always be ready to accept the financial responsibility for a date.

2. a. I would rather be a famous scientist than a famous fashion model.
   b. I would rather be a famous fashion model than a famous scientist.

3. a. I like a man who has some sexual experience.
   b. Sexual experience is not a relevant factor in my choice of a male partner.

4. a. Women should never break up a friendship due to interest in the same man.
   b. Sometimes women have to compete with one another for men.

5. a. I like to play hard-to-get.
   b. I don’t like to play games in a relationship.

6. a. I would agree to have sex with a man if I thought I could get him to do what I want.
   b. I never use sex as a way to manipulate a man.

7. a. I try to state my sexual needs clearly and concisely.
   b. I sometimes say “no” but really mean “yes”.

8. a. I like to flirt with men.
   b. I enjoy an interesting conversation with a man.

9. a. I seldom consider a relationship with a man as more important than my friendship with women.
   b. I have broken dates with female friends when a guy has asked me out.

10. a. I usually pay for my expenses on a date.
    b. I expect the men I date to take care of my expenses.

11. a. Sometimes I cry to influence a man.
    b. I prefer to use logical rather than emotional means of persuasion when necessary.

12. a. Men need sex more than women do.
    b. In general, there is no difference between the sexual needs of men and women.

13. a. I never use my sexuality to manipulate men.
    b. I sometimes act sexy to get what I want from a man.

14. a. I feel anger when men whistle at me.
    b. I feel a little flattered when men whistle at me.
15. a. It’s okay for a man to be a little forceful to get sex.  
    b. Any force used during sex is sexual coercion and should not be tolerated.

16. a. Effeminate men deserve to be ridiculed.  
    b. So-called effeminate men are very attractive.

17. a. Women who are good at sports probably turn men off.  
    b. Men like women who are good at sports because of their competence.

18. a. A “real” man is one who can get any woman to have sex with him.  
    b. Masculinity is not determined by sexual success.

19. a. I would rather be president of the U.S. than the wife of the president.  
    b. I would rather be wife of the president of the U.S. than the president.

20. a. Sometimes I care more about my boyfriend’s feelings than my own.  
    b. It is important to me that I am as satisfied with a relationship as my partner is.

21. a. Most women need a man in their lives.  
    b. I believe some women lead happy lives without male partners.

22. a. When a man I’m with gets really sexually excited, it’s no use trying to stop him from getting what he wants.  
    b. Men should be able to control their sexual excitement.

23. a. I like to have a man “wrapped around my finger”.  
    b. I like relationships in which both partners are equal.

24. a. I try to avoid jealousy in a relationship.  
    b. Sometimes women need to make men feel jealous so they will be more appreciative.

25. a. I sometimes promise to have sex with a man to make sure he stays interested in me.  
    b. I usually state my sexual intentions honestly and openly.

26. a. I like to feel tipsy so I have an excuse to do anything with a man.  
    b. I don’t like getting drunk around a man I don’t know very well.
APPENDIX F

SELF-EFFICACY INSTRUMENT
1. Described below are a variety of activities that people might engage in. Please rate, on a scale of 1 – 10 how many of these activities you actually do, right now, on your own.

<table>
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<th>Activity</th>
<th>Scale</th>
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<tr>
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<td></td>
</tr>
<tr>
<td>Don’t do</td>
<td></td>
</tr>
<tr>
<td>Do Some</td>
<td></td>
</tr>
<tr>
<td>Do Many</td>
<td></td>
</tr>
</tbody>
</table>

1a. _______ Outdoor exercise (jogging, biking, walking)
1b. _______ Outdoor Recreational Activities (hiking, camping, beach)
1c. _______ Travel to different neighborhoods in your city
1d. _______ Travel to neighboring towns or cities
1e. _______ Travel to distant cities
1f. _______ Use Public Transportation
1g. _______ Attend Evening events (movies, lectures, plays, musical performances)
1h. _______ Dating
1i. _______ Work activities outside the usual hours (working late or on weekend)
1j. _______ Attend social activities (parties, receptions)
2. How many of these activities, that you would like to do, **do you avoid**, when you are **alone**, because of **concern over personal safety**.

<table>
<thead>
<tr>
<th>Avoid</th>
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<th>9</th>
<th>10</th>
<th>Avoid</th>
<th>None</th>
<th>Some</th>
<th>Many</th>
</tr>
</thead>
</table>

2a. ________ Outdoor exercise (jogging, biking, walking)
2b. ________ Outdoor Recreational Activities (hiking, camping, beach)
2c. ________ Travel to different neighborhoods in your city
2d. ________ Travel to neighboring towns or cities
2e. ________ Travel to distant cities
2f. ________ Use Public Transportation
2g. ________ Attend Evening events (movies, lectures, plays, musical performances)
2h. ________ Dating
2i. ________ Work activities outside the usual hours (working late at or on weekend)
2j. ________ Attend social activities (parties, receptions)
Please use the following scale for questions 3 through 6.

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</tr>
</thead>
<tbody>
<tr>
<td>Cannot Do At All</td>
<td>Moderately Certain Can Do</td>
<td>Certain Can Do</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

3. You are walking through a deserted neighborhood looking for a friend’s apartment. You get the feeling that a man about half a block back may be following you. How confident are you that you can, as of now:

3a. _____ Walk faster
3b. _____ Cross the street
3c. _____ Run
3d. _____ Walk like you know where you are going
3e. _____ Walk up to another house or apartment and ask for help
3f. _____ Attract a crowd by yelling

4. You are alone in the elevator going down to the basement to buy a drink from the machine. A man gets on the elevator. He looks at you in a way that makes you feel a little uncomfortable. How comfortable are you that you can, as of now:

4a. _____ Press another button and get off the elevator.

5. A man comes to your house to read your gas-meter. You don’t want him to come into your house because you feel uncomfortable about him (even if he showed ID). How comfortable are you that you can, as of now:

5a. _____ Tell him that you do now want him to come in.

6. You arrive home after work and, before going in, sense that something is not right. How confident are you that you can as of now:

6a. _____ Go over to a neighbor's house
6b. _____ Call the police.
Please use the following scale for questions 7 and 8.

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7. You are waiting for the bus at a bus stop. There is no one standing next to you but there are other people fairly close by. A man walks up to the stop and startsverbally hassling you. He comes up close but has not touched you.

How confident are you that you can, as of now:

7a. _____ Stay silent and act as if you are ignoring him

7b. _____ Maintain your spot

7c. _____ State firmly that you do not want to talk to him

7d. _____ Stay put AND tell him that you do not want to talk to him.

7e. _____ Tell him off

7f. _____ Walk over to other people and ask for help

7g. _____ Call for help

8. You are standing on a crowded bus when the man standing next to you puts his hand on your buttocks and leans his body into yours.

How confident are you that you can, as of now:

8a. _____ Complain to the driver

8b. _____ Ask him to remove his hand

8c. _____ Speak loudly to let other passengers know what is going on

8d. _____ Make a loud scene so that most everybody on the bus knows what this man has done to you

139
Please use the following scale for questions 9 through 11.

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9. You have stayed late at work for an office party and are now ready to go home. Your car is parked in a lot about a block away. Since it is dark and the streets are not as busy as they are when you usually leave the office, you are feeling uneasy about walking to your car.

How confident are you that you can, as of now:

9a. ______ Walk to your car alone with your car-key ready and look out for people who look suspicious

9b. ______ Ask someone who is also leaving the party to walk with you to your car

9c. ______ Ask someone at the party to walk you to your car

10. You meet a man at a party and are very interested in getting to know him better. At midnight he asks you to go with him, in his car, to a bar. You feel a little wary because you have just met him.

How confident are you that you can, as of now:

10a. ______ Go to the bar but take separate cars

10b. ______ Suggest that some of your other friends at the party come along

10c. ______ Suggest another time to get together

11. In a dating situation,

How confident are you that you can, as of now:

11a. ______ Tell a man that you would like him to come into your house but not spend the night.

11b. ______ Tell a date that you have invited into your house that you are ready for him to leave

11c. ______ Refuse to kiss your date good-night
Please use the following scale for questions 12 and 13.

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12. How confident are you that you can, as of now jog in the park:

   With a female friend:
   During the day 12a. ________    12b. ________
   At dusk 12c. ________    12d. ________
   In the evening 12e. ________    12f. ________

13. How confident are you that you can, as of now:

   13a. _____ Drive alone to an evening lecture or performance in an unfamiliar area
   13b. _____ Drive alone to an evening lecture where you will have trouble finding a parking place.
   13c. _____ Go to an evening lecture by bus
   13d. _____ Bike alone to a day lecture in an unfamiliar area
   13e. _____ Ride your bike alone to an evening lecture
Please use the following scale for question 14.

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14. How confident are you that you can, as of now:

14a. _____ Go to the beach by yourself
14b. _____ Go hiking by yourself
14c. _____ Go camping with a female friend
14d. _____ Go camping by yourself
14e. _____ Go to a restaurant by yourself at night
14f. _____ Go to an unfamiliar party by yourself at night
14g. _____ Go to a movie by yourself at night
14h. _____ Go to a bar by yourself
14i. _____ Go to a night club (e.g. jazz) by yourself
14j. _____ Go to a night rock concert by yourself
Please use the following scale for question 15.

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15. You are walking on a public street when a man grabs you from behind. At the moment that this happens you do not see any other people close by.

How confident are you that you can, as of now:

15a. _____ Scream loudly more than once

15b. _____ Struggle physically in any way

15c. _____ Stomp to the instep of the foot to cause pain

15d. _____ Use your elbow to forcefully strike him

15e. _____ Pull his finger back and release his arms

15f. _____ Come back quickly with another strike if one was not effective

15g. _____ Get out of his hold in some way

15h. _____ Get out of his hold and run away

15i. _____ Disable the assailant so that he can not run after you

15j. _____ Get away if he had blind-folded you as he grabbed you
Please use the following scale for question 16.

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16. You are grabbed from the front or somehow end up facing your assailant.

How confident are you that you can, as of now:

16a. ______ Scream or yell loudly more than once
16b. ______ Struggle physically in some way
16c. ______ Stomp to the instep of the foot to cause pain
16d. ______ Forcefully hit him using the heel of your palm
16e. ______ Knee him forcefully in the groin
16f. _____ Kick low to the unstable parts of his body (e.g. knee) and throw him off balance
16g. ______ Forcefully strike him in the throat
16h. _____ Forcefully strike him in the eye
16i. _____ Come back quickly from one strike and use another
16j. _____ Cover yourself from being hit
16k._____ Get out of his hold and run away
16l. _____ Continue striking your assailant until he is disabled
Please use the following scale for question 17.

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17. You are grabbed from behind and the assailant pulls you down onto the ground

How confident are you that you can, as of now:

17a. _____ Scream or yell loudly more than once
17b. _____ Struggle physically in some way
17c. _____ Stay in a ball for safety when you are knocked down
17d. _____ While in a ball, roll and forcefully bite his arm or hand
17e. _____ Use your advantage or opening from the bite to strike the throat or some other area with your elbow
17f. _____ After striking with your elbow, turn your body and strike to his eyes
17g. _____ Turn body and forcefully use a side-thrust kick
17h. _____ Jump up and out of reach of your assailant
17i. _____ Run away
17j. _____ Disable your assailant
Please use the following scale for question 18.

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18. The assailant has you lying on your back with him on top of you

How confident are you that you can, as of now:

18a. _____ Scream loudly more than once

18b. _____ Struggle physically in some way

18c. _____ Use your hip to his groin area if he is not completely down and then do a quick shift of your weight to unseat him

18d. _____ If your legs are not completely pinned, push the man off with your legs

18e. _____ If your arms are not completely pinned, use fingers to forcefully strike eyes

18f. _____ Hook your legs over his shoulders if he is lying up near your chest. Then make a quick move with your legs and get on your side.

18g. _____ Use your heel to kick down forcefully on your assailant

18h. _____ Through whatever means, get unpinned

18i. _____ Run away

18j. _____ Disable your assailant
Please use the following scale for questions 19 through 22.

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19. You have been surprised in your bed and the assailant has you pinned on your front.

How confident are you that you can, as of now:

19a. ______ Scream or yell loudly more than once
19b. ______ Roll him off
19c. ______ If his hands are around your hips or shoulder, lunch forward quickly. Then get on your side for a kick.
19d. ______ Get away
19e. ______ Disable your assailant

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<thead>
<tr>
<th>20. If you are grabbed and remain standing</th>
<th>21. If you are pulled to the ground</th>
<th>22. If you are pinned on the ground</th>
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<tr>
<td>Find openings where you can strike</td>
<td>20a. _____ 21a. _____ 22a. _____</td>
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<tr>
<td>Strike quickly and powerfully</td>
<td>20b. _____ 21b. _____ 22b. _____</td>
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<tr>
<td>Disable assailant</td>
<td>20c. _____ 21c. _____ 22c. _____</td>
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<tr>
<td>Knock out assailant</td>
<td>20d. _____ 21d. _____ 22d. _____</td>
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23. If you are attacked in a closed space (bedroom, car)

   How confident are you that you can, as of now:

   23a. ______ Get away
   23b. ______ Disable assailant
   23c. ______ Knock out assailant

24. If you are attacked in an open space (street, park)

   How confident are you that you can, as of now:

   24a. ______ Get away
   24b. ______ Disable assailant
   24c. ______ Knock out assailant

25. If a stranger attacks you

   How confident are you that you can, as of now:

   25a. ______ Yell loudly more than once
   25b. ______ Struggle in some physical way
   25c. ______ Physically fight back to get away
   25d. ______ Disable assailant
   25e. ______ Knock out assailant
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26. If an acquaintance attacks you (casual dating or friend):

How confident are you that you can, as of now:

26a. _____ Yell loudly more than once
26b. _____ Struggle in some physical way
26c. _____ Physically fight back to get away
26d. _____ Disable assailant
26e. _____ Knock out assailant
APPENDIX G

COURSE SYLLABUS
OSU Sport Fitness and Health Program
Self-Defense Course

Week One

Overview of the course
Introductions all around: mutual respect, learn from each other
Discuss victim blame and confidentiality
Introduce Levels of Self-Defense:
Awareness, Intuition, Body Language, Verbal, Physical
Introduce strikes to vulnerable targets

Handouts: Resources and Referrals, If You Are Raped

Week Two

Verbal self-defense practice
Introduce range: Angles, Moving in and out
Practice strikes and kicks to targets: focus pads
Handouts: Five Levels of Self-Defense, Vulnerable Man
Homework #1: Observe the body language of yourself and others; change your behavior in some way, e.g. eye contact

Week Three

Review strikes and kicks, practice combinations
Introduce holds and grabs
Handout: Coercion

Week Four

Practice strikes and kicks to targets: focus pads
Continue grabs and holds, including front and rear chokeholds
Handout: Legal information

Homework #2: Personal Safety Plan (including escape and evasion, car safety)

Week Five

Introduce falling, fighting from different levels
Kicking from the ground
Handout: Drug Facilitated Rape
Week Six

Review and practice with ground fighting
Review strike and kicks, combinations: focus pads
Discussion of drug facilitated rape, including both voluntary and involuntary intoxication
Overview of offenders/offending
Homework #3: Apply self-defense principles in everyday life, share the outcome

Week Seven

Review
Introduce weapons: Defense against weapons; Using weapons for self-defense
Handout: Weapons
Assignment for Week Eight: Bring in a non-traditional weapon, and be prepared to share with the class both how you would use the weapon and what is the intended target.

Week Eight

Review and practice strikes and kicks: focus pads
Review ground fighting, including hip roll from horizontal position
Introduce multiple attacker defense
Homework #4: Supply behaviors/attitudes/skills for each of the Five Levels of Self-Defense

Week Nine

Focus pads
Review choke hold releases, review ground fighting

Week Ten

Final practice/evaluation