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I, Wendy Perkins , hereby submit this original work as part of the requirements for the degree of Doctor of Philosophy in Criminal Justice.

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Application of an Ecological Model to the Labeling of Sexual Aggression

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Application of an Ecological Model to the Labeling of Sexual Aggression

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By

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ABSTRACT

Many women enrolled in college experience sexual aggression, including acts of rape. One area of research examining sexual aggression on college campuses attempts to determine what factors contribute to a woman deciding that her experience with sexual aggression was rape. Previous research indicates that women often do not label their experiences with sexual aggression as being rape even when the legal requirements for the crime are met. This study uses data collected from women enrolled in a university located in the southeast part of the United States to examine the factors related to the labeling decision. An ecological framework is used to organize previous research and is tested for its utility in predicting the labeling decision. Ecological models posit that a person's life events, and their interpretations of these events, are influenced by multiple variables. The ecological framework in this research consists of individual, situational, relationship, community, and societal variables. Results from a series of logistic regression analyses are encouraging with regard to the utility of the ecological model in predicting the labeling decision. The results suggest situational factors are clearly important in a woman's decision to label her experiences with sexual aggression as being rape. However, the significance of situational variables should not overshadow the potential relevance of variables at other levels of the ecological model. It is possible that the interpretation of situational factors surrounding an incident of sexual aggression is related to variables at other levels of the ecological model, thus emphasizing the necessity of examining the decision to label incidents of rape within the ecological framework.

DEDICATION

This dissertation is for my parents, who have encouraged me to reach for the educational stars since the day I was born.

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CHAPTER 1

STATEMENT OF THE PROBLEM

While women of any age can be subjected to rape and other forms of sexual aggression by men[1], the risk of having these experiences is particularly high for adolescent girls and women of traditional college age compared to women of other age groups (Black et al., 2011; Tjaden and Thoennes, 2006). Research has consistently demonstrated that women who are enrolled in college[2] are at a substantial risk for being subjected to acts of sexual aggression prior to or during their college careers (Banyard et al., 2005; Clements and Ogle, 2009; Fisher, Cullen, and Turner, 2000; Forbes and Adams-Curtis, 2001; Gross, Winslett, Roberts, and Gohm, 2006; Kilpatrick, Resnick, Ruggiero, Conoscenti, and McCauley, 2007; Koss, Gidycz, and Wisniewski, 1987; Koss and Oros, 1982; Krebs, Lindquist, Warner, Fisher, and Martin, 2009; Littleton, Grills-Taquechel, and Axsom, 2009). This unfortunate reality necessitates continued research in an effort to effectively address this social problem and formulate evidence-based strategies for its primary prevention and for victim after-care.

One area of research focuses on the decisions a woman makes after experiencing sexual aggression. Of particular interest for this dissertation is the decision made by a woman about what label to apply to her experience. She may find herself wondering if what happened to her was rape, sexual assault, or "something else." She also may find herself wondering whether or not what happened is legally a crime, and whether or not it is an important enough experience to

[1] For purposes of this dissertation, only those instances of sexual aggression with male perpetrators will be considered.

[2] The population of interest for this dissertation is women who experience sexual aggression while they are enrolled in college. Unless otherwise noted all references to samples and women refers to this population.

warrant calling the police or seeking medical or psychological treatment. This decision is known as labeling or acknowledging sexual aggression (Koss, 1985; Hammond and Calhoun, 2007; Harned, 2005; Kahn and Andreoli Mathie, 2000).

The decision of women to label incidents of sexual aggression as rape is an interesting topic because the academic research demonstrates that women are unlikely to apply the rape label to their experiences. This finding occurs even when those experiences meet the legal criteria for rape (Bondurant, 2001; Botta and Pingree, 1997; Clements and Ogle, 2009; Fisher, Daigle, Cullen, and Turner, 2003; Kahn, Jackson, Kully, Badger, and Halvorsen, 2003; Koss, Dinero, Seibel, and Cox, 1988; Layman, Gidycz, and Lynn, 1996; Littleton, Axsom, Breitkopf, and Berenson, 2006; Peterson and Muehlenhard, 2009). Given this information, researchers must then ask the following question: Why do women decide not to label their experiences rape even when the legal requirements for rape have been met?

The academic research has reported that many factors contribute to a woman's decision to label an act of sexual aggression as being rape. The focus of that research has been on the influence of the individual characteristics of women and the situational characteristics of the sexually aggressive experience on the labeling decision (see Table 2.1). Relationship, community, and societal factors that may contribute to the labeling decision have largely been omitted from published research (for exceptions see Bondurant, 2001; McMullin and White, 2006; and Peterson and Muehlenhard, 2004). Including relationship, community, and societal factors in future scholarly inquiries will contribute to a better understanding of the labeling decision.

There is another question that academic researchers should be asking about the labeling decision: Do women apply the rape label to acts of sexual aggression that do not meet the legal

criteria for rape? Women enrolled in college often experience acts of sexual aggression other than rape (American College Health Association, Fall 2012; Banyard et al., 2005; Fisher et al., 2000; Gross, et al., 2006; Harned, 2004; Humphrey and White, 2000; Kanin, 1957; Kirkpatrick and Kanin, 1957; Koss, et al., 1987; Koss and Oros, 1982; Muehlenhard and Linton, 1987), but the labeling of these experiences has largely been omitted from academic analysis (for exceptions see Fisher, et al., 2003; and Harned, 2005). Researching the labeling of other forms of sexual aggression will provide insight about how women view these experiences and whether or not they are considered rape. This research can then inform prevention and intervention efforts aimed at assisting women in identifying when an act of sexual aggression has occurred and whether or not the incident meets legal requirements to be considered a crime. This line of inquiry will also continue to address concerns that the crime of rape on college campuses is largely a socially constructed phenomenon created by feminist scholars (Gilbert, 1991, 1992; Roiphe, 1993).

In summary, the problem of labeling sexual aggression is still being explored by academic researchers. While many factors influence the decision of women to label acts of sexual aggression, the impact of relationship, community, and societal factors on labeling has largely been omitted from academic research. Also largely omitted from academic research is examination of factors related to the labeling of sexually aggressive experiences that are not rape. A more robust understanding of the factors related to the labeling decision will inform theory development and contribute to comprehensive strategies designed to prevent sexual aggression, encourage the reporting of sexual aggression to the police and campus authorities, and insure appropriate first-response and follow-up care to affected women.

CONTRIBUTION OF THIS DISSERTATION

This dissertation contributes to existing knowledge about the labeling of sexual aggression by applying an ecological model to examine the decision of women to apply the rape label to incidents of sexual aggression. Ecological models account for individual, situational, relationship, community, and societal factors that coalesce to create a personal environment within which life events are experienced and interpreted (Bronfenbrenner, 1979, 1986). Specific to this dissertation, individual factors are characteristics unique to a woman who has experienced sexual aggression, such as psychological distress and previous experience with sexual aggression. Situational factors are characteristics of the incident of sexual aggression, such as where the incident occurred. Relationship factors are indicative of personal relationships a woman has with her family members or peers, such as knowing someone else who has experienced sexual aggression. Community factors are indicative of the level of support a person believes she may receive after an experience with sexual aggression, and can be indicated by disclosure of the incident. Societal factors are overarching societal influences which may influence an individual's perception of life events, such as norms and attitudes that support sexual aggression.

The ecological model used in this dissertation differs from ecological research in the field of criminology, which examines the impact of neighborhood characteristics on neighborhood crime rates (e.g. Sampson and Groves, 1989; Sampson, Raudenbush, and Earls, 1997). In contrast to the macro-level studies that use social ecology to predict crime rates, the analysis conducted in this dissertation is micro-level. The current study examines how the factors listed

above combine to impact the decision of individual women to label their experiences with sexual aggression as being rape.

To this author's knowledge, no other published studies have used a complete ecological model to examine the labeling decision, thus making the current research unique. While the extant research largely focuses on the analysis of individual and situational factors in relation to the labeling decision, use of the ecological model includes relationship, community, and societal factors and provides an organizational framework within which the variables can be tested and organized.

Examining these issues is important to victimology researchers, rape prevention educators, and service providers, such as mental health professionals, for five reasons. First, experiencing sexual aggression is a social problem for women and is a particularly salient issue for women enrolled in college. One recent national study estimated that approximately 300,000 (5.15%) of the 6 million women attending college in America were raped in the year prior to participating in the study (Kilpatrick et al., 2007). The Centers for Disease Control estimates that approximately 37.4% of women who are raped for the first time are between the ages of 18 and 24, which is the traditional age range for women attending college (Black et al., 2011). These estimates of women who are raped while enrolled in college supports the assertion that sexual aggression is a public health issue that warrants continued attention. In addition, the negative impact of sexual aggression on women has been well documented. Women who experience sexual aggression often have Post Traumatic Stress Disorder (PTSD) (Campbell, Dworkin, and Cabral, 2009; Kelley, Weathers, McDevitt-Murphy, Eakin, and Flood, 2009; Resick, 1993) and may use alcohol or drugs to cope with the psychological and emotional trauma of their experience (Kilpatrick, Acierno, Resnick, Saunders, and Best, 1997; Littleton et al., 2009;

McCauley, Ruggiero, Resnick, Conoscenti, and Kilpatrick, 2009). Therefore, it is important that continued efforts be focused on preventing sexually aggressive experiences from occurring.

Second, academic research has established that many women do not label their experiences rape even when legal criteria for rape have been met. Assigning a label to an experience with sexual aggression is important because doing so gives the experience meaning and may provide a starting point for a woman to address the emotional and psychological impact of her experience both in the short and long term (Botta and Pingree, 1997; Clements and Ogle, 2009; McMullin and White, 2006). In addition, recent research indicates that women who label their rapes are more likely to contact the police (Kilpatrick, et al., 2007), thus increasing the likelihood of legal recourse against the perpetrator and recoupment of medical expenses from victim assistance funds should she also seek medical attention. This is important because if a report is not made to the police, the involved male cannot be held accountable for his actions and any request that medical expenses incurred as a result of the incident be paid for by victim compensation funds may be denied (National Center for Victims of Crime, 2003).

Third, research has focused on the labeling of rape experiences, largely omitting an examination of the labeling of other types of sexual aggression. While there have been some exceptions (Cleere and Lynn, 2013; Fisher, et al., 2003; Harned, 2005), the research has largely confined its interest in labeling to incidents that meet the legal requirements for rape. This omission has occurred despite evidence that women experience other forms of sexual aggression at a similar or higher prevalence and incidence as rape (Banyard et al., 2005; Fisher et al., 2000; Gross et al., 2006; Humphrey and White, 2000; Kanin, 1957; Kirkpatrick and Kanin, 1957; Koss et al., 1987; Koss and Oros, 1982; Muehlenhard and Linton, 1987). As a result, little information

is known about whether or not women apply the rape label to incidents of sexual aggression that are not legally rape.

Fourth, research about the labeling of sexual aggression has not robustly examined the impact of relationship, community, and societal factors on the labeling decision. It is unlikely that a woman makes the decision to apply the rape label based only upon the characteristics of the incident and her own personal attributes. Some research suggests that women filter their experiences through friends (Botta and Pingree, 1997) and knowing others who have experienced sexual aggression may influence the labeling decision. The willingness of a woman to disclose an incident of sexual aggression may indicate the level of support she feels she has from her family, friends, and formal support systems (i.e. the community). A woman's decision to label may be influenced by societal norms about violence against women and gender attitudes. A comprehensive understanding of the labeling decision is more likely to occur when these factors are routinely considered in empirical research.

Fifth, it is necessary at this point in the empirical research examining the labeling decision to organize the literature around a theoretical framework consistent with other research on the subject of sexual aggression. Ecological frameworks have been used to organize the literature on the effects of sexual aggression on mental health (Campbell et al., 2009; Neville and Heppner, 1999), primary prevention of sexual aggression (Casey and Lindhorst, 2009; Dahlberg, and Krug, 2002; Jewkes, Sen, and Garcia-Moreno, 2002), decision making after an incident of sexual aggression (Anders and Christopher, 2011), and repeat experiences with sexual aggression and accompanying trauma (Tomsich, 2013).[3]

[3] McMullin (2006) used an ecological framework to organize her review of the literature, however, her research focused on the labeling of rape scenarios and not on the labeling of first-hand experiences with sexual aggression.

In sum, the prevalence of sexual aggression experienced by women enrolled in college continues to be a valid concern. Continued research into the labeling of sexual aggression is necessary to develop evidence-based prevention programming and assistance for women after they are subjected to sexually aggressive acts. Discovering why women do and do not label their experiences rape will assist in the development of educational efforts designed to inform people which acts of sexual aggression constitute rape or some other crime. In turn, this could encourage the labeling of these experiences, which may increase the likelihood of perpetrator accountability. It is also an advantage to organize research about the labeling of sexual aggressing using a consistent theoretical framework adopted in other areas of research about sexual aggression.

ORGANIZATION OF THE DISSERTATION

To achieve its goal of examining the factors that influence the decision of a woman to apply the rape label to an incident of sexual aggression, this dissertation will use data that were collected as part of a longitudinal study conducted between 1990 and 1995 at a large public university in the Southeastern United States. The data used in the current effort were collected in Spring 1992, near the end of the study participants' sophomore year (White and Smith, 2001). This data were collected as part of a study designed to assess the relative risk of college women experiencing sexual aggression each year from high school to the senior year in college.

This dissertation is organized into six chapters. The first chapter has presented a statement of the problem of labeling sexual aggression. The second chapter reviews the empirical evidence regarding the prevalence and incidence of sexual aggression among women enrolled in college and discusses the negative psychological impact of rape and its relation to the importance of the labeling decision. Chapter three presents a review and methodological assessment of the extant

literature about the prevalence of, and factors related to, the labeling of sexual aggression. Chapter three also presents the ecological model, which is the theoretical framework for this research. Chapter four details the methods used for this research. The fifth chapter presents the results of the statistical analysis, and the sixth chapter discusses the current study's findings and presents suggestions for continued research efforts.

CHAPTER 2

PREVALENCE AND INCIDENCE OF SEXUAL AGGRESSION EXPERIENCED BY WOMEN ENROLLED IN COLLEGE

Numerous large national-level and smaller scale local studies have estimated the prevalence and incidence of sexual aggression experienced by women enrolled in college. The prevalence of sexual aggression refers to how many women have had at least one such experience during a particular reference period. The incidence of sexual aggression indicates how many separate incidents women have experienced during a particular reference period. A reference period is the period of time during which a woman may have had an experience with sexual aggression (Koss et al., 1987). Some of the studies discussed in this section examined incidents of sexual aggression which occurred while attending high school or college, while other studies only examine those incidents which occurred while enrolled in college (see Table 2.1, Table 2.2, and Table 2.3).

Measuring Sexual Aggression

Three primary methods of measurement have been used to estimate the prevalence and incidence of sexual aggression. The first method is the Sexual Experiences Survey (SES) (Clements and Ogle, 2009; Hammond and Calhoun, 2007; Koss and Oros, 1982), or the Modified Sexual Experiences Survey (M-SES) (Botta and Pingree, 1996; Humphrey and White, 2000; Koss and Gidycz, 1985; Koss et al., 1987; Layman et al., 1996). The SES and the M-SES ask respondents behaviorally specific questions about sexual aggression. Behaviorally specific questions use detailed descriptions of sexually aggressive actions to cue respondents about their experiences (Fisher and Cullen, 2000). The SES and M-SES classify as rape those instances of sexual intercourse, oral intercourse, and anal intercourse occurring because of force or threats of

force. Sexual intercourse is defined as vaginal penetration by the male penis. Oral intercourse is defined as penetration of the mouth by a penis or by an object. Anal intercourse is defined as penetration of the anus by a penis or by an object. The M-SES also classifies as rape instances of unwanted sexual intercourse because a man provided alcohol or drugs to a woman, and sexual penetration with an object other than the penis. The SES and M-SES define attempted rape as unsuccessful attempts at unwanted sexual intercourse occurring because of threats of force, the actual use of force, or because a man gave a woman alcohol or drugs. Unwanted sexual contact is defined by these measures as unwanted fondling, kissing, or petting because of the use of pressure/arguments, physical force or threats of physical force, or because of a man's position of authority. Finally, sexual coercion is defined as unwanted sexual intercourse occurring because of a man's pressure/arguments or because of his position of authority.

The second method used to estimate the prevalence and incidence of sexual aggression is researcher modifications to the SES/M-SES (Forbes and Adams-Curtis, 2001; Kahn et al., 2003; Kahn, Andreoli Mathie and Torgler, 1994; Pitts and Schwartz, 1993; Schwartz and Leggett, 1999; White and Smith, 2001). Sometimes researchers modify the SES/M-SES to reflect the legal requirements for the crime of rape in a specific state, to examine other forms of sexual aggression, or to make clarifications in the meaning of terms and questions. Littleton, et al. (2006) modified four questions from the M-SES to reflect the legal criteria for sexual assault and rape in Virginia. Littleton and Henderson (2009) modified two items from the M-SES to be consistent with the definitions of sexual assault and rape in the states of Texas and Virginia. Pitts and Schwartz (1993) amended the M-SES to reflect legal definitions in the Ohio Revised Code, including an assessment of sexual battery and an amendment to the definition of rape to include unwanted sexual intercourse occurring due to one person's authority over another.

Another reason for researcher modifications to the SES and M-SES is to address criticism that these measures overestimate the prevalence and incidence of rape. Schwartz and Leggett (1999) omitted questions about sex because of pressure or arguments. They also refined the question designed to measure rape resulting from drug or alcohol intoxication to be more specific. Instead of asking, "Have you had sexual intercourse when you didn't want to because a man gave you alcohol or drugs," the researchers asked, "Have you engaged in sexual intercourse when you didn't want to but were so intoxicated or under the influence of alcohol or drugs that you could not stop it or object?" The goal of changing this question's wording was to reduce any ambiguity that may have existed in the omitted or revised questions, thus improving the likelihood of accurate prevalence estimates.

The third common method of measuring the prevalence and incidence of sexual aggression is creating new survey instruments that use the SES or M-SES as a basis for developing more detailed behaviorally specific survey instruments. Kilpatrick, Edmunds, and Seymour (1992) improved upon the SES and M-SES by asking very specific questions about rape and defining terms for respondents participating in the National Women's Survey (NWS). They also instructed participants to consider incidents which occurred with someone that they knew. In this study rape was defined as sexual intercourse, anal intercourse, oral intercourse, or the penetration of the vagina or anus by fingers or objects. To determine if rape occurred as a result of sexual intercourse the following question was asked: "Has a man or boy ever made you have sex by using force or threatening to harm you or someone close to you? Just so there is no mistake, by sex we mean putting a penis in your vagina?" This question defines the term sex and makes it clear that researchers are interested in instances when sex occurred due to force or threats of force. Behaviorally specific questions about sexual aggression have continued to be

used in more recent research studies (Fisher et al., 2000; Krebs et al., 2009; Tjaden and Thoennes, 2000; Kilpatrick, et al., 2007).

Unless otherwise noted in the following review, the SES and M-SES classifications of sexual aggression were applied to the research findings by the respective authors. The original authors' terminology and operational definitions will be used to describe their findings. The review will conclude with a discussion dedicated to explaining the variation in the prevalence estimates of sexual aggression.

Research from the 1950s to the 1980s

Eugene Kanin and Clifford Kirkpatrick conducted what may be the first published studies to examine sexual aggression experienced by women enrolled in college. Kanin (1957) surveyed 262 freshmen women about their experiences with "offensive sexual aggression" during their senior year of high school and the summer prior to beginning college. Sixty-two percent (n = 163) of the women indicated experiencing 372 instances of sexual aggression. Eighteen percent (n = 48) of the women had experienced unwanted attempted intercourse, and 44% (n = 115) of the women had experienced unwanted necking or petting. Kirkpatrick and Kanin (1957) surveyed 291 undergraduate women who had experienced sexual aggression with their current dating partners. Fifty-six percent (n = 162) of the women reported 1,022 instances of having been subjected to attempts of necking, petting, sexual intercourse, and attempts of sexual intercourse due to force or the threat of force. There were 83 incidents of attempted forced intercourse experienced by 27.1% (n = 78) of the women. These early research efforts suggested that experiences with sexual aggression were not uncommon for women either prior to or after they became college students. These studies are referenced in Table 2.3.

There was limited academic research about the prevalence and incidence of rape and other types of sexual aggression during the 1960s and 1970s. A search of academic writings housed in Academic Search Complete, Sociological Collection, the Psychology and Behavioral Sciences Collection and the PsycInfo databases yielded results that indicated academics were primarily focused on researching sex offenders (e.g. Groth and Burgess, 1977a, 1977b; Peters, 1976); the counseling of women who had experienced sexual aggression (Abarbanel, 1976; Burgess and Holmstron, 1974; Schuker, 1979; Silver and Stonestreet, 1978); and attributions of fault and responsibility for sexual aggression (e.g. Krulewitz and Nash, 1979; Paulsen, 1979; Seligman, Brickman, and Koulack, 1977). There were several books published in the 1970s on the subject but the focus of these works was more on bringing attention to sexual aggression as a social issue and not as an issue for a particular population of women (e.g. Brownmiller, 1975; Clark and Lewis, 1977).

It was not until the 1980s that scholars began studying the prevalence and incidence of sexual aggression in earnest, particularly as it related to women enrolled in college. Russell (1980) collected data from 930 women who lived in San Francisco, California. She reported that 44% (n = 407) of them had experienced rape or attempted rape based upon the study's operational definition. While this study's sample was not drawn from a sample of college women, it was groundbreaking because it shed light on a little discussed social issue and paved the way for larger studies that would focus on women enrolled in college. Koss and Oros (1982) piloted the SES using a random sample of 2,016 college women at one university in Ohio. They reported that since the age of 14, 3.1% (n = 62) of their sample had been raped as a result of threats of physical force. In addition, 8.2% (n = 165) of the sample had been raped as a result of force, and 6.4% (n = 129) had experienced forced anal or oral intercourse. Twenty-seven perent

(n = 543) experienced attempted rape and 30% (n = 609) experienced forced kissing and petting. This study provided a first-look at the extent of sexual aggression that had been experienced by women enrolled in college since the age of 14 and laid the groundwork for subsequent studies.

Estimates of Sexual Aggression in National Studies

Since Koss and Oros' groundbreaking work, several national studies using representative samples have been conducted with the purpose of estimating the prevalence and incidence of sexual aggression among women enrolled in college (see Table 2.1). The first of these studies was conducted by Koss et al. (1987). The researchers administered the M-SES to a national sample of college women and estimated that 27.5% (n = 876) of the 3,187 women participating in the study had experienced a rape or attempted rape and 26.3% (n = 838) experienced sexual coercion or sexual contact since the age of 14. They also reported that in the 12 months leading up to the survey, 17% (n = 530) of the women had experienced 886 incidents of rape/attempted rape and 39% (n = 1,252) of the women experienced 2,861 incidents of unwanted sexual contact and sexual coercion during the 12 months prior to the administration of the survey.

Subsequent national-level research has revealed prevalence and incidence rates of sexual aggression among women attending college that are just as alarming. Fisher et al. (2000) used a national sample of college women to examine sexual aggression occurring during the seven months prior to participation in the study. They defined rape as the penetration of the mouth, the anus, or the vagina by a penis, a finger, or an object because of the threat or use of force; or as the forced reception of oral sex. Rape due to alcohol/drug incapacitation or intoxication was not assessed in this survey. Of the 4,446 women surveyed, 123 (2.8%) reported experiencing attempted or completed rape during the seven months since the beginning of the 1996 academic year. Many women experienced more than one instance of rape or attempted rape, reporting a

total of 157 incidents. When the findings are calculated as rates, the prevalence is 27.7 rapes per 1,000 female students, and the incidence is 35.3 incidents of rape per 1,000 female students. A total of 568 (13%) women in the sample experienced 1,161 incidents of forced kissing or touching and sexual activity due to verbal coercion and threats of sexual aggression. The survey was bounded by a six to eight month timeframe, suggesting that the prevalence and incidence rates would be much higher if students had been asked about their experiences over the course of their college careers (Fisher et al., 2000).

Kilpatrick et al. (2007) conducted a national study that included among its goals estimating lifetime and annual prevalence and incidence of rape among women enrolled in college. Rape in this study was defined as unwanted oral, anal or vaginal penetration by a penis, mouth, tongue, fingers, or objects because of force or incapacitation due to drugs or alcohol consumed voluntarily by, or given surreptitiously to, women. Out of 2,000 college women sampled from 253 four-year institutions in the United States, 11.5% (n = 230) reported experiencing 326 incidents of rape during their lifetimes, and 2.95% (n = 59) experienced forcible rape or rape due to incapacitation during the seven months prior to participating in the study. Based upon this data, the researchers estimate 673,000 women who attend college will be raped during their lifetimes, and that 301,000 women attending college are raped annually. This study did not address the prevalence of other forms of sexual aggression such as unwanted kissing or touching of body parts, or unwanted sexual intercourse due to verbal or psychological coercion.

Other national-level studies have included an estimation of the prevalence of sexual aggression experienced by women enrolled in college as part of a broader assessment of the violent victimization and health-related experiences of college students. Baum and Klaus (2005)

analyzed data that was collected from 36,881 college students age 18 to 24 as part of the National Crime Victimization Survey (NCVS) for the years 1995 to 2002 to estimate the prevalence of violent crime among students enrolled in college. Included in this report were prevalence estimates of sexual aggression. Rape was defined as forced vaginal, anal, or oral penetration occurring because of physical force or psychological coercion. Attempted rapes were also included in this data collection. Not measured in the NCVS is rape or attempted rape occurring because the woman was intoxicated due to alcohol or drugs. The NCVS defined sexual assault as attempted or completed acts of a sexual nature that were not rape or attempted rape, such as fondling. These acts may or may not have involved force. The researchers estimated that on average, 24,591 women enrolled in college experienced rape or sexual assault each year included in the study.

The American College Health Association-National College Health Assessment (ACHA-NCHA) is conducted during the spring and fall of every year. During the Fall of 2012, 51 colleges and universities located in the United States voluntarily participated in the assessment. The study includes three questions about the experiences of college students with sexual aggression. Seven percent (n = 1,350) of 18,425 females who completed the survey indicated that they had been touched in a sexual manner without their consent in the 12 months prior to the survey. Three percent (n = 624) of 18,425 females indicated that experienced attempted sexual penetration without their consent, and 2% (n = 357) of 18,384 females indicated they had been sexually penetrated without their consent during the same timeframe.

The studies reviewed in this section provide national-level information on the prevalence and incidence of rape and other forms of sexual aggression experienced by women enrolled in

Table 2.1 National Studies Estimating the Prevalence of Sexual Aggression Among College Women

Authors/Year of Study	Sample Size	Reference Period	Measure	Definition of Rape	Rape Prevalence	Prevalence of Other Sexual Aggression
Koss, Gidycz, and Wisniewski (1987)	N = 3,187	Since age 14	Modified SES	Anal/oral/sexual intercourse because man gave you alcohol or drugs, because of physical force/threats of physical force	Since age 14 27.5% (n = 876) (includes attempts) Past 12 months 17% (n = 530) (includes attempts)	Since age 14 26.3% (n = 838) (sexual coercion and sexual contact) Past 12 months 39% (n = 1,252)
Fisher, Cullen & Turner (2000)	N = 4,446	Since school started in 1996 (6 months)	Self-developed instrument	Unwanted attempted and completed penetration of the vagina, anus, or mouth by the penis, mouth or object because of force or threat of force	2.8% (n = 123) (includes attempts)	13% (n = 568) (attempts and threats of sexual coercion and sexual contact)
Baum & Klaus (2005)	N = 36,881	Average per year from 1995 to 2002	NCVS	Vaginal, oral, or anal penetration, including by a foreign object	.006% (n = 24,591) (includes attempts)	N/A

Table 2.1. National Studies Estimating the Prevalence of Unwanted Sexual Experiences Among College Women (continued)

Authors/Year of Study	Sample Size	Reference Period	Measure	Definition of Rape	Rape Prevalence	Prevalence of Other Sexual Aggression
Kilpatrick, Resnick, Ruggiero, Conoscenti, and McCauley (2007)	N = 2,000	Lifetime and previous 7 months in 2005	Self-developed instrument	Oral, anal, or vaginal penetration by penis or object because of force/threats of force, after voluntarily consuming alcohol and becoming incapacitated; or after man deliberately gets woman drunk without her permission	Previous 7 months for study sample 2.95% (n = 59) Annual estimate for female student population 5.15% (n = 301,000) Lifetime estimate for study sample 11.5% (n = 230) Lifetime estimate for female student population 11.5% (n = 673,000)	N/A
ACHA-NCHA (Fall, 2012)	N = 18,425	Previous 12 months	Self-developed instrument	N/A	2% (n = 357) sexual penetration 3% (n = 624) attempted sexual penetration	7% (n = 1,350) (touched in a sexual manner)

college. The most recent studies estimate that between .006% and 6% of women enrolled in college experience some form of sexual aggression or attempts at sexual aggression in the months immediately preceding participation in the studies (ACHA-NCHA, Fall 2012; Baum and Klaus, 2005; Fisher et al. 2000; Kilpatrick et al., 2007). Stated another way, between 24,000 and 301,000 women enrolled in college experience sexual aggression each academic year (Baum and Klaus, 2005; Kilpatrick et al., 2007). This estimate underscores the need for further research about sexual aggression experienced by women while they are enrolled in college.

Estimates of Sexual Aggression in Small Studies

Many studies conducted from the 1980s to the present have been conducted on single college campuses or used a small number of campuses from which to draw samples. These samples are largely samples of convenience. Many of these studies rely upon the SES or M-SES to operationalize rape and other types of sexual aggression (Botta and Pingree, 1997; Clements and Ogle, 2009; Gross et al., 2006; Hammond and Calhoun, 2007; Harned, 2004; Humphrey and White, 2000; Koss and Oros, 1982; Layman et al., 1996; Pitts and Schwartz, 1993; Schwartz and Leggett, 1999). The findings of these studies further illustrate the extent to which women enrolled in college experience sexual aggression. Similar to their national counterparts, the smaller studies use two general reference periods – sexual aggression experienced since the age of 14 or sexual aggression experienced during a specific time period while enrolled in college. For purposes of clarity, the studies are discussed in two sections reflecting their respective reference periods. Studies using both reference periods will be reported in both sections based upon the findings. Unless otherwise noted, these studies used the SES or M-SES classification scheme for defining rape and other types of sexual aggression. Information about the incidence of sexual aggression is also included when provided by the authors of the reviewed studies.

Sexual Aggression Since Age 14

Studies examining sexual aggression experienced since the age of 14 are summarized in Table 2.2. Several of these studies estimate the prevalence of such events to be approximately 20%. Kahn et al. (1994) surveyed 198 women and reported that 23% (n = 46) of them had experienced rape during the reference period. In addition to the SES criteria, these authors included unwanted sexual intercourse that was the result of threats of harm to someone else, threats of spreading rumors, and the use of alcohol or drugs to incapacitate the woman in their estimates. Similarly, Botta and Pingree (1997) reported that 20% (n = 123) of the 623 women in their study had experienced rape.

Peterson and Muehlenhard (2004) defined rape as sexual intercourse due to intoxication and being unable to stop the other person due to the force or threat of force. They report that of the 396 women in their sample, 18% (n = 70) experienced rape. Kahn et al. (2003) used the M-SES with additional questions about sexual intercourse as a result of threats to loved ones, threats, and intimidation. Of 491 women in their sample, 18% (n = 89) reported having been raped during their lifetimes. Littleton et al. (2006) assessed the prevalence of sexual aggression using two samples of women enrolled as students in the psychology department at a university located in the Southeast United States. The researchers modified the M-SES to reflect criminal statutes in Virginia, which include as rape instances of oral sex, anal sex, and object penetration when a woman is incapacitated or unconscious. Of the 1,253 women who were students during spring 2002, summer 2002, fall 2002, and spring 2003, approximately 20% (n = 256) had been raped. Littleton and Henderson (2009) modified the M-SES to reflect the criminal statutes of Virginia and Texas. The survey was administered to 1,744 women at three universities located in these states who were students during the Fall 2006 and Spring 2007 semesters. Twenty percent

(n = 346) of these women reported having experiences that met the researchers' definition of rape (Littleton and Henderson, 2009). Krebs et al. (2009) used a self-developed instrument to estimate the prevalence of sexual assault among 5,466 randomly selected women enrolled in two public universities. They reported that approximately 16% (n = 819) of these women had experienced an incident of sexual aggression prior to beginning college.

Some studies report a prevalence of sexual aggression that is lower than the previously reviewed studies. Muehlenhard and Linton (1987) used a self-developed instrument and reported that 14.7% (n = 50) of the 341 women in their sample had been raped since high school, and 70.4% (n = 24) experienced some other type of unwanted sexual activity during high school. Rape was defined in this study as forced sexual intercourse. Other forms of unwanted sexual activity included forced touching of the woman, forcing the woman to touch the man, kissing, and forced oral sex on either the man or the woman. Layman et al. (1996) reported that of 591 women, 14% (n = 85) had been raped, while Hammond and Calhoun (2007) reported that 11% (n = 56) of the 525 women in their sample experienced 70 incidents of rape. Clements and Ogle (2009) restrict their definition of rape to only instances of physically forced sexual intercourse, and report a lower prevalence of 10% (n = 31). Forbes and Adams-Curtis (2001) relied on 178 women to classify themselves as rape victims by answering the question "Have you ever been raped" and report a prevalence of 2.8% (n = 5). However, 53% (n = 94) of the sample in this study experienced some form of attempted or completed sexual aggression due to verbal pressure, threats of force, and force.

Table 2.2. Prevalence of Sexual Aggression Since Age 14

Authors/Year of study	Sample*	Reference Period	Measure	Definition of Rape	Prevalence of rape	Prevalence of Other Sexually Aggressive Acts
Koss & Oros (1982)	N = 2,016 (randomly sampled students at one university)	Since age 14	Original SES	SES	3.1% (n = 62) threats of physical force 8.2% (n = 165) physical force 6.4% (n = 129) anal/oral intercourse	30.2% (n = 609) forced kissing or petting
Muehlenhard & Linton (1987)	N = 341 women who are interested in/are dating men	During high school	Self-developed instrument	Sexual intercourse against the woman's will	N/A	70.4% (n = 240) (includes rape)
		Since high school			14.7% (n = 50)	N/A
Kahn, Mathie & Torgler (1994)	N = 198	Since age 14	SES plus four additional questions	SES plus sexual intercourse because of threats, rumors, and alcohol/drug use	23% (n = 46)	N/A

*Unless otherwise noted all samples are convenience samples

Table 2.2. Prevalence of Sexual Aggression Since Age 14 (continued)

Authors/Year of study	Sample*	Reference Period	Measure	Definition of Rape	Prevalence of rape	Prevalence of Other Sexually Aggressive Acts
Layman, Gidycz, & Lynn (1996)	N = 591	Since age 14	M-SES	M-SES	14% (n = 85)	N/A
Botta and Pingree (1997)	N = 623	Since age 14	M-SES	M-SES	20% (n = 123)	N/A
Humphrey & White (2000)	N = 1404	Since age 14	M-SES	M-SES	33% (n = 463) (includes attempts)	36.8% (n = 516)
Forbes & Adams-Curtis (2001)	N = 178	Since age 14	SES with revisions (Experience With Sexual Coercion Scale)	Self-identified as having been raped	2.8% (n = 5)	53% (n = 94) inclusive of rape
Kahn, Jackson, Kully, Badger, & Halvorsen (2003)	N = 491	Lifetime	M-SES	M-SES and when you stated you did not want to have sex	18% (n = 89)	N/A
Peterson and Muehlenhard (2004)	N = 396	Since age 14	Two self-developed questions reflecting KS law	Sexual intercourse due to intoxication or force/threat	18% (n = 70)	N/A

*Unless otherwise noted all samples are convenience samples

Table 2.2. Prevalence of Sexual Aggression Since Age 14 (continued)

Authors/Year of study	Sample*	Reference Period	Measure	Definition of Rape	Prevalence of rape	Prevalence of Other Sexually Aggressive Acts
Littleton Axsom, Breitkopf, and Berenson (2006)	N = 1,253	Since age 14	Modified SES adjusted to fit VA law	M-SES plus unwanted penetration due to incapacitation	20% (n = 256)	N/A
Hammond & Calhoun (2007)	N = 525	Since age 14	SES	Intercourse due to force or incapacitation; sex acts due to force	11% (n = 56)	N/A
Clements & Ogle (2009)	N = 319	Since age 14	SES	Sexual intercourse and other sex acts due to physical force	10% (n = 31)	N/A
Littleton & Henderson (2009)	N = 1744 (women at three Texas universities)	Since age 14	Two items from modified SES adjusted to fit VA and TX law	Vaginal, anal, oral, penetration due to force or incapacitation	20.2% (n = 346)	N/A
Krebs, Lindquist, Warner, Fisher, & Martin (2009)	N = 5,466 (women at two public universities)	Before entering college	Self- developed instrument	Oral/anal/vaginal intercourse/ penetration with object due to force or incapacitation		16% (n = 819) any sexual assault

*****Unless otherwise noted all samples are convenience samples

The studies reviewed in this section examined the prevalence of sexually aggressive experiences that occurred since the age of 14 among women enrolled in college. In these studies, prevalence estimates of rape and attempted rape ranged from 2.8% (Forbes and Adams-Curtis, 2001) to 33% (Kahn et al., 1994). These studies also demonstrate that women enrolled in college experienced other forms of sexual aggression prior to their enrollment in college (Forbes and Adams-Curtis, 2001; Humphrey and White, 2000; Muehlenhard and Linton, 1987). These findings are pertinent because women enrolled in college who experienced sexual aggression as adolescents were likely to experience sexual aggression their first year in college. Further, experiencing sexual aggression during the freshman year increased the likelihood of experiencing sexual aggression during the sophomore year (Humphrey and White, 2000).

Sexual Aggression Since Enrolling in College

Several studies have examined the prevalence and incidence of sexual aggression that occurs only while women are enrolled in college. These studies are summarized in Table 2.3. Unless otherwise noted, these studies used the SES or M-SES to measure sexual aggression. Most of these studies estimate that between 16% and 20% of women experience rape while they are college students. Pitts and Schwartz (1993) report that of 288 study participants, 19% (n = 58) experienced rape, while Schwartz and Leggett (1999) reported that 16% (n = 65) of their sample had been raped. Harned (2004) reported that since enrolling in college, 20% (n = 272) of her sample experienced rape or attempted rape, and 14.2% (n = 192) of her sample experienced unwanted sexual contact or sexual coercion. Gross, et al. (2006) sampled 903 women from a university in the southeast United States. During the course of their college careers 18.8% (n = 170) of the women had vaginal, oral, or anal intercourse because of physical force, threats of

force, emotional pressure, drug/alcohol incapacitation, or feeling as if it would be useless to resist. Approximately 13% (n = 117) of the sample had been forced into kissing or petting.

Some smaller studies examining only experiences with sexual aggression occurring since women enrolled in college have found a lower prevalence and incidence than the studies reviewed above. Banyard, et al. (2005) used a self-developed instrument and reported that 6% (n = 25) of 417 women at a New England university had unwanted vaginal, anal, or oral intercourse because of force or verbal pressure during the previous six months of the academic year, and 20% (n = 77) experienced some type of other sexual aggression. Krebs et al. (2009) found that since entering college, 19% (n = 1,073) of the 5,466 women in their sample experienced attempted or completed sexual assault. Further, 3.4% (n = 181) of these women experienced a rape due to physical force and 8.5% (n = 507) experienced a rape due to incapacitation. In the 12 months prior to the survey, 7.5% (n = 410) of the women some form of attempted or completed sexual assault, including rape.

The research findings reviewed in this section illustrate that the seriousness of the problem of sexual aggression that occurs while women are enrolled in college. Many of the studies estimate that between 16% and 20% of women experience rape and at least 13% experience other types of sexual aggression at some point during their college careers. These findings illustrate that many women are impacted by sexual aggression while they are enrolled in college and underscore the need to further research this topic.

Humphrey and White's Study

Humphrey and White's (2000) study is discussed separately because of its unique longitudinal cohort design and because the same dataset is used for this dissertation. Two cohorts of incoming freshmen women completed the SES upon beginning college and during the

spring semester of the next four years. One goal of this study was to determine their relative risk for experiencing sexual aggression during each year of college enrollment. The first cohort entered college in Fall 1990, and the second cohort entered college in Fall 1991. A total of 1,571 women completed surveys at the time of the first data collection (White and Smith, 2001).

The first survey wave collected information about sexual aggression that occurred prior to and after the age of 14. Approximately 17% (n = 266) reported a forced or coerced sexual experience with a peer or an adult prior to the age of 14. Approximately 50% (n = 786) reported experiencing sexual aggression since the age of 14. Twenty percent of these women (n = 320) had experienced at least one instance of rape or attempted rape, and 30% (n = 456) experienced other forms of sexual aggression. The second data wave occurred during the spring of the respondents' freshman year, inquiring about any incidents of sexual aggression that occurred since the time of the initial data collection. Just over 10% (n = 142) of the 1,398 women remaining in the study indicated they had experienced rape or attempted rape while 21.1% (n = 294) experienced unwanted contact or verbally coerced sexual activity during the time frame of interest (Humphrey and White, 2000).

The remaining three data waves were conducted in the spring of participants' sophomore, junior, and senior years. These waves inquired about incidents of sexual aggression that occurred in the 12 months prior to survey administration. At the time of the sophomore year data collection, 7.2% (n = 84) of the remaining 1,178 women experienced rape or attempted rape and 13.6% (n = 231) experienced unwanted contact or verbally coerced sexual activity during the previous 12 months. At the time of the junior year data collection, 7.4% (n = 69) of the remaining 955 women experienced rape or attempted rape, while 18.3% (n = 173) had been verbally coerced into sex or had unwanted sexual contact. At the time of the last data collection,

5.2% (n = 38) of the remaining 747 women experienced rape or attempted rape, and 19% (n = 151) were verbally coerced into having sex or experienced unwanted sexual contact. By the end of their fourth year in college, 69.8% (n = 521) of the 747 women who completed all five survey waves had experienced sexual aggression during high school or college. Thirty-three percent (n = 246) had experienced rape or attempted rape, while 36.8% (n = 274) experienced either unwanted sexual contact or verbal sexual coercion (Humphrey and White, 2000).

In summary, Humphrey and White (2000) found that nearly 70% of the women who participated in all five waves of data collection experienced sexual aggression such as rape and unwanted sexual contact between the age of 14 and the final wave of data collection. They concluded that the highest risk for experiencing sexual aggression occurs during women's freshman year. Although this risk decreases for each subsequent year, women who experience sexual aggression as adolescents are at a higher risk for similar experiences in college. In addition, sexual aggression occurring during the freshman year of college increases the likelihood of similar experiences during subsequent college years. This increased risk for multiple experiences of sexual aggression underscores the importance of identifying women who experience sexual aggression so that they can receive medical or psychological assistance and perhaps reduce their future risk of such experiences. The current dissertation extends this work by specifically examining experiences with sexual aggression that occur during women's sophomore year of college enrollment and examining the labeling decision.

Table 2.3 Prevalence of Sexual Aggression Since Enrolling in College

Authors/Year of study	Sample Size	Reference Period	Measure	Definition of Rape	Rape Prevalence	Prevalence of Other Sexually Aggressive Acts
Kanin (1957)	N = 262 freshmen	Senior year of high school and summer prior to freshman year of college	Self-developed survey	Attempted intercourse and attempted intercourse with violence	18% (n = 48)	44% (n = 115)
Kirkpatrick & Kanin (1957)	N = 291	Current academic year	Self-developed survey	Attempted/completed intercourse with violence or threats of violence	27.1% (n = 78) attempted rape	56% (n = 162) all forms of sexual aggression
Muehlenhard & Linton (1987)	N = 341 women who are interested in/are dating men	During college	Self-developed survey	Sexual intercourse against the woman's will	14.7% (n = 50)	65.1% (n = 221) (includes rape and attempts
		Most recent date			N/A	18.8% (n = 64) (includes rape and attempts)

*****Unless otherwise noted all samples are convenience samples

Table 2.3. Prevalence of Sexual Aggression Since Enrolling in College (continued)

Authors/Year of study	Sample Size	Reference Period	Measure	Definition of Rape	Rape Prevalence	Prevalence of Other Sexually Aggressive Acts
Pitts & Schwartz (1993)	N = 288	Since entering college	Original SES with changes to questions about alcohol and use of authority	Original SES classification plus oral or anal intercourse, use of objects; alcohol intoxication, or use of authority	19% (n = 58)	2.4% (n = 7)
Schwartz & Leggett (1999)	N = 388 seniors	Since entering college	M-SES with changes to questions about alcohol	Sex due to force/threats or intoxication due to alcohol/drugs	16% (n = 65)	N/A
Humphrey and White (2000)	N = 747	Four years of college	M-SES	SES classifications	33% (n = 246) (includes attempts)	36.8% (n = 274)
Harned (2004)	N = 1,395	Since enrolling in college	Modified SES	Modified SES classifications	20% (n = 272) (includes attempts)	14.2% (n = 192)

*****Unless otherwise noted all samples are convenience samples

Table 2.3. Prevalence of Sexual Aggression Since Enrolling in College (continued)

Authors/Year of study	Sample Size	Reference Period	Measure	Definition of Rape	Rape Prevalence	Prevalence of Other Sexually Aggressive Acts
Banyard, et al. (2005)	N = 384	6 months prior to survey	Self-developed instrument	Unwanted intercourse (as any form of sexual penetration) inclusive of verbal pressure	6% (n = 23)	20% (n = 77)
Gross, Winslett, Roberts, & Gohm (2006)	N = 903	Since enrolling in college in Fall 1996	Modified SES	Modified SES designation; sex because woman felt it was useless to stop; verbal pressure	18.8% (n = 170)	13.3% (n = 117) kissing/petting
Krebs, Lindquist, Warner, Fisher, & Martin (2009)	N = 5,466 (women at two public universities)	Since entering college	Self-developed survey	Oral, anal, vaginal intercourse, penetration with finger or object due to force or incapacitation	3.4% (n = 181) forced rape 8.5% (n = 507) incapacitated rape	19% (n = 1,073) any SA
		12 months prior to survey				7.5% (n = 410) any SA

*Unless otherwise noted all samples are convenience samples

Variation in the Estimation of the Prevalence of Rape

The majority of the studies reviewed above indicate that between 3% and 33% of women who are enrolled in college have experienced some form of sexual aggression either before or during college enrollment. The large difference between the lowest and highest prevalence estimates may be due to differences in operational definitions of rape and other types of sexual aggression used in the studies. As discussed previously, many studies use the SES or M-SES designations in whole or in part. However, researchers sometimes choose to change or add questions to these instruments or develop their own instruments to measure the prevalence of unwanted sexual experiences.

The result of the aforementioned changes to measurement instruments is that more or fewer types of sexual aggression may be included in the researchers' definitions of rape, which may influence prevalence estimates. For example, some studies classify as rape only those instances of sexual aggression occurring as the result of physical force (Clements and Ogle, 2009; Fisher et al. 2000; Muehlenhard and Linton, 1987). This classification omits instances of sexual aggression occurring due to alcohol or drug incapacitation which are classified as rape in other studies (Hammond and Calhoun, 2007; Kilpatrick et al., 2007; Krebs et al., 2009; Littleton et al., 2006; Littleton and Henderson, 2009; Peterson and Muehlenhard, 2004; Schwartz and Leggett, 1999). A few studies include sexual intercourse and other forms of sexual aggression that are the result of verbal pressure, the result of authority, or threats made to the woman's family/friends, or threats of rumors in their operationalization of rape (Banyard et al., 2005; Gross et al., 2006; Kahn et al., 2003; Kahn et al., 1994; Pitts and Schwartz, 1993). Forbes and Adams-Curtis (2001) relied upon a single-item measure that allowed study participants to self-identify as having been raped. Since women frequently do not label their unwanted sexual

experiences rape even when the legal criteria for rape are met (see Table 2.1), using this single-item measure likely underestimates the prevalence of rape in this sample.

In summary, differences in methodology are likely to lead to variation in the estimation of the prevalence and incidence of sexual aggression experienced by women prior to or during college enrollment. These differences should not be used to underestimate the seriousness of the problem of sexual aggression. Even at a minimum, thousands of women enrolled in college experience sexual aggression each year (Baum and Klaus, 2005). In addition, as the next section demonstrates, there are serious negative consequences resulting from experiencing sexual aggression that may have a long term impact on women as they move beyond their college years.

The Impact of Sexual Aggression on Women

To underscore the importance of research into sexual aggression this section briefly discusses the negative consequences of such experiences for women enrolled in college. These negative consequences can impact their post-college lives if not addressed with formal support (medical assistance, psychological assistance) or informal support (speaking with friends or family members). The most commonly researched consequences of sexual aggression include Post Traumatic Stress Disorder (PTSD) and the use of alcohol or drugs as coping mechanisms. To this author's knowledge, no published research exists examining the impact of sexual aggression on the decision of women enrolled in college to drop out of or change schools. In addition, to this author's knowledge, there has not been published empirical research examining the impact of sexual aggression on academic performance.

Several studies have reported that women who experience sexual aggression prior to or while enrolled in college have symptoms of depression PTSD, including nightmares, flashbacks, and difficulty sleeping and concentrating (Brown, Testa, and Messman-Moore, 2009; Kelley et

al., 2009; Kilpatrick et al.,2007; Thompson and Kingree, 2010). They may experience low self-worth (Littleton and Radecki Breitkopf, 2006; Thompson and Kingree, 2010), and use alcohol and drugs presumably in an effort to cope with the psychological and emotional impact of these experiences. Kilpatrick et al. (1997) and Thompson and Kingree (2010) report that experiencing sexual aggression increases the likelihood of a woman's use of alcohol or drugs after the event. There also is evidence that women who were impaired or incapacitated when they experienced sexual aggression drink more alcohol after their experience (Littleton et al., 2009; McCauley et al., 2009). This observation is important because both substance use and current experiences with sexual aggression are risk factors for future experiences with sexual aggression (Adams-Curtis and Forbes, 2004; Humphrey and White, 2000; Kilpatrick et al., 1997). These negative consequences underscore the contribution of the current research effort. If women choose to label their experiences they may be more likely to ask for medical and psychological assistance, perhaps preventing future experiences sexual aggression. Therefore, continued research into factors related to the decision to label an experience with sexual aggression is of the utmost importance.

SUMMARY

This chapter has reviewed the extant academic research that provides estimates of the prevalence of sexual aggression experience by women enrolled in college. Most of these studies estimate that between 3% and 33% of college women enrolled in college have experienced some form of sexual aggression since the age of 14. In addition, most academic studies indicate that between 16% and 20% of women attending college will experience some form of sexual aggression during the four year time period in which they are enrolled. While the estimates of the prevalence and incidence of sexual aggression occurring during the time of college

enrollment varies, the magnitude of the problem should not be ignored. Even one of the lowest prevalence estimates indicates that 2.8% of women enrolled in college experience sexual aggression during an academic year (Fisher et al., 2003). There were approximately 11.9 million women enrolled in college at the beginning of the fall semester of 2010 (National Center for Education Statistics, 2012). Therefore, it can be estimated that at least 339,196 of these women experienced sexual aggression during the 2010-2011 academic year. Many of these women will experience negative consequences such as PTSD, depression, and the use of alcohol to cope with their feelings about their experiences. The potential for negative consequences on such a large number of women reinforces the importance of continued research into sexual aggression.

Estimates of sexual aggression are largely generated from the use of measurement instruments such as the Sexual Experiences Survey (Koss and Gidycz, 1985). Researchers using these instruments designate which women have experienced sexual aggression based upon participant answers to specific questions about their experiences. It is important, however, to examine how women view their own experiences. This concept is commonly referred to as labeling. It is important to study labeling because the label a researcher applies to an experience of sexual aggression reported by a woman as part of an academic study may be different from the label the woman applies to the experience as part of her life. As chapter three will discuss, many women do not label their experiences as rape even when the legal criteria for this crime have been met. Because of this incongruence, it is important to determine what factors a woman considers when deciding whether or not her experience with sexual aggression was rape. By exploring contributing factors to the labeling decision researchers can provide valuable information that will improve prevention programming to include knowledge about which acts of sexual aggression are criminal. In turn, this may increase the likelihood that women will

recognize their experiences as being some form of sexual aggression and encourage them to seek legal, medical, and psychological assistance.

CHAPTER 3

THE LABELING OF SEXUAL AGGRESSION

The extant research provides strong evidence that experiencing rape and other forms of sexual aggression is a reality in the lives of many young women attending college. However, women having these experiences may not identify them as rape. Indeed, research has established that many women in college have experienced sexual aggression that legally qualifies as rape but do not label these experiences as such (Bondurant, 2001; Botta and Pingree, 1997; Clements and Ogle, 2009; Fisher et al., 2003; Kahn et al., 2003; Koss et al., 1988; Layman et al., 1996; Littleton et al., 2006; Peterson and Muehlenhard, 2004). These women are often referred to as "hidden rape victims" (Koss, 1985) or "unacknowledged rape victims" (e.g. Bondurant, 2001; Kahn and Mathie, 2000; Kahn et al., 1994; Littleton et al., 2009; Peterson and Muehlenhard, 2004).

To facilitate a discussion about the labeling of sexually aggressive experiences, this chapter first distinguishes between the concepts of ‘labeling’ and ‘acknowledging’ incidents of sexual aggression. Next, this chapter reviews the extant literature about the prevalence of labeling sexually aggressive experiences by women enrolled in college. Finally, this chapter presents the theoretical framework used by the current research to examine predictors of the decision to apply the rape label to their experiences with sexual aggression. Included is a review of ecological models used in rape research and a review of the factors believed to influence the decision of a woman to label an incident of sexual aggression as being rape and which are relevant to this dissertation.

Labeling vs. Acknowledging Rape

Acknowledging rape and *labeling rape* are two terms used interchangeably in much of the published empirical research that examines whether or not women label their rape experiences accordingly. When a woman acknowledges that she has experienced rape, she is indicating that such an incident did indeed occur. Koss (1985) specifically addresses this issue in her study examining sexual aggression experienced by college women. She categorizes the women in her study as acknowledged victims, unacknowledged victims, and women who were not victims of rape based upon SES classifications. Specifically, she notes that the term 'acknowledged' cannot be applied to the women who had not experienced rape because 1) they did not see themselves as having experienced rape; and 2) they were not conceptually defined as having experienced rape by the researcher. In other words, these women had no reason to acknowledge they had been raped because a rape had not occurred. Koss then proposes that future research explore whether or not these women believe their experiences to be "on a continuum with rape" (p. 196). In other words, would these women believe these experiences to be some other type of sexual aggression and label them appropriately?

One of the most common measures used to determine if a woman believes she has experienced a rape is a variation of a single-item question asking, "Have you ever been raped?" (e.g. Kahn et al., 2003; Kahn, Mathie, and Torgler, 1994; Pitts and Schwartz, 1993). Answering yes to this question implies both acknowledgement and labeling have occurred. The woman is affirming that she has had an experience (acknowledging) that she believes to be rape (labeling). One issue with this measure, however, is that researchers cannot be sure of which incident the woman believes to be rape if she has had more than one experience with sexual aggression. Some researchers have resolved this issue by asking study participants if they consider each

reported incident of sexual aggression to be rape (Fisher et al., 2003) or by asking participants to choose the label they feel most appropriately describes their experience (Cleere and Lynn, 2013; Littleton et al., 2006; Littleton et al., 2009; Littleton and Henderson, 2009; Peterson and Muehlenhard, 2004).

Of note is that the term victim is often used in research about the labeling of sexual aggression. This is problematic because researchers are assuming that women who experience sexual aggression believe themselves to be victims and this is not always the case. Referring to study participants as victims fails to distinguish between labeling an event and labeling the person who experienced the event. A person could label an event rape, but not label themselves a victim. For some women, applying the word 'rape' is directly associated with being a victim. Women who do not wish to be labeled as victims may avoid using the rape label to describe their experiences (Harris, 2011; Young and Maguire, 2003). In light of these findings, care has been taken in the current research to avoid the use of the word victim so that no assumptions are made about how women view themselves in terms of their experiences.

PREVALENCE OF LABELING RAPE

Empirical research has consistently reported that many women enrolled in college whose experiences with sexual aggression are consistent with the legal definition of rape do not label their experiences as such when asked directly. While Russell's (1983) study was not specifically focused on the labeling of sexual aggression among women enrolled in college, it did provide a glimpse into the depth of this issue. Russell reported that of 407 San Francisco women who had experienced rape or attempted rape based upon the author's operational definition, only 22% (n = 81) answered affirmatively to the question, "At any time in your life, have you ever been the victim of a rape or attempted rape?" Koss (1985) also brought attention to the issue of labeling,

reporting that of the 62 college women from a national sample whose experiences with sexual aggression met the legal criteria for rape according to Ohio law, 42% (n = 26) did not label their experiences accordingly. Table 3.1 summarizes the research findings regarding the prevalence of labeling rape experiences among women enrolled in college, and includes the operational question for labeling used in each study.

Subsequent research has also explored the labeling of sexual aggression. Pitts and Schwartz (1993) used the SES to identify 58 women in their sample as having experienced rape, 27% (n = 14) of whom indicated they had been raped by a man (their measure of labeling a rape). Kahn et al. (1994) reported that 52% (n = 24) of the 46 women classified as having experienced rape in their study also independently indicated they had been raped. Botta and Pingree (1997) asked 123 women classified as having been raped if they had ever been sexually assaulted. Only half of the women (n = 62) answered affirmatively, while the remaining women were either unsure if they had been sexually assaulted (21%, n = 27), or indicated they had never been sexually assaulted (28%, n = 34).

Only 36% (n = 40) of the 109 women identified by the SES as having experienced rape in Bondurant's (2001) study answered yes to the question "Have you ever been raped?" Kahn et al. (2003) identified 97 women in their sample as experiencing a rape. Thirty-seven percent (n = 33) of these women answered yes to the question "Have you ever been raped by a man?" while 63% (n = 56) answered no to the same question. Peterson and Muehlenhard (2004) found that 38% (n = 33) of the 86 women who experienced rape in their study assigned the label of rape to their experience. McMullin and White (2006) identified 96 women as having been raped prior to their freshman year in college, 53.7% (n = 51) of whom considered their experience a rape.

Fisher et al. (2003) report both the prevalence and incidence of the labeling of sexual aggression. Their sample of 4,446 women reported 1,318 instances of sexual aggression occurring between fall of 1996 and spring of 1997. Approximately 6.2% (n = 82) of these incidents were labeled rape by study participants. Of 157 incidents classified as completed or attempted rape, 26.8% (n = 42) were considered to be rape by study participants. More specifically, 46.5% (n = 40) of the completed rape incidents and 2.8% (n = 2) of the attempted rape incidents were designated as rape by study participants. At the respondent level, of the 123 who experienced completed or attempted rape, 30.1% (n = 37) labeled the experience rape. More specifically, 47.4% (n = 35) of the 74 women who experienced completed rape labeled the incident rape, and 3.5% (n = 2) of the 57 women who experienced attempted rape considered the incident rape. Also assessed was the labeling of instances of sexual aggression that were not operationalized as rape in this study. Of 1,161 non-rape incidents, 3.4% (n = 40) were considered to be rape by study participants, who also indicated that they did not know if .8% (n = 9) of these incidents were rape. The low labeling of attempted rapes and other forms of sexual aggression indicates that completion of forced penetration is central to deciding that such an experience is rape (Fisher et al., 2003).

Hammond and Calhoun (2007) investigated the labeling of sexual aggression experienced since the age of 14 within the context of a broader study examining the labeling of child sexual abuse and adult physical abuse by a dating partner. They also report their findings at the incident and respondent levels. A unique component of their study is their request of participants to indicate on a Likert scale how sure they were that the incident was assault. Responses ranged from definitely assault to definitely not assault. Of the 70 incidents of rape, 44.3% (n = 31) of them were classified as probably or definitely rape. The remaining incidents were classified as

either probably not or definitely not rape (38.6%, n = 27) or unsure if the experience was rape (17.1%, n = 12). At the respondent level, of the 56 women who were identified by the researchers as having experienced rape, 44.6% (n = 24) always acknowledged their experiences as rape, and 30.4% (n = 17) never acknowledged their experiences as rape. Of the remaining women, 5.4% (n = 3) acknowledged some of their experiences as rape, and 19.6% (n = 11) were always unsure about whether their experiences were rape.

Compared to previously discussed studies, Schwartz and Leggett (1999) reported a relatively low overall prevalence of labeling. Only 11.8% (n = 7) of the 65 senior women identified as having experienced rape in their study answered affirmatively to the question "Have you been raped since coming to college?" More specifically, of the 30 women who indicated they had been raped due to force, 23.8% (n = 7) answered yes to the labeling cue. In comparison, of the 35 women who had been raped because they were unable to resist, only one labeled the experience rape. Harned (2004) also reported a comparatively low prevalence of labeling rape. She included incidents of unwanted sexual contact and sexual coercion in addition to rape and attempted rape when asking women to label their experiences. The labeling cue was "Have you experienced sexual abuse or assault from a dating partner?" Dating partners could be male or female. Approximately 14% (n = 70) of the 464 women classified as having experienced sexual aggression indicated these experiences were sexual abuse/assault. This finding suggests that women do not consider sexual aggression with dating partners to be a form of sexual assault/abuse.

Alternative Labels for Rape

Some women who do not label their experiences rape do label them something else. Several studies have provided women with a list of labels from which they could choose the one

that most accurately describes experience. Koss et al. (1988) found that 55% (n = 28) of women who experienced stranger rape and 23% (n = 96) of women who experienced acquaintance rape actually considered their experience a rape. In comparison, the remaining women believed their experiences were either a miscommunication, a crime other than rape, or that they were not victimized. Peterson and Muehlenhard (2004) provided 20 labels from which women could choose to describe their experiences with sexual aggression. The researchers do not provide details regarding which labels were available. They report that of the 86 women included in their study, 38% (n = 33) chose the rape label while 62% (n = 35) chose other labels. Similar to Hammond and Calhoun (2007), the women in this study were asked to indicate on a Likert scale of 0 (not at all true) to 7 (very much true) how much they believed the incident to be rape. While many of the women who chose the rape label also chose the highest score on the Likert scale, there were still several who chose options indicating they were less than certain their experiences were rape.

Littleton et al. (2006) identified 256 women who had experienced rape according to measures that were congruent with Virginia law. Forty percent (n = 101) of these women chose a label the authors consider to be consistent with acknowledging a victimization. Sixty percent of the acknowledged victims (n = 60) chose the label rape, 20% (n = 20) chose the attempted rape label, and 20% (n = 20) chose to label their experience a crime other than rape. Sixty-one percent (n = 155) of the women chose other labels to describe their experience with sexual aggression. Forty-five percent (n = 69) considered the experience to be a miscommunication, 11% (n = 17) considered it to be a seduction, and 45% (n = 69) were not sure how to label their experience. In addition to the aforementioned labeling choices, Littleton and Henderson (2009) added two labels from which participants could choose to describe their experiences with sexual

aggression – bad sex and a hook-up. Of the 346 women who had experienced rape, 39% (n = 135) were classified as acknowledged victims by the authors. The majority of these women chose the rape label for their experiences (66%, n = 89); followed by attempted rape (24%, n = 32), or some other type of crime (10%, n = 13). The remaining 211 women chose the labels miscommunication (38%, n = 80), a hook-up (9%, n = 19), bad sex (4%, n = 8), a seduction (3%, n = 6), or did not know what to label their experience (46%, n = 97).

More recently, Cleere and Lynn (2013) included an examination of the labeling of other forms of sexual aggression, in addition to the labeling of rape, through the use of a provided list of labels. The authors considered a participant as having acknowledged her experience if she chose the option rape or sexual assault to describe her experience. Women who considered their experiences a crime other than rape, a serious miscommunication, or who indicated they did not feel victimized were considered unacknowledged victims. One hundred and eighty-four women were classified as having experienced sexual aggression based upon the SES. Twenty-five percent (n = 46) of these women were classified as acknowledged victims and 75% (n = 138) of these women were classified as unacknowledged victims. Of the women who are classified as acknowledged victims, 24% (n = 11) considered it a rape and 76% (n = 35) considered it to be a sexual assault. Of the women classified as unacknowledged victims, 66% (n = 91) classified it as a serious miscommunication, 4.8% (n = 5) believed it to be a crime other than rape or sexual assault, and 29% (n = 40) reported they were not victimized.

Orchowski et al. (2013) offered 371 study participants three options from which they could choose to label their experiences with unwanted sexual contact, attempted rape, sexual coercion, and rape. Overall, 21% (n = 79) of the women chose to label their experiences rape, 38% (n = 142) chose to label their experiences a serious miscommunication, and 40% (n = 150)

chose to label their experiences a non-victimization. Consistent with other studies, the majority of women who were classified as having been raped did not apply the rape label. Of the 96 women who were raped, 48% (n = 46) applied the rape label, 30% (n = 29) applied the serious miscommunication label, and 22% (n = 21) did not believe they were victimized. Of interest is that 33 women who were not classified as having experienced rape chose the rape label. With regard to the remaining non-rape incidents, 30% (n = 113) were labeled a serious miscommunication and 35% (n = 129) were labeled as a non-victimization.

Based upon the findings of these six studies, it can be surmised that even when alternative labels are provided, the majority of women who are classified as having experienced rape do not label their experiences accordingly. Many women consider their experiences to be a serious miscommunication, and therefore a non-criminal offense. Perhaps more importantly, women are unsure what to label their experiences even when alternative labels to rape are provided, suggesting that current labeling options are inadequate in terms of how a woman may have processed her experience.

Labeling Oneself a Victim

Two studies stand out for their methodology in allowing study participants to classify themselves as victims. As discussed in a previous section, there is a conceptual distinction between labeling an incident as being rape and labeling oneself a victim. In their examination of labeling, Layman et al. (1996) provided respondents with four options for describing their experiences with sexual aggression, which included not being victimized, being a victim of a "serious miscommunication," being a victim of a crime other than rape, and being a victim of rape. Of the 85 women who were classified as having experienced rape by the researchers, only 27% (n = 23) indicated they had been a victim of rape. The remaining 73% (n = 62) labeled their

experience something other than rape. Nine of these women indicated they were a victim of a crime other than rape; 39 believed they were a victim of a serious miscommunication; and 14 believed they were not victimized. Clements and Ogle (2009) examine the labeling of sexual aggression within the broader context of examining physical and sexual abuse. They use the labeling cue, "Have you ever been a victim of rape?" They reported that 56% (n = 18) of 32 women classified as having been raped answered affirmatively to this question. While their study is not specifically focused on sexual aggression and does not offer alternative labels from which to choose, the use of the word 'victim' in the labeling cue and the finding that over half of the women answered affirmatively makes it worthy of mention in this section.

Summary

While there is wide variation in estimates of the prevalence of labeling rape (11% to 56%), a strong argument can be made that many women who experience sexual aggression do not label these experiences rape even when the legal requirements for this crime are met. In addition, the studies that allowed women to choose which label to apply to their experience with sexual aggression demonstrate that not only do many women regard their experiences as something other than rape, they may not regard their experiences as crimes. Further, the studies that provide options for labeling indicate that women are unsure of how to label their experience. These findings are important because if women do not label their experiences rape or some other type of crime, they may not talk to the police or seek out medical and psychological treatment that could assist them with recovery from their experiences with sexual aggression.

Measuring the Labeling of Sexual Aggression

As the review above demonstrates, between 11% and 56% of women label their experiences with sexual aggression as being rape. A possible reason for the variation in

Table 3.1. Prevalence of Labeling Rape

Authors/Year	Number of Women Classified as Having Experienced Rape	Prevalence of Labeling	Labeling Measure
Russell (1983)	n = 407	22% (n = 81)	At any time in your life, have you ever been the victim of a rape or attempted rape?
Koss (1985)	n = 62	42% (n = 26)	Have you been raped since coming to college?
Pitts & Schwartz (1993)	n = 55	27% (n = 14)	Has a man ever raped you?
Kahn, Mathie, & Torgler (1994)	n = 46	52% (n = 24)	Have you ever been raped?
Layman, Gidyzc, and Lynn (1996)	n = 85	27% (n = 23)	Looking back on the experience, how would you describe the situation? Participants could choose from four options
Botta & Pingree (1997)	n = 123	50% (n = 62)	Have you ever been sexually assaulted?
Schwartz & Leggett (1999)	n = 65	11.8% (n = 7)	Have you been raped since coming to college?
Bondurant (2001)	n = 109	36% (n = 40)	Have you ever been raped?
Kahn, Jackson, Kully, Badger, & Halvorsen (2003)	n = 97	37% (n = 33)	Have you ever been raped by a man?
Fisher, Daigle, Cullen &Turner (2003)	n = 157 incidents of rape/attempted rape	26.8% (n = 42)	Do you consider this incident to be a rape?
	n = 123 women who experienced rape/attempted rape	30.1% (n = 37)	
Harned (2004)	n = 464	15% (n = 70)	Have you experienced sexual abuse or assault from a dating partner? Dating partners could be male or female.

Table 3.1. Prevalence of Labeling Rape (continued)

Authors/Year	Number of Women Classified as Having Experienced Rape	Prevalence of Labeling	Labeling Measure
Mason, Riger, & Foley (2004)	n = 32	43% (n = 11)	Looking back on the experience, how would you describe the situation? (Provided Koss' (1985) SEI labels)
Peterson & Muehlenhard (2004)	n = 86	38% (n = 33)	Respondents asked to assign one of 20 possible labels to the incident
Littleton, Axsom, Breitkopf, & Berenson (2006)	n = 256	40% (n = 101) inclusive of women who labeled their experience rape, attempted rape, or another type of crime	Respondents asked to assign one of six labels to their experience
McMullin & White (2006)	n = 96 since age 14	53.7% (n = 51)	Have you ever been raped?
Hammond & Calhoun (2007)	n = 56	44.3% (n = 25)	Five point Likert scale, 0 = definitely not rape, 5 = definitely rape
Clements and Ogle (2009)	n = 32	56% (n = 18)	Have you ever been a victim of rape?
Littleton, Axsom, & Grills-Taquechel (2009)	n = 334	39% (n = 131)	Respondents asked to assign one of six labels to their experience
Littleton & Henderson (2009)	n = 346	39% (135)	Respondents asked to assign one of eight labels to their experience
Cleere and Lynn (2013)	n = 302	15% (n = 46)	Respondents asked to assign one of six labels to their experience
Orchowski, Untied, & Gidycz (2013)	n = 371	21.3% (n = 79)	Respondents asked to assign one of three labels to their experience

prevalence estimates is the differing methods used to measure labeling. Many studies use a variant of a single yes/no question that asks if the study participant has ever been raped (Bondurant, 2001; Kahn et al., 1994; Kahn et al., 2003; McMullin and White, 2006; Pitts and Schwartz, 1995), sexually assaulted (Botta and Pingree, 1997), or sexually abused/assaulted (Harned, 2004). As Fisher et al. (2003) observe, the use of the word 'ever' is problematic when specific instructions are not provided to delineate which incident of sexual aggression to label. This can pose difficulties when testing the predictive ability of situational factors related to the labeling of sexual aggression, because researchers cannot be positive that the rape labeled by the participant is the same incident for which situational factors were measured.

Some research has addressed this issue by being more specific in the manner of questioning. Fisher, et al. (2003) asked the question, "Do you consider this incident to be a rape?" for each incident of sexual aggression respondents reported. This method allows respondents to apply a label to each experience with sexual aggression and reduces the likelihood of measurement error. Other studies have provided a list of labels from which women can choose to describe their experiences (Cleere and Lynn, 2013; Layman et al., 1996; Littleton et al., 2006; Littleton et al., 2009; Mason, Riger, and Foley, 2004). In addition to providing a list of alternative labels, Hammond and Calhoun took a unique approach and measured the extent to which a woman felt her experience was rape using a Likert scale ranging from definitely rape to definitely not rape. The benefit of using the Likert scale is that information can be collected about which incidents women were unsure about and corresponded with which incidents were labeled rape.

In summary, varying methodology may contribute to the wide range in the prevalence rates of labeling found by researchers. Many studies use a single yes/no question that asks if a woman has ever been raped, posing a problem in determining which incident of sexual aggression the study participant is labeling. Use of this single question also prohibits study participants from applying another term to their experience that they feel may be more accurate. In an effort to improve upon methodology, other studies ask a labeling question of each incident of sexual aggression reported by participants. Despite methodological differences and weaknesses in the measures used to determine labeling, it remains clear that most women do not label their experiences with sexual aggression as being rape even when the legal or research criteria for rape has been met.

Summary

The research reviewed above indicates that a substantial majority of women do not label their experiences with sexual aggression as being rape, even if these experiences meet the legal criteria for this crime. The lowest prevalence of labeling in the reviewed studies is 11% (Schwartz and Leggett, 1999), and the highest prevalence of labeling is 56% (Clements and Ogle, 2009). The variation in prevalence is likely due in part to methodological differences in measuring the label applied to experiences with sexual aggression. In addition, some women are unsure how to label their experiences, and some label them as miscommunications or some other form of non-criminal behavior. The overall low prevalence of labeling begs the question of why these women do not recognize that these experiences are illegal and for those that meet the legal criteria, are rape. Next we will explore which factors are related to a woman's decision to label a sexually aggressive experience a rape. The subsequent discussion is organized around the ecological model, the theoretical framework used for this this dissertation.

THE ECOLOGICAL MODEL

The review of the extant academic literature on the labeling of sexual aggression reveals that the research has largely focused on individual characteristics of the woman and situational aspects of the experience as predictors of labeling, without examining the possible impact of other factors such as a woman's relationships with family members or peers, community support for women who experience sexual aggression, and beliefs and attitudes that support sexual aggression against women (for exceptions see Koss, 1985; McMullin and White, 2004; and Peterson and Muehlenhard, 2006, discussed below). Researchers have explicitly noted that the influence of cultural and societal factors are frequently omitted from some categories of research on sexual aggression (Campbell et al., 2009; Heise, 1998; Rozee and Koss, 2001), and the research on labeling is no exception. By omitting the exploration of the potential impact of relationship, community, and societal variables on the labeling decision researchers are missing the opportunity to identify factors that can be targeted in education efforts designed to encourage women enrolled in college to recognize their experiences as rape and to report the experiences to the police and campus authorities. The goal of this dissertation is to expand knowledge about labeling sexual aggression by including in its analysis variables that have largely been omitted from prior research. An ecological framework will be used to guide the discussion and analysis of the decision of women enrolled in college to label their experiences with sexual aggression.

An ecological model is a comprehensive framework that illustrates the interactive nature of factors contributing to the experience of, and reaction, to life events (Belsky, 1980; Heise, 1998). The ecological model as used in this current dissertation has its origins in human development research (Bronfenbrenner, 1979, 1986). Bronfenbrenner (1979, 1986) proposed that human development is influenced by factors within and outside of the home, and presents three

categories of such influences. The mesosystem accounts for the reciprocal impact of environments on child development. The example Bronfenbrenner uses is that a child's performance at school may impact his behavior at home, and a child's behavior at home may impact his performance at school. The exosystem consists of factors that may impact child development through indirect exposure, such as a parent's exposure to peer networks that may influence parental interaction with the child. Finally, the chronosystem accounts for life events that may have a cumulative effect upon a child's development (Bronfenbrenner, 1986). Belsky (1980) applied Bronfenbrenner's (1979) ecological model to the academic research on child maltreatment, incorporating into the framework ontogenic factors, which are characteristics of perpetrators of child maltreatment.

In relation to the current research, Heise (1998) used Belsky's (1980) interpretation of the ecological model to examine the causes of violence against women. She contended that focusing on individual characteristics of men when researching the etiology of violence against women fails to account for the interaction of societal factors and cultural influences that impact the likelihood of men perpetrating violence against women. Of importance to this dissertation is that Heise (1998) proposes that the ecological model can be used at both the individual-level and macro-level to explain violence against women. In other words, the framework can be used to determine the risk factors for individuals experiencing or perpetrating violence against women, and the framework also can be used to predict the rates of violence against women in specific communities. The individual-level application of the ecological model is used in the current dissertation to predict the decision of women enrolled in college to label sexual aggression as being rape.

At this point it is necessary to distinguish between social ecology models used in criminological research and the ecological model used in the current research. Research examining causes of neighborhoods or community crime rates employ macro-level models that use aggregate measures of neighborhood characteristics such as racial heterogeneity, socioeconomic status and residential stability as predictors (e.g. Sampson and Groves, 1989; Sampson et al., 1997). In comparison, ecological models such as the one proposed by Bronfenbrenner (1979, 1986) and Heise (1998) include individual and situational variables, and can be used as micro-level models that attempt to explain the cause of life events and a person's response these events at the individual level.

The Ecological Model and Sexual Aggression

While each of the ecological models used in sexual aggression research varies slightly, the linking element between all of them is the proposition that while individual and situational factors are important for studying sexual aggression, life events are influenced by relationships, a person's community environment, and the broader society. Ecological frameworks have been used by the World Health Organization (WHO) and academic researchers to organize the literature about the causes of sexual aggression (Dahlberg and Krug, 2002; Jewkes et al., 2002), recovery from sexual aggression (Campbell et al., 2009; Neville and Heppner, 1999), and the primary prevention of sexual aggression (Casey and Lindhorst, 2009). In her dissertation, Tomsich (2013) used an ecological model to organize her research examining which factors would be predictive of repeat sexual victimization and subsequent psychological consequences. Of special note is that White and Smith (2001), who collected the data used for the current study, used an ecological model as their theoretical framework. They purposefully chose their variables of interest based upon an interactive model that accounts for peer interaction and transfer of

values and beliefs. Other studies have used an ecological model to conduct empirical research about sexual aggression. These studies are discussed in the next section.

Empirical Research About Sexual Aggression Using the Ecological Model

Campbell (1998) applied an ecological model to examine of the response of community services to women who are raped. She conducted phone interviews with a random sample of 168 rape victim advocates from the United States. The advocates were asked questions about their most recent client's experiences with medical, mental health, and legal services in their communities. Women whose rapes were consistent with 'real rapes' (i.e. raped by a stranger, sustained injuries, use of a weapon) received the best services with the least amount of difficulty. In contrast, women whose rapes were not consistent with real rapes had extreme difficulty in receiving even minimal services. Campbell concluded that a woman's characteristics and situational characteristics of the rape were significantly related to the community services made available to women.

The ecological model has recently been used to explain a woman's decision to participate in the prosecution of their offender, thus illustrating the utility of this theoretical framework in explaining a woman's decision-making after an experience with sexual aggression. Anders and Christopher (2011) examined 440 incidents of rape and attempted rape that were reported to a police department located in a southwestern city in the United States. The rapes were reported between the years 1998 and 2004. Their ecological model is represented by the woman's characteristics (ontogenic level), characteristics of the rape (microsystem level), informal and formal sources of support (exosystem) and rape myths (macrosystem). The researchers reported that women who received the most informal and formal support were more likely than women who did not receive such support to aid in the prosecution of their offenders. Further, ontogenic

variables, microsystem variables, and macrosystem variables interacted to produce an influence on the support received by women. The police provided the most support to women who most closely resembled 'ideal victims' whose cases reflected societies view of 'real rapes' as previously described. These findings support Campbell's (1998) conclusion that individual characteristics of women and situational characteristics of a rape interact to impact the quality and quantity of community services available to women who experience sexual aggression.

Ecological Model and Labeling – Bondurant's (2001) Study

To this author's knowledge the ecological model has only been applied one time in research examining the decision of college women to label experiences with sexual aggression. Bondurant (2001) used the ecological framework in her examination of individual, situational, and social variables related to the decision of college women to label their experiences with sexual aggression rape. Women (n = 109) identified as having experienced rape according to M-SES classifications participated in the study. To determine if women applied the rape label to their experiences, they were asked, "Have you ever been raped?" Individual factors examined for a relationship to the labeling decision were victim self-blame and blame of the perpetrator for the rape, the type of rape script the victims believed in, and victim perceptions of the concept of romantic love. Situational variables in this study included the relationship to the perpetrator, the level of force used during the rape, victim resistance, and harm experienced by the victim. Finally, Bondurant classifies relationships with sexually aggressive peers as a social network variable.

At the individual level, women who blamed themselves and who possessed a blitz rape script were more likely to label their experiences rape. At the situational level, women who believed their experiences were more violent (and therefore more consistent with a blitz rape

script) were more likely to apply the rape label than other women in the sample. In sum, variables at the individual and situational levels were most predictive of the labeling decision in this study.

Summary

Table 3.2 briefly describes ecological models used in the studies discussed above. Because each study uses different variable classifications for their models, the studies have been summarized using general categorical themes based upon the WHO ecological model (Dahlberg and Krug, 2002; Jewkes, et al., 2002). Individual variables are specific to a person who has experienced sexual aggression, such as age, sex, income, and mental health functioning. Situational level variables are specific to each incident of sexual aggression, such as the location of the incident and the relationship between the people involved in the incident. Relationship variables are indicative of the interpersonal relationships a woman who has experienced sexual aggression has with others, such as knowing a peer or a family member who has been raped. Community variables include potential support systems that a woman may use after experiencing sexual aggression, such as family, friends, and the criminal justice system. Finally, societal variables reflect potential societal influences on how a woman interprets her experience, such as a person's attitudes and beliefs that are supportive of sexual aggression against women. This is the model used for the current research, as discussed below.

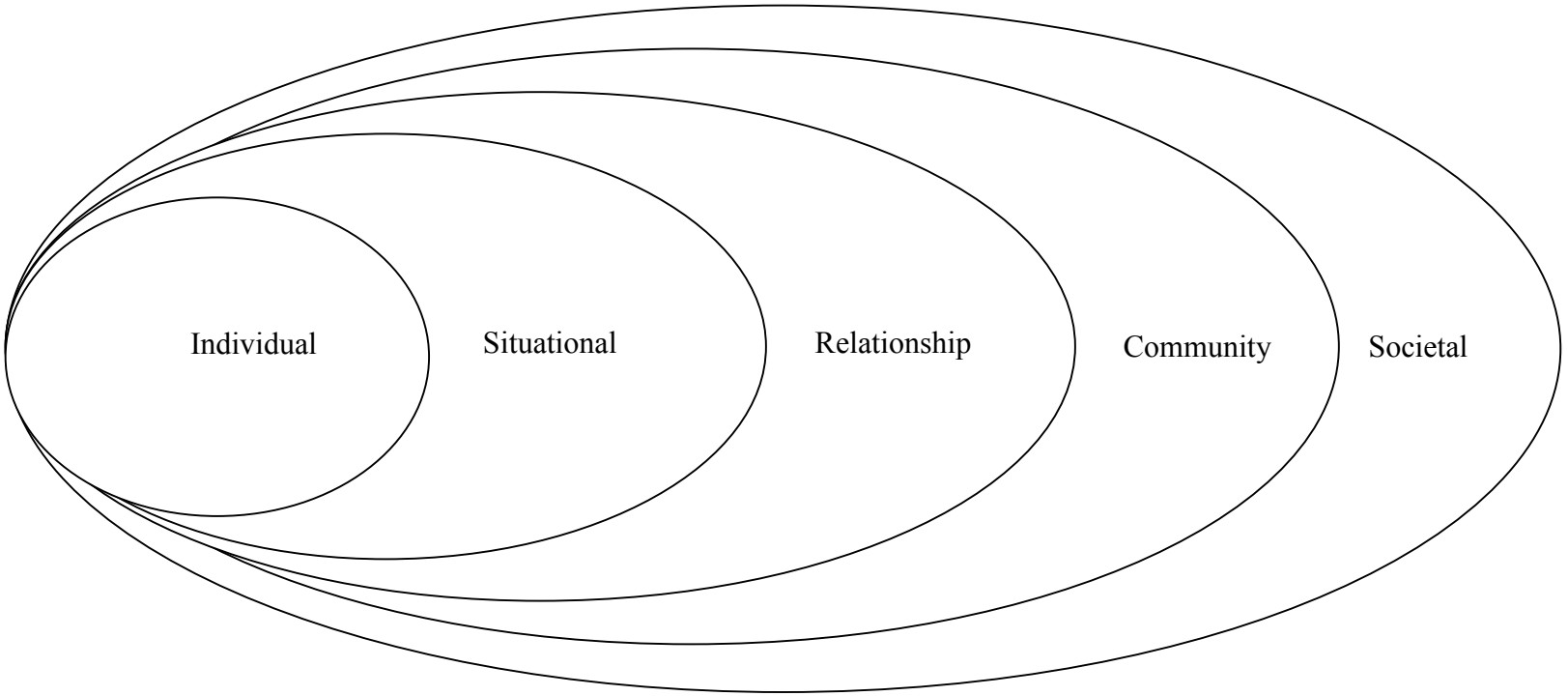
Table 3.2. Summary of Ecological Models Used in Rape Research

Authors	Topic	Micro/Individual	Situational/assault	Micro/relationship	Meso/community	Macro
Campbell (1998)	Community response to rape	Characteristics of women	Characteristics of rape		Quality and quantity of available medical, legal, and advocacy services	
White and Smith (2001)	Rape	Characteristics of women	Characteristics that increase or decrease risk of sexual aggression	Interaction between a victim and an offender	Interaction with peer groups, parents, school, work environments	Sociocultural context
Neville & Heppner (1999)	Rape recovery	Characteristics of women who experience sexual aggression – race, prior history of victimization, psychological functioning	Characteristics of the incident of sexual aggression		Support from family/friends Support from police/counselors	Sociocultural context Racial and ethnic context
Bondurant (2001)	Labeling rape	Characteristics of women who experience sexual aggression	Characteristics of assault	Sexually aggressive peer groups		

Table 3.2. Summary of Ecological Models Used in Rape Research (continued)

Authors	Topic	Individual	Situational/assault	Micro/relationship	Meso/community	Macro/societal
WHO model Dahlberg & Krug (2002) Jewkes, Sen, & Garcia-Moreno (2002)	Preventing perpetration of rape	Characteristics of men and women who experience or perpetrate sexual aggression – substance use, education level, prior history of victimization or perpetration		Friendship networks Family environment	Socioeconomic factors Lack of judicial system support against rape Tolerance of sexual assault; weak sanctions	Norms supporting violence and gender disparity Weak laws and policies about gender equality High crime rates
Campbell, Dworkin, & Cabral (2009)	Rape recovery	Characteristics of victim Previous victimization	Characteristics of assault	Support from family, friends, and intimate partners	Support from formal sources	Rape-prone culture Racial/ethnic context
Casey & Lindhorst (2009)	Prevention of rape – male focus	Characteristics of men who rape		Peers of men who rape	Community norms supporting rape	
Anders and Christopher (2011)	Victim prosecution decisions	Characteristics of victim	Characteristics of assault		Informal support from family/friends Formal support from police	Victim and assault characteristics reflective of stereotypical rape
Tomsich (2013)	Repeat sexual victimization and trauma	Childhood development of victim	Characteristics of first sexual victimization			Person's social power (race, income, education level, disclosure)

Figure 3.1. Ecological Model



Adapted from Heise (1998) and the World Health Organization (Dahlberg and Krug, 2002; Jewkes et al., 2002)

Table 3.3. Variables Related to the Labeling of Sexual Aggression

Authors/Year	Number of raped women (labeling percentage)	Individual Variables	Situational Variables	Relationship Variables	Community Variables	Societal Variables
Koss (1985)	n = 62 (42%)	Not significant Number of sexual partners	Positive Intensity of force Less acquainted with man Negative More intimate and acquainted with man Not significant Substance use Types of force Severity of aggression Strength of resistance Clarity of non-consent Immediate reaction	N/A	N/A	Not significant Attitudes about rape, aggression, and women
Pitts and Schwartz (1993)	n = 55 (27%)	Negative Self-blame for rape	N/A	N/A	N/A	N/A
Kahn, Andreoli Mathie, & Torgler (1994)	n = 46 (52%)	Positive Prior experiences with SA Not significant Attending rape program	Positive Use of force	Not significant Knowing someone who was raped	N/A	N/A

Table 3.3. Variables Related to the Labeling of Sexual Aggression (continued)

Authors/Year	Number of raped women (labeling percentage)	Individual Variables	Situational Variables	Relationship Variables	Community Variables	Societal Variables
Layman, Gidyzc, and Lynn (1996)	n = 85 (275)	<u>Positive</u> Psychological distress <u>Not Significant</u> Responsibility of woman	<u>Positive</u> Use of force Resistance Clarity of non-consent Might press charges <u>Not significant</u> Relationship to offender Extent of knowing offender Prior intimacy with offender Either person intoxicated	N/A	N/A	N/A
Botta and Pingree (1997)	n = 123 (50%)	<u>Positive</u> Being older Few emotional problems Discomfort in talking about rape <u>Negative</u> Psychological distress <u>Not significant</u> Comfort in disclosing rape Attendance at rape program	<u>Positive</u> Offender an acquaintance Event occurring further in past <u>Negative</u> Presence of alcohol	<u>Not significant</u> Knowing someone who has been raped	N/A	N/A

Table 3.3. Variables Related to the Labeling of Sexual Aggression (continued)

Authors/Year	Number of raped women (labeling percentage)	Individual Variables	Situational Variables	Relationship Variables	Community Variables	Societal Variables
Bondurant (2001)	n = 109 (36%)	Positive Self-blame	Positive Use of force Resistance Physical harm Not significant Relationship to offender	Not significant Sexually aggressive peers Knowing someone who has been raped	N/A	Not significant Romantic beliefs
Kahn, Jackson, Kully, Badger, & Halvorsen (2003)	n = 97 (37%)	Positive Psychological distress Not significant Feelings of anger and loss of control Feelings of responsibility	Positive Lesser known offender Clarity of non-consent Use of force Man using alcohol was associated with labeling the event something other than rape Negative Known offender Familiarity with offender Not significant Substance use by woman	N/A	N/A	N/A

Table 3.3. Variables Related to the Labeling of Sexual Aggression (continued)

Authors/Year	Number of raped women (labeling percentage)	Individual Variables	Situational Variables	Relationship Variables	Community Variables	Societal Variables
Fisher, Daigle, Cullen, & Turner (2003)	n = 1,318 (6.2%)	Positive Previous experience with sexual aggression	Positive Forceful verbal resistance Use of force Completed penetration Use of weapon Injury Incident further in the past Not significant Relationship to offender Attempted penetration Other forms of resistance Substance use by either party	Not significant Knowing someone who has been raped	Not significant Disclosure	N/A
Mason, Riger, & Foley (2004)	n = 32 (43%)	Negative Age at time of incident Less violence	Not significant Acquaintance level with offender Prior sexual activity with offender	N/A	N/A	N/A

Table 3.3. Variables Related to the Labeling of Sexual Aggression (continued)

Authors/Year	Number of raped women (labeling percentage)	Individual Variables	Situational Variables	Relationship Variables	Community Variables	Societal Variables
Peterson & Muehlenhard (2004)	n = 86 (38%)	N/A	N/A	N/A	N/A	Positive Acceptance of individual rape myths congruent with rape experiences
Littleton, Axsom, Breitkopf, and Berenson (2006)	n = 256 (40%)	Positive Psychological distress	Positive Resistance Negative Alcohol use by woman	N/A	N/A	N/A
McMullin and White (2006)	n = 96 (51)	Not significant Psychological well-being and distress	Positive Physical injury Not drinking Not significant Offender identity	Not significant Friends who have been raped	N/A	Not significant Attitudes toward women
Hammond & Calhoun (2007)	n = 56 (44.6%)	Not significant Previous sexual aggression	Positive Use of force Woman drinking	N/A	N/A	N/A
Clements and Ogle (2009)	n = 32 (56%)	Positive Better psychological adjustment	N/A	N/A	N/A	N/A

Table 3.3. Variables Related to the Labeling of Sexual Aggression (continued)

Authors/Year	Number of raped women (labeling percentage)	Individual Variables	Situational Variables	Relationship Variables	Community Variables	Societal Variables
Littleton, Axsom, & Grills-Taquechel (2009)	n = 334 (39%)	Positive Age Psychological distress Negative Post incident alcohol use Not significant Multiple incidents with same offender Sexual aggression with different offender	Positive Use of force Type of resistance Negative Known offender Woman drinking Assault occurred within past year Continued relationship with assailant Not significant Binge drinking by offender Romantic relationship with offender	N/A	N/A	N/A
Cleere and Lynn (2013)	n = 302 (15%)	Positive Held offender responsible Pressed charges	Positive Offender a relative Use of force Clarity of non-consent Offender aggressive	N/A	N/A	N/A
Orchowski, Untied, & Gidycz (2013)	n = 371 (21.3%)	Positive High perpetrator blame	Positive Severity of assault Woman drinking Not significant Self-blame Known perpetrator	N/A	Positive Disclosing assault	N/A

Table 3.4. Ecological Model for the Labeling Decision – Current Study

Variable Category	Variables Included
Individual	Psychological distress, prior experiences with sexual aggression, expectation of sexual aggression*
Situational/Assault	Relationship with offender, was offender a student, who paid,* where incident occurred,* who initiated contact,* why they were together,* substance use by woman, substance use by offender
Relationship	Knowing a person who has experienced sexual aggression
Community	Disclosure of incident, drinking behavior
Societal	Acceptance of heterosexual male violence (including rape myths), traditional attitudes toward women

* Indicates a variable not examined in previous published research

Ecological Model for the Current Research

This dissertation uses an adaptation of the ecological models proposed by Heise (1998) and the World Health Organization (Dahlberg and Krug, 2002; Jewkes et al., 2002) to frame its research. The ecological model proposed by the WHO (Dahlberg and Krug, 2002; Jewkes et al., 2002) consists of four levels of variables. Individual-level variables are personal factors unique to an individual woman such as age or education level. Relationship-level variables are those social and familial relationships that may increase the likelihood of sexual aggression. Community-level variables are indicative of the social, family, and work environment within which a person operates that may increase the chances of experiencing sexual aggression. Finally, societal factors are overarching beliefs and attitudes that are reflected in a society's laws and response to sexual aggression. The current dissertation adds the situational/assault level to this model to account for situation specific variables that have been shown to be related to the

labeling decision. This model is illustrated in Figure 2.1. Further, this dissertation uses Heise's (1998) individual-level application of the ecological model to conduct a micro-level analysis of the decision of women enrolled in college to label their experiences with sexual aggression.

The next section describes in detail the academic research about predictors of the labeling decision relevant to the current study. This review is organized according to the ecological model being used in this dissertation, which is summarized in Table 3.4. The section begins with a discussion about the contribution of individual victim characteristics to the labeling decision, and follows with discussions about situational/assault level factors, relationship factors, community factors, and societal factors. Unless otherwise noted, all samples discussed in this review consist of women enrolled in college at the time of the study. In addition, the following section only addresses the extant research specific to the current variables of interest. For example, the use of force has been found to be related to the labeling decision, but cannot be measured using the current dataset. However, brief findings regarding the variables that have been examined for a relationship to labeling but that are not part of the current dataset are included in Table 3.3.

Individual-Level Variables

Individual-level variables are characteristics unique to someone who has experienced sexual aggression. The individual-level variables of interest in the current research are psychological distress, previous experience with sexual aggression, and expectations of sexual aggression. Only the empirical research including psychological distress and previous experience with sexual aggression is reviewed in this section due to the fact that expectations of sexual aggression have not been examined for a relationship to label an incident of sexual aggression as being rape.

Psychological distress. One individual-level variable of interest for the current research is psychological distress. Several academic studies have examined the relationship between psychological and emotional distress and labeling a rape. One methodological challenge encountered in this line of research is the temporal order of events. It is difficult to ascertain whether or not psychological distress is concurrent to or precedes labeling, or if labeling precedes psychological distress. To explore this relationship, researchers generally measure a woman's distress levels at the time of the study and then use statistical testing to determine if a correlational or predictive relationship exists between labeling and her psychological state. All but one study reviewed in this section relied on this method. One exception is Kahn et al. (2003), who examined the relationship between how women felt immediately after a rape to the likelihood of labeling. They found that women who reported feeling dirty, sad, confused, and detached from reality immediately following their experiences were more likely to label their experience a rape. This suggests that an immediate and negative psychological impact is related to labeling an incident of sexual aggression rape.

Some empirical evidence indicates that women who label their experiences a rape have more psychological distress than women who do not apply the rape label to their experiences. Littleton et al. (2006) reported that approximately 25% (n = 64) of the 256 women in their sample met the criteria for PTSD, 25% (n = 64) were clinically depressed, and 35% (n = 90) met the criteria to be clinically diagnosed with anxiety. Women who labeled their experiences rape exhibited significantly more post traumatic symptoms than women who did not label their experiences rape even after controlling for the situational factors of the experience. Another study conducted by Littleton and colleagues reported similar findings. Littleton and Henderson (2009) reported that 47% (n = 63) of the 135 women in their sample who acknowledged their

rape had PTSD. These findings could suggest that labeling causes psychological distress. However, Littleton and Henderson also estimated a path model which indicated labeling did not contribute to the prediction of PTSD in their sample. Harned (2004) also addressed this issue by testing the mediating and direct effects of applying a label to sexually aggressive events on negative psychological outcomes. Using data from 464 women who had experienced sexual aggression by dating partners, she estimated path models to predict psychological distress of women who labeled their experiences sexual assault/abuse compared to those who did not label their experiences sexual assault/abuse. She reported that it is the sexual incident of sexual aggression itself - not the decision to label it - that contributes to negative psychological outcomes.

Some studies indicate that differences in psychological distress between labelers and non-labelers may decrease over time. Layman et al. (1996) reported that women who label their experiences rape had more PTSD symptoms than women who did not label their experiences rape and women who had not experienced sexual aggression. However, the number of PTSD symptoms experienced by both labelers and non-labelers decreased over time. Similarly, McMullin and White (2006) found that women labeling their rapes reported more psychological distress than women who did not label their rapes but a subsequent assessment indicated no significant differences in psychological distress between labeling groups. Together these two studies suggest that for some women the trauma symptoms resulting from rape are acute (short-term) regardless of labeling status.

Other studies indicate that women who label their rapes may fare better psychologically than women who do not label their experiences rape. Botta and Pingree (1997) reported that women who label their rapes were happier and had fewer emotional problems that impacted their

work compared to women who had not labeled their experiences. Similarly, Clements and Ogle (2009) found that women in their sample who labeled their experiences rape reported better psychological functioning than women who did not label their experiences rape. It is possible that the decision to label impacts women differently. For some women the act of labeling their rape may be positive emotionally and psychologically and for other women the decision to label could be negative. It is also possible that the labelers who reported better functioning sought help from counselors, as in Botta and Pingree's (1997) study. In sum, while the influence of the psychological impact of rape on the labeling decision is unclear, there is evidence that labeling is related to more positive or better mental health for college women experiencing sexual aggression.

Prior experiences with sexual aggression. There is limited research examining the impact of previous experiences with sexual aggression on the labeling decision. Fisher et al. (2003) reported that women who had prior experiences with forced sexual aggression were significantly more likely to label a current incident rape compared to women who did not have previous experiences with forced sexual aggression. Kahn et al. (1994) reported that women who labeled an experience rape had experienced more instances of forceful sexual aggression that did not culminate in intercourse (i.e. forced kissing or petting). In contrast, Hammond and Calhoun (2007) did not find a relationship between previous experiences with sexual aggression and the labeling decision.

Summary of individual-level variables. The individual-level variables of interest to the current research are psychological distress and prior experiences with sexual aggression. There are mixed findings regarding the impact of psychological distress on the labeling decision. Some studies report that women who label their experiences with sexual aggression as being rape fare

better psychologically, while others indicate that the opposite is true. In addition, there is limited research examining the impact of previous experiences with sexual aggression on the labeling decision. The research that does exist reports mixed findings, with two out of the three studies reviewed indicating previous sexual aggression increases the likelihood of labeling a current experience with sexual aggression as being rape. The remaining study did not find a relationship between previous incidents of sexual aggression and the decision to label a rape.

Situational-Level Variables

Situational-level variables are specific characteristics of the experience with sexual aggression. Two of the relevant situational-level variables for this dissertation that have been previously examined for a relationship to the labeling of sexual aggression are the nature of the victim-offender relationship and the use of substances by either person before or during an incident of sexual aggression. A review of the academic literature about the impact of these situational variables on the labeling decision is discussed below.

Victim-offender relationship. Empirical research has explored the impact of the relationship between the parties involved on the likelihood of labeling or acknowledging an experience with sexual aggression. Some research indicates that women who are more familiar with their offender are less likely to label their experiences rape (Kahn et al., 2003; Koss, 1985; Littleton et al., 2009). Other studies have not found a significant relationship between labeling the experience rape and how well the woman knows the offender (Bondurant, 2001; Fisher et al., 2003; Hammond and Calhoun, 2007; Layman et al., 1996; Littleton et al. 2006). Cleere and Lynn (2013) reported conflicting findings based upon the degree of intimacy between the woman and the offender. Women who labeled their experiences were more likely to have been assaulted by a relative or someone they knew but with whom there was no romantic involvement. In contrast,

women who did not label their experiences were more likely to have had prior sexual relations with the offender, and the offender was more likely to be a romantic partner. Orchowski, et al. (2013) did not find a relationship between degree of acquaintance with the perpetrator and labeling a rape. One possible explanation for the conflicting findings is that as young women are exposed to healthy relationships education, they become more knowledgeable about sexual aggression and recognize that perpetrators can be people they know (Botta and Pingree, 1997; Fisher et al., 2003). Based upon the previous review, the predictive ability of the relationship between parties involved in an incident of sexual aggression is unclear and may be influenced by educational efforts aimed at informing college women that someone they know can perpetrate sexual aggression

Substance use. The use of alcohol or drugs prior to or during an incident of sexual aggression has been shown to be related to the likelihood of labeling that experience rape. Botta and Pingree (1997) reported women who were given drugs or alcohol by the involved male did not label their experiences with sexual aggression rape. Similarly, Schwartz and Leggett (1999) found that only one woman in their sample who had experienced sexual aggression after she had been drinking alcohol labeled her experience rape. Littleton et al. (2006) reported that women in their study who had been drinking heavily at the time of their experience with sexual aggression were less likely to label their experience rape than those who were not drinking heavily. In contrast, Hammond and Calhoun (2007) found that women who had been drinking alcohol at the time of their experiences were more likely to label their experiences rape than women who had not been drinking. Other studies have not found a significant relationship between alcohol consumption by the victim and the label attached to their experience with sexual aggression (Fisher et al., 2003; Koss, 1985; Layman et al., 1996; McMullin and White, 2006; Orchowski et

al., 2013). In sum, while several studies have reported that women who were drinking alcohol prior to or during incidents of sexual aggression do not label these experiences rape, some studies call this finding into question. The current research will further explore the relationship between substance use and the labeling of sexual aggression.

Summary of situational-level variables. The two situational variables of interest reviewed above are the relationship between the woman and the offender and the use of alcohol or drugs before or during an incident of sexual aggression. Empirical research demonstrates that sometimes women are less likely to label sexually aggressive experiences rape when the other person involved is someone they know or alcohol was being used during or before the incident, while other studies indicate these variables do not influence the labeling decision. It is possible that there are other situational factors involved in the labeling decision that have yet to be explored in empirical research such as where the assault occurred, who initiated the contact, why the people were together, who paid for expenses, and prior sexual contact between the people involved. These variables will be included in the current analysis.

Relationship-Level Variables

The relationship level of the ecological model accounts for interpersonal relationships that a woman has with friends and family members. The relationship variable of interest for the current research is knowing a friend who has experienced sexual aggression. To this author's knowledge, there are only three empirical studies examining the relationship of this variable to the decision of a woman to label an experience with sexual aggression. Botta and Pingree (1997) found that women in their sample who labeled their experiences with sexual aggression as rape were more likely to know other women who experienced sexual aggression. In contrast, the relationship between labeling a rape and knowing other women who had been raped only

approached significance in Bondurant's (2001) study and was not significant in another study (Fisher et al., 2003). Overall, there is limited information available about the impact of relationship variables on the decision to apply the rape label to experiences with sexual aggression.

Community-Level Variables

The first community variable of interest for the current research is the disclosure of an incident of sexual aggression to another person. While disclosure could also be classified as a relationship variable, support for categorizing disclosure to a third party as a community-level variable exists in previous research. The decision to disclose an incident of sexual aggression to a third party may indicate that a woman feels she will receive emotional and/or legal support from her immediate and extended community in response to her experience (Anders and Christopher, 2011; Campbell et al., 2009; Neville and Heppner, 1999). Several empirical studies have examined the influence of disclosing incidents of sexual aggression to a third-party on the decision to label sexual aggression. Botta and Pingree (1997), Fisher et al. (2003) and Hammond (2007) reported that disclosing an experience of sexual aggression to someone was not related to the labeling decision. In comparison, Littleton et al. (2006) found that women who labeled their experiences rape were more likely to disclose to someone and to disclose to more people, and Orchowski et al. (2013) found that disclosure was positively related to labeling an experience rape. Botta and Pingree note that women primarily gather information about sexual aggression from their peers. With that in mind, it is possible that as the women in Littleton et al.'s study continued to discuss their experiences, they gathered information leading them to conclude that their experience with sexual aggression was rape.

The second community-level variable of interest is the drinking behavior of the women in the study. College campuses are unique in that they are self-contained communities that cultivate an atmosphere designed to immerse students into the educational and social environments. The 'party scene' is one such social environment present on many college campuses. A woman's drinking behavior may be indicative of how much she participates in the party scene. There is evidence that people involved in - and witness to - the party culture tend to believe that women who experience sexual aggression are to blame for what happens to them (Armstrong, Hamilton, and Sweeney, 2006; Luke, 2006). It is possible that women who get drunk frequently subscribe to beliefs that would lead them to blame themselves for their experiences with sexual aggression. To this author's knowledge, there is no published empirical research that includes a woman's drinking habits as predictors of the labeling decision.

Societal-Level Variables

The societal level of the ecological perspective as it is used in the current study represents the societal context, or culture, within which life events occur. With regard to sexual aggression, norms supporting violence toward women contribute to the creation of such a social context (e.g. Dahlberg and Krug, 2002; Jewkes et al., 2002; Neville and Heppner, 1999). In addition, Heise (1998) categorizes attitudes and beliefs about violence against women as societal variables in her proposed use of the ecological model for individual-level analyses. Therefore, this dissertation also classifies a person's attitudes and beliefs about sexual aggression and gender roles at the societal level.

Women who experience sexual aggression may be influenced by their own beliefs and attitudes about rape and gender roles when deciding what label to apply to their experience. Rape myths excuse the perpetrators from, and blame women for, sexual aggression. They do so by

overtly stating or covertly implying that it is a woman's responsibility to prevent rape and it is her fault if she has such an experience (Burt, 1980; Lonsway and Fitzgerald, 1994). Gender attitudes indicate how a person feels about male and female roles in society and whether or not men and women are viewed favorably or unfavorably (Ashmore, DelBoca, and Bilder, 1995). While it could be argued that these variables should be included at the individual-level of the model, there is support in previous research for categorizing the individual acceptance of rape myths and traditional attitudes about gender roles as societal variables (Campbell et al.; Dahlberg and Krug, 2004; Heise, 1998; Jewkes et al., 2002). This section discusses the only studies known to the author that tests the concepts of rape myths and gender attitudes in relation to the decision to label sexual aggression.

To this author's knowledge, Koss (1985) and Peterson and Muehlenhard (2004) conducted the only published studies to examine the relationship between a woman's belief in rape myths and her decision to label a rape. Koss reported no relationship between measures of rape myths and a woman's decision to label a rape. Peterson and Muehlenhard (2004) hypothesized that a woman's acceptance or rejection of rape myths that were similar to their individual circumstances of sexual aggression would predict the labeling of their experiences. They reported that women who endorsed Illinois Rape Myth Assessment (IRMA) items about sexual teasing and who believed the perpetrator in their individual circumstances may have felt like he was being teased were less likely than other women to label their experiences rape. In addition, women who endorsed IRMA items indicating that physical resistance is a necessary component of rape and who did not physically resist during their own experience with sexual aggression were less likely than other women to label their experiences rape. To this author's

knowledge, two studies have tested for a relationship between gender attitudes and labeling and neither found a significant relationship (Koss, 1985; McMullin and White, 2006).

In summary, research exploring the relationship between rape myth acceptance and labeling indicates that women whose experiences are similar to the rape myths they endorse are less likely than other women to label their rapes. Research examining the relationship between gender attitudes and labeling revealed no significant findings. However, it is still important to include these variables in analysis when possible due to the paucity of studies exploring the potential relationship between these factors and the labeling decision.

Summary

The above review indicates that much of the research exploring the labeling decision focuses on the impact of individual and situational variables, and very little research examines the influence of relationship, community and societal factors on the labeling decision. Continued research examining the factors related to the decision of women to apply the rape label to their experiences with sexual aggression is important for several reasons. First, if women enrolled in college who experience sexual aggression do not identify the event as a rape or some other crime, they may not report their experiences to the police or to campus officials (Fisher et al., 2003). This necessarily means that the likelihood of detection and prosecution of the offender decreases. This lack of formal notification also contributes to the underestimation of the prevalence and incidence of sexual aggression according to official police and college records. Second, if a woman does not label an experience with sexual aggression as some sort of crime she may not seek psychological or medical assistance for any emotional difficulties or physical injuries because she does not identify what happened to her as rape. Therefore, it is important to establish correlates and predictors of labeling so education and prevention efforts can be

appropriately developed. In addition, at this juncture it is necessary to align the academic research examining the labeling decision with a theoretical framework (i.e. the ecological model) adopted in studies exploring other aspects of sexual aggression such as its primary prevention or its psychological impact on the women it effects.

CURRENT FOCUS AND RESEARCH QUESTIONS

The purpose of this dissertation is to further examine the individual, situational/assault, relationship, community, and societal factors that may influence the decision of women enrolled in college to label their sexual experiences as sexual aggression. Previous research has focused on individual and situational/assault factors, largely omitting the potential impact of relationship, community, and societal variables. Previous research also has largely ignored the labeling of sexually aggressive acts other than rape. To address these weaknesses in the empirical research, several questions with regard to the labeling of sexual aggression will be addressed as outlined below.

Research question #1: Do women who label their experience with sexual aggression as being rape differ from women who do not label their experience with sexual aggression as being rape with regard to mental health measures, their attitudes toward women and gender roles, their acceptance of heterosexual male violence, and their expectation of sexual aggression?

Precedent has been set in empirical research for comparing women who label their experiences with sexual aggression as rape to women who do not label those experiences as rape. The labeling and non-labeling groups will be compared on mental health measures, their attitudes about women and gender roles, their acceptance of rape myths, and their expectation of sexual assault. Prior research has reported mixed findings regarding the relationship between

psychological functioning and labeling group membership. Some studies suggest that women who label their experiences rape have more psychological distress than women who do not label their experiences rape (Kahn et al., 2003; Layman et al., 1996; Littleton et al., 2006; Littleton et al., 2009). Therefore, this dissertation hypothesizes that women who label their rapes will have significantly lower psychological functioning and higher psychological distress than women who do not label their rapes. The unique contribution of this exploratory between groups analysis stems from the inclusion of expectations of sexual aggression. To this author's knowledge there is no published research that includes expectations of sexual aggression as a predictor variable of the labeling decision. It is possible that women who label their experiences with sexual aggression may be more aware of their risk because they have already recognized one incident as being rape. Therefore, it is hypothesized that women who label their experiences rape will have significantly higher scores on measures of rape expectancy than women who do not label their experiences rape.

Research question #2: What is the prevalence of labeling sexually aggressive acts *other than* rape in the sample?

The majority of research examining the correlates and predictors of labeling sexual aggression includes only instances of rape, ignoring other types of sexual aggression (for exceptions see Fisher et al., 2003; and Cleere and Lynn, 2013). Other forms of sexual aggression may be traumatizing and/or illegal and it is important to explore which labels are applied to these experiences to assist in the development of prevention programming and response protocol to these events. In addition, critics contend that the prevalence of rape is overestimated because researchers inflate statistics through haphazard methodology that classifies incidents of sexual aggression as rape when a rape did not actually occur. These same critics also contend that the

movement to research sexual aggression has resulted in women believing most acts of sexual aggression are rape (e.g. Gilbert, 1991; 1992; Roiphe, 1993). Exploring the labeling of experiences other than rape addresses these concerns by demonstrating whether or not the rape label is applied to incidents of sexual aggression that are not legally rape. Previous research has found that women are unlikely to apply the rape label to non-rape experiences (Cleere and Lynn, 2013; Fisher et al., 2003). Therefore, this dissertation hypothesizes that women will apply the rape label significantly less to incidents of sexual aggression that are not rape compared to incidents of sexual aggression that are rape.

Research question #3: Does the ecological model predict a woman's decision to label an experience with sexual aggression as being rape?

There is limited research using the ecological model to predict the labeling decision (Bondurant, 2001). Because the ecological model takes into account individual, situational, relationship, community, and societal variables under one umbrella it may be possible to determine which of these categories of variables has the most or least influence on the labeling decision. Models for the primary prevention of sexual aggression use an ecological model to frame their approach and influence prevention programming (e.g. WHO). A next logical step is to believe that such a model could be used to predict the labeling decision, as the same factors that support sexual aggression are likely an influence in a person's interpretation of a sexually aggressive experience.

The current study provides a unique opportunity to explore variables at all levels of the ecological model, including variables that have not been previously examined to determine any relationship they may have with a woman's decision to label sexual aggression as being rape. Variables unique to the present work include the expectation of sexual aggression and situational

circumstances leading up to an incident of sexual aggression. Other variables have been examined for a relationship to labeling in previous research, however, they were not examined using an ecological model. These variables include disclosing of an incident of sexual aggression, which is classified as a community-level variable (Campbell et al., 2009). The acceptance of rape myths and traditional gender attitudes are classified as societal-level variables, based upon Heise's (1998) propositions that these variables are appropriate at this level of the ecological model for a micro-level study. As its major proposition, this study hypothesizes that the ecological model will predict the decision of women to label their experiences with sexual aggression as being rape.

CONCLUSION

This section has provided a review of the extant academic literature on the labeling of rape and the factors that are related to the labeling decision. This section also presented the ecological framework being used to organize the current study. Employing an ecological model is the next logical step in attempting to determine how circumstances coalesce to influence a woman's interpretation of her experiences with sexual aggression. This approach will encourage other researchers to examine the labeling of sexual aggression using a holistic approach. Further, this approach can be extended into the area of physical aggression towards women in an effort to discover how they frame these experiences. Answering the research questions presented above will advance research in the area of violence against women because they can be extended to other types of violence against women such as intimate partner violence and stalking. The remaining chapters of this dissertation are devoted to developing the methods used in this research, the results of the research, and a discussion of the findings and suggestions for future investigations.

CHAPTER 4

RESEARCH STRATEGY

The purpose of this dissertation is to examine factors that predict a woman's decision to label an experience with sexual aggression. This dissertation is in part an extension of McMullin and White's (2006) and Peterson and Muehlenhard's (2004) research examining the impact of rape myth acceptance and gender attitudes on the labeling decision. More specifically, the current research uses an ecological model as its framework to explore the influence of individual, situational, relationship, community, and societal variables on the labeling decision. The current dissertation is an important contribution to the academic literature for five reasons. First, the prevalence of sexual aggression on campuses is alarming. Even a low prevalence estimate using less robust methodology compared to other studies indicates that during an average year, approximately 25,000 women experience sexual aggression while enrolled in college (Baum and Klaus, 2005). Second, there is very little published academic research that examines the labeling of sexually aggressive experiences other than rape. Studies indicate that women experience many forms of sexual aggression at a higher prevalence than rape, making this an important aspect to explore (e.g. Fisher et al., 2003; Koss et al., 1987; Koss and Oros, 1982). Third, rape often has negative consequences for a woman's psychological and emotional well-being and it is to our advantage to continue researching a phenomenon that may contribute to a woman's decision to seek medical attention or psychological assistance after an experience with sexual aggression. Finally, there is limited published academic research that uses an ecological model as its theoretical framework (for an exception see Bondurant, 2001). The current research applies an ecological framework in an effort to align research examining the labeling decision with the

research examining other areas of sexual aggression (e.g. Campbell et al., 2009; Anders and Christopher, 2011).

METHODS

Theoretical Model

This study uses an ecological model to explore the decision by women enrolled in college to apply the rape label to their experiences with sexual aggression. To this author's knowledge, an ecological model has been used only once in published empirical research to explore the labeling decision (Bondurant, 2001). However, an ecological model has been used to theorize about the trauma of sexual aggression (Campbell et al., 2009; Neville and Heppner, 1999), the primary prevention of sexual aggression (Casey and Lindhorst, 2009), and the decision of women who have experienced sexual aggression to pursue prosecution of the alleged offender (Anders and Christopher, 2011). Ecological models are useful for exploring aspects of sexual aggression because they account for the roles that individual, situational, relationship, community, and societal factors may play in a person's experiences and how these experiences are interpreted. It is the goal of this dissertation to explore the utility of an ecological model in explaining a woman's decision to label an experience with sexual aggression.

Data

This dissertation will use data collected by White and Smith (2001) that was part of a longitudinal cohort study examining the risk factors for physical and sexual aggression among students attending a medium-sized public university in the southeastern United States. This data was retrieved from the Inter-university Consortium for Political and Social research (ICPSR). Two cohorts of incoming freshmen women initially participated in the study during the fall of 1990 and 1991. Most of the participants completed paper-pencil surveys at freshman orientation.

Freshmen women who did not attend the orientation were contacted by phone or by mail and asked to participate in the study.

These initial surveys gathered baseline information about instances of physical and sexual aggression experienced by women since the age of 14 to the time of the first data collection. Subsequent surveys were conducted in the spring of the following years and gathered information about physical and sexual aggression occurring since the previous survey administration (a 12-month period) (White and Smith, 2001). The surveys also collected information about participants' mental health, risky life activities (i.e. binge drinking, criminal behavior), and experiences with witnessing family violence. Each survey wave also gathered specific information about incidents of sexual aggression such as whether or not the experience occurred in a dating context and whether drug and alcohol use was a factor in the incident. In addition, questions were asked that assessed the acceptance of rape myths, traditional dating rules, ambivalent sexism, and sexual conservatism.

This dissertation *only uses information from the 1990 cohort* that was collected during the spring semester of this cohort's sophomore year (Spring 1992). Data from this wave is used because information for some of the independent variables of interest was not collected or was unavailable for the 1991 cohort and other data waves for the 1990 cohort. In their report to the National Criminal Justice Reference Service, White and Smith (2001) estimated there were approximately 994 women whose freshman year began in the fall of 1990 and who could have participated in the initial wave of data collection. They further estimated an initial response rate of 83% (n = 825) for completion of the initial surveys. However, this author's examination of the dataset for the current analysis indicated there were 830 women who participated in the initial stage of data collection, a response rate of 83.5%. Of these 830 women, approximately 83.2% (n

= 690) provided usable data during the spring 1992 data collection. Only those women who experienced sexual aggression during their sophomore year of college *or* who answered yes to the labeling cue are included in this study. They are divided into two samples, as summarized in Table 4.1 and discussed in the next section.

Table 4.1. Sample Characteristics

Demographic Information	Sample 1 N = 156	Sample 2 N = 199
Race		
White	114 (73%)	145 (73%)
Non-white/unknown	42 (27%)	54% (27%)
Relationship status		
Single/divorced	72 (46%)	100 (50%)
Not single	84 (54%)	99 (50%)
Age at time of current data collection		
20	117 (75%)	144 (72%)
Other	39 (25%)	55 (28%)

Sample

This study examines two samples of women who were in the second semester of their sophomore year of college when the data used for this study was collected in the spring of 1992. Data for the samples was initially collected in the fall of 1990, at the beginning of the fall semester of their freshman year. Limited demographic information was collected to protect privacy. These two samples are used to test the hypothesis that the ecological model can be used to predict the labeling decision. Sample one consists of 35 women who labeled their experiences with sexual aggression as being rape and 121 who did not label their experiences with sexual aggression as being rape. All of these women experienced sexual aggression during the 12 months prior to the survey (approximately their sophomore year of college). The majority of

these women were white (n = 114, 73%) and age 20 (n = 117, 75%). Approximately 46% (n = 72) were single.

Sample two consists of 78 women who labeled their experiences with sexual aggression as being rape and 121 women who did not label their experiences with sexual aggression as being rape. The 121 non-labelers in sample two are the same non-labelers in sample one. The 78 labelers consist of the 35 labelers in sample one, plus an additional 43 labelers. The additional 43 women in sample two answered 'yes' to the labeling question but did not indicate they had experienced sexual aggression during the reference period. There is no way to determine if these women had previously labeled an experience with sexual aggression because this information was not included in the data. The majority of the women in sample two were white (n = 145, 73%) and were single (n = 100, 50%). The majority of the women were age 20 (n = 144, 72%).

Measure of Sexual Aggression

The Sexual Experiences Survey (SES) (Koss and Oros, 1987) was used to measure the women's experiences with sexual aggression. The SES is an 11-item closed-response survey that asks study participants questions about sexual activity occurring consensually, because of coercion, or because of force. Koss and Gidycz (1985) report a Crohnbach's alpha reliability of .74 for women. The women were asked to indicate which types of sexual activity they had experienced in the previous twelve months (White and Smith, 2001). Based upon the timing of the survey (Spring, 1992), the previous 12 months would have included the very end of the women's freshman year, the summer prior to their sophomore year, and the majority of their sophomore year in college. Table 4.2 lists the SES questions and the proportion of each type of

Table 4.2. SES Frequencies

Question	Sample 1 (N = 156)			Sample 2 (N = 199)		
	Number of Incidents	Mean	S.D.	Number of Incidents	Mean	S.D.
1. Have you ever had sexual intercourse with a male when you both wanted to?	140	.90	.30	178	.89	.308
2. Have you given into sex play (fondling, kissing or petting but not intercourse) when you didn't want to because you were overwhelmed by a male's continual arguments and pressure?	132	.85	.36	132	.66	.474
3. Have you engaged in sex play (fondling, kissing or petting but not intercourse) when you didn't want to because a male used his position of authority (boss, teacher, camp counselor, supervisor) to make you?	8	.05	.221	8	.04	.197
4. Have you engaged in sex play (fondling, kissing or petting but not intercourse) when you didn't want to because a male threatened to use some degree of physical force (twisting your arm, holding you down, etc.) to make you?	22	.14	.35	22	.11	.314
5. Have you had a male attempt sexual intercourse (get on top of you, attempt to insert his penis) when you didn't want to by threatening or using some degree of force (twisting your arm, holding you down, etc.) but intercourse did not occur?	28	.18	.39	28	.14	.349
6. Has a male ever deliberately given you alcohol or drugs and attempted to engage in sexual intercourse (get on top of you, attempt to insert his penis) when you didn't want to but intercourse did not occur?	18	.12	.321	18	.09	.288
7. Have you given into sexual intercourse when you didn't want to because you were overwhelmed by a man's continual arguments and pressure?	88	.56	.497	88	.44	.498

* Scale for each item is 0 = No, 1 = Yes, and the range for each item is 0-1

Table 4.2. SES Frequencies (continued)

Question	Sample 1 (N = 156)			Sample 2 (N = 199)		
	Number of Incidents	Mean	S.D.	Number of Incidents	Mean	S.D.
8. Have you engaged in sexual intercourse when you didn't want to because a male used his position of authority (boss, teacher, camp counselor, supervisor) to make you?	4	.03	.169	4	.02	.141
9. Has a male ever deliberately given you alcohol or drugs and engaged in sexual intercourse when you didn't want?	12	.08	.267	12	.06	.239
10. Have you ever engaged in sexual intercourse when you didn't want to because a male threatened or used some degree of physical force (twisting your arm, holding you down, etc.) to make you?	13	.08	.277	13	.07	.248
11. Have you ever been in a situation where you had sexual acts with a male such as anal or oral intercourse when you didn't want to because he used threats or physical force (twisting your arm, holding you down, etc.) to make you?	10	.06	.246	10	.05	.219

* Scale for each item is 0 = No, 1 = Yes, and the range for each item is 0-1

sexual behavior experienced at least once by women in the sample. Women may be included in more than one category, as the questions are not mutually exclusive.

The SES uses a hierarchical classification system. Women are classified into categories based upon their most serious experience with sexual aggression. Following the SES classification scheme, women are classified as having experienced unwanted sexual contact using questions 2, 3, and 4. Women were classified as having experienced attempted rape using questions 5 and 6. Women were classified as having experienced verbal coercion using questions 7 and 8. Finally, women were classified as having experienced rape using questions 9, 10, and

11. Respondents were classified as having only consensual sex if they answered 'yes' to question 1 and 'no' to all other questions. Respondents who answered 'no' to all questions were classified as not having any sexual experiences during the previous year. In each sample, 156 women experienced at least one type of sexual aggression Spring 1991 and Spring 1992. Please recall that in sample two, 43 women answered yes to the labeling question but either did not have any sexual experience or had only consensual sexual contact during the 12-month reference period. Table 4.3 summarizes the SES classifications for each sample.

Table 4.3 SES Hierarchical Classification

Current Classification	SES Question Numbers	Number (%)[1] in Sample One (N = 156)	Number (%)[1] in Sample Two (N = 199)
No sexual experience	Respondent answered 'no' to all questions	0	5 (3%)
Consensual sexual contact	Respondent answered 'yes' to SES question 1	0	38 (19%)
Unwanted sexual contact	Respondent answered 'yes' to SES question 2, 3, or 4	42 (27%)	42 (21%)
Attempted rape	Respondent answered 'yes' to SES question 5 or 6	76 (49%)	76 (38%)
Verbal coercion	Respondent answered 'yes' to SES question 7 or 8	15 (10%)	15 (8%)
Rape	Respondent answered 'yes' to SES question 9, 10 or 11	23 (15%)	23 (12%)

[1]Totals do not add to 100% due to rounding.

Dependent Variable

The dependent variable of interest is the labeling of sexual aggression by women enrolled in college. Labeling was assessed by asking the question "Have you ever been raped?" Participants could answer 'yes' or 'no' to this question and it is coded as a dichotomous variable (0 = no, 1 = yes). Women who answered ‘yes’ to the labeling question will hereinafter be referred to as labelers and women who answered ‘no’ to the labeling question will be referred to as non-labelers. The question was asked after the participant completed the SES portion of the survey. In sample one, 35 women were classified as labelers 121 women were classified as non-labelers. In sample two, 78 women were classified as labelers and 121 women were classified as non-labelers. Please note that the non-labeler groups are the same in both samples.

While the SES in the data wave used for the current study assessed consensual and non-consensual sexual activity occurring between Spring 1991 and Spring 1992, the labeling question is a lifetime measure. Because the labeling question asks if the study participant has 'ever been raped,' it is possible that women answering ‘yes’ to this question are referring to experiences with sexual aggression that occurred at any point in their life. This is a common issue in the labeling research. While the conclusion cannot be definitively drawn that the women who answered yes to the question, “Have you ever been raped?” are referring to an instance that occurred in the 12 months prior to the data collection, precedent exists in previous research for using this measure when a non-lifetime measure is used for assessing experiences with sexual aggression (Bondurant, 2001; Botta and Pingree, 1997; Clements and Ogle, 2009; Kahn, Andreoli, Mathie, and Torgler; Kahn, Jackson, Kully, Badger, and Halvorsen, 2003; Pitts and Schwartz, 1995; Russell, 1983). While it would have been optimal to have been able to compare

answers to the labeling cue provided by the women in previous data waves to the answers provided in the current data wave, this information was not collected by the researchers who generated the data set (White and Smith, 2001).

Independent Variables

The independent variables examined in this study are organized based upon the ecological model (Campbell et al., 2009; Dahlberg and Krug, 2002; Heise, 1998; Jewkes et al., 2002). Each category of variables is described in the subsequent sections. In addition to testing these variables for a relationship to the labeling decision, comparisons will be made for the individual-level and societal-level variables between women who did and who did not experience sexual aggression between Spring 1991 and Spring 1992. This practice is consistent with prior research (Koss, 1985; Layman et al., 1996; McMullin and White, 2006; Peterson and Muehlenhard, 2004).

Individual-level variables. Individual-level variables are unique to each study participant. Three individual variables are included in the present analysis: expectation of sexual aggression, psychological well-being and distress, and previous experiences with sexual aggression.

Expectation of sexual aggression. To this author's knowledge, the relationship between the labeling decision and the expectation of sexual aggression has not been explored in the published empirical research. Measures of the expectation of sexual aggression are similar to rape myth measures in that they are statements indicating the circumstances under which sexual aggression is justifiable. For example, the expectation statements of "you got him excited" and "you changed your mind" are similar to items on the Illinois Rape Myth Acceptance Scale (Payne, 1999). However, these expectation items are specific to the individual, in that the

questions directly asks when the respondent believes she may experience sexual aggression. In comparison, rape myth measures ask general questions about women and sexual aggression as opposed to personalizing the question. Six items measure participants' perceived risk of experiencing sexual aggression. Participants were presented with a list of statements and asked to indicate on a Likert scale how likely it was that they would experience sexual aggression under each of the given circumstances (1 = not likely at all, 2 = very unlikely, 3 = somewhat unlikely, 4 = somewhat likely, 5 = very likely). To this author's knowledge, there is no information in the materials provided with the dataset or published research to indicate the origin of these items, however, they are similar to Cook's (1995) measures used in her study examining the acceptance and expectation of rape among male and female college students. Because each item appears to measure the expectation of rape in specific situations and is not an overall measure of whether or not a woman believes she will experience sexual aggression, each item will be tested separately for a relationship to a woman's decision to label an incident with sexual aggression as being rape. Each item mean for the entire sample are presented in Table 4.4. Higher means indicate a belief that participants would experience sexual aggression under the given circumstance. Cronbach's alpha for sample one is .905, and Cronbach's alpha for sample two is .919.

Table 4.4. Expectation of Sexual Aggression

Variable	Sample 1 (N = 156)		Sample 2 (N = 199)	
	Sample Mean	SD	Sample Mean	SD
He spent a lot of money on you	3.99	1.33	4.03	1.15
You had sex with others before	3.80	1.25	3.86	1.27
You had sex with him before	2.76	1.34	2.90	1.40
You were intoxicated	2.97	1.45	3.05	1.48
You got him excited	2.97	1.38	3.07	1.40
You changed your mind	2.87	1.43	2.98	1.47

Psychological well-being and distress. The Mental Health Index (MHI) (Veit and Ware, 1983) was used to assess psychological well-being and distress among all study participants. Cronbach's α for the original index is .96 (Veit and Ware, 1983); however, the Cronbach's α for sample one .69 and for sample two it is .68. It is possible that this is because the MHI was tested on a sample consisting of people ranging from the age of 13 to 69 and not specifically on a sample of college students (Veit and Ware, 1983). The alphas for the original and current studies are summarized in Table 4.5.

The MHI contains five subscales summarized in Table 4.6. The original subscales from Veit and Ware's (1983) study were used to determine Cronbach's α for the subscales in the current sample. Overall psychological distress is measured by using the anxiety, depression and emotional control subscales. Overall psychological well-being is measured by the general positive affect and the emotional ties subscales. All of the items on the MHI were assessed on a Likert scale, with participants indicating how well the presented statements described them (1 = not at all like me, 5 = very much like me). Subscale values for each participant are computed by averaging the scores for each set of subscale items. The means and standard deviations for each subscale are in Table 4.6.

Prior experiences with sexual aggression. The current research classifies prior experiences with sexual aggression as an individual variable based upon the example set in prior ecological models (Heise, 1998; Neville and Heppner, 1999). Some empirical research indicates that previous experiences with sexual aggression predict the decision to apply the rape label to a more recent experience with sexual aggression (Fisher, Daigle, Cullen, and Turner, 2003). In sample one, 89% (n = 138) of the women experienced sexual aggression prior to the time of the data collection. In sample two, 89% (n = 177) of the women experienced sexual aggression

Table 4.5. Cronbach's Alpha for Mental Health Index

	Original Cronbach's α	Sample 1 (N = 156) Current Cronbach's α	Sample 2 (N = 199) Current Cronbach's α
Subscale (# of items)			
Anxiety (10)	.90	.89	.89
Depression (5)	.86	.89	.89
Loss of behavioral/emotional control (9)	.83	.84	.84
General positive affect (11)	.92	.95	.95
Emotional ties (3)	.81	.63	.66
Factor (# of items)			
Psychological distress (24)	.94	.94	.94
Psychological well-being (14)	.92	.94	.94
Overall index (38)	.96	.69	.68

Table 4.6. MHI Subscales Means and Standard Deviations

	Sample 1 (N = 156)		Sample 2 (N = 199)	
	Sample Mean	SD	Sample Mean	SD
Subscale				
Anxiety	2.32	.85	2.28	.83
Depression	2.51	1.05	2.46	1.04
Loss of control	2.09	.70	2.07	.471
Positive affect	2.93	.98	3.00	.99
Emotional ties	3.14	1.08	3.26	1.09
Factor				
Psychological stress	2.28	.77	2.24	.76
Psychological well being	2.98	.93	3.06	.94

prior to the time of the data collection. These prior experiences include those incidents that occurred prior to the age of 14. A dichotomous variable (0 = no prior sexual aggression, 1 = prior sexual aggression) will be used to measure prior experience with sexual aggression on the labeling decision.

Situational-level variables. Situational-level variables are characteristic of the incident of sexual aggression. There are nine situational variables of interest in the current study, summarized in Table 4.7. All of these variables are dichotomous. The first situational variable is the offender being a boyfriend (0 = no, 1 = yes). The second situational variable is the offender being a student (0 = no, 1 = yes). The third situational variable is the offender and the woman being on a date (0 = no, 1 = yes). The fourth situational variable is whether or not the incident occurred in a residence (0 = no, 1 = yes). The fifth situational variable is mutual initiation of the contact (0 = no, 1 = yes). The sixth situational variable the man paying for any expenses (0 = no, 1 = yes). The seventh situational variable is the offender using alcohol or drugs at the time of the incident (0 = no, 1 = yes). The eighth situational variable is the woman using alcohol or drugs at the time of the incident (0 = no, 1 = yes). The ninth situational variable is prior sexual contact between the two people involved in the incident (0 = no, 1 = yes).

There is precedent in previous empirical research for examining each of the situational-level variables separately in relationship to the dependent variable of interest (e.g. Cleere and Lynn, 2013; Fisher et al., 2003; Littleton et al., 2009). That method will be followed in the current dissertation. Please note that the situational variables of victim resistance is excluded from the present analysis due to extensive missing data, and use of force data was not collected in the original dataset (White and Smith, 2001).

Relationship-level variables. Relationship-level variables reflect interpersonal relationships between the study participant and her friends or family members. While previous research has not found a relationship between a woman labeling her experience with sexual aggression and knowing someone who has been raped (Bondurant, 2001; Botta and Pingree,

Table 4.7. Situational-level Variables

Variable	Scale	n	Mean	SD	Range
Sample 1 (N = 156)					
Offender an intimate	0 = no, 1 = yes	85	.55	.50	0-1
Offender a student	0 = no, 1 = yes	87	.56	.50	0-1
Together on a date	0 = no, 1 = yes	105	.67	.47	0-1
Occurred at a residence	0 = no, 1 = yes	128	.82	.36	0-1
Together because of mutual agreement	0 = no, 1 = yes	85	.54	.50	0-1
Man paid for expenses	0 = no, 1 = yes	116	.74	.44	0-1
She used substances	0 = no, 1 = yes	115	.73	.44	0-1
He used substances	0 = no, 1 = yes	103	.66	.48	0-1
Prior sexual contact	0 = no, 1 = yes	115	.74	.44	0-1
Sample 2 (N = 199)					
Offender an intimate	0 = no, 1 = yes	104	.52	.50	0-1
Offender a student	0 = no, 1 = yes	101	.51	.50	0-1
Together on a date	0 = no, 1 = yes	125	.63	.48	0-1
Occurred at a residence	0 = no, 1 = yes	149	.75	.43	0-1
Together because of mutual agreement	0 = no, 1 = yes	101	.51	.50	0-1
Man paid for expenses	0 = no, 1 = yes	150	.75	.43	0-1
She used substances	0 = no, 1 = yes	153	.77	.42	0-1
He used substances	0 = no, 1 = yes	140	.70	.46	0-1
Prior sexual contact	0 = no, 1 = yes	137	.69	.46	0-1

1997; Fisher et al. 2003; Kahn et al., 1994; McMullin and White, 2006), Anders and Christopher (2012) found that relationship factors are important in a woman's decision to aid in the prosecution of crimes related to sexual aggression. The current research hypothesizes that relationship variables are also important in the labeling decision. More specifically, women who know other women who have experienced sexual aggression will be more likely to label their experiences rape. This variable is measured dichotomously (0 = no, 1 = yes).

Community-level variables. Known in some ecological models as the mesosystem (Bronfenbrenner, 1986; Neville and Heppner, 1999), community-level variables are reflective of the acknowledgement that a person's experiences and social interactions occur within the context of their families, their neighborhoods, their schools, (Bronfenbrenner, 1979, 1986; Dahlberg and

Krug, 2002). To that end, the community also may provide or deny support to woman who has experienced sexual aggression. There are two community variables of interest in this research. The first is disclosure – whether or not the study participant told anyone about her experience with sexual aggression. A willingness to disclose may indicate whether or not a woman believes she will be supported in coping with any negative consequences resulting from her experience with sexual aggression. In sample one, 51% of the women (n = 79) indicated they did not tell anyone about the incident, and 49% (n = 77) of the women indicated they disclosed the assault to someone. In sample two, 46% (n = 91) did not tell anyone about the incident, and 54% (n = 108) indicated they did tell someone about the incident. This variable will be measured dichotomously (0 = did not disclose, 1 = disclosed).While this variable could arguably be considered a relationship variable because the majority the sample only disclosed to a friend or family member , there is precedent in previous research for classifying disclosure at the community level (Anders and Christopher, 2011; Campbell et al., 2009; Neville and Heppner, 1999).

The second community-level variable of interest is how often a woman gets drunk or high on a monthly basis. The decision to include drinking frequency as a control variable is based upon qualitative research indicating that women who participate in a 'party culture' while enrolled in college may view experiences with sexual aggression as part of their normal lives (Luke, 2006) and thus may influence how women characterize these experiences. McMullin and White (2006) also include measures of drinking in their study examining the long-term impact of labeling sexual aggression. This variable is measured dichotomously (0 = never, 1 = at least once per month).

Societal-level variables. In the ecological model, societal-level variables include over-arching belief systems that encourage sexual aggression against women (Dahlberg and Krug,

2002). The independent variables of interest at this level are the acceptance of male heterosexual violence and gender role attitudes, which were measured using subscales of Ashmore and Del Boca's Gender Attitude Inventory (GAI) (as cited in White and Smith, 2001). The specific subscales used in the current study are the Acceptance of Male Heterosexual Violence, Endorsement of Chivalry, Disapproval of Female Sexual Initiative, and Acceptance of Traditional Stereotypes. The Cronbach's alphas and descriptive statistics for these variables are presented in Table 4.8.

Acceptance of male heterosexual violence. The authors of the dataset used in the current study used a variation of the Acceptance of Heterosexual Violence Subscale of the GAI to measure the acceptance of heterosexual male violence among study participants (White and Smith, 2001). Study participants were asked how much they agreed or disagreed with each item using an agree/disagree Likert scale (1 = agree strongly, 5 = disagree strongly). To determine a participant's score, items on the subscale are summed and then averaged. Lower mean scores are indicative of more agreement with acceptance of male heterosexual violence. The original Cronbach's alpha for this subscale is .79 (Ashmore et al., 1995). The Cronbach's alpha for sample one is .57, the mean is 4.02, and the standard deviation is .48. The Cronbach's alpha for sample two is .57, the mean is 4.05, and the standard deviation is .46. There were no missing values in any of the cases. Consistent with previous research using this dataset (McMullin and White, 2006), acceptance of rape myths is subsumed under this measure and will not be analyzed separately.

Acceptance of traditional stereotypes. The authors of the dataset used in the current study used the full Acceptance of Traditional Stereotypes subscale of the GAI to measure the acceptance of heterosexual male violence among study participants (White and Smith, 2001).

Study participants were asked how much they agreed or disagreed with each item using an agree/disagree Likert scale (1 = agree strongly, 5 = disagree strongly). To determine a participant's score, items on the scale are summed and then averaged. The original Cronbach's α = .83 for women (Ashmore et al., 1995). For sample one, the Cronbach's alpha is .71, the mean is 2.99, and the standard deviation is .54. For sample two, the Cronbach's alpha for the scale is .74, the mean is 3.00, and the standard deviation is .57. There were two cases in each sample with missing values for this scale. The mean score of the scale for each respective sample was substituted for these missing values.

Endorsement of chivalry. The authors of the dataset used in the current study used a variation of the Chivalry Subscale to measure study participants' beliefs about chivalry (White and Smith, 2001). Study participants were asked how much they agreed or disagreed with each item using an agree/disagree Likert scale (1 = agree strongly, 5 = disagree strongly). To determine a participant's score, items on the subscale are summed and then averaged. For sample one, the Cronbach's alpha is .54, the mean is 2.63, and the standard deviation is .62. For sample two, the Cronbach's alpha for the scale is .58, the mean is 2.62, and the standard deviation is .64. There was one case in each sample with missing values for this scale. The mean score of the scale for each respective sample was substituted for these missing values.

Disapproval of female sexual initiative. The authors of the dataset used in the current study used a variation of the Disapproval of Female Sexual Initiative subscale of the GAI to measure how acceptable it was among study participants for women to initiate sexual contact (White and Smith, 2001). Study participants were asked how much they agreed or disagreed with each item using an agree/disagree Likert scale (1 = agree strongly, 5 = disagree strongly). To determine a participant's score, items on the subscale are summed and then averaged. In sample

one, Cronbach's alpha is .69, the mean is 3.55, and the standard deviation is .73. In sample two, Cronbach's alpha is .71, the mean is 3.59, and the standard deviation is .77. There was one case in each sample with missing values for this scale. The mean score of the scale for each respective sample was substituted for these missing values.

Table 4.8. Attitudes Toward Heterosexual Male Violence and Gender Roles

	Sample 1 (N = 156)			Sample 2 (N = 199)		
Subscale	**Cronbach's Alpha**	**Mean**	**SD**	**Cronbach's Alpha**	**Mean**	**SD**
Acceptance of Male Heterosexual Violence	.57	4.05	.46	.57	4.02	.48
Acceptance of Traditional Stereotypes	.71	2.61	.64	.74	2.63	.62
Endorsement of Chivalry	.54	3.00	.57	.58	2.99	.54
Disapproval of Women Taking Initiative	.69	3.59	.77	.71	3.55	.73

Control Variables

Demographics. The demographic variables used as controls in this study are age, race, and relationship status. These variables are summarized in Table 4.9. Previous research indicates that a woman's current age is related to her decision to apply the rape label to an experience with sexual aggression (Botta and Pingree, 1997; Littleton et al. 2009). The majority of the women in both samples were age 20 at the time of the data collection (sample one, 75%, n = 117; sample two, 72%, n = 144). Age is coded as a dummy variable (0 = other age, 1 = age 20). Approximately 73% of the women in both samples are white (sample one, n = 114; sample two, n = 145), and race is coded as a dichotomous variable (0 = non-white, 1 = white). The majority of the women in both samples were single at the time of the data collection (sample one, 46%, n = 72; sample two, 50%, n = 99).

Attendance at sexual assault program. Attendance at a sexual assault educational program was assessed by a single yes/no item (0 = yes, 1 = no) asking participants if they had ever attended a program about sexual assault. Thirty-seven percent (n = 58) of the women in sample one and 39% (n = 78) of the women in sample two had attended a program about sexual assault at some point in their lives. Prior research has not found a significant relationship between the labeling decision and attendance at a sexual assault program (Botta and Pingree, 1997; Kahn, et al., 1994), support for including this variable stems from the suggestion that attendance at an awareness program may influence the likelihood of labeling an incident of sexual aggression as rape (Fisher et al., 2003). This variable is summarized in Table 4.9.

Table 4.9. Control Variables

Variable	Scale	n	Mean	S.D.	Range
Sample 1 (N = 156)					
White	0 = non-white 1 = white	114	.73	.44	0-1
Age 20	0 = other age 1 = age 20	117	.75	.43	0-1
Respondent single	0 = no 1 = yes	72	.46	.50	0-1
Did not attend at rape program	0 = yes 1 = no	98	.63	.48	0-1
Sample 2 (N = 199)					
White	0 = non-white 1 = white	145	.73	.45	0-1
Age 20	0 = other age 1 = age 20	144	.72	.45	0-1
Respondent single	0 = no 1 = yes	99	.50	.50	0-1
Did not attend rape program	0 = yes 1 = no	121	.61	.49	0-1

STATISTICAL TECHNIQUES

Several statistical techniques will be used in this research. All of these statistical analyses will use an alpha value of $p \leq .20$. While this is a larger alpha value than is used in much of the extant research on the labeling decision, precedent has been set in other research areas for use of a larger alpha value when the primary goal of the research is theoretical development (Mustaine and Tewksbury, 1998). What follows is a discussion of the statistical techniques that will be used in the between groups comparisons, bivariate analysis, and multivariate analysis in this dissertation.

Between Groups Comparisons

The first two research questions asked in the current study inquire about differences that may exist between women who have experienced sexual aggression between Spring 1991 and Spring 1992, and women who did not have such experiences. Following the precedent set in previously published empirical research (e.g. McMullin and White, 2006) women in the sample will be categorized into three groups: No sexual aggression, labeled sexual aggression, non-labeled sexual aggression. Women in the labeled and non-labeled groups will be classified based upon their answer to the question, "Have you ever been raped?" Groups will be compared on their mean scores on the Mental Health Index, their mean scores on the gender role attitudes, their mean scores on the acceptance of heterosexual male violence subscale, and their mean score on items measuring the expectation of sexual aggression. Because there are three exclusive groups for comparison and there are control variables which must be considered (see Table 4.7), the appropriate statistical test is the analysis of covariance (ANCOVA) (Nolan and Heinzen, 2012). The use of nominal covariates in ANCOVA analysis is supported by Tabachnick and

Fidell (2007), who suggest that this estimation is acceptable if the purpose of the ANCOVA is descriptive model-building rather than prediction.

Bivariate Analyses

To determine the general relationships between variables and to check for multi-collinearity, bivariate analyses will be conducted. The independent and control variables in the current study are both dichotomous and continuous, and the dependent variable is dichotomous. Therefore, several analyses will be conducted to determine correlations between variables that will account for the small sample size without compromising statistical assumptions. The first set of tests will focus on the independent variables of interest, including control variables. The first bivariate analysis will be conducted between all of the dichotomous independent variables. A series of Chi-square tests for independence will be used to determine if these variables are independent of each other (Nolan and Heinzen, 2012). Cramers' phi (φ), will be reported to indicate the strength of any correlations (Nolan and Heinzen, 2012). The next series of tests will determine if any of the scale independent variables are related to each other. The appropriate test for correlation between two scale variables is Pearson's *r* (Tabachnick and Fidell, 2007). Finally a series of independent samples t-tests will be conducted to determine correlation between the dichotomous independent variables and the scale independent variables. *Cohen's d* is the appropriate effect-size measure (Tabachnick and Fidell, 2007).

The next set of analyses will focus on the relationship between the independent (including controls) and dependent variables. The Chi-square test for independence will be used to test for relationships between dichotomous independent variables and the dichotomous dependent variable of interest. Cramer's phi (φ) will be reported to describe effect size. A series of independent t-tests will be used to determine if relationships exist between continuous

independent variables and the dichotomous dependent variables. *Cohen's d* will be reported as the effect size measure (Tabachnick and Fidell, 2007).

Multivariate Analysis

The primary purpose of the current research is to determine if an ecological model can predict a woman's decision to label sexual aggression. The dependent variable in this study is labeling sexual aggression, a dichotomous (0 = no, 1 = yes) variable. The independent variables in the current study are dichotomous and scale. Therefore, the appropriate multivariate analysis is logistic regression (Miles and Shevlin, 2005; Tabachnick and Fidell, 2007). Logistic regression analysis does not assume there is a linear relationship between the independent and dependent variables. Instead, this analysis calculates the probability of an outcome given the influence of the independent variable(s) (Tabachnick and Fidell, 2007).

To estimate the model in a logical regression, maximum likelihood (ML) is used to generate parameter estimates and produce a log likelihood function. The ML procedure is repeated until there are there are no improvements in the fit of the estimated parameters to the data (Miles and Shevlin, 2005). Because the log likelihood value is negative, it is multiplied by -2 to obtain a positive value (-2LL) (Miles and Shevlin, 2005). An additional benefit to this step is that the -2LL has a chi-square distribution that can be tested for significance. Smaller -2LL values indicate a better model fit (Miles and Shevlin, 2005), while larger chi-square values indicate a better model fit (Pampel, 2000). The Wald's test will be used to determine the significance of each logistic regression coefficient (Pampel, 2000; Tabachnick and Fidell, 2007). Overall model fit will be determined by using the Naglekerke *pseudo* R^2 measure (Pampel, 2000; Tabachnick and Fidell, 2007). A summary of the independent and control variables used in the analysis is provided in Table 4.10.

Table 4.10. Independent Variables of Interest

Individual-level
Psychological functioning
Expectation of sexual aggression
Prior experiences with sexual aggression
Situational-level
Identity of offender
Student status of offender
Why woman and offender were together
Where incident occurred
Who initiated contact between the two people
Who paid for any expenses
She was using alcohol/drugs
He was using alcohol/drugs
Prior sexual contact
Community-level
Disclosure of incident
Woman's drinking behavior
Societal-level
Acceptance of rape myths
Traditional gender attitudes
Attitudes toward chivalry
Attitudes about women taking lead in relationships
Controls
Age
Race
Relationship status
Attendance at sexual assault program

SUMMARY

Chapter four has explained the research strategy for the current study. A description of the study sample, the dependent variable, the independent variables, and the control variables was presented. The next chapter will explain the results of the statistical analysis, which will be followed by a chapter that discusses the study results, its limitations, and directions for future research.

CHAPTER 5

RESULTS

The purpose of this dissertation is to explain the decision of college women to label their experiences with sexual aggression as being rape. To achieve this goal, this research uses an ecological framework to organize the past research about the labeling decision and to develop and test hypotheses about the multi-level predictors of the labeling decision. This study's results are organized around the levels of the ecological model as proposed by Heise (1998) and the World Health Organization (Dahlberg and Krug, 2002; Jewkes et al., 2002). Recall from chapters three and four that the levels of the ecological model are individual, situational, relationship, community, and societal. Using an ecological model to organize the literature and test hypotheses about labeling is important for several reasons. First, research examining sexual aggression often does not include measures of community and societal variables (Campbell, et al., 2009; Heise, 1998; Rozee and Koss, 2001). Second, to this author's knowledge, the ecological model has been used to examine the labeling decision in only one published study (Bondurant, 2001). Finally, it is essential to use an ecological framework in the labeling research to make it consistent with other research about sexual aggression (e.g. Campbell, et al. 2009; Casey and Lindhorst, 2009; Neville and Heppner, 1999).

This chapter presents the findings of this study and is divided into five main sections. The first section presents findings regarding the labeling of experiences with sexual aggression other than rape. The second section presents group comparisons between women who did and women who did not label their experiences with sexual aggression as being rape. After these group comparisons, within-level bivariate findings are presented. The fourth section presents multivariate findings of the full model logistic regressions. The final section presents

multivariate findings of the reduced model logistic regressions. Please observe that in all sections, multiple alpha values are presented and noted under each table.

PREVALENCE OF LABELING NON-RAPE EXPERIENCES AS BEING RAPE

One research question this dissertation seeks to answer is whether or not women who experience incidents of sexual aggression other than rape apply the rape label to those experiences. Non-rape incidents include unwanted sexual contact, attempted rape, and verbal coercion. A labeler is a study participant who answered 'yes' to the labeling cue, "Have you ever been raped?" A non-labeler is a study participant who answered 'no' to the labeling cue, "Have you ever been raped?"

This study uses two samples of women who labeled experiences with sexual aggression as being rape for analytical purposes. However, the analysis to determine the prevalence of labeling non-rape experiences as being rape is limited to sample one because it can be determined what type of sexual aggression these women experienced during their sophomore year in college. Sample two has 78 labelers including the aforementioned 35 women in sample one. However, in the former sample there are 43 women who are classified as labelers but who did not experience sexual aggression during the sophomore year in college. Sample two is included in Table 5.1 for comparison purposes.

As summarized in Table 5.1, 133 women were classified as having experienced sexual aggression other than rape during the reference period. Twenty-two (17%) of these women answered 'yes' to the labeling cue. Six (5%) of these women experienced unwanted sexual contact, 15 (11%) of these women experienced attempted rape, and one (.007%) of these women experienced verbal coercion. The low prevalence of applying the rape label to non-rape

experiences is consistent with the findings of other published research (e.g. Fisher, et al., 2003; Orchowski, et al., 2013).

Table 5.1 Prevalence of Labeling Sexual Aggression

SES classification (SES question #'s in parentheses)	Sample One (N =156)			Sample Two (N= 199)		
	Non-labeler 121 (78%)	Labeler 35 (22%)	Total 156 (100%)	Non-labeler 121 (61%)	Labeler 43 (39%)	Total 199 (100%)
No sexual contact	0	0	0	0	5 (6%)	5 (3%)
Consensual contact (1)	0	0	0	0	38 (49%)	38 (19%)
Unwanted sexual contact (2, 3, 4)	36 (30%)	6 (17%)	42 (27%)	36 (30%)	6 (7%)	42 (21%)
Attempted rape (5, 6)	61 (50%)	15 (43%)	76 (48%)	61 (50%)	15 (19%)	76 (38%)
Verbal coercion (7, 8)	14 (12%)	1 (3%)	15 (10%)	14 (12%)	1 (1%)	15 (8%)
Rape (9, 10, 11)	10 (8%)	13 (37%)	23 (15%)	10 (8%)	13 (17%)	23 (12%)
Total	121	35	156	121	78	199

GROUP DIFFERENCES

One goal of this dissertation is to determine whether there are differences between women who do label and women who do not label their experiences with sexual aggression as being rape. Group analyses will be conducted for both samples included in this study. The first sample has 35 women who labeled their experiences with sexual aggression as being rape. All of these women experienced sexual aggression during their sophomore year in college. The second sample has 78 women who labeled their experiences with sexual aggression as being rape. This sample has an additional 43 labelers who did not experience sexual aggression during the sophomore year of college but who answered 'yes' to the labeling question, "Have you ever been raped?" These 43 additional women are included in the analysis to facilitate testing the ecological model for its utility in predicting the decision to label experiences with sexual aggression as being rape. While they did not experience sexual aggression during the 12 months

prior to the survey and situational-level data for between 21 and 25 cases had to be replaced (see discussion on this issue in Chapter 4), their affirmative answer to the labeling cue justifies including them in the second sample for the purposes of comparison model building. The results of this analysis are presented in Table 5.2.

The sample with 35 labelers will be discussed first. At the individual level, labelers had significantly higher mean scores for the individual-level variable of psychological distress than non-labelers ($t = -2.401$, $p \leq .05$). At the situational level, the labeling of rape was negatively associated with the encounter being initiated through mutual agreement ($\varphi = -.156$, $p \leq .10$) and the man paying for expenses ($\varphi = -.106$, $p \leq .20$). At the relationship level, knowing someone who had experienced sexual aggression was positively associated with labeling ($\varphi = .176$, $p \leq .05$). At the societal level, women who labeled their rapes had significantly lower mean scores than non-labelers for the acceptance of gender stereotypes ($t = 1.345$, $p \leq .20$), indicating more of an acceptance of traditional gender roles in society. Finally, there was a positive association with labeling for the control variable of the respondent being white ($\varphi = .119$, $p \leq .20$).

The sample with 78 labelers also has several significant group differences. There were no group differences at the individual-level. At the situational level, labeling sexual aggression was negatively associated with the offender being a student ($\varphi = -.146$, $p \leq .05$), being together for a reason other than a date $\varphi = -.149$, $p \leq .05$), the assault occurring in a home ($\varphi = -.199$, $p \leq .01$), being together because of mutual agreement ($\varphi = -.197$, $p \leq .05$), and having previous sexual contact ($\varphi = -.149$, $p \leq .05$). At the community level, labeling rape is positively associated with telling someone about the incident ($\varphi = .158$, $p \leq .05$). Compared to non-labelers, labelers had significantly higher mean scores for the acceptance of male heterosexual violence ($t = -1.321$, $p \leq .20$), indicating less of an acceptance of the use of violence by men.

Table 5.2 Non-Labelers and Labelers Comparisons

Variable	Group 1 (N = 156) Non-labelers n = 121	Group 1 (N = 156) Labelers n = 35	Group 1 (N = 156) Test Statistic (p-value)	Group 2 (N = 199) Non-labelers n = 121	Group 2 (N = 199) Labelers n = 78	Group 2 (N = 199) Test Statistic (p-value)
Individual level						
Prior SA	105 (87%)	33 (94%)	p = .180[1]	105 (87%)	72 (92%)	φ = .086 (p = .224)
Psych stress	mean = 2.19	mean = 2.54	t = -2.401*** (p = .018)	mean = 2.19	mean = 2.30	t = -1.004 (p = .317)
Psych wellness	mean = 3.02	mean = 2.83	t = 1.084 (p = .280)	mean = 3.02	mean = 3.10	t = -.566 (p = .572)
Expect SA	mean = 3.24	mean = 3.14	t = .481 (p = .631)	mean = 3.24	mean = 3.41	t = -.985 (p = .326)
Situational Level						
Intimate offender	67 (55%)	18 (51%)	φ = -.033 (p = .680)	67 (55%)	37 (47%)	φ = -.078 (p = .274)
Student offender	69 (57%)	18 (63%)	φ = -.047 (p = .557)	69 (57%)	32 (41%)	φ = -.146*** (p = .028)
On a date	83 (69%)	22 (63%)	φ = -.051 (p = .524)	83 (69%)	42 (54%)	φ = -.149*** (p = .036)
Assault in a home	99 (82%)	29 (83%)	φ = .011 (p = .888)	99 (82%)	50 (64%)	φ = -.199**** (p = .005)
Mutual agreement	71 (60%)	14 (40%)	φ = -.156** (p = .051)	71 (60%)	30 (38%)	φ = -.197**** (p = .005)
Man paid	93 (77%)	23 (66%)	φ = -.106* (p = .184)	93 (77%)	57 (73%)	φ = .043 (p = .545)
She substances	91 (75%)	24 (69%)	φ = -.063 (p = .432)	91 (75%)	62 (79%)	φ = .050 (p = .484)
He substances	82 (68%)	21 (60%)	φ = -.068 (p = .393)	82 (68%)	58 (74%)	φ = .070 (p = .320)
Prior sex contact	90 (74%)	26 (74%)	φ = -.001 (p = .991)	90 (74%)	47 (60%)	φ = -.149*** (p = .036)

**** p ≤ .01 *** p ≤ .05 ** p ≤ .10 * p ≤ .20

[1] Fisher's exact test is reported due to a low count in one cell

Phi (φ) is reported for comparisons of two dichotomous variables. *T*-values are reported for comparisons of one dichotomous variable and one scale variable.

Table 5.2 Non-Labelers and Labelers Comparisons (continued)

Variable	Group 1 (N = 156) Non-labelers n = 121	Labelers n = 35	Test Statistic (p-value)	Group 2 (N = 199) Non-labelers n = 121	Labelers n = 78	Test Statistic (p-value)
Relationship Level						
Know a victim	61 (50%)	25 (71%)	φ = .176*** (p = .028)	61 (50%)	43 (55%)	φ = .046 (p = .516)
Community Level						
Tell anyone	58 (48%)	16 (46%)	φ = -.053 (p = .508)	58 (29%)	50 (25%)	φ = .158*** (p = .025)
Drinking behavior	73 (48%)	24 (15%)	φ = .071 (p = .376)	73 (48%)	45 (58%)	φ = -.026 (p = .712)
Societal Level						
Accept male violence	mean = 4.01	mean = 4.03	t = -.244 (p = .807)	mean = 4.01	mean = 4.10	t = -1.321* (p = .188)
Accept chivalry	mean = 2.67	mean = 2.46	t = 1.749 (p = .082)	mean = 2.67	mean = 2.52	t = 1.695** (p = .092)
Accept stereotypes	mean = 3.01	mean = 2.88	t = 1.345* (p = .180)	mean = 3.01	mean = 2.96	t = .673 (p = .502)
Disapprove women	mean = 3.57	mean = 3.47	t = .715 (p = .476)	mean = 3.57	mean = 3.62	t = -.405 (p = .687)
Controls						
Age 20	93 (60%)	24 (15%)	φ = -.080 (p = .319)	93 (47%)	51 (33%)	φ = -.125** (p = .077)
White	85 (54%)	29 (19%)	φ = .119* (p = .139)	85 (43%)	60 (30%)	φ = .073 (p = .301)
Single	67 (43%)	17 (11%)	φ = -.057 (p = .477)	54 (28%)	46 (23%)	φ = .140*** (p = .048)
Attend SA program	75 (48%)	24 (15%)	φ = .057 (p = .476)	75 (38%)	46 (23%)	φ = -.030 (p = .671)

**** p ≤ .01 *** p ≤ .05 ** p ≤ .10 * p ≤ .20

[1] Fisher's exact test is reported due to a low count in one cell

Phi (φ) is reported for comparisons of two dichotomous variables. *T*-values are reported for comparisons of one dichotomous variable and one scale variable.

Labelers also had lower means for the acceptance of chivalry ($t = 1.695$, $p \leq .10$), indicating more agreement with chivalry. Labeling was negatively associated with the control variable of being age 20 ($\varphi = -.125$, $p \leq .10$) and positively associated with the control variable of being single ($\varphi = .140$, $p \leq .05$).

One significant group difference is found in both samples. Labelers are less likely to have been with their offender due to mutual agreement than non-labelers (35 labelers, $\varphi = -.156$, $p \leq .10$), (78 labelers, $\varphi = -.197$, $p \leq .05$). While there are no other commonalities between samples and none of the significant group differences are particularly strong, this analysis provides a baseline for understanding potential relationships between the independent and dependent variables.

BIVARIATE ANALYSIS

A bivariate analysis was conducted within each level of the ecological model for both samples. These results will be organized around each level of the ecological model and comparisons made between samples where appropriate. Emphasis is placed on discussing the correlations that are similar across samples and/or those correlations which are moderate or high according to Cohen's (1988) criteria. Strong bivariate relationships are indicated by *r* values of .5 and above. Moderate bivariate relationships are indicated by *r* values ranging from .3 to .4. Weak bivariate relationships are indicated by *r* values ranging from .1 to .2 (Cohen, 1988). The results of the bivariate relationships for each sample are summarized in Table 5.3 and Table 5.4. Table 5.5 summarizes the significant bivariate relationships that are present in both samples.

Individual Level

There are four significant correlations at the individual level that occur in both samples. Higher scores for expecting sexual aggression are negatively correlated with psychological

Table 5.3. Within Level Bivariate Relationships for 35 Labelers

Variable	1I	2I	3I	4I	1S	2S	3S	4S	5S	6S	7S	8S	9S
Individual Level													
(1I) Expect SA	1.00												
(2I) Psych distress	-.217*****	1.00											
(3I) Psych well-being	.149***	-.716*****	1.00										
(4I) Prior SA	.047	-.056	.032	1.00									
Situational Level													
(1S) Intimate					1.00								
(2S) Student					-.062	1.00							
(3S) SA in residence					.277*****	.088	1.00						
(4S) On a date					.598*****	-.098	.315*****	1.00					
(5S) Mutual					.561*****	-.036	.210****	.406*****	1.00				
(6S) Man paid					-.006	.068	-.045	-.096	.153**	1.00			
(7S) She used subs.					.361*****	-.209****	.366*****	.360*****	.127*	.116*	1.00		
(8S) He used subs.					.323*****	-.067	.335*****	.308*****	.160***	.106*	.000***** [1]	1.00	
(9S) Prior sex					.495*****	-.050	.414*****	.498*****	.259*****	-.042	.316*****	.323*****	1.00

Table 5.3. Within Level Bivariate Relationships for 35 Labelers (continued)

Variable	1C	2C	1SO	2SO	3SO	4SO	1CO	2CO	3CO	4CO
Community Level										
(1C) Drinking behavior	1.00									
(2C) Disclosure	-.129*	1.00								
Societal Level										
(1SO) Accept violence			1.00							
(2SO) Accept chivalry			-.134**	1.00						
(3SO) Accept stereo.			-.009	.111	1.00					
(4SO) Disapprove			.205***	.102	.191***	1.00				
Controls										
(1CO) Age 20							1.00			
(2CO) White							-.083	1.00		
(3CO) Single							.030	.098	1.00	
(4CO) Attend rape Program							.023	-.070	-.072	1.00

***** $p \leq .001$ **** $p \leq .01$ *** $p \leq .05$ ** $p \leq .10$ * $p \leq .20$ Phi, Pearson's *r*, and point-biserial correlations are reported based upon the different levels of measurement between variables.

[1] Fisher's exact test is reported due to a low count in one cell.

The relationship level is not included in these tables because there is only one relationship-level variable (knowing someone who has been raped) and only within-level bivariate correlations were examined.

Table 5.4. Within Level Bivariate Relationships for 78 Labelers

Variable	1I	2I	3I	4I	1S	2S	3S	4S	5S	6S	7S	8S	9S
Individual Level													
(1I) Expect SA	1.00												
(2I) Psych distress	-.219****	1.00											
(3I) Psych well-being	.138[d]	-.719*****	1.00										
(4I) Prior SA	.075	-.032	.008	1.00									
Situational Level													
(1S) Intimate					1.00								
(2S) Student					.085	1.00							
(3S) SA in residence					.421*****	.264*****	1.00						
(4S) On a date					.659*****	.095*	.513*****	1.00					
(5S) Mutual					.588*****	.115*	.380*****	.511*****	1.00				
(6S) Man paid					-.079	-.003	-.170***	-.198****	-.166***	1.00			
(7S) She used subs.					.216****	-.230*****	.177***	.219****	.056	.129**	1.00		
(8S) He used subs.					.173***	-.111*	.131**	.161***	.065	.114*	.000*****[1]	1.00	
(9S) Prior sex					.595*****	.162***	.586*****	.627*****	.401*****	.158***	-.146***	.133**	1.00

Table 5.4. Within Level Bivariate Relationships for 78 Labelers (continued)

Variable	1C	2C	1SO	2SO	3SO	4SO	1CO	2CO	3CO	4CO
Community Level										
(1C) Drinking behavior	1.00									
(2C) Disclosure	-.145***	1.00								
Societal Level										
(1SO) Accept violence			1.00							
(2SO) Accept chivalry			-.097*	1.00						
(3SO) Accept stereo.			-.019	.156***	1.00					
(4SO) Disapprove			.243*****	.217****	.258****	1.00				
Controls										
(1CO) Age 20							1.00			
(2CO) White							-.049	1.00		
(3CO) Single							.037	.071	1.00	
(4CO) Attend rape Program							.010	-.004	-.078	1.00

***** $p \leq .001$ **** $p \leq .01$ *** $p \leq .05$ ** $p \leq .10$ * $p \leq .20$ Phi, Pearson's *r*, and point-biserial correlations are reported based upon the different levels of measurement between variables.

[1] Fisher's exact test is reported due to a low count in one cell. The relationship level is not included in these tables because there is only one relationship-level variable (knowing someone who has been raped) and only within-level bivariate correlations were examined.

distress (35 labelers, r = -.217, p ≤ .01), (78 labelers, r = -.219, p ≤ .01). Expectation of sexual aggression is positively correlated with psychological well-being (35 labelers, r = .149, p ≤ .10), (78 labelers, r = .138, p ≤ .10). While these correlations are weak, their importance lies in being significant for both samples. Higher scores of psychological distress are negatively correlated with psychological wellness scores in both samples (35 labelers, r = -.716, p ≤ .01), (78 labelers, r = -.719, p ≤ .01).

Relationship Level

The relationship level only has one variable, knowing someone who has experienced sexual aggression. Since only within-level bivariate correlations were analyzed, there are no correlations for this variable.

Situational Level

There are several significant bivariate correlations at the situational-level in both samples. The incident of sexual aggression occurring in a residence was positively associated with being on a date (35 labelers, φ = .315, p ≤ .001), (78 labelers, φ = .513, p ≤ .001) and with prior sexual contact between the two people (35 labelers, φ = .586, p ≤ 001), (78 labelers, φ = .414, p ≤ .001). Being on a date is positively associated with prior sexual contact between the man and woman (35 labelers, φ = .498, p ≤ .001), (78 labelers, φ = .627, p ≤ .001). A mutually agreed upon meeting has a moderate to high positive relationship with being on a date (35 labelers, φ = .406, p ≤ .001), (78 labelers, φ = .511, p ≤ .001). Prior sexual activity was positively associated with a mutually agreed upon meeting in both samples (35 labelers, φ = .259, p ≤ .001), (78 labelers, φ = .401, p ≤ .001).

Community Level

There is only one significant bivariate association in both samples at the community level. Disclosing the incident of sexual aggression was weakly and negatively associated with getting drunk more frequently (35 labelers, $\varphi = -.129$, $p \leq .20$), (78 labelers, $\varphi = -.145$, $p \leq .05$).

Societal level

At the societal level there are three significant bivariate associations that occur in both samples. Acceptance of violence was negatively associated with acceptance of chivalry (35 labelers, $r = -.134$, $p \leq .10$), (78 labelers, $r = -.097$, $p \leq .20$) and positively associated with disapproval of women taking the lead in relationships (35 labelers, $r = .205$, $p \leq .05$), (78 labelers, $r = .243$, $p \leq .001$). Acceptance of male and female stereotypes is positively correlated with disapproval of women taking the lead in relationships (35 labelers, $r = .191$, $p \leq .05$), (78 labelers, $r = .258$, $p \leq .01$).

Summary

Table 5.5 summarizes the bivariate within-level correlations for this study that are statistically significant in both samples ($p \leq .20$). There are two correlations at the individual level that are statistically significant in both samples, and there are nine correlations at the situational level that are statistically significant in both samples. There is one correlation at the community level that is statistically significant in both samples, and three correlations that are statistically significant at the societal level. While some of these correlations are not strong, they do provide a basic understanding for how variables in these samples might be related to each other.

Table 5.5. Significant Within-Level Bivariate Correlations in Both Samples

Individual Level	Expect SA	Psychological Distress		
Psychological well being	+	-		
Situational Level	Assault in residence	Being on a date	Mutual agreement	Prior sexual contact
Intimate offender	+	+	+	+
Prior sexual contact	+	+	+	
Assault in a residence		+		
Mutual agreement		+		
Community Level	Getting drunk monthly			
Disclosing assault	-			
Societal Level	Accept stereotypes	Accept violence		
Disapproval of women	+	+		
Accept chivalry		-		

MULTIVARIATE RESULTS

Prior to estimating multivariate models, variance inflation factors and tolerance for the independent and control variables were calculated to check for multicollinearity. Multicollinearity occurs when the independent variables are highly correlated with each other (Tabchnick and Fidell, 2007). Variance inflation factor values indicate multicollinearity between some variables (see Appendix A). Therefore, results from the multivariate logistic regression models will be interpreted with caution.

Four logistic regression models were estimated to test the hypothesis that the ecological model predicts the decision of women enrolled in college to label their experiences with sexual aggression as being rape. Each model uses the dependent variable of labeling as not labeled (coded 0), and labeled (coded 1). The first logistic regression model included the variables in all five levels of the ecological model and was conducted using the sample with 35 labelers. The second logistic regression analysis included the variables in all five levels of the ecological model and was conducted using the sample with 78 labelers. These models will hereinafter be referred to as full models. Variables that were statistically significant in both logistic regression models were then used in a logistic regression analysis to determine which of these variables best predicted the labeling decision in each sample. These models will hereinafter be referred to as reduced models.

The multivariate results will first discuss the findings from the two full logistic regression models organized around the levels of the ecological model used in this study. These models are presented in Table 5.6. Emphasis will be placed on findings that are statistically significant in both models. A comparison of the significant findings in the models is presented in Table 5.7 and Table 5.8. Next, the reduced logistic regression models will be discussed and compared to each other. These models are presented in Table 5.9 and 5.10.

Full Logistic Regression Models for Each Level of the Ecological Model

This section presents findings from the full logistic regression models for both samples. The chi-square model fit statistic was significant for both models (35 labelers, $\chi^2 = 35.124$, $p \leq .10$), (78 labelers, $\chi^2 = 48.885$, $p \leq .01$). The chi-square values and their significance indicate that the prediction of the dependent variable is statistically improved by the independent variables after accounting for the control variables in the models (Menard, 2002). The model for the sample with 35 labelers explains 31% of the variance in the dependent variable labeling

(Naglekerke's R^2 = .31) and the model for the sample with 78 labelers explains 28% of the variance in the dependent variable labeling (Naglekerke's R^2 = .28). The following sub-sections present logistic regression results from each level of the ecological model.

Individual Level

One individual-level variable significantly predicted labeling in both samples. Women with higher levels of psychological stress were significantly more likely to label their experiences with sexual aggression as being rape. Specifically, women were 1.8 times more likely to apply the rape label when they had more psychological stress. No other individual-level variables were significant in both samples, however, there are two other findings that are important to discuss. In the sample with 35 labelers, women who had prior experiences with sexual aggression were significantly more likely to indicate they had been raped. Women in the sample with 78 labelers who had higher expectations of sexual aggression were significantly more likely to apply the rape label to their experiences. Stated another way, women in the 35 labeler sample were 3 times more likely to label their experiences rape. Women in the 78 labeler sample were 1.3 times more likely to apply the rape label to their experiences with sexual aggression.

Situational Level

Two situational-level variables were statistically significant in both models. The odds of labeling an experience with sexual aggression as being rape were significantly reduced when women were with their offender because of mutual agreement. The odds of a woman labeling their experience with sexual aggression as being rape also were significantly reduced when the man paid for any expenses incurred during the interaction. More specifically, women in the sample with 35 labelers were .26 times less likely to label their experiences rape when they were

with the offender because of a mutual agreement. Women in the sample with 78 labelers were .41 times less likely to label their experiences rape under the same circumstance. When the man paid for expenses, women in the 35 labeler group were .32 times less likely to label their experiences rape, while women in the 78 labeler group were .36 times less likely to label their experiences rape.

Relationship Level

The relationship variable of knowing someone who had experienced sexual aggression was significantly related to the labeling of sexual aggression in only the model with 35 labelers. Women in this sample were significantly more likely to use the rape label to describe their own experience if they also knew someone who had experienced sexual aggression. These women were 3 times more likely to use the rape label than were women who did not know someone who had experienced sexual aggression.

Community Level

One community-level variable was significant in both models and was positively related to the labeling decision. In both samples, women who disclosed the incident were significantly more likely to apply the rape label to that incident. Disclosing the incident of sexual aggression increased the odds of applying the rape label by approximately 2 times for women in both samples.

Societal Level

It is important to note that higher scores on the measures of societal-level variables are indicative of *less* agreement with the respective concept being measured. For example, higher scores on the measure for acceptance of male violence are indicative that study participants *do not agree* that it is okay for men to use violence. While no societal-level variables were common

across the two samples, there are three findings of interest that will be discussed. One variable significantly predicted the labeling decision in the sample with 35 women. In this sample, women who accepted gender stereotypes were significantly less likely to label their experiences with sexual aggression as being rape. Two variables were significantly related to the labeling decision in the sample with 78 women. In this sample, women who disagreed with male violence were significantly more likely to label their experiences as being rape. Women who were more accepting of chivalry were significantly less likely to apply the rape label.

Summary

Results from the full logistic regression analysis show that four variables are statistically significant in both models. At the individual level, higher levels of psychological stress were positively related to the decision to label an experience with sexual aggression as being rape. At the situational level, women who were with the offender due to a mutual agreement and who were with men who paid for expenses were significantly less likely to apply the rape label to their experiences. At the community level, women who told someone about their experience with sexual aggression were more likely to apply the rape label. These variables will be included in the reduced logistic regression models discussed in the next section.

Table 5.6 Full Logistic Regression Models

	Sample 1 – 35 Labelers				Sample 2 – 78 Labelers			
Variables	B	S.E.	Sig.	Odds Ratio	B	S.E.	Sig.	Odds Ratio
Individual Level								
Prior victimization	1.214*	.891	.173	3.367	.596	.564	.291	1.814
Psychological stress	.590*	.424	.164	1.804	.565**	.332	.089	1.759
Psychological wellness	-.076	.396	.848	.927	.201	.286	.482	1.223
Expectation of SA	.280	.223	.210	1.323	.259**	.155	.095	1.296
Situational Level								
Intimate offender	.529	.744	.477	1.698	.404	.524	.441	1.498
Student offender	-.396	.495	.424	1.776	-.294	.377	.436	.745
On a date	-.805*	.627	.199	.447	-.562	.508	.268	.570
SA in residence	.712	.744	.339	2.038	-.261	.529	.622	.770
Mutual agreement	-1.338***	.612	.029	.262	-.889***	.443	.045	.411
Man paid	-1.133***	.578	.050	.322	-1.023***	.423	.015	.359
She used substances	-.254	.833	.761	.776	-.054	.668	.936	.947
He used substances	-.061	.695	.931	.941	.386	.564	.494	1.471
Prior contact with him	-.046	.716	.948	.955	-.540	.548	.325	.583
Relationship Level								
Know an SA victim	1.121***	.527	.034	3.068	.184	.365	.614	1.202
Community Level								
How often drunk	-.020	.607	.974	.980	-.056	.408	.892	.946
Tell anyone	.807*	.578	.162	2.242	.818***	.395	.039	2.266
Societal Level								
Accept male violence	.475	.566	.401	1.609	.646*	.436	.139	1.908
Accept chivalry	-.485	.389	.212	.616	-.469**	.282	.096	.626
Accept stereotypes	-.593*	.450	.187	.552	-.281	.318	.377	.755
Disapprove of women	-.057	.319	.589	.945	.157	.241	.514	1.171
-2 Log-likelihood	130.975				220.623			
Model $\chi 2$	35.124**				45.885****			
Nagelkerke R2	.31				.28			

**** $p \leq .01$ *** $p \leq .05$ ** $p \leq .10$ * $p \leq .20$

These models control respondent's race, age at time of survey, current relationship status and having attended a program about rape.

Table 5.7 Comparison of Full Logistic Regression Models

	Sample 1 - 35 Labelers			Sample 2 - 78 Labelers		
Significant Variable	B	S.E.	Odds Ratio	B	S.E.	Odds Ratio
Individual Level						
Prior SA	1.214*	.891	3.367			
Psychological stress	.590*	.424	1.804	.565**	.332	1.759
Expectation of SA				.259**	.155	1.296
Situational Level						
On a date	-.805*	.627	.447			
Mutual Agreement	-1.338***	.612	.262	-.889***	.443	.411
Man Paid	-1.133***	.578	.322	-1.023***	.423	.359
Relationship Level						
Know a victim	1.121***	.527	3.068			
Community Level						
Tell anyone	.807*	.578	2.242	.818***	.395	2.266
Societal Level						
Accept male violence				.646*	.436	1.908
Accept chivalry				-.469**	.282	.626
Accept stereotypes	-.593*	.319	.945			
-2 Log-likelihood	130.975			220.623		
Model $\chi 2$	35.124**			45.885****		
Nagelkerke R2	.31			.28		

**** $p \leq .01$ *** $p \leq .05$ ** $p \leq .10$ * $p \leq .20$

These models control respondent's race, age at time of survey, current relationship status and having attended a program about rape.

Table 5.8 Comparison of Directional Relationships in Full Logistic Regression Models

Significant Variable	Sample 1 35 Labelers	Sample 2 78 Labelers
Individual Level		
Prior SA	+	
Psychological stress	+	+
Expectation of SA		+
Situational Level		
On a date	+	
Mutual Agreement	-	-
Man Paid	-	-
Relationship Level		
Know a victim	+	
Community Level		
Tell anyone	+	+
Societal Level		
Accept violence		+
Accept chivalry		-
Accept stereotypes	-	

Reduced Logistic Regression Models

This section presents findings from the reduced logistic regression models that include only those independent variables that were significant for both samples in the full logistic regression models. These variables are psychological functioning (individual level), meeting because of mutual agreement and man paying for expenses (situational level), and disclosure of the incident (community level). The chi-square model fit statistic is significant for both models (35 labelers, $\chi^2 = 18.650$, $p \leq .01$), (78 labelers, $\chi^2 = 26.411$, $p \leq .001$). Both models explain 17% of the variance in the dependent variable of labeling (Naglekerke's $R^2 = .17$). The results of the reduced logistic regression models are presented below, organized around the ecological model. The results are summarized in Table 5.9 and Table 5.10.

Individual Level

The individual-level variable in the reduced models is psychological stress. This variable is statistically significant in the model with 35 labelers. Women with higher scores on measures of psychological stress are significantly more likely to label their experiences with sexual

aggression as being rape. Women who have more psychological stress are 1.8 times more likely to apply the rape label to their experiences.

Situational Level

Two situational-level variables were included in the reduced models. Being together because of a mutual agreement and the man paying for expenses were both negatively and significantly related to a woman's decision to apply the rape label to an incident of sexual aggression. Women who were with the offender because of a mutual agreement were significantly less likely to label their experiences with sexual aggression as being rape. In both samples, women who were with the offender due to mutual agreement were .32 times less likely to use the rape label. Women were also significantly less likely to apply the rape label to their experiences with sexual aggression when the man paid for expenses. Specifically, women in the sample with 35 labelers were .40 times less likely to use the rape label, and women in the sample with 78 labelers were .51 times less likely to use the rape label in reference to their experiences with sexual aggression.

Community Level

The community-level variable of telling someone about the incident of sexual aggression was included in both reduced models. In both models, disclosing an incident of sexual aggression predicted the decision of college women to apply the rape label to their experiences with sexual aggression. Women in the sample with 35 labelers group who disclosed were 1.6 times more likely to label, while women in the 78 labelers group were 2.3 times more likely to label.

Summary

Results from the reduced logistic regression models show that all of the included independent variables are statistically significant in one or both models. Being with the offender

Table 5.9. Reduced Logistic Regression Models

	Sample 1 - 35 Labelers				Sample 2 - 78 Labelers			
Variables	B	S.E.	Sig.	Odds Ratios	B	S.E.	Sig.	Odds Ratios
Individual Level								
Psychological stress	.559***	.259	.031	1.749	.247	.208	.236	1.280
Situational Level								
Mutual agreement	-1.155***	.452	.011	.315	-1.128*****	.338	.001	.324
Man paid	-.914**	.468	.051	.401	-.673**	.380	.076	.510
Community Level								
Tell someone	.490	.443	.269	1.632	.853***	.334	.011	2.346
-2 Log Likelihood	147.449				240.096			
Model $\chi 2$	18.650***				26.411*****			
Nagelkerke R^2	.17				.17			

***** $p < .001$ **** $p \leq .01$ *** $p \leq .05$ ** $p \leq .10$ * $p \leq .20$

These models control respondent's race, age at time of survey, current relationship status and having attended a program about rape.

Table 5.10. Comparison of Directional Relationships in Reduced Logistic Regression Models

Variables	Labeling 35 Labelers	Labeling 78 Labelers
Individual Level		
Psychological distress	+	
Situational Level		
Mutual agreement	-	-
Man paid	-	-
Community Level		
Tell someone		+

because of a mutual agreement and being with offenders who pay for expenses are negatively related to the labeling decision in both samples. Having more psychological distress increases the likelihood of labeling in the sample with 35 labelers. Telling someone about the incident increases the likelihood of labeling in the sample with 78 labelers. Overall, these four variables appear to predict the labeling decision, and the situational variables may have more predictive utility than the individual and community variables.

Conclusion

Two variables were statistically significant in predicting the labeling decision in the full and reduced logistic regression models for both samples. Being together because of a mutual agreement and the man paying for expenses were significant predictors of the labeling decision. Women with offenders because of mutual agreement and women with offenders who paid for expenses were significantly less likely to label their experiences with sexual aggression as being rape. The individual-level variable of psychological distress was significant in in the reduced model with 35 labelers. The community-level variable of telling someone about the incident was significant in the reduced model with 78 labelers. Together these findings suggest that there is confidence in the utility of the two situational-level variables to predict the labeling decision, while caution must be exercised in determining the utility of the individual-level and community-level variables. These findings will be discussed in the next chapter, as will the study's strengths and weaknesses. The implications of this study's finding for future research on the topic of labeling sexual aggression also will be discussed.

CHAPTER 6

DISCUSSION

This dissertation has examined the decision of women enrolled in college to label their experiences with sexual aggression as being rape. Three research questions were examined in the present study and the findings related to these questions are discussed in this chapter. The first question addressed in this study is: Are there group differences between women who label and women who do not label their experiences with sexual aggression as being rape? The second research question addressed in this study is: What is the prevalence of the labeling of incidents of sexual aggression other than rape? The final research question addressed in this study is: Does the ecological model predict the decision of women enrolled in college to label their experiences with sexual aggression as being rape? After a discussion of the study results, the limitations of this study will be addressed. Last, suggestions for future research will be discussed and are accompanied by concluding comments.

The Labeling of Non-Rape Incidents

The first research question sought to determine the prevalence of applying the rape label to incidents of sexual aggression that are not legally rape. Unwanted sexual contact, attempted rape, and verbal coercion were classified as non-rape incidents in this study. This research hypothesized that women will apply the rape label less often to incidents of sexual aggression that are not rape compared to incidents of sexual aggression that are rape. The findings of this study support the hypothesis. In sample one, 133 women experienced non-rape incidents during the 12 months preceding the survey. Of these women, only 17% (n = 22) were classified as labelers based upon their answer to the labeling cue, “Have you ever been raped?” In comparison, 73% (n = 111) of these women were classified as non-labelers, suggesting they did

not believe their experiences were rape. Further, of the 23 women who did experience rape during the reference period, only 56% (n = 13) were classified as labelers. These findings are consistent with those of other studies that women do not apply the rape label to non-rape incidents (Cleere and Lynn, 2013; Fisher, et al., 2003; Orchowski, et al., 2013) and that many women do not apply the rape label to their experiences even when the legal criteria for rape have been met (e.g. Bondurant, 2001; Botta and Pingree, 1997; Fisher, et al., 2003; Kahn, et al., 1994; Pitts and Schwartz, 1993). These findings contradict critics who contend that women incorrectly identify non-rape incidents as being rape (e.g. Gilbert, 1991; 1992; Roiphe, 1993). Instead, these findings support the stance that a large percentage of women do not misidentify non-rape incidents as being rape and do not apply the rape label to incidents of sexual aggression that would legally be rape. These findings underscore the need for rape education efforts to focus on assisting women in defining their experiences with sexual aggression as being rape when the legal criteria for the crime are met. In addition, women also need information about which non-rape acts of sexual aggression are illegal and how to report such acts.

Differences Between Labelers and Non-Labelers

The second research question addressed in this dissertation focuses on group differences between women who label their experiences rape and women who do not label their experiences rape. The hypothesis that women who label their rapes will have significantly lower psychological functioning and higher psychological distress than women who do not label their rapes was partially supported in the sample with 35 labelers. Women in this sample who applied the rape label to their experiences with sexual aggression reported higher levels of psychological distress than women who did not apply the rape label to their experiences with sexual aggression ($t = -2.401$, $p \leq .05$). This finding is consistent with previous research examining the relationship

between psychological distress and the labeling decision (Kahn, et al., 2003; Layman, et al., 1996; Littleton, et al., 2006; Littleton, et al., 2009), although other research suggests that labelers have less psychological distress than non-labelers (Botta and Pingree, 1997; Clements and Ogle, 2009) or that psychological distress is not related to the labeling decision (McMullin and White, 2006). It should also be pointed out that while psychological distress was not found to predict labeling group membership in previous research using the same dataset (McMullin and White, 2006), the current research used data from a different data collection point and included non-rape experiences in the analysis. More research should be conducted to further determine the nature of the relationship between the labeling decision and psychological distress, perhaps incorporating Kahn et al.'s (2003) methodology of using how women felt immediately after an incident of sexual aggression as a predictor of labeling.

Predicting Labeling Using an Ecological Model

The primary goal of this dissertation was to test the utility of the ecological model in predicting the decision of women enrolled in college to label their experiences with sexual aggression as being rape. As discussed in Chapter 3, the ecological model provides a framework within which the research about labeling sexual aggression can be organized and tested. An ecological model takes into account that the experience of, and reaction to, life events does not depend on a single variable. Rather, the ecological model supports the proposition that life events are influenced by multiple variables originating from a variety of sources (Belsky, 1980; Bronfenbrenner, 1979; 1986; Heise, 1998). The ecological model used in this study is based upon those proposed by Heise (1998) and the World Health Organization (Dahlberg and Krug, 2002; Jewkes et al., 2002) and consists of the following levels: Individual, Situational, Relationship, Community, and Societal. Recall that four logistic regression models were

analyzed in this study – one full model and one reduced model for each sample. The logistic regression results show modest but encouraging support for the contention that the ecological model can be used to predict the labeling decision. What follows is a discussion of the results from the full and reduced logistic regression models.

Full Logistic Regression Models

Individual level. At the individual level of the ecological model, one variable was statistically significant in both full logistic regression models. Women with higher levels of psychological distress were significantly more likely to label their experiences with sexual aggression as being rape. This is an interesting finding because the previous research that has sought to determine predictors of labeling has relied on group comparisons to explore the relationship between psychological distress and the labeling decision (Botta and Pingree, 1997; Clements and Ogle, 2009; Kahn, et al., 2003; Layman, et al., 1996; Littleton, et al., 2006; Littleton, et al., 2009; McMullin and White, 2006). This finding suggests that psychological distress makes an independent contribution to the labeling decision in relation to other variables and that group comparisons alone may not be adequate for examining the relationship between psychological distress and the labeling decision.

Also of interest is that in the sample with 78 labelers, women with higher scores on the expectation of sexual aggression measure were significantly more likely to apply the rape label than women with lower scores on the sexual expectation measure. This finding stands out because to this author's knowledge, there is no published research examining the relationship between expectation of sexual aggression and the labeling decision. One possible explanation for this finding lies in Peterson and Muehlenhard's (2004) research. They reported that women who supported specific rape myths and whose rapes had characteristics of those rape myths were less

likely to label those events rape. The same logic may apply in a circumstance during which a woman expects sexual aggression. If a woman's experience with sexual aggression is congruent with her views on when sexual aggression might occur or is justified, she may not label her experience as being rape.

Situational level. Two situational-level variables were statistically significant in both full models and are of interest because to this author's knowledge, these variables have not been examined for a relationship to the labeling decision in previous academic research. Being together because of a mutual agreement and the man paying for expenses incurred while the man and the woman were together both reduced the odds of a woman labeling sexual aggression as being rape. The impact of being with the offender because of mutual agreement on the labeling decision could be related to the concept of self-blame. Some labeling research has found that women who blame themselves or who are blamed by others for experiencing rape are unlikely to apply the rape label to those experiences (Pitts and Schwartz, 1993; Schwartz and Leggett, 1999). If a woman is with an offender because of a mutual agreement, she might blame herself for the incident because she made the decision to be with the offender.

The reduced likelihood of labeling when a man has paid for expenses may be related to the concept of courtship patriarchy (Schwartz and DeKeseredy, 1997). Courtship patriarchy sets up an exchange relationship, wherein goods (i.e. money spent on dates) are exchanged for sex. This patriarchy also includes the right to use force to obtain sex, particularly if the man feels he has not been 'paid' what he is duly owed for his participation in the relationship (Basow and Minieri, 2011; Baumeister and Vohs, 2004; Schwartz and DeKeseredy, 1997). Qualitative interviews with female students enrolled in college suggests that they do believe men expect sex in return for paying for expenses (Burnett, et al., 2009). If women subscribe to the belief that

they ‘owe’ men sex in exchange for paid expenses, it stands to reason that women would not apply the rape label to their experiences in situations of sexual aggression with those characteristics.

Relationship level. Knowing someone who has experienced sexual aggression increased the likelihood of labeling only in the sample with 35 labelers. This finding is in contrast to some previous research, which has reported that knowing someone who has experienced sexual aggression is not significantly related to the labeling decision (Bondurant, 2001; Fisher, et al., 2003; Kahn, et al., 1994). McMullin and White (2006) used the same dataset in their study examining the psychological impact of labeling but also did not find a relationship between knowing someone who had experienced sexual aggression and the labeling decision. Again, much like the findings regarding psychological distress, it is possible that including non-rape incidents in the analysis and using a different data wave contributed to the difference in findings. Further, Botta and Pingree (2001) found that women who labeled their experiences with acquaintance rape as being rape were likely to have a friend who had been raped by an acquaintance. This suggests that perhaps the relationship between knowing someone who has experienced sexual aggression is dependent upon whether or not that person experienced the same kind of sexual aggression as a study participant.

Community level. In both samples, disclosing the incident of sexual aggression increased the odds of labeling the incident as being rape. This finding supports Ochowski, et al. (2013) who also reported a positive relationship between disclosure and the labeling of rape. In a qualitative study examining the labeling of sexual aggression, Harned (2004) also reported that women in her sample who labeled their experience with sexual aggression as being rape were likely to have discussed the rape with someone else. However, Fisher, et al. (2003) reported a

negative relationship between disclosure and the labeling of rape. Most studies examining the labeling decision do not include disclosure as a predictor variable, making it difficult to draw any firm conclusions about its relationship to the labeling decision. Therefore, it is important for future research to include this variable in data collection and analysis.

Societal Level. While there were no significant relationships between societal variables and labeling that occurred in both full logistic regression models, the findings merit discussion because they differ from those of previous research. In the sample with 35 labelers, endorsing gender stereotypes reduced the odds of labeling an incident of sexual aggression as being rape. While gender role stereotypes have not been shown to be related to the labeling decision in other research (Koss, 1985; McMullin and White, 2006), some research shows that they are related to the acceptance of rape myths in relation to blaming women for their experiences with sexual aggression (for a review see Grubb and Turner, 2012). It is possible that a belief in gender roles is related to self-blame for experiences with sexual aggression and through this contributes to the labeling decision.

In the sample with 78 labelers, the odds of labeling significantly decreased with more acceptance of chivalry and significantly increased with more disagreement with male violence. While other studies have not reported a relationship between these variables and labeling sexual aggression, this finding may have support in research examining the relationship between rape myth acceptance and protective paternalism. Chapleau, Oswald, and Russell (2007) reported that male and female college students who believe men should protect women are less likely to endorse rape myths. Applied to labeling, women who believe men should not use violence may be more likely to label their experiences with sexual aggression as being rape because the use of violence against women is not protective.

Reduced Logistic Regression Models

The variables that were significant in both full logistic regression models were entered into a reduced logistic regression model for each sample. This reduced model contained four independent variables – psychological stress (individual level), together because of mutual agreement (situational level), man paid (situational level), and telling someone about the incident (community level). The situational-level variables of being together because of mutual agreement and the man paying for expenses significantly predicted the labeling decision in both samples. Women who were with the offender because of mutual agreement and women with men who paid for expenses were less likely than other women to label their experiences with sexual aggression as being rape. These findings were consistent in the group comparisons and across all logistic regression models, underscoring the importance of situational-level variables in relation to a woman's decision to label an experience with sexual aggression as being rape. These findings do not, however, negate the importance of other variables in the model. Psychological distress remained significant in the model with 35 labelers and telling someone about the incident of sexual aggression remained significant in the model with 78 labelers. These findings indicate that these two variables are still relevant but more research is necessary to determine precisely what value they lend to predicting the decision to label sexual aggression as being rape.

Using the ecological model to predict the labeling decision

The results discussed above provide limited but encouraging support for the use of the ecological model to predict the decision of college women to label their experiences with sexual aggression as being rape. While variables at the relationship level and at the societal level were not included in the reduced models, their potential importance as part of an ecological model to

predict the labeling of sexual aggression should not be underestimated. Instead, all of the findings of this study should be viewed as a 'stepping stone' to further developing the ecological model for use in theorizing about the labeling of sexual aggression.

It is clear from the current study and from previous studies that situational factors are important in the decision of women enrolled in college to label their experiences with sexual aggression as being rape. It is likely that the importance of the variables is not the circumstance itself. Rather, the importance of the situational variables lies in their interpretation by the woman who has experienced sexual aggression. This interpretation of situational circumstances is likely influenced by variables at the other levels of the ecological model. For example, a woman who believes that there is a high chance of sexual aggression occurring when a man pays for expenses may not label her experience with sexual aggression as being rape if the man paid for expenses during that experience. This possibility underscores the necessity of studying the decision of women enrolled in college to label their experiences with sexual aggression as being rape using a model that examines variables at multiple levels.

Summary

The major tenet of the ecological model is that a person's experience with life events is influenced by variables at different levels. These variables influence each other and determine how a person will interpret a life event (Belsky, 1980; Bronfenbrenner, 1979, 1986; Heise, 1998). In this study, the life event of interest is sexual aggression but it is the interpretation of that event as being or not being rape that has been the focus of analysis. The analysis discussed above indicates that the ecological model can be used to predict the labeling decision, but further development is needed. Some of the issues related to the development of the current study that place limitations on it are discussed in the next section.

STUDY LIMITATIONS

There are several limitations to this study that should be addressed. First, there were only 35 labelers in sample one. This prompted the analysis of a second sample that included an additional 43 women who indicated they had been raped. However, between 21 and 25 cases in this second sample had missing data for situational variables. As discussed in the methods section, those missing values were replaced by a value indicating the characteristic of interest was not present in the case ('0'). In addition, it is possible that the situational variables that were not missing in these 43 cases were related to consensual sexual experiences these women had during the year prior to the data collection. This possibility is supported by the structure of the SES, which asks study participants to answer questions based upon their most serious sexual experience. If study participants followed directions and they only experiences consensual sex during the reference period, then this situational information is related to consensual sexual experiences instead of experiences with sexual aggression.

Second, the measure of labeling is a general measure that assesses whether or not a woman has "ever" been raped. While this or a similar measure is commonly used in the labeling research (Bondurant, 2001; Botta and Pingree, 1997; Clements and Ogle, 2009; Kahn, et al., 1994; Kahn et al., 2003; McMullin and White, 2006; Pitts and Schwartz, 1993), it is possible that when women answered 'yes' to the question they were not referring to a situation that happened in the year immediately prior to the data collection (approximately their sophomore year in college). Conversely, the 43 additional labelers in sample two who answered 'yes' to the labeling cue could have been referring to an incident that did occur during the sophomore year of college even though their answers on the SES did not allow them to be classified as having experienced

sexual aggression. This weakness in the labeling measure must be considered when interpreting all results from this study.

Third, the classification of variables for testing in the ecological model, while based in prior research about labeling and the ecological model, is still somewhat arbitrary. For example, the variable of 'telling someone about the incident' was classified as a community variable because disclosure of an incident of sexual aggression to a third-party indicates that the woman feels there is enough support to feel comfortable in discussing her assault. This variable has also been classified as a community variable in research that used the ecological model to examine the decision of women who experienced rape to cooperate with the prosecution of their offenders (Anders and Christopher, 2011). However, disclosure could also be classified as a relationship variable because it requires telling someone the woman trusts about the incident which is indicative of an interpersonal relationship. Perhaps one solution to this issue is to classify disclosure to a friend or relative at the relationship level, and disclosure to the police, college administrators, a counselor, or medical personnel at the community level (Campbell et al., 2009).

A second variable that could have been classified in two variable levels is how often a woman gets high or drunk during any given month during the time frame of interest. The variable is classified as a community variable because drinking is a reflection of the campus culture within which the women in the sample live (Young et al., 2005). However, this variable could arguably be an individual-level variable that is specific to each woman in the sample. One potential way to address this issue is to include drinking behavior as both an individual-level and community-level variable. The individual-level variable would be specific to each woman, while episodic drinking rates for groups of women could be calculated for a community-level variable. The episodic drinking rate has been used to predict differences in the prevalence of sexual

aggression on college campuses (Mohler-Kuo, Dowdall, Koss, and Weschler, 2004) and theoretically could be applied to different groups of women on the same college campus, such as women who belong to a sorority and women who do not belong to a sorority. Women who have labeled or not labeled sexual aggression could then be compared based upon their group membership with regard to drinking rate.

While these limitations are of concern they do not negate the importance of the effort made toward building an ecological model that can be used to test the decision of women enrolled in college to label their experiences with sexual aggression as being rape. Instead, these limitations should be looked upon as opportunities to improve this line of research. Future research opportunities are discussed in the next section.

DIRECTIONS FOR FUTURE RESEARCH

Future research would be well-served to concentrate on collecting data about labeling at all levels of the ecological model. This will improve model building and prediction by insuring that there are variables available at all levels of the model that can be included in data analyses. The decision about which variables to include in data collection efforts should be guided by existing research about labeling. However, it would be prudent to include variables that have been examined in a limited fashion such as expectation of sexual aggression and situational factors about the interaction between the people involved prior to the incident. Therefore, research should attempt to determine how the variables at each level of the ecological model interact and influence each other to predict the decision of women enrolled in college to label their experiences with sexual aggression as being rape.

Much of the academic research on labeling rape demonstrates that situational factors are important in a woman's decision to label an experience with sexual aggression as being rape (see

Table 3.3 for a summary). The current study also shows that situational-level variables are an important consideration when women decide whether or not to apply the rape label to experiences with sexual aggression. However, these findings should not be construed as a reason to limit the research on predicting labeling to only situational variables. Instead, researchers must remember that the interpretation of life events is influenced by multiple variables that also influence each other. Consistent with the proposition of the ecological model, future research would benefit from focusing on how a woman's interpretation of situational factors surrounding an incident of sexual aggression is influenced by variables from other levels of the ecological model. Researchers would be well served to explore ways to measure the influence of variable levels on each other, paying particular attention to how the other levels influence the interpretation of situational circumstances.

Future research should also focus on including variables that have not been thoroughly explored in relation to the labeling decision. For example, it would be prudent to test for an interaction effect between expectations of sexual aggression under specific circumstances and situational variables mirroring those circumstances on the labeling decision. This suggestion is supported by a study conducted by Peterson and Muehlenhard (2004), who reported that specific rape myths were positively related to the labeling decision when circumstances of the rape were similar to the rape myth of interest.

It is imperative to continue rape education and prevention efforts on America's college campuses. One component of this education should be focused on assisting women in identifying which incidents of sexual aggression might constitute an illegal act. While there were no alternative labels to rape provided in the current research, previous studies indicate that women do not consider some incidents of sexual aggression as criminal behavior even when legal

criteria have been met (Cleere and Lynn, 2013; Orchowski et al., 2013). Accordingly, it is also necessary to determine why women do not believe such actions are criminal in nature. Among the possible explanations is women do not know the actions could be criminal, they blame themselves for these incidents more than they blame the offender for these incidents (Orchowski et al., 2013), or that they have been desensitized to the seriousness of such incidents. While these potential explanations are certainly not exhaustive, they provide a starting point for research that can inform rape education efforts.

CONCLUDING REMARKS

This study contributes important knowledge to the research examining the decision of women enrolled in college to label their experiences with sexual aggression for several reasons. First, to this author's knowledge, it is the only published study to use a full ecological model to predict the labeling decision. Use of an ecological model aligns research examining the labeling decision with research examining other areas of research focusing on sexual aggression. In addition, life events and their interpretations are influenced by many variables that that also influence each other. These variables must be accounted for in research models that attempt to explain the labeling decision.

The second contribution of this study is that it examined variables that, to this author's knowledge, have not been included in published research. The individual-level of expectation of sexual aggression, and the situational-level variables of the man paying for expenses, being together on a date, mutually initiated contact, and where the incident occurred were new predictive variables. The importance of including these variables is demonstrated by their significance in the predictive models, as discussed above. These variables should be included in future studies to more solidly determine their importance to the labeling decision.

The third contribution of this study is that it provides information that can be used by education providers who disseminate information about sexual aggression on college campuses. If researchers can more accurately identify what contributes to the interpretation of situational factors of an incident of sexual aggression, educational efforts can begin addressing beliefs that encourage the non-labeling of sexual aggression. Educational efforts could be aimed at all levels of the ecological model with an emphasis on those factor that contribute to the interpretation of the situational factors of sexual aggression.

The primary goal of this dissertation was to test the ecological model for its utility in predicting the decision of women enrolled in college to label experiences with sexual aggression as being rape. While this study has several limitations, there is moderate but encouraging support using the ecological model in the labeling research. If women are unaware that particular circumstances are legally rape, or are unwilling to label a rape as such because of their interpretations of the incident, they run the risk of experiencing sexual aggression in the future. In addition, when women do not apply the rape label to their experiences with sexual aggression, offenders cannot be held accountable for their actions. Furthering our knowledge of the decision of college women to label their experiences with sexual aggression as being rape will allow for the development of more accurate education so college women can have more information to use when interpreting their experiences with sexual aggression.

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Appendix 1a. Tolerance and VIF statistics for 35 Labelers

Variable	Tolerance	VIF
Individual Level		
Prior SA	.929	1.076
Psychological stress	.420	2.382
Psychological wellness	.360	2.777
Expectation of SA	.841	1.189
Situational Level		
Intimate offender	.406	2.461
Student offender	.828	1.207
On a date	.513	1.950
Assault in residence	.685	1.460
Mutual agreement	.563	1.778
Man paid	.812	1.232
She using substances	.355	2.819
He using substances	.411	2.434
Prior sexual contact	.537	1.862
Relationship Level		
Know a victim	.789	1.267
Community Level		
Tell anyone	.705	1.419
How often drunk	.643	1.556
Societal Level		
Acceptance of violence	.789	1.268
Acceptance of chivalry	.865	1.156
Acceptance of stereotypes	.863	1.159
Disapprove of women	.808	1.238
Controls		
Age 20	.892	1.121
White	.688	1.454
Single	.739	1.353
Attend SA program	.918	1.089

Appendix 1b. Tolerance and VIF Statistics for 78 Labelers

Variable	Tolerance	VIF
Individual Level		
Prior SA	.961	1.041
Psychological stress	.423	2.363
Psychological wellness	.388	2.575
Expectation of SA	.856	1.168
Situational Level		
Intimate offender	.391	2.556
Student offender	.762	1.312
On a date	.415	2.410
Assault in residence	.495	2.022
Mutual agreement	.535	1.869
Man paid	.839	1.192
She using substances	.337	2.964
He using substances	.389	2.571
Prior sexual contact	.430	2.325
Relationship Level		
Know a victim	.810	1.235
Community Level		
Tell anyone	.737	1.356
How often drunk	.624	1.462
Societal Level		
Acceptance of violence	.824	1.213
Acceptance of chivalry	.861	1.161
Acceptance of stereotypes	.820	1.219
Disapprove of women	.750	1.334
Controls		
Age 20	.913	1.096
White	.745	1.342
Single	.779	1.284
Attend SA program	.943	1.060