



Prevalence and consequences of adult sexual assault of men: Review of empirical findings and state of the literature

Zoë D. Peterson^{a,*}, Emily K. Voller^b, Melissa A. Polusny^{b,c,d}, Maureen Murdoch^{b,c,d}

^a Department of Psychology, University of Missouri-St. Louis, United States

^b Minneapolis VA Medical Center, United States

^c Center for Chronic Disease Outcomes Research, Minneapolis, MN, United States

^d University of Minnesota Medical School, United States

ARTICLE INFO

Article history:

Received 4 March 2010

Received in revised form 13 August 2010

Accepted 22 August 2010

Keywords:

Sexual assault

Rape

Sexual coercion

Sexual victimization

Male victimization

Adult men

ABSTRACT

Male victims of adult sexual assault (ASA) are understudied as compared with female victims. Further, commonly-held myths about sexual assault suggest that men cannot be victims or that, if men are victims, they are relatively physically and emotionally unharmed by sexual assault. The goal of this paper was to systematically review the empirical literature on ASA among men to evaluate the veracity of these myths. This paper also sought to examine the methodological quality of the body of research in this area, identify limitations and gaps in the current literature, and suggest directions for future research. Eighty-seven relevant studies were identified through a systematic review of the literature. The reported prevalence of men's sexual aggression varied widely depending on the methods used and the population studied; some populations (e.g., veterans, prison inmates, and gay and bisexual men) reported higher rates of ASA than men in the general population. Few studies have systematically examined the consequences of male ASA; however, those that have suggest that ASA can have notable adverse physical and psychological consequences for some men.

© 2010 Elsevier Ltd. All rights reserved.

Contents

1.	Introduction	2
2.	Selection of articles for inclusion	2
3.	Evaluating the research: definitional and methodological considerations.	2
3.1.	Defining sexual assault	3
3.1.1.	What qualifies as an "assault?"	3
3.1.2.	Which sexual acts count?	16
3.1.3.	Advantages of broad vs. narrow definitions of "sexual assault".	16
3.2.	Research methods.	16
3.2.1.	Behaviorally specific questions vs. participant interpretation.	16
3.2.2.	Research sample and setting.	17
3.2.3.	Sex of the perpetrator.	17
3.2.4.	Time frame.	17
4.	Prevalence of adult sexual assault of men	18
5.	Consequences of adult sexual assault of men	18
5.1.	Considerations in investigating the consequences of sexual assault of men	18
5.2.	Psychological consequences	19
5.2.1.	Psychological consequences for male victims as compared with female victims.	19
5.2.2.	Psychological consequences for sexually assaulted men as compared with non-assaulted men	19
5.2.3.	Sex of the perpetrator as related to psychological consequences.	20
5.3.	Consequences for sexuality and sexual identity	20
5.3.1.	Problems with sexual functioning as related to male ASA	20

* Corresponding author. Department of Psychology, 325 Stadler Hall, University of Missouri-Saint Louis, One University Boulevard, St. Louis, MO 63121-4400, United States.
E-mail address: petersonz@umsl.edu (Z.D. Peterson).

5.3.2.	Sexual risk taking behaviors related to male sexual assault.	20
5.3.3.	Impact of male ASA on sexual identity	20
5.4.	Interpersonal consequences.	20
5.5.	Consequences to physical health	21
6.	Conclusions and directions of future research	21
6.1.	Directions for future research on the prevalence of sexual assault of men	21
6.2.	Directions for future research on consequences of sexual assault of men	21
6.3.	General conclusions	22
References	22

1. Introduction

The widespread prevalence and substantial adverse effects of sexual assault on female victims have been well documented (see [Koss \(1993\)](#) and [Resick \(1993\)](#) for reviews). Although relatively less attention has been paid to understanding the male victims of this same crime, a limited but growing body of literature has begun to provide evidence of the presence and negative consequences of male sexual assault.

Contrary to the emerging data suggesting that some men do suffer as a result of sexual assault, commonly-held myths suggest that men cannot be raped or sexually assaulted and that, if men are sexually assaulted, they are unharmed by the experience and may even find it pleasurable (e.g., [Mitchell, Hirschman, & Hall, 1999](#); [Struckman-Johnson & Struckman-Johnson, 1992](#)). As a consequence of these myths, male victims of adult sexual assault (ASA) may have difficulty obtaining treatment services, and efforts to prevent male ASA may be marginalized ([Donnelly & Kenyon, 1996](#)). Therefore, it is important to evaluate the veracity of these male rape myths, which minimize or deny the existence and consequences of male ASA and which may contribute to a paucity of research on male ASA. To that end, the goal of this paper is to comprehensively review and synthesize the current literature on men as victims of ASA in order to evaluate the scope of the problem and recommend directions for future research.

Several prior literature reviews have examined aspects of male ASA. However, prior literature reviews on this topic have had important limitations in their scope or methods. For example, prior reviews have been unsystematic or have limited their examination of the literature by including only specific populations such as veterans ([Polusny & Murdoch, 2006](#)) or incarcerated men ([Robertson, 2003](#)), by evaluating only the physical health consequences of male ASA ([Acierno, Resnick, & Kilpatrick, 1997](#)), or by including only men from the U.S. ([Isely, 1998](#)) or the UK ([Rentoul & Appleboom, 1997](#)). In this review we extend and update the work conducted in previous literature reviews by taking a more systematic and comprehensive approach to reviewing the literature on the prevalence and consequences of male ASA.

2. Selection of articles for inclusion

For this review article, we systematically searched PsycINFO and MEDLINE databases to identify empirical studies of male ASA published in the past 25 years (January 1984 through July 2009). [Fig. 1](#) describes our literature search strategy. We searched for any abstract that (a) contained the term “sexual assault,” “sexual coercion,” “sexual abuse,” “sexual offenses,” or “rape” and (b) contained the term “male,” “males,” “men,” or “man” and (c) contained the term “victim” or “victims.” The search was limited to English language articles with adult (age 18 and over for PsycINFO and age 19 and over for MEDLINE) human males as the research population. Additionally, we hand-searched bibliographies in order to identify articles that were missed in our original

search, and we reviewed [Fiebert's \(2000\)](#) annotated bibliography of articles related to women's sexual aggression against men. Using these strategies, we identified and reviewed a total of 811 abstracts from published works (i.e., excluding unpublished dissertations), and we excluded studies that focused on male sexual abuse during childhood and on sexually coercive behavior perpetrated by men against women. Based on this review of abstracts, we identified and reviewed in full 204 potentially relevant articles. We limited our review to empirical articles that addressed male ASA in North America and Europe because (1) virtually all of the studies included in English language journals fell into this category and (2) we wanted to avoid including research on samples from countries with widely varying cultural standards and laws regarding sexual assault. Our search strategy resulted in a total of 87 unique empirical articles on the prevalence and consequences of male ASA. Those articles are reviewed in this paper.

3. Evaluating the research: definitional and methodological considerations

Reviewing the literature on the broad topic of male ASA presents multiple challenges. There are no well-validated instruments specifically designed to measure men's experiences with sexual assault. Often researchers of male ASA adapt instruments designed to measure women's sexual assault. For example, the Sexual Experiences Survey (SES; [Koss, Gidycz, & Wisniewski, 1987](#); [Koss & Oros, 1982](#)) was designed to measure women's sexual victimization by male perpetrators and men's sexual perpetration against female victims¹; however, it frequently has been modified to measure men's experiences as victims of sexual assault and coercion. The revised Conflict Tactics Scale (CTS2; [Straus, Hamby, Boney-McCoy, & Sugarman, 1996](#)) is also sometimes used to measure men's experiences with sexual assault; however, it was specifically designed to measure sexual assault within relationships, so many of the studies utilizing the CTS2 assess male ASA only within the context of committed relationships.

The lack of standardized measures of male ASA contributes to the fact that researchers differ widely in their definitions of male ASA and their chosen methods for measuring men's experiences with sexual assault. Even the terms used to describe men's sexual victimization vary widely, with some researchers using the term “sexual assault” to label coerced or nonconsensual sexual behaviors, and other researchers using terms such as “sexual violence,” “sexual coercion,” or “rape.” In this article, we review the literature on all forms of adult male sexual victimization.

¹ A recent revision of the SES was designed to measure both women's and men's sexual victimization and perpetration ([Koss et al., 2007](#)); however, there are currently no psychometric data available for the revised SES, and none of the studies reviewed here utilized the revised version of the scale.

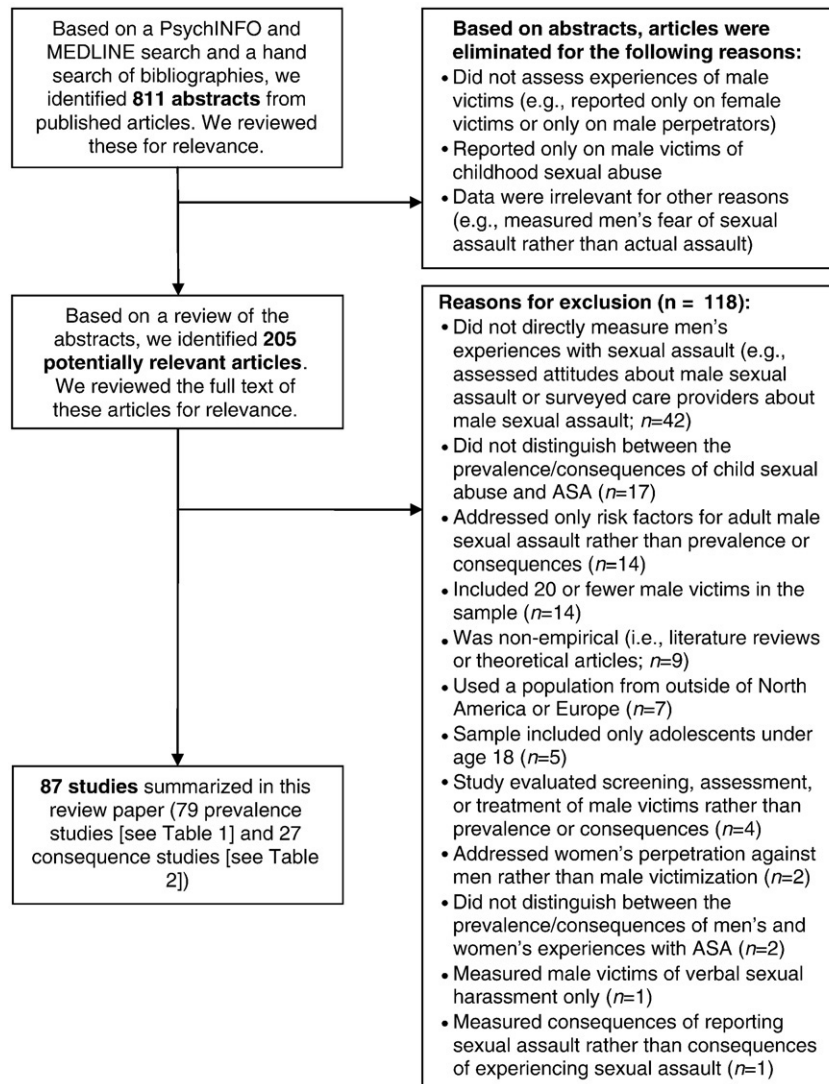


Fig. 1. Selection procedure and criteria for studies included in this review paper.

3.1. Defining sexual assault

One of the greatest challenges in reviewing research findings related to male ASA is that definitions of sexual assault vary widely across studies (see Tables 1 and 2 for summaries of operational definitions of rape used in prevalence and consequence studies).

Researchers examining female sexual victimization often rely on legal definitions of rape to guide research definitions (e.g., Koss et al., 1987; Russell, 1984). Because most states and countries identify rape as a crime and because legal definitions of rape tend to be relatively similar, relying on legal definitions may help rape researchers achieve more definitional consistency (i.e., rape is operationally defined in similar ways) as well as greater consistency in relation to terminology (i.e., researchers tend to use the term rape rather than related but less well defined terms like sexual assault or sexual coercion).

However, in the case of male ASA, legal definitions of rape may not offer a reasonable basis for research definitions. For example, in the United States, many states' rape statutes specify that rape must involve *sexual intercourse*, and in several states, sexual intercourse must, by definition, involve vaginal penetration (APRI, 2003a,b). Thus, according to many legal definitions, men cannot be victims of

rape.² In fact, the gender bias in legal definitions of rape may indirectly contribute to the relative paucity of research on male victims of sexual assault; that is, researchers relying on legal definitions may operationally define rape in such a way that it excludes male victims.

In the absence of consistent legal definitions of male ASA to guide research definitions, two fundamental definitional questions must be addressed: First, what is an "assault," and second, what acts are considered "sexual"?

3.1.1. What qualifies as an "assault"?

Researchers exploring male ASA have used definitions that reflect different points along a continuum of coercion that ranges from verbal

² Rape is not the only sex crime. For example, forced oral and anal sex are illegal in all states although the label for these sex crimes varies from state to state. However, rape is the most publicly visible sex crime in spite of the fact that other forms of sexual victimization may have similar consequences for victims (see Rentoul and Appleboom (1997) and Vearnal and Campbell (2001) for discussions of this issue as related to English law).

Table 1
Summary of studies reporting prevalence and incidence of adult male sexual assault organized according to type and location of participant sample.

Study	Sample characteristics	N	Response rate ^a	Method of obtaining data	Definition of sexual assault	Rates of sexual assault ^b
<i>Community samples (exclusively or predominantly heterosexual)</i>						
<i>United States samples</i>						
Basile, Chen, Black, and Saltzman (2007)	Nationally representative U.S. sample contacted through random-digit-dialing	N = 9684 Men (n = 4807)	48%	Telephone interview	Unwanted sexual activity, including touch, in past 12 months Forced sex (vaginal, oral, or anal penetration or intercourse against will or because you were unable to give consent due to alcohol, drugs, sleep, or mental disability) in lifetime	1% 2%
Burnam et al. (1988); Sorenson and Siegel (1992); Sorenson, Stein, Siegel, Golding and Burnam (1987)	Randomly selected adults in households in Los Angeles catchment area	N = 3132 Men (n = 1480)	68%	Face-to-face interviewers	Sexual contact (i.e., touching sexual parts or sexual intercourse) through use of pressure or force: -In their lifetime -Since age 16	9% 7%
Elliott, Mok, and Briere (2004)	National stratified random sample of registered automobile owners and/or individuals with listed telephones	N = 941 Men (n = 469)	65%	Mailed survey	Sexual contact (including touching or intercourse) since age 18 obtained through threat or physical force	4%
Masho and Anderson (2009)	Male residents in Virginia identified through random-digit-dialing	N = 705	21%	Interviewer-administered phone survey	Sexual assault experiences that occurred for the first time after age 18 (thus, these percentages exclude child sexual abuse victims who were also assaulted as adults), including: -Sexual touch obtained through force or threat of force -Oral, anal, or vaginal intercourse obtained when the man was too drunk or high to consent -Attempted oral, anal, or vaginal sex against the man's will	1% 1% 0.3%
Tjaden and Thoennes (2000)	National U.S. sample of married/cohabiting men and women contacted by random-digit-dialing	N = 14,212 Men (n = 6934)	Not reported	Telephone survey	Attempted or completed rape (i.e., use or threat of force to penetrate the victim's vagina or anus by penis, tongue, fingers, or object, or the victim's mouth by penis) by current or former marital/opposite-sex cohabiting partner; -In their lifetime -In the past 12 months	0.2% 0%
Yuan, Koss, Polacca, and Goldman (2006)	Native American men and women from six tribes, randomly selected from those living on or near federal tribal land	N = 1368 Men (n = 575)	Not reported	Face-to-face interviews	Since age 18, penetration of the victim's anus by penis, tongue, fingers, or object or penetration of the victim's mouth by penis through the use of actual or threatened physical force	2%
Zweig, Barber, and Eccles (1997)	Wave 7 of a prospective study of high school students from 10 Michigan school districts; participants were ages 19-22	N = 1399 Men (n = 527)	80% of those from the original sample (original sample response rate not reported)	Mailed surveys	"How often does it (sex) happen because you are pressured into it" (p. 296)? "Have you ever been raped" (p. 297)? "Have you ever gotten...sexually assaulted" (p. 297)?	13% 1% 2%
<i>Non-U.S. samples</i>						
Kerbs and Jolly (2007)	Two studies of German men recruited in public settings	Study 1: N = 247 Study 2: N = 153	Not reported	Surveys completed on site	Attempted and completed nonconsensual sexual interaction perpetrated by women using physical force, exploitation of intoxication, or verbal pressure: -Study 1 -Study 2	25% 30%
Krahe et al. (2003)	Study 1: German adolescent boys and adult men (ages 14–24) recruited at public settings Study 2: German men (mean age = 22 years) recruited at public settings	Study 1: N = 247 Study 2: N = 153	Not reported	Surveys administered in private locations at the recruitment sites	Attempted or completed unwanted sexual acts with a women as measured by the Men's Nonconsensual Sexual Experiences Survey derived from the SES ^c ; types of sexual assault included: -Attempted or completed sexual contact (kissing/petting, oral sex or intercourse) through physical force: -Study 1 (attempted)	7%

					-Study 1 (completed)	8%
					-Study 2 (attempted)	5%
					-Study 2 (completed)	11%
					-Sexual contact through exploitation of intoxication:	
					-Study 1 (attempted)	13%
					-Study 1 (completed)	16%
					-Study 2 (attempted)	12%
					-Study 2 (completed)	22%
					-Sexual contact through verbal pressure:	
					-Study 1 (attempted)	9%
					-Study 1 (completed)	9%
					-Study 2 (attempted)	10%
					-Study 2 (completed)	10%
					-Any attempted or completed sexual assault:	
					-Study 1	25%
					-Study 2	30%
Soares et al. (2007)	Swedish men randomly selected from adult men living in Stockholm County	N = 520	59%	Mailed surveys	"Sexual violence"	
					-In their lifetime	1%
					-In the past 12 months	0%
<i>College student samples (exclusively or predominantly heterosexual)</i>						
<i>United States samples</i>						
Aizenman and Kelley (1988)	Undergraduate students at Rutgers University	N = 344 Men (n = 140)	43% Men (35%)	Mailed surveys	Lifetime attempted acquaintance rape (as defined by participant)	18%
					Lifetime acquaintance rape	6%
					"Pressed to have sexual contact when they did not want to" (p.308)	17%
					Forced intercourse	14%
Baier, Rosenzweig and Whipple (1991)	Random sample of students at a large public university	N = 702 Men (n = 340)	43%	Mailed survey	Unwanted sexual intercourse measured using modified version of SES ⁵ ; types of sexual assault included:	
					-Unwanted sex because the other person threatened to end the relationship	4%
					-Unwanted sex due to continual arguments	9%
					-Attempted unwanted sex through threat of force	1%
					-Attempted unwanted sex through force	2%
					-Unwanted sex through threat of force	1%
					-Unwanted sex through force	1%
Banyard et al. (2007)	State university students in New England	N = 651 Men (n = 225)	50%	Self-report surveys completed in class or at home	Unwanted sexual contact (kissing, fondling, or touching) excluding intercourse through use of intimidation, force, or incapacitation with alcohol/drugs in past 6 months	8%
Burke, Stets and Pirog-Good (1998)	Men in upper-level classes at a Midwestern university	N = 505 Men (n = 207)	Not reported	Self-report surveys completed in class	Unwilling breast or genital fondling or attempted or completed intercourse in the past year	9%
Conway, Mendelson, Giannopoulos, Csank, and Holm (2004)	Undergraduates from Concordia University	N = 201 Men (n = 100)	36%	Surveys completed at home	Unwanted sexual acts (including kissing and petting) and intercourse (including vaginal, oral, and anal sex) as measured by a modified version of the SES ⁵ ; types of sexual assault included:	
					-Attempted forced sexual acts or intercourse	8%
					-Forced intercourse	5%
					-Acquiescing to intercourse due to pressure or misinterpretation	49%
					-Intercourse obtained through verbal manipulation or lies	7%
Fiebert and Tucci (1998)	Men from California State University at Long Beach	N = 182	Not reported	Self-report survey	Sexual coercion as measured by items based on the CTS2; coercion included unwanted dating, sexual touching, or oral, anal or vaginal sex obtained through insistence, threat, or force	70%
Fiebert and Osburn (2001)	Students at two southern California colleges	N = 452 Male (n = 193)	Not reported	Self-report survey completed in a classroom	Sexual coercion as measured by the CTS2; types of sexual coercion included:	

(continued on next page)

Table 1 (continued)

Study	Sample characteristics	N	Response rate ^a	Method of obtaining data	Definition of sexual assault	Rates of sexual assault ^b
					-Forced kissing	35%
					-Forced sexual touching	23%
					-Sex through insistence	27%
					-Oral/anal sex through insistence	18%
					-Sex through threat	10%
					-Sex through physical force	6%
					-Oral/anal sex through threat	7%
					-Oral/anal sex through physical force	5%
Fisher (1992)	Students in psychology and human sexuality courses	N = 796 Men (n = 322)	Not reported	Survey completed in classrooms	“When you were a teenager or adult, did anyone initiate or do anything sexual with you without your wanting to or without your consent” (p. 219)?	11%
<i>College student samples (exclusively or predominantly heterosexual)</i>						
<i>Non-U.S. samples</i>						
Hogben, Byrne, and Hamburger (1996)	Students in introductory psychology courses at the University of Albany	N = 214 Men (n = 101)	Not reported	Self-report surveys completed in classrooms	Attempted and completed unwanted sexual acts obtained through verbal coercion, intoxication, and physical force as measured with a revised version of the SES ^c	52%
Johnson and Stahl (2004)	Students from a midsized Midwestern university who indicated that they had played drinking games in the previous year	N = 187 Men (n = 120)	Not reported	Self-report survey completed in class	Sexual experiences that occurred during or after a drinking game, including: -Someone touched genitals without consent: -Lifetime -Previous year -Someone sexually “took advantage”: -Lifetime -Previous year -Had sex when too drunk to give consent: -Lifetime -Previous year	33% 19% 25% 12% 28% 14%
Larimer, Lydum, Anderson, and Turner (1999)	Members of fraternities and sororities at a large, public university on the west coast	N = 296 Men (n = 165)	Not reported	Mailed surveys	Unwanted intercourse due to verbal pressure or attempted or completed intercourse due to physical force or intoxication in the last year as measured by a modified SES ^c	21%
Lottes (1992)	Students at an eastern state university	N = 398 Men (n = 171)	Not reported	Surveys administered in classes	The following types of lifetime sexual coercion as measured by a scale that was loosely based on SES: -Verbal pressure in which intercourse did not occur -Using lies but intercourse did not occur -Getting partner stoned or drunk but intercourse did not occur -Verbal pressure resulting in intercourse -Use of lies resulting in intercourse -Getting partner stoned or drunk resulting in intercourse	27% 22% 27% 11% 9% 19%
Lottes and Weinberg (1997)	Random sample of heterosexual students (ages 20-22) at two universities—one in the U.S. and one in Sweden	N = 977 U.S. Men (n = 129); Swedish results reported below	U.S. (48%)	Mailed survey	Attempted or completed “sex” obtained by a female partner using the following tactics as measured by a modified version of the SES ^c (results for U.S. sample only; Swedish results reported below): -Pressure through continual arguments -Lying -Use of intoxication -At least one coercive strategy	28% 24% 28% 50%
Moore and Waterman (1999)	Undergraduate students from a variety of student groups	N = 152 Men (n = 63)	71% for mailed surveys	Surveys administered in a group or distributed and returned by mail	Oral sex or vaginal or anal intercourse or penetration by objects or fingers through use of physical force since the age of 14	6%

Muehlenhard and Cook (1988)	Men enrolled in introductory psychology courses	N = 507	Not reported	Self-report surveys completed in a classroom	Engagement in unwanted sexual activity for a variety of reasons including: -Physical coercion -Intoxication -Partner's verbal coercion -Partner's threat of self-harm	24% 55% 27% 3%
Poppen and Segal (1988)	Students at a large, private Eastern university	N = 177 Men (n = 77)	93%	Self-administered surveys	Lifetime unwanted sexual behavior (obtained through physical force, pressure from partner or peers, intrapersonal conflict) included the following sexual acts: -Kissing -Genital touching -Oral sex -Intercourse	36% 14% 12% 18%
Richman et al. (1992)	Male medical students	N = 80	75%	Mailed surveys	Unwanted sexual advances during the course of medical school training	3%
Rouse (1988)	Black, White, and Hispanic students from a medium-sized Southwestern university	N = 228 Men (n = 114)	Not reported	Surveys administered in classroom	Being hurt sexually or made to have intercourse against their will in the most recent dating relationship	2%
Ryan (1998)	Students from technical and liberal arts schools	N = 656 Male (n = 245)	96%	Surveys administered to classes or groups of students	The following experiences (as measured by a modified version of the SES ^c): -Sex play through use or threats of force -Attempted intercourse through force -Intercourse through force -Anal/oral sex through force -Attempted intercourse through alcohol -Intercourse through alcohol	2% 2% 2% 3% 4% 6%
Sandberg, Jackson, and Petretic-Jackson (1987)	Students at a small Midwestern university from predominantly rural backgrounds	N = 408 Men (n = 161)	Not reported	Surveys administered in classroom	Physically forced sexual intercourse perpetrated by dating partner in their lifetime Unwilling kissing or touching by a dating partner in their lifetime	6% 25%
Sigelman et al. (1984)	Students from psychology, sociology, and nursing courses	N = 504 Men (n = 116)	94%	Surveys administered in classes	An attempted or completed sexual act obtained through "strong physical force" or "violence" (p. 535) occurring within a heterosexual relationship, as measured by a modified version of the CTS2	21%
Stets and Pirog-Good (1989)	Students from a large Midwestern university	N = 287 Men (n = 118)	100%	Surveys administered in classroom	Necking, chest fondling, genital fondling, oral sex, attempted intercourse, or intercourse occurring against the man's will with dating partner in past year	22%
Stevenson and Gajarsky (1991)	A random sample of students from one university	N = 217 Male (n = 93)	54%	Mailed surveys	Unwanted sexual experiences obtained through coercion, intoxication, or force since age 16, as measured by a modified version of the SES	47%
Straus et al. (1996)	Students in a heterosexual dating, cohabiting, or marital relationship	N = 317 Men (n = 113)	Not reported	Surveys administered in classroom	"Sex" or anal sex obtained through use of insistence, threat of force or force during their current relationship as measured by the CTS2	38%
Struckman-Johnson (1988)	Students at University of South Dakota	N = 623 Men (n = 268)	Not reported	Surveys administered in psychology courses, in residence hall, and in fraternities and sororities	Forced sexual intercourse while on a date in their lifetime	16%
Struckman-Johnson and Struckman-Johnson (1994)	Male students from a small Midwestern liberal arts college	N = 204	90%	Self-administered survey; subset participated in face-to-face interview	Sexual contact (i.e., touching sexual parts or sexual intercourse) through use of pressure or force since the age of 16: -Sexual touching only -Intercourse -Any sexual contact (touching or intercourse)	12% 22% 34%

Table 1 (continued)

Study	Sample characteristics	N	Response rate ^a	Method of obtaining data	Definition of sexual assault	Rates of sexual assault ^b
Struckman-Johnson et al. (2003)	Students from a Midwestern and a Southern university	N = 656 Men (n = 275)	95% Men (78%)	Self-report surveys completed at home	Since age 16, men's experiences of sexually coercive tactics used by a woman to obtain sexual contact after the man said "no"; tactic included: -Sexual arousal tactics -Emotional manipulation and deception -Exploitation of intoxication -Physical force or threats of harm	54% 44% 31% 25%
Tewksbury and Mustaine (2001)	Students from 12 southern institutions	N = 1215 Men (n = 541)	97%	Surveys administered in classes	Coerced and forced dating, kissing, oral, anal, and vaginal intercourse; "serious sexual assault" was defined as oral, anal, or vaginal sex obtained through insistence, threat, or force: -Any sexual assault -Serious sexual assault	22% 8%
Waldner-Haugrud and Magruder (1995)	Heterosexual students from a family course at a large Midwestern university	N = 422 Men (n = 202)	Not reported	Self-report survey completed in class	Sexual behavior in a dating relationship (including kissing, fondling, or intercourse) that occurred "despite your wish not to participate" as a result of 12 different coercive strategies, including verbal coercion, intoxication and physical force	73%
Non-U.S. samples Hartwick, Desmarais, and Hennig (2007)	Students from a Canadian university	N = 518 Men (n = 240)	Not reported	Self-report survey administered on computers	Coerced or forced sexual acts (including kissing, fondling, oral sex, and intercourse) perpetrated by women using a modified version of the SES ^c ; types of sexual assault included: -Coerced/forced kissing and fondling -Coerced/forced intercourse -Coerced/forced oral sex	23% 18% 6%
Hines (2007)	Students from international universities sampled in the International Dating Violence Study	N = 7667 Men (n = 2084)	Ranged from 44% to 100% across different colleges	Surveys administered 7 in classrooms	Experiences with oral, anal, or vaginal sex obtained through verbal coercion and physical force in the past year as measured by the CTS2: -Verbal coercion -Physical force	22% 3%
Lottes and Weinberg (1997)	Random sample of heterosexual students (ages 20-22) at two universities—one in the U.S. and one in Sweden	N = 977 Swedish Men (n = 211); U.S. results reported above	Sweden (52%)	Mailed survey	Attempted or completed "sex" obtained by a female partner using the following tactics as measured by a modified version of the SES ^c (results for Swedish sample only; U.S. results reported above): -Pressure through continual arguments -Lying -Use of intoxication -At least one coercive strategy	17% 8% 6% 22%
College student samples (exclusively or predominantly heterosexual) Non-U.S. samples O'Sullivan, Byers, and Finkelman (1998)	Undergraduate and graduate students at two Canadian universities	N = 433 Men (n = 156)	31%	Mailed surveys	The following experiences occurring in the preceding year (as measured by a modified version of the SES): -Sex play due to verbal pressure -Sexual play due to position of authority -Sex play due to threat of force -Attempted intercourse due to physical force -Attempted intercourse using alcohol or drugs -Intercourse due to verbal pressure -Intercourse due to position of authority -Intercourse due to alcohol or drugs -Intercourse due to physical force -Any type of coercion	7% 2% 1% 1% 1% 3% 1% 1% 1% 1% 9%

Predominantly or exclusively gay and bisexual samples

United States samples

Balsam, Rothblum, and Beauchaine (2005)	Homosexual, and bisexual adults and their heterosexual siblings recruited through LGB publications	N = 12,245 Men (n = 449)	54%	Mailed survey	The following behaviors as measured by a modified version of the SES ^c : -Coerced non-intercourse -Heterosexual men 13% -Bisexual men 45% -Gay men 28% -Coerced intercourse -Heterosexual men 9% -Bisexual men 40% -Gay men 21% -Attempted rape -Heterosexual men 2% -Bisexual men 16% -Gay men 15% -Completed rape -Heterosexual men 2% -Bisexual men 13% -Gay men 12%
Comstock, 1989	Gay men and lesbians recruited through lesbian/gay service organizations and conferences throughout the U.S.	N = 294 Men (n = 166)	42%	Self-report survey completed at home	Experiences in which non-lesbian/gay people "raped" them because of their sexual orientation 10%
Heidt, Marx, and Gold (2005)	Gay, lesbian, and bisexual men and women recruited from GLBT organizations and events	N = 307 Men (n = 139)	Not reported	Surveys administered at the recruitment sites.	Unwanted sexual experiences occurring after the age of 18 as measured by a modified version of the SES: -Gay men (rates for bisexual men were not reported separately from rates for bisexual women) 42%
Kalichman et al. (2001)	Gay and bisexual men attending an Atlanta gay pride festival	N = 595	Not reported	Self-report survey completed onsite at the festival	Unwanted anal intercourse since age 16 obtained through verbal pressure or coercion, threat of physical force, or use of force. 35%
Kalichman and Rompa (1995)	Homosexually active men recruited through STD clinics, bars, businesses, and newspapers	N = 196	Not reported	Self-report surveys administered at an HIV prevention center	Unwanted anal intercourse without a condom (as measured by a modified version of the SES ^c); unwanted sex was obtained through: -Threats to end the relationship 11% -Pressure by continual arguments 13% -Lies 16% -Threats of physical force 4% -Physical force 6%
Ratner et al. (2003)	Men who reported having sex with men or who identified as homosexual or bisexual; recruited through medical offices and community outreach	N = 358	Not reported	Self-administered survey	Forced or coerced sexual activity since age 14 14%
Waldner-Haugrud and Gratch (1997)	Gay and lesbian participants recruited through gay/lesbian organizations and events and through snowball sampling	N = 283 Men (n = 165)	38%	Self-report survey	"The most extreme unwanted sexual behavior" (i.e., kissing, fondling, or penetration) "that occurred with a lesbian/gay partner" as a result of one of 12 different tactics, including verbal coercion, intoxication and physical force (p. 91) 57%
Waterman et al. (1989)	Gay and lesbian students recruited from colleges and universities in the northeast.	N = 70 Men (n = 34)	Not reported	Self-report surveys	Unwilling forced sex by a partner 12%
Non-U.S. samples					
Krahe et al. (2001)	Homosexual men recruited from social clubs, gay events, and youth centers in Berlin, Germany	N = 325	Not reported	Surveys administered at the recruitment sites	Unwanted sexual acts obtained through use of verbal coercion, intoxication, or force as measured by the Homosexual Experiences Survey (derived from the SES ^c); participants were classified as:

(continued on next page)

Table 1 (continued)

Study	Sample characteristics	N	Response rate ^a	Method of obtaining data	Definition of sexual assault	Rates of sexual assault ^b
					“Moderately victimized” (most severe victimization involved sexual act(s) obtained through verbal coercion or attempted but unsuccessful acts obtained through force or intoxication)	15%
					“Severely victimized” (most severe victimization involved sexual act(s) obtained through physical force or intoxication)	26%
<i>Military and veteran samples (all from the U.S.)</i>						
Cunradi, Ames, and Moore (2005)	Enlisted Navy recruits	N = 713 Men (n = 493)	93%	Self-administered survey	Forced sexual activities within the past year	4%
Kang, Dalager, Mahan and Ishii (2005)	A stratified random sample of male Gulf War veterans	N = 11,441 Men (n = 9310)	76%	Mailed survey	“Forced sexual relations or a sexual assault” while in the Persian Gulf (p. 192)	0.2%
Lapp et al. (2005)	Male veterans with combat-related PTSD recruited from an inpatient psychiatric unit	N = 133	97%	Structured face-to-face interview	Forced or threatened oral, anal, or vaginal intercourse since age 16 as measured by the CTS2 -Since age 16 -In last year	20% 6%
Martin, Rosen, Durand, Stretch and Knudson (1998)	U.S. Army soldiers	N = 1128 Men (n = 555)	Not reported	Self-administered survey	Oral, anal, or vaginal penetration by penis, finger, or object due to force or threat of harm -Attempted -Completed	2% 1%
Murdoch, Polusny, Hodges, and O'Brien (2004)	A representative sample of veterans seeking Veterans Administration disability benefits	N = 3337 Men (n = 1654)	68%	Mailed survey	Attempted or completed forced sex while in the service and post-service: -Men with combat exposure -Men with no combat exposure	7% 17%
Rosen and Martin (1998)	Soldiers from combat support and combat service support units from three different Army posts in the U.S.	N = 1356 Men (n = 1051)	94%	Surveys administered at participating posts	“Coerced sexual activity by threat of punishment, solicitation of sex for promise of reward, and attempted rape” in the last 12 months (p. 272)	10%
Smith et al. (1999)	Male combat veterans referred for routine clinical evaluation for PTSD	N = 129	Not reported	Structured clinical interview	“Sexual assault” as defined by the participant	12%
<i>Prison inmate samples (all from the U.S.)</i>						
Hensley, Koscheski, and Tewksbury (2005)	Male inmates housed a maximum-security correctional facility in the Southern U.S.	N = 142	18%	Self-report survey completed at participants' leisure	Threatened “sexual assault” by another inmate while incarcerated Completed “sexual assault” by another inmate while incarcerated	18% 9%
Hensley, Tewksbury, and Castle (2003)	Male inmates from three facilities in Oklahoma	N = 174	58%	Face-to-face interviews	Sexually threatened during incarceration (but sex did not occur) Sexually assaulted during incarceration	14% 1%
Struckman-Johnson and Struckman-Johnson (2000, 2006)	Inmates at seven men's correctional facilities	N = 1788	25%	Self-report surveys completed in the prison and returned by mail	Pressured or forced sexual contact (touching of genitals, oral, anal, or vaginal sex) during their incarceration	21%
Struckman-Johnson, Struckman-Johnson, Rucker, Bumby, and Donaldson (1996)	Inmates from three men's and women's correctional facilities in Nebraska	N = 528 Men (n = 486)	30%	Self-report surveys completed in the prison and returned by mail	Pressured or forced sexual contact (touching of genitals, oral, anal, or vaginal sex) during their incarceration	21%

<i>Prison inmate samples (all from the U.S.)</i>						
Tewksbury (1989)	Prison inmates at Lebanon Correctional Institution	N = 150	Not reported	Self-report surveys completed in prison	Sex obtained through forced or threat while in prison "Sexually assaulted or raped" while in prison	7% 0%
Wolff et al. (2007, 2006, 2008); Wolff and Shi (2009)	Inmates from 12 prisons for men and 1 prison for women in a state prison system	N = 7528 Men (n = 6964)	58%	Audio computer administered surveys or face-to-face interviews	Unwanted or threatening genital touching by an inmate or prison staff member in the last 6 months: -Inmate-on-inmate -Staff-on-inmate Attempted or successful forced oral or anal sex by an inmate or prison staff member in the last 6 months: -Inmate-on-inmate -Staff-on-inmate	4% 7% 2% 2%
<i>Physical and mental health treatment-seeking samples</i>						
<i>United States samples</i>						
Briere, Elliott, Harris and Cotman (1995)	Men and women aged 54 or younger who were receiving inpatient or outpatient mental health treatment	N = 370 Men (n = 66)	Not reported	Self-report survey	"Sexual assaults that occurred within or outside of a relationship after age 17" (p. 390)	9%
Goodman, et al. (2001)	Clinical sample of individuals with serious mental illness	N = 782 Men (n = 461)	87%	Face-to-face semi-structured interviews	Forced or threatened oral, anal, or vaginal intercourse: -In lifetime -Since age 16 -In the past year	40% 25% 8%
Goodman et al. (1999)	Patients at an outpatient community mental health center; all participants had diagnoses of Schizophrenia, Bipolar Disorder, or Psychotic Disorder Not Otherwise Specified	N = 50 Men (n = 21)	Not reported	Face-to-face interview at two time points 2 weeks apart (to assess reliability)	Sexual coercion as measured by the CTS2 modified to ask about violence perpetrated by both partners and strangers: -Since age 16 (Time 1) -Since age 16 (Time 2) -In the prior year (Time 1) -In the prior year (Time 2)	48% 19% 38% 14%
Kalichman, Sikkema, DiFonzo, Luke, and Austin (2002)	Men and women with HIV-AIDS recruited from AIDS service organizations, healthcare providers, and social service agencies	N = 352 Men (n = 242)	Not reported	Self-report surveys (or interviews for participants who had trouble reading)	The following experiences (measured by questions based on the SES ^c): Unwanted sexual intercourse (anal or vaginal sex) obtained through threat or physical force "Forced you to have sex when you did not want to" (p. 290)	20% 31%
Teplin et al. (2005)	Randomly selected sample of severely mentally ill patients from psychiatric agencies in Chicago	N = 936 Men (n = 483)	74%	Face-to-face interview	Unwanted sexual acts obtained through force or coercion occurring in the prior 12 month period as defined in the National crime Victimization Survey from the U.S. Bureau of Justice Statistics (1994).	1%
<i>Non-U.S. samples</i>						
King et al. (2002) (includes data from Coxell, King, Mezey, & Gordon, 1999 and Coxell, King, Mezey, & Kell, 2000)	English men recruited from general practice and genitourinary medical (GUM) clinics	N = 2698 General practice (n = 2474); GUM (n = 224)	General practice (79%); GUM (87%)	Computer-administered interviews	Use of "force or other means" to do unwanted "sexual things to you" or "to make you" do unwanted sexual things since age 16: -General practice sample -GUM sample	3% 18%
<i>Homeless samples (all from the U.S.)</i>						
Wenzel et al. (2000)	Homeless adults recruited at shelters, soup kitchens, and on the streets in Los Angeles County	N = 1553 Men (n = 1159)	78%	Face-to-face interviews	"Sexual assault" within the past 30 days	1%

^a In cases in which the sample includes both men and women, the response rate is reported for the entire sample unless otherwise specified. In cases in which a weighted or adjusted response rate was available, the adjusted rate is provided.

^b Prevalence rates are reported for men only. When the study provided prevalence rates of child and adult victimization, only rates for adult victimization are reported.

^c For those studies which used a modified version of the Sexual Experiences Survey (Koss et al., 1987; Koss & Oros, 1982), it is assumed that the definition refers to sexual assault occurring since the age of 14 unless otherwise specified.

Table 2
Summary of studies examining consequences of adult male sexual assault organized according to type and location of participant sample.

Study	Sample characteristics	N	Outcome measure(s)	Definition of sexual assault	Findings
<i>Community samples (exclusively or predominantly heterosexual)</i>					
<i>United States samples</i>					
Elliott et al. (2004)	Community men and women	N = 941 Men (n = 469)	Trauma-related symptoms including anxious arousal, depression, anger/irritability, intrusive experiences, defensive avoidance, dissociation, sexual concerns, dysfunctional sexual behavior, impaired self reference, and tension reduction behavior	Sexual contact (e.g., touching genitals, buttocks, breasts, or having intercourse) obtained through use of threats or physical force since the age of 18	<ul style="list-style-type: none"> •Victims reported significantly more distress on all 10 scales compared with non-victims •Male victims reported higher levels of distress than female victims on eight of 10 scales, and equivalent levels on the remaining two scales (Depression and Intrusive Experiences)
<i>Non-U.S. samples</i>					
Krahe et al. (2003)	Two samples of community men in Germany	N = 400	Affective impact (i.e., how upsetting they found the experience)	Attempted or completed unwanted kissing/petting, sexual intercourse, or oral sex with a woman through use of physical force, exploitation of incapacitated state (i.e., alcohol or drug use), or verbal pressure measured using a modified version of the SES ^a	<ul style="list-style-type: none"> •Male victims rated nonconsensual sexual experiences as moderately upsetting
Mezey and King (1989)	Community men from the UK	N = 22	Psychological and behavioral reactions	Attempted or completed forced anal intercourse, forced fellatio, forced masturbation, being urinated on after age 16	<ul style="list-style-type: none"> •23% of victims reported increased vulnerability •23% increased anger/irritability •26% conflicted sexual orientation •32% loss of self-respect •36% emotional distancing •23% took security precautions •50% sexual dysfunction •50% rape-related phobias
Walker et al. (2005a)	Community men recruited through British newspaper, magazine, and internet advertisements	N = 80 Rape victims (n = 40), Matched controls (n = 40)	Psychological functioning (somatic symptoms, anxiety, social dysfunction, depression), assumptions about the world, self-esteem, PTSD-related intrusion and avoidance	Anal rape or oral penetration through use of force or coercion, as well as other sexual acts (i.e., masturbation, penetration with objects, sadomasochistic practices, watching sexual assault of another person) since the age of 16	<ul style="list-style-type: none"> •Rape group had poorer psychological functioning, lower self-worth, and lower self-esteem compared with matched controls •No differences on assumptions about the world •Most victims reported intrusive re-experiencing (58%) and avoidance (85%) •Lack of treatment following assault predicted suicide attempts
Walker, Archer, and Davies (2005b)	Community men recruited through British newspaper, magazine, and internet advertisements	N = 40	Psychological functioning (somatic symptoms, anxiety, social dysfunction, depression), assumptions about the world, self-esteem, PTSD-related intrusion and avoidance	Anal rape or oral penetration through use of force or coercion, as well as other sexual acts (i.e., masturbation, penetration with objects, sadomasochistic practices, watching sexual assault of another person) since the age of 16	<ul style="list-style-type: none"> •35% of victims sought medical services •58% sought psychological treatment •Up to 98% reported psychological consequences (depression, suicide ideation/attempts, self-harm, intrusive thoughts, flashbacks, anxiety, guilt, anger, substance abuse, eating disorders) •Up to 90% reported social consequences (reduced self-esteem/respect, vulnerability, social withdrawal, impaired task performance, crisis with sexual identity, damaged masculine identity)
<i>College student samples (exclusively or predominantly heterosexual)</i>					
<i>United States samples</i>					
Banyard et al. (2007)	State university students in New England	N = 651 Men (n = 225)	Changes in behavior (academic plans, class attendance, concentration, grades, sleep, appetite, alcohol or drug use) and feelings about self or relationships with others, sexual	Unwanted sexual contact (i.e., kissing, fondling, or touching) excluding intercourse through use of intimidation, force, or incapacitation with alcohol/drugs in past 6 months	<ul style="list-style-type: none"> •Female victims reported greater number of negative changes compared with male victims

Larimer, Lydum, Anderson, and Turner (1999)	Students in a college Greek system	N = 296 Men (n = 165)	intimacy, being with other people in general Alcohol use, alcohol-related negative consequences, and depressive symptoms	Unwanted intercourse due to verbal pressure or attempted or completed intercourse due to physical force or intoxication in the last year as measured by a modified SES ^a	Victims reported heavier alcohol consumption and related negative consequences and more depressive symptoms compared with non-victims
Struckman-Johnson (1988)	Students at University of South Dakota	N = 623 Men (n = 268)	Short-term and long-term emotional impact	Forced sexual intercourse while on a date in their lifetime	<ul style="list-style-type: none"> •Female victims' immediate and long-term reactions to the assault were more negative than male victims' •46% of male victims (vs. 12% of female victims) felt neutral about the episode when it happened •27% of male victims (vs. 88% of female victims) felt bad to very bad •22% of male (vs. 78% of female victims) acknowledged long-term impact •Among victims, male-initiated contact rated as having higher negative emotional impact than female-initiated contact •23% of victims reported strong negative reaction to female-initiated contact; 47% reported strong negative reaction to male-initiated contact •No differences between coerced and non-coerced men on sexual well-being
Struckman-Johnson and Struckman-Johnson (1994)	College men	N = 204	Emotional reactions, sexual well-being (i.e., sexual esteem, depression, preoccupation)	Sexual contact (i.e., touching sexual parts or sexual intercourse) through use of pressure or force since the age of 16	<ul style="list-style-type: none"> •Among victims, male-initiated contact rated as having higher negative emotional impact than female-initiated contact •23% of victims reported strong negative reaction to female-initiated contact; 47% reported strong negative reaction to male-initiated contact •No differences between coerced and non-coerced men on sexual well-being
Non-U.S. samples O'Sullivan et al. (1998)	Undergraduate and graduate students at a Canadian college	N = 433 Men (n = 156)	Emotional reactions, reporting/disclosure, perceived impact on daily and academic activities	Unwanted sexual activity (ranging from kissing to intercourse) through verbal pressure (pleading, manipulating, name-calling) or physical force in the preceding year	<ul style="list-style-type: none"> •Female victims reported being more upset than did male victims at the time of the incident •14% of male victims (vs. 31% of female victims) were extremely upset •20% of male victims (vs. 18% of female victims) reported decreased involvement in social activities •19% of male victims (vs. 33% of female victims) reported impairment in academic functioning
<i>Predominantly or exclusively gay and bisexual samples (all from the U.S.)</i>					
Heidt et al. (2005)	Gay, lesbian, and bisexual men and women recruited from GLBT organizations and events	N = 307 Men (n = 139)	Global psychological distress, depression, and PTSD symptoms	Unwanted sexual experiences including sex play, sexual coercion, attempted rape, and rape occurring after the age of 18 using modified version of SES	<ul style="list-style-type: none"> •No significant gender differences among victims for global distress, depression, or PTSD symptoms •Adult sexual abuse victims reported greater global distress and depression than non-victims
Kalichman et al. (2001)	Gay and bisexual men attending an Atlanta gay pride parade	N = 595	HIV-risk behavior (i.e., substance use, sexual practices), symptoms of dissociation, trauma-related anxiety, and borderline personality	Unwanted sexual intercourse (through force, threat of physical force, or pressure) after the age of 16	<ul style="list-style-type: none"> •Victims more likely to report crack cocaine and nitrite inhalant use, unprotected intercourse, and exchanging sex for money or drugs than non-victims •Victims reported greater dissociative symptoms, trauma-related anxiety, and borderline personality characteristics than non-victims •Sexual coercion was associated with multiple unprotected anal intercourse partners
Kalichman and Rompa (1995)	Homosexually active men recruited through STD clinics, bars, businesses, and newspapers	N = 196	Depression, self-esteem, behavioral intentions to reduce HIV-risk	Unwanted anal intercourse without a condom (through use of threats of ending the relationship, continual arguments or pressure, saying things he didn't really mean, physical force, or threat of force) or unwanted kissing, rubbing, mutual masturbation, or oral sex (through use of physical force), or attempted anal	<ul style="list-style-type: none"> •Coerced men reported greater number of past STDs, higher depression, and lower self-esteem than non-coerced men •Coerced men reported lower likelihood of engaging in risk-resistance behavior in future than non-coerced men

Table 2 (continued)

Study	Sample characteristics	N	Outcome measure(s)	Definition of sexual assault	Findings
				intercourse (through use of threat of force) using adapted version of the SES ^a	
<i>Predominantly or exclusively gay and bisexual samples (all from the U.S.)</i>					
Kalichman et al. (2002)	Men (74% identified as gay/bisexual) and women living with HIV-AIDS	N = 357 Men (n = 242)	Emotional distress and mental health problems (i.e., trauma symptoms, depression, anxiety, pessimism, OCD, borderline personality disorder), substance use, and sexual risk practices	Unwanted intercourse through use of physical force or threat of force since age 15	<ul style="list-style-type: none"> •Victims reported greater cognitive–affective depression, anxiety, and borderline personality symptoms, and were more likely to have history of mental health and substance abuse treatment compared with non-victims
Ratner et al. (2003)	Homosexual and bisexual men recruited through physicians' offices, walk-in medical clinics, and community outreach	N = 358	Alcohol abuse, suicidal ideation and attempted suicide, mood disorders, and self-esteem	Forced or coerced sex since age 14	<ul style="list-style-type: none"> •48% of victims reported alcohol abuse; 2.7 times more likely than non-victims •69% of victims reported suicidal ideation; 2.8 times more likely than non-victims •28% of victims reported history of suicide attempt; 1.8 times more likely than non-victims •32% of victims reported ever experiencing a mood disorder; 2.0 times more likely than non-victims •20% reported current depression; 3.3 times more likely than non-victims •Victims had poorer self-esteem than non-victims
<i>Military and veteran samples (all U.S. samples)</i>					
Kang et al. (2005)	Gulf War veteran respondents in the National Health Survey	N = 11,441 Men (n = 9310)	PTSD checklist	“Forced sexual relations or a sexual assault” while in the Persian Gulf	<ul style="list-style-type: none"> •Sexual assault was associated with PTSD, even when controlling for combat status
<i>Prison inmate samples (all U.S. samples)</i>					
Lipscomb, Muram, Speck, and Mercer (1992)	Incarcerated and non-incarcerated men who sought services at a sexual assault center	N = 99	Self-reported mental illness extracted from treatment records	Anal and/or oral assault (No definition provided; records reviewed for all males age 15 and over)	<ul style="list-style-type: none"> •Significant relationship between mental illness and sexual assault •No differences between incarcerated and non-incarcerated men
Struckman-Johnson and Struckman-Johnson (2006)	Inmates at 10 Midwestern prisons—7 men's facilities and 3 women's facilities	N = 2051 Men (n = 1788)	Emotional and physical consequences	Pressured or forced sexual contact (touching of genitals, oral, anal, or vaginal sex) during incarcerated	<ul style="list-style-type: none"> Attributed to worst sexual incident: •Most commonly reported emotional consequences were feelings of distrust of people (75% of male victims), nervousness around people (71% of male victims), discomfort with being physically close to others (65% of male victims), and worry it would happen again (59% of male victims) •Male victims more likely than female victims to report worry about their sex-role reputation, suicidal ideation, suicide attempt, worry about catching AIDS, physical injury, feeling that the assault had made them hate people.
Struckman-Johnson, Struckman-Johnson, Rucker, Bumby, and Donaldson (1996)	Inmates from Midwestern prison system	N = 528 Men (n = 486)	Emotional consequences and physical injuries	Pressured or forced sexual contact (touching of genitals, oral, anal, or vaginal sex) since the time the participant has been in prison	<ul style="list-style-type: none"> •Emotional consequences among male victims: 66% distrust, 63% nervousness around people, 58% uncomfortable with people getting physically close, 56% depression, 37% flashbacks/bad dreams, 36% suicidal ideation •16% sustained physical injuries
Wolff and Shi (2009)	Inmates from 12 adult male prisons operated by a single state	N = 6964	Physical injury and emotional reactions	Unwanted sex through use of force, or threatening to harm victim or someone close to victim, attempted	<ul style="list-style-type: none"> •89–97% of male victims experienced psychological sequelae (anger, shock, fear,

				or completed unwanted oral or anal sex through use of force or threat of force, inserting fingers or objects in anus through use of force or threats, unwanted sexual acts to protect self from future harm, in the past 6 months. Results broken down by inmate-on-inmate v. staff-on-inmate assault.	trouble sleeping, nightmares, crying, flashbacks, and depression) •81% made social changes (transfer to different facility, administrative segregation, requested protective custody, joined a gang, joined a religious group, avoided certain areas or people, began carrying a weapon, bulked up more) •53–67% experienced any physical injury •30–31% received any medical attention
<i>Physical and mental health treatment-seeking samples</i>					
United States samples					
Kimerling, Rellini, Kelly, Judson, and Learman (2002)	Community members seeking services at a rape treatment center	N = 546 Men (n = 68)	Current psychiatric symptoms, history of psychiatric disorder, history of psychiatric hospitalization	Sexual assault (No definition provided)	•Male victims more likely to report acute psychiatric symptoms, history of psychiatric disorder, and psychiatric hospitalization compared with female victims
Non-U.S. samples					
Coxell, King, Mezey, and Gordon (1999)	Male patients in general practice setting	N = 2474	Psychological problems, alcohol use, self-harm, help received	Unwanted “sexual things” (i.e., taking sexual photographs, touching genitals, oral sex, rape) through use of force or other means after age 16	Rates among men reporting nonconsensual sex with a woman (n = 23), nonconsensual sex with a man (n = 26), and consensual sex only (n = 153), respectively: •48%, 42%, 37% reported a psychological problem •44%, 35%, 40% reported high-risk alcohol use •17%, 24%, 10% reported self-harm •14% of victims reported being infected with STD following sexual molestation
Coxell, King, Mezey, and Kell (2000)	Male English patients attending a genitourinary medicine clinic	N = 224	Sexually transmitted diseases (STD)	Unwanted “sexual things” (i.e., masturbation, touching genitals, oral sex, vaginal or anal rape) through use of force or other means after age 16	•67% skin or mucosal damage •18% STDs •1 man tested positive for HIV 6 weeks post-assault
Hillman, O’Mara, Tomlinson, and Harris (1991)	Community men from the UK presenting to an organization offering services to male victims of sexual assault	N = 28	Physical injury, STD	Defined by presenting individual as entering into sexual activity of any kind against his will; included anal and oral intercourse, forced masturbation, instrumentation, scatological abuse, forced vaginal intercourse, assailants urinating on victim, and sadomasochistic practices after age 16	•Victims of adult sexual molestation more likely to have suffered any psychological disorder than non-victims; self-harm was more likely to be reported among victims than non-victims •35% psychological disturbance •34% substance misuse •12% sexual difficulties •8% self-harm
King et al. (2002)	Male English patients attending general practice and genitourinary medicine clinics	N = 2698	Psychological disturbance (i.e., anxiety, depression, nightmares, severe insomnia), problems related to use of alcohol or drugs, sexual difficulties, self-harm or suicide attempts	Unwanted “sexual things” through use of force or other means after age 16	•43% of male victims of stranger assault and 46% of acquaintance assault sustained physical injuries •6% of male victims of stranger assault and 6% of acquaintance assault were admitted to hospital
Stermac, Del Bove, and Addison (2004)	Community members presenting to a hospital-based sexual assault care center in Canada	N = 251 Men (n = 145)	Physical injuries and service delivery	Attempted or completed sexual assault (touching/fondling, vaginal/anal assault, fellatio, foreign object assault) through use of force, coercion, or drugging in individuals aged 14–65	•59% evidenced “emotional trauma” in the initial presentation •19% reported soft-tissue damage •19% reported lacerations or abrasions
Stermac et al. (1996)	Community men presenting to sexual assault crisis unit of a hospital in Canada	N = 29	Presentation information (including evidence of “emotional trauma”) medical and/or psychological intervention extracted from database	Unwanted touching/fondling, fellatio performed on assailant, receptive anal intercourse, vaginal intercourse with female perpetrator through use of force, physical violence, or coercion of individuals aged 18 and over	

^a For those studies which used a version of the Sexual Experiences Survey (Koss & Oros, 1982; Koss et al., 1987), it is assumed that the definition refers to sexual assault occurring since the age of 14 unless otherwise specified.

persuasion to violent physical force. For example, some researchers defined assault narrowly, including only physical force in their definition of sexual assault (e.g., Cunradi et al., 2005; Rouse, 1988; Sigelman, Berry, & Wiles, 1984; Struckman-Johnson, 1988; Tjaden & Thoennes, 2000; Waterman, Dawson, & Bologna, 1989). Other researchers defined assault or coercion broadly, asking about sexual acts obtained through force, intoxication (e.g., the victim was too intoxicated to resist), threats, or verbal pressure or manipulation (e.g., Banyard et al., 2007; Hogben et al., 1996; Kerbs & Jolly, 2007; Krahe, Scheinberger-Olwig, & Schutze, 2001; 2003; Muehlenhard & Cook, 1988; Struckman-Johnson, Struckman-Johnson, & Anderson, 2003; Waldner-Haugrud & Gratch, 1997; Waldner-Haugrud & Magruder, 1995). Fisher (1992) used an extremely broad definition of coercion, assessing sexual coercion history with the question, "...did anyone initiate or do anything sexual with you without your wanting to or without your consent" (p.219).

It is worth noting that, as in Fisher's (1992) definition, sexual assault is commonly measured with items that refer to "unwanted sex"; in fact, the SES (Koss et al., 1987; Koss & Oros, 1982), which is commonly used as a basis for measures of male ASA, asks about experiences with sex "when you didn't want to" obtained through use of verbal coercion, intoxication, or use or threat of physical force (p. 167). However, research suggests that unwanted sex is not always coerced or forced. People sometimes consent to engage in sex that is not entirely wanted (e.g., Peterson & Muehlenhard, 2007). For example, Muehlenhard and Cook (1988) reported that almost all (94%) of the college men in their sample had experienced "unwanted" sexual activity. Although some of the men in their sample had been coerced or forced into engaging in unwanted sex (e.g., through verbal pressure, intoxication, or force), many instances of unwanted sex did not qualify as coercive (e.g., the men agreed to engage in unwanted sex because they were sexually enticed by the other person or because of peer pressure). Thus, including "anything sexual without your wanting to" within the definition of sexual assault may broaden the definition to a point of imprecision.

3.1.2. Which sexual acts count?

The sexual acts involved in definitions of "sexual assault" vary widely. Research definitions include a range of activities from kissing to intercourse. Some researchers asked participants only about nonconsensual intercourse (e.g., Baier et al., 1991; Kalichman et al., 2001; Larimer et al., 1999; Ratner et al., 2003; Rouse, 1988; Struckman-Johnson, 1988; Tjaden & Thoennes, 2000), whereas, other researchers considered sexual assault to include any unwilling sexual contact—ranging from kissing and petting to intercourse—to qualify as sexual assault (e.g., Banyard et al., 2007; Conway et al., 2004; Fiebert & Osburn, 2001; Hartwick et al., 2007; Krahe, Scheinberger-Olwig, & Bieneck, 2003; O'Sullivan, Byers, & Finkelman, 1998; Poppen & Segal, 1988; Ryan, 1998; Stets & Pirog-Good, 1989; Tewksbury & Mustaine, 2001; Waldner-Haugrud & Gratch, 1997; Waldner-Haugrud & Magruder, 1995).

3.1.3. Advantages of broad vs. narrow definitions of "sexual assault"

Given the invisibility of the problem of male ASA, defining sexual assault broadly may be advantageous in that broad definitions illuminate the many subtle forms of coercion experienced by men, and research results could reveal that even seemingly "minor" forms of coercive sex can have negative consequences. On the other hand, if definitions of sexual assault are very broad and if researchers do not distinguish between degrees of victimization, then findings related to consequences of sexual assault may become murky. For example, if researchers using a broad definition of ASA report that sexual assault has only minimal impact on male victims, it is hard to know whether that is true for all forms of sexual assault or only for less severe incidents (also see Muehlenhard, Powch, Phelps, and Giusti (1992) for further discussion of these issues).

Another important issue regarding research definitions relates to the fact that the impact of any coercive sexual experience is likely to vary based on the situational characteristics of the experience and on individual differences in victims. For some men in some situations, an experience with coerced kissing may have more negative consequences than an experience with forced intercourse. As an illustration, Struckman-Johnson and Struckman-Johnson (1994) described a male participant who pushed a woman off of him following nonconsensual genital fondling. He reported feeling proud that he had stopped the interaction and had avoided the potential consequences of having intercourse with her (p. 109). Despite the fact that this individual was the victim of forced genital contact, which might seem to be a severe violation (in comparison to verbally coerced kissing, for example), this participant seemed to feel that he had successfully avoided a sexual assault by preventing penetrative sex. Thus, the meaning that a man assigns to a coercive sexual experience is likely to influence that individual's reaction to the experience. Researching a wide range of sexually coercive behaviors may be advantageous in that it allows researchers to investigate individual differences in men's responses to sexual assault.

3.2. Research methods

Methodological differences across studies also contribute to discrepancies in estimated prevalence rates and in conclusions regarding the consequences of male ASA (see Koss (1996) for a summary of these issues as they apply to female victims). Among the specific methodological decisions that must be made when researching sexually victimized men is whether to use behaviorally-oriented questions vs. allowing the participant to make his own interpretation of what constitutes a sexual assault. Decisions about the research setting, sample, and time frame also influence research findings.

3.2.1. Behaviorally specific questions vs. participant interpretation

In most studies of male ASA, researchers established their own operational definitions of male ASA and asked participants behaviorally-specific questions to determine whether subjects had had an experience that qualified as sexual assault based on the research definition. However, some researchers (Aizenman & Kelley, 1988; Briere et al., 1995; Comstock, 1989; Hensley et al., 2005, 2003; Smith, Frueh, Sawchuk, & Johnson, 1999; Wenzel, Koegel, & Gelberg, 2000; Zweig et al., 1997) allowed participants to define rape or sexual assault for themselves; for example, Soares, Luo, Jablonska, and Sundin (2007) asked participants if they had ever experienced "sexual violence" without defining the term "sexual violence." This latter approach has the benefit of allowing participants the autonomy to interpret their own experiences as qualifying or not qualifying as sexual violence, sexual assault or rape. However, because different participants may define terms like rape, sexual assault, and sexual violence differently, participants who have had similar types of experiences may answer these questions differently. Additionally, research that does not use operational definitions of sexual assault fails to detect reports of nonconsensual sex from men who do not conceptualize their experiences as a rape, sexual assault, or sexual violence (see also Muehlenhard et al. (1992)). Researchers have found that, among female participants, many women who have had an experience that meets a research definition of rape do not label their experience as "rape"; these women are sometime called "unacknowledged rape victims" (see Fisher, Daigle, Cullen, and Turner (2003) and Peterson and Muehlenhard (2004) for reviews). Similarly, it is likely that many male victims of nonconsensual sex do not conceptualize their experience as a rape or sexual assault. This may be especially true because it is a commonly-held myth that men cannot be raped (Struckman-Johnson & Struckman-Johnson, 1992). Male victims who accept this myth may not believe their experience could possibly qualify as rape or sexual assault. Thus, research that relies on labels such as sexual violence, sexual assault,

or rape rather than on behaviorally-specific questions may underestimate the prevalence of male ASA. Further, men who do label their nonconsensual sexual experiences as sexual assault may not be representative of all men who have experienced nonconsensual sex (e.g., their nonconsensual sexual experience may have been more severe or more traumatic than other victims or they may be more educated about sexual assault than other victims).

3.2.2. Research sample and setting

Concerns about generalizability and external validity arise when researchers rely on convenience rather than representative community samples. There are two types of convenience samples—convenience samples whose selection is *unrelated* to experiences of sexual assault (e.g., college student samples) and convenience samples whose selection is *related* to experiences of sexual assault (e.g., individuals reporting to a rape crisis center).

Measuring sexual assault prevalence among convenience samples whose selection is unrelated to experiences of sexual assault may be useful even though the results of the study could not be generalized to the broader population. For example, it is helpful to know what percentage of college men experience ASA. Indeed, some groups of men may be at greater risk for sexual assault than other groups. Researching convenience samples of men may help to highlight groups that are at particular risk for sexual assault. For example, researching special populations such as prison inmates may contribute little to our understanding of male ASA in the general population; however, it may be valuable in highlighting the unique problem of sexual assault within the prison system.

Additionally, measuring the consequences of ASA among convenience samples whose selection is unrelated to experiences of sexual assault also could be useful. For example, college counseling centers would benefit from research addressing the consequences of ASA specifically among college men, and prison psychologists would benefit from research addressing consequences of ASA among prison inmates. However, because these convenience samples are not selected specifically for their sexual assault experiences, it may be difficult to obtain a large enough group of male victims to draw any clear conclusions about the consequences of ASA.

It would not make sense to measure sexual assault prevalence among convenience samples whose selection is related to experiences of sexual assault because having experienced ASA increases their likelihood of being in the sample; in some cases, individuals are in the sample precisely because they experienced ASA (e.g., most men presenting to a rape crisis center have experienced sexual assault, so the prevalence of ASA among that sample would be nearly 100%). Although these samples are not useful for assessing prevalence, this type of convenience sample potentially can allow for the measurement of consequences of sexual assault among a large sample of sexual assault victims; of course, the results cannot be generalized to all sexual assault victims. Indeed, some researchers have investigated the consequences of male ASA experiences by gathering data from men who present at sexual assault care centers or hospitals or who report to police following a sexual assault experience (e.g., Hillman et al., 1991; Kimerling et al., 2002; Stermac, Sheridan, Davidson, & Dunn, 1996; 2004). Given that only a minority of sexual assault experiences are reported to police or health care workers and given that men may be less likely than women to report such experiences (Kimerling et al., 2002; Tjaden & Thoennes, 2000), men who report to hospitals, care centers, or the police following sexual assault are likely to differ from other male victims in important ways. For example, their assault may have been more severe or violent or they may hold less stigmatizing views about rape or mental health treatment. In many cases, individuals present to care centers because of their high level of distress; in other words, these men may self-select into the study because of the high severity of their post-assault distress.

Although sexually assaulted men presenting for treatment may not be representative of all male ASA victims, focusing on this group may help to dispel certain rape myths (e.g., that male sexual assault is trivial or that men who are sexually assaulted must have “wanted it”). Men who report to hospitals or sexual assault centers following their assault have generally experienced an unusually high level of violence and frequently were attacked by more than one perpetrator (Kimerling et al., 2002; Stermac et al., 1996; 2004). Thus, data from these men, even if non-representative of other victims, do provide evidence that male ASA can be, in some cases, extremely severe.

3.2.3. Sex of the perpetrator

When men are victims of sexual assault, the sex of the perpetrator may have important implications in terms of the consequences of their experiences. For example, men who are assaulted by men may suffer from feelings of confusion regarding their sexual orientation (Mezey & King, 1989), a consequence that may be less likely among male victims of female perpetrators. Struckman-Johnson and Struckman-Johnson (1994) found that men sexually coerced by other men had stronger negative reactions to the experience than did men who were coerced by women. Thus, a researcher's methodological decision about whether to include male victims of male perpetrators, male victims of female perpetrators, or both is an important one. Several of the studies reported here specified the sex of the perpetrator in their definition of sexual assault (e.g., Kerbs & Jolly, 2007; Krahe et al., 2003; Lottes & Weinberg, 1997; Sigelman et al., 1984; Struckman-Johnson et al., 2003; Tjaden & Thoennes, 2000; Hartwick et al., 2007; Waldner-Haugrud & Gratch, 1997; Waterman et al., 1989), but most did not. Of those that specified the sex of the perpetrator, all but two of them (Waldner-Haugrud & Gratch, 1997; Waterman et al., 1989) measured sexual assault perpetrated by women (with the exception of studies of prison inmates, who were likely primarily assaulted by other men).

3.2.4. Time frame

An additional methodological consideration in the study of male ASA is the time frame used when determining prevalence rates. Obviously, it would not make sense to compare findings of lifetime prevalence with annual incidence rates. Similarly, when considering potential consequences of male ASA, it is important to consider whether the study measured lifetime prevalence—that is, nonconsensual sex at any age, including experiences that some might label child sexual abuse—or experiences that occurred after a defined age of consent. Among studies of ASA, the specified age of consent often varies. If researchers asked about experiences with sexual assault since age 14, they clearly would find higher prevalence rates than if they asked about sexual assault since age 18. Consideration of the time frame utilized in the study is important when drawing conclusions based on one or multiple studies. Some of the studies here measured sexual assault in the preceding month (e.g., Wenzel et al., 2000), preceding 6 months (e.g., Banyard et al., 2007) or preceding year (e.g., Teplin, McClelland, Abram & Weiner, 2005). Others measured experiences of ASA occurring during a particular life period, such as during incarceration (Hensley et al., 2003; 2005; Struckman-Johnson & Struckman-Johnson, 2000, 2006; Struckman-Johnson et al., 1996; Tewksbury, 1989; Wolff, Blitz, & Shi, 2007; Wolff, Blitz, Shi, Bachman, & Siegel, 2006; Wolff, Shi, & Blitz, 2008), while stationed for military service in the Persian Gulf (Kang et al., 2005), or during medical school (Richman, Flaherty, Rospenda, & Christensen, 1992). Still others measured ASA since age 14 (e.g., Moore & Waterman, 1999; Ratner et al., 2003), since age 16 (e.g., Burnam et al., 1988; Stevenson & Gajarsky, 1991), or since age 18 (e.g., Elliott et al., 2004; Masho & Anderson, 2009).

The impact of sexual assault on men's mental health may vary as a result of the developmental period at which the assault occurred. For example, Burnam et al. (1988) found that childhood sexual abuse (defined in this study as occurring prior to age 16) was more strongly associated with subsequent development of a mental disorder than was adult sexual assault. Ratner et al. (2003) reported that among

men, childhood sexual abuse (occurring before age 14) was more strongly correlated with suicidality than was ASA (occurring after age 14). Conversely, men who had experienced ASA had higher rates of alcohol abuse and lower self-esteem than men who had not experienced ASA, whereas, childhood sexual abuse was not linked to these variables. Because the consequences of child sexual abuse and ASA are likely to differ, we have eliminated from this literature review studies that did not distinguish between sexual assault occurring in childhood vs. adulthood.³

All of these definitional and methodological issues make it difficult to compare findings across different studies and to draw clear conclusions about the prevalence and consequences of male ASA. Nevertheless, in the remainder of this article, we attempt to synthesize the literature and draw some tentative conclusions about the prevalence and consequences of male ASA.

4. Prevalence of adult sexual assault of men

Of the 87 studies that we reviewed, 79 studies (representing 74 unique samples) reported the prevalence of ASA among samples of men (see Table 1). These studies comprised U.S. community samples ($n=7$), non-U.S. community samples ($n=3$), U.S. college student samples ($n=29$), non-U.S. college student samples ($n=4$), predominately gay/bisexual samples ($n=8$ in U.S. and $n=1$ non-U.S.), U.S. military/veteran samples ($n=7$), U.S. prison inmate samples ($n=6$), physical/mental health treatment-seeking samples ($n=5$ in U.S. and $n=1$ non-U.S.), and homeless samples ($n=1$). Studies varied widely in their methodological quality and definitions of ASA used. For example, response rates serve as one measure of the methodological quality of prevalence studies: Community sample studies reported response rates between 21% and 68%, and, four of the ten community sample studies did not report response rates at all. Most studies reporting on college students used convenience samples of students who completed self-report surveys in classroom settings, and many of these studies (45%) did not report response rates.

There was considerable variability in the prevalence estimates presented across studies depending upon the sample and definition of sexual assault used. For example, the prevalence of ASA among community samples ranged from 0.2% of men (when sexual assault was defined as anal penetration obtained through physical force and perpetrated by a female partner; Tjaden & Thoennes, 2000) to 30% (when sexual assault included any sexual contact obtained by a woman using verbal pressure, exploitation of intoxication, or physical force; Kerbs & Jolly, 2007; Krahe et al., 2003). Similarly, among college samples, ASA prevalence rates ranged from 2% (when sexual assault was defined as being sexually hurt or forced to have intercourse in the most recent dating relationship; Rouse, 1988) to 73% of men (when sexual assault was defined as any unwanted sexual behavior with a dating partner obtained through multiple forms of verbal coercion, intoxication, or physical force; Waldner-Haugrud & Magruder, 1995).

Prevalence estimates varied even when studies used similar definitions of ASA and similar participant populations. For studies defining rape as vaginal, anal, or oral intercourse obtained through physical force, prevalence rates of forcible adult rape among college men ranged from about 1% (Baier et al., 1991) to about 14% (Aizenman & Kelley, 1988). Intercourse obtained through verbal coercion (i.e., verbal pressure, manipulation, or insistence) was more common, with reported prevalence rates ranging from about 13% (in a community sample; Zweig et al., 1997) to about 27% (in a college sample; Fiebert & Osburn, 2001). Although investigated less frequently, rates of vaginal, anal, or oral intercourse obtained through intoxication ranged from

about 1% (in a community sample; Masho & Anderson, 2009; O'Sullivan et al., 1998) to about 19% (in a college sample; Lottes, 1992); one study of college students that investigated multiple sexual assault tactics (including verbal pressure, intoxication, and force) found that intoxication was the most common sexually coercive strategy experienced by college men (Waldner-Haugrud & Magruder, 1995). Of course, when the definitions of sexual assault are expanded to include sexual behaviors beyond intercourse (e.g., kissing, fondling), then prevalence rates are even higher (see Table 1).

It is likely that the widely varying prevalence rates found for similar acts among similar populations are a consequence of subtle, but meaningful, differences in wording among the items used to measure ASA. For example, as noted above, Fiebert and Osburn (2001) found substantially higher rates of sex through verbal coercion than did Zweig et al. (1997). Fiebert and Osburn assessed experiences with verbal coercion by asking whether "a man/woman has insisted, without using physical force, that I have sex with him/her even though I didn't want to." (p. 6). Zweig et al. assessed verbal coercion by asking, "How often does it (sex) happen because you are pressured into it" (p. 296)? Although these are similar questions, it is possible that insistence may be interpreted as less coercive than pressure; thus, men may be more likely to endorse an item that asks about sex obtained through insistence than an item that asks about sex obtained through pressure. This illustrates the fact that even minor wording differences potentially can have a meaningful impact on men's endorsement of ASA.

It is evident from reviewing the prevalence literature that male ASA is more common among some populations of men than others. For example, based on the studies reported here, gay and bisexual men (Balsam et al., 2005; Comstock, 1989; Heidt et al., 2005; Kalichman et al., 2001; Kalichman & Rompa, 1995; Krahe et al., 2001; Ratner et al., 2003; Waldner-Haugrud & Gratch, 1997; Waterman et al., 1989), veterans (Lapp et al., 2005; Murdoch et al., 2004; Rosen & Martin, 1998; Smith et al., 1999), inmates (Hensley et al., 2003; 2005; Struckman-Johnson & Struckman-Johnson, 2000, 2006; Struckman-Johnson et al., 1996; Wolff et al., 2006, 2007), and men seeking physical and mental health services (Briere et al., 1995; Goodman et al., 1999; 2001; King, Coxell, & Mezey, 2002) tend to report particularly high rates of ASA.

5. Consequences of adult sexual assault of men

As with research on sexual assault prevalence, the vast majority of research on the long-term consequences of sexual assault has focused on women. However, existing data suggest that many sexually victimized men experience adverse psychological, sexual, interpersonal, and physical consequences similar to those widely documented for female victims.

5.1. Considerations in investigating the consequences of sexual assault of men

Along with the methodological and definitional issues discussed above, there are several additional challenges when interpreting the results of research on the consequences of male sexual assault.

First, it is difficult to interpret associations between having experienced ASA and having various psychological, physical, or sexual problems. Did the ASA cause the problem or did the problem place the man at risk for ASA? For example, alcohol abuse could be a potential consequence of ASA (i.e., men might abuse alcohol to cope with distress regarding their assault) or alcohol abuse might put men at risk for ASA (i.e., if men are intoxicated, they might have more difficulty resisting nonconsensual sex).

Second, men's likelihood of reporting ASA (on a questionnaire or to an agency) may be affected by the consequences of the ASA. Individuals might be more likely to report their experience if the

³ We did include a few studies which measured lifetime experiences with sexual assault; however, these studies limited the definition of sexual assault to contexts that would tend to exclude experiences of child sexual abuse (e.g., by specifying that the sexual assault occurred in a dating context).

consequences are severe rather than if the consequences are minor. If this occurs, men who report rape in research studies may not be representative of all ASA victims; that is, they may have self-screened into the study based on the severity of the consequences. Thus, research might exaggerate the consequences of ASA.

Gender comparisons in the consequences of ASA involve further complications. It has often been assumed that men suffer fewer negative consequences from ASA than women. It is possible that male sexual assault victims are less likely than female victims to admit to experiencing negative consequences as a result of their ASA experiences. Men may be particularly unlikely to admit to psychological consequences that are inconsistent with male gender role expectations (e.g., depression or loss of sexual desire; Helgeson, 2002). In contrast, men may be more likely than women to report consequences that are consistent with male stereotypes (e.g., anger or alcohol abuse). Observed gender differences in the consequences of ASA therefore may be a result of men's underreporting (or selectively reporting) distress rather than men's experiencing fewer negative consequences than women.

Further, it is important to note that some of the studies investigating consequences of sexual assault initially reviewed for this paper were eliminated because they did not evaluate the consequences of ASA for male and female victims separately, but rather collapsed the results related to consequences of ASA across gender. The researchers in these cases may not have examined gender differences or they may have failed to find significant differences between men and women and thus opted to combine results. Given these limitations and the other difficulties of comparing across gender, it is particularly difficult to draw firm conclusions about the existence or nonexistence of gender differences in the impact of ASA.

With an awareness of these many challenges, we have attempted to summarize the results of the extant literature on the consequences of male ASA. Of the 87 studies included in this review, 27 examined the consequences of male ASA victimization. More specifically, 24 studies examined some measure of psychological functioning and/or emotional reactions, seven examined sexual functioning or behaviors, six examined interpersonal or social functioning, and eight examined consequences to physical health. The findings from these studies are summarized in Table 2.

5.2. Psychological consequences

The majority of studies addressing the consequences of male ASA ($n = 24$) have evaluated psychological or emotional consequences. These studies have assessed the impact of ASA on men's psychological functioning in two primary ways—by comparing male ASA victims to female ASA victims ($n = 7$) and by comparing male ASA victims to non-assaulted men ($n = 10$). Additionally, a few studies offer some insight into how psychological consequences of male ASA may differ depending on the sex of the perpetrator.

5.2.1. Psychological consequences for male victims as compared with female victims

The finding that sexual assault can have lasting negative consequences for psychological functioning has been well-established for female victims (for review see Resick (1993)). For example, longitudinal studies have shown that many women experience fear, anxiety, depression, posttraumatic stress disorder (PTSD), poor self-esteem, and social difficulties following a sexual assault—in some cases for a number of years thereafter (Neville & Heppner, 1999; Resick, 1993). Suicidal ideation is another common response to sexual assault, occurring in 33–50% of female rape victims (Goodman, Koss, & Russo, 1993).

There is a commonly-held belief that men are less negatively impacted by sexual assault than women. This may be based on a limited number of studies that have found that male victims

experience less severe consequences than female victims following ASA (Banyard et al., 2007; O'Sullivan et al., 1998; Struckman-Johnson, 1988). For example, in a study of college students' reports of unwanted sexual experiences and negative consequences (e.g., negative changes in behavior, feelings about self, sexual intimacy, and alcohol or drug use), women were more likely than men to have told someone about their experience and were more likely to report suffering negative changes. However, these differences were small (Banyard et al., 2007).

Contrary to these findings, there is some evidence to suggest that ASA is at least as psychologically distressing to male victims as it is to female victims. For example, Heidt et al. (2005) examined global psychological distress, depression, and PTSD symptoms in a sample of gay, lesbian, and bisexual individuals who had experienced sexual assault. Findings revealed no significant differences between men and women on any of the outcome variables.

Other researchers have demonstrated that sexual assault is associated with poorer outcomes in men as compared with women. In a study using a non-treatment-seeking community sample, Elliot et al. (2004) found that male victims of ASA reported *higher* levels of distress than female victims of ASA on eight out of ten measures of traumatic stress symptomology, including anxiety, depression, and intrusive experiences. In addition, one study using a sample of incarcerated men and women found that a higher percentage of men than women reported thoughts of suicide and having made suicide attempts following a sexual assault that occurred in prison (Struckman-Johnson & Struckman-Johnson, 2006). In a review of the medical charts of women and men who were seen at a San Francisco rape treatment center, Kimerling and colleagues (2002) found that sexually assaulted men had significantly higher rates of current psychological symptoms, increased lifetime history of psychological disorders (55% vs. 29%), and a greater history of psychiatric hospitalizations (52% vs. 18%) as compared with sexually assaulted women. Of course, in the case of this latter study, comparisons of male and female victims in convenience samples must be interpreted with caution due to the fact that men may be less likely than women to seek treatment for sexual assault; thus, the men who do present for treatment following an assault may have suffered a more severe attack (e.g., involving more violence, a weapon, or numerous perpetrators) on average than the women who report for treatment (e.g., Kimerling et al., 2002; Stermac et al., 1996; 2004). Nevertheless, there are some reasons that men might be more distressed than women following sexual assault. For some men, being a victim of coerced or forced sex may threaten their sense of power, control, and masculinity. Further, because of rape myths that trivialize male rape, men may feel less free to talk about and seek support following a sexual assault as compared with women.

5.2.2. Psychological consequences for sexually assaulted men as compared with non-assaulted men

Although the data are mixed as to whether the consequences of male ASA are comparable to the consequences of female ASA, there is relatively convincing evidence that male sexual assault victims experience higher rates of psychological disturbance than men who have not been assaulted. Indeed, of the 10 studies comparing victims and non-victims on psychological functioning, all found that victims demonstrated poorer functioning than non-victims. This suggests that ASA does negatively impact men, contrary to myths which suggest that men experience no harm or even pleasure as a consequence of sexual assault. Psychological symptoms that generally have been found to be associated with male ASA include anxiety, depression, anger, and self-harm—including suicidal ideation and attempts (e.g., Coxell et al., 1999; Elliott et al., 2004; Larimer et al., 1999; Walker, Archer, & Davies, 2005a; Wolff & Shi, 2009). Numerous studies have also confirmed an association between male ASA experiences and alcohol abuse (Coxell et al., 1999; Kalichman et al., 2001; Larimer et al., 1999; Ratner et al., 2003). Additionally, Kalichman et al. (2002)

found that male victims of ASA were more likely than non-victims to have a history of mental health and/or substance abuse treatment. It is important to note that the data in these studies were based on retrospective reports of the assault, so it is impossible to determine with any certainty whether the psychological symptoms were caused by the sexual assault or whether the symptoms preceded and perhaps served as a risk factor for the assault.

5.2.3. Sex of the perpetrator as related to psychological consequences

Sex of the perpetrator may influence the severity of men's psychological reactions following sexual assault. Studies that have suggested that there are significant psychological consequences following male sexual assault generally either have not controlled for sex of the perpetrator or have asked only about experiences with sexual assault perpetrated by men. There is some evidence that sexual assault perpetrated by women may have less severe psychological consequences for male victims than sexual assaults perpetrated by men (e.g., Struckman-Johnson & Struckman-Johnson, 1994; Krahe et al., 2003).

Struckman-Johnson and Struckman-Johnson (1994) reported that male victims experienced only a minimal amount of psychological distress following a sexual assault by a female perpetrator—less than men who were assaulted by a male perpetrator. Similarly, based on a sample of German men, Krahe et al. (2003) reported that very few men who experienced nonconsensual sex with a woman described the experience as “very upsetting”; most indicated that they found the experience “moderately upsetting,” and many indicated that it was “not at all upsetting” (pp. 168–169). These findings suggesting minimal impact from sexual assault perpetrated by women could be explained by the fact that both Struckman-Johnson and Struckman-Johnson (1994) and Krahe et al. (2003) included fairly “minor” incidents of coercion in their definition (e.g., even verbally coerced kissing would qualify). Still, in the Krahe et al. study, even among men who experienced forced intercourse by a woman—a severe form of sexual assault—only three of the ten men described the experience as “very upsetting.”

Struckman-Johnson and Struckman-Johnson (1994) offered a possible explanation for men's resiliency following sexual assault perpetrated by women. They stated that

Due to men's sex role socialization to seek sexual opportunities, heterosexual men may view coercive contact by a woman as a ‘sexual experience’ not a violation of will...men who are coerced into sex by women may resent either the tactic or the woman, but because the outcome is ‘sex role congruent’—they achieved sexual intercourse—the negative emotional reaction is mitigated (p.113).

In other words, sexual assault perpetrated by a female may result in fewer negative psychological sequelae than sexual assault perpetrated by a male because sexual activity—even coerced sexual activity—with a woman fits the stereotypical male sex role; whereas, sexual activity—especially coerced sexual activity—with a man does not fit the stereotypical male sex role.

5.3. Consequences for sexuality and sexual identity

Seven of the studies addressing the consequences of male ASA measured the impact of sexual assault on men's sexuality—including their sexual functioning, sexual risk behaviors, and sexual identity.

5.3.1. Problems with sexual functioning as related to male ASA

There is evidence that male ASA negatively influences many victims' sexual functioning. Elliott et al. (2004) found that men who had been sexually assaulted reported more sexual dysfunction and sexual concerns than non-assaulted men or than sexually assaulted women. Half of the 22 men in Mezey and King's (1989) study reported

sexual problems following their sexual assault. Problems associated with male ASA included sexual inactivity or sexual “promiscuity” (Mezey & King, 1989). However, one study found no differences between coerced and non-coerced men in terms of their sexual well-being (Struckman-Johnson & Struckman-Johnson, 1994).

5.3.2. Sexual risk taking behaviors related to male sexual assault

Some evidence suggests that sexual assault is associated with a greater likelihood of engaging in high-risk sexual behaviors. For instance, women who have been raped are more likely than those who have not been raped to report having engaged in voluntary intercourse at an early age, having multiple sexual partners, and having unprotected sex (Brener, McMahon, Warren, & Douglas, 1999; Campbell, Sefl, & Ahrens, 2004; Koss & Dinero, 1989). For male victims of ASA as compared with non-victims, studies have shown higher rates of unprotected intercourse, greater likelihood of exchanging sex for money or drugs, greater number of past sexually transmitted diseases (STDs), and lower self-predicted likelihood of engaging in risk-resistant behaviors in the future (Kalichman et al., 2001; Kalichman & Rompa, 1995). It is unclear whether increased sexual risk follows or precipitates male ASA. Although some evidence suggests high-risk sexual behaviors increase from pre- to post-assault for female victims (Campbell et al., 2004), this has not been tested in men. Furthermore, even if risk behaviors are shown to increase following ASA, it is still possible that sexual risk behaviors function as both risk factors and consequences of ASA in both women and men.

5.3.3. Impact of male ASA on sexual identity

Several studies (e.g., Mezey & King, 1989; Struckman-Johnson & Struckman-Johnson, 1994, 2006; Walker et al., 2005b) have reported that men experience confusion about their sexual orientation following sexual assault. One study found that 70% of male ASA survivors reported long-term crises with their sexual orientation, and 68% worried about their masculinity; the authors of this study did not specify the sex of the perpetrator, so presumably this study included men who were assaulted by both men and women (Walker et al., 2005b). Struckman-Johnson and Struckman-Johnson (1994) reported that male victims of ASA in their study reported sexual identity confusion regardless of the sex of the perpetrator. Anecdotally, one participant assaulted by a man described his struggle with sexual self-identity following his assault as follows: “It's almost like I don't deserve to be a man because I'm attracting other men...I know I'm not gay, but then again, I can't establish my manhood” (p. 107). Conversely, a male participant who was assaulted by a woman reported that he questioned his sexual orientation because the sexual contact was unwanted on his part: “Most guys would have gone for an easy lay” (p. 109). Finally, a study of incarcerated men and women found that a higher percentage of men than women were concerned about their sex-role reputation following unwanted sexual contact during the time that they were in prison (Struckman-Johnson & Struckman-Johnson, 2006).

5.4. Interpersonal consequences

Based on a sample of 40 male rape victims, Walker et al. (2005b) reported that a large majority of the men suffered from disturbances in interpersonal functioning. Specifically, 85% of their sample reported emotional distancing from others, and 73% reported withdrawing from family and friends. In studies of college students, male victims of ASA also reported decreased involvement in social activities and impaired academic functioning (Banyard et al., 2007; O'Sullivan et al., 1998). In a study of incarcerated men, Struckman-Johnson and Struckman-Johnson (2006) found that the most commonly reported effects of unwanted sexual contact were feelings of distrust, nervousness around people, and discomfort with being physically

close to others. Other interpersonal outcomes found to be associated with male ASA have included increased anger and irritability and, in the case of perpetration by a male, distrust of men (Elliott et al., 2004; Mezey & King, 1989).

5.5. Consequences to physical health

Evidence indicates that male victims of ASA also may suffer consequences to their physical well-being. As may be expected, this has been demonstrated primarily in treatment-seeking samples. For example, in a study of men presenting to a sexual assault center, 46% of victims of sexual assault by an acquaintance and 43% of victims of sexual assault by a stranger sustained physical injuries; 6% of all male victims were admitted to the hospital (Stermac et al., 2004). Another problem experienced by male victims of ASA is infection with STDs; 18% of men in one sample developed STDs following the assault (Hillman et al., 1991). Other researchers have found rates of STDs in male victims that are similar to those reported by Hillman et al. (e.g., Coxell et al., 2000).

A fair amount of research has examined physical health consequences of sexual assault in incarcerated populations as well. Physical injuries were the most common problem seen in these samples; in one study, 67% of men who experienced inmate-on-inmate sexual assault sustained physical injuries, and 31% required medical attention (Wolff & Shi, 2009). It is possible that the nature of sexual assault among incarcerated samples is qualitatively different than non-incarcerated samples. Male-on-male assault in prison might involve more violent and aggressive tactics than non-prison sexual assault; thus a greater number of physical injuries might be expected among prison samples as compared to other samples of male victims.

Given that men are unlikely to report sexual assault even when seeking medical treatment for injuries associated with that assault (Davies, 2002), it is unclear the extent to which sexual victimization may result in physical injuries among non-treatment-seeking or non-incarcerated populations of men.

6. Conclusions and directions of future research

This systematic review highlights gaps in the current literature and suggests directions for future research on both the prevalence and consequences of male ASA.

6.1. Directions for future research on the prevalence of sexual assault of men

One important conclusion that can be drawn from this systematic review is that consistency among operational definitions and standardized instruments for assessment of sexual assault among men are lacking. For example, definitions of sexual assault ranged from broad—and sometimes vague—descriptions of unwanted sex to more restrictive descriptions corresponding to legal definitions of rape. Standard measures of men's experiences with ASA are needed in order to allow for comparisons across different studies and different research populations. Ideally, to allow for consistency and ease of interpretation, these measures would assess a wide range of experiences with sexual assault using multiple, behaviorally-specific questions. The measures would clearly distinguish between childhood and adult sexual assault and between sexual aggression perpetrated by men and by women. The revised SES (Koss et al., 2007) shows promise on several of these fronts. However, there are currently no psychometric data available for the revised SES, so more research is needed before it can be adopted as the standard measure of ASA among men.

A review of the prevalence of male ASA points to several avenues for future research. We identified only eight studies that assess male ASA among representative community samples; only three of these

studies were national samples—all of which were conducted in the United States. Additionally these three national studies used relatively narrow definitions of male ASA (i.e., measured only experiences obtained through force or threats of force). More large-scale studies of representative samples in the U.S. and throughout the world are needed to estimate the prevalence of a wide range of coercive and aggressive sexual acts experienced by men in the general population.

Existing studies of special populations—gay and bisexual men, veterans, prison inmates, and men from physical and mental health treatment facilities—also point to the importance of studying groups of men who may be at particularly high risk for ASA. The rates of sexual assault among these groups of men far exceed the rates in community samples of men. Although it is important to estimate the prevalence of ASA in community samples of men, such figures may underestimate the risk for some groups of men, as male ASA appears to be heavily concentrated among select groups. More research is needed to evaluate why members of these groups are particularly vulnerable to male ASA.

6.2. Directions for future research on consequences of sexual assault of men

As with the body of research on the prevalence of male ASA, concerns about the lack of definitional and operational consistency also apply to the literature on the consequences of male ASA. For example, quality of measurement of the consequences of male ASA varied considerably across studies and included imprecise ratings of “emotional trauma” based on a chart-review, subscale-level scores on validated and reliable self-report instruments, and structured interviews for psychological disorders. Additionally, the methods with which outcome data were collected were also diverse and sometimes unclear. For example, in some studies of treatment-seeking populations, outcome data were extracted through chart reviews with unknown reliability and validity. Although some researchers specified that chart data were obtained through structured interviews with patients (Kimerling et al., 2002), for others it was unclear whether data came from patients' self-report or a clinicians' observations (e.g., Stermac et al., 1996). The wide variability makes it difficult to draw accurate and reliable conclusions about the impact of ASA on men.

Further, while collecting articles for this review, it became evident that additional research specifically examining the consequences of ASA in men is warranted. Several studies were eliminated from this review because they assessed lifetime history of abuse or did not specify a time frame in their definition of sexual assault. It was therefore difficult to ascertain whether psychological sequelae resulted from childhood sexual abuse, adult sexual assault, or the cumulative impact of both. Furthermore, there may be important differences in the sequelae of childhood sexual abuse as compared with the sequelae of ASA (e.g., King et al., 2002). Other studies failed to report findings separately for men and women. Given that findings are mixed regarding similarities and differences between men's and women's responses to sexual assault, it is important to continue examining men and women separately in order to clarify this issue. Finally, some studies collapsed results over multiple types of abuse (e.g., physical and sexual abuse). It is likely that assaults of different natures would contribute to different psychological and physical consequences for the victim.

Additionally, many of the studies described in this review provided descriptive statistics only for victims of sexual assault (e.g., Stermac et al., 2004; Mezey & King, 1989; Struckman-Johnson & Struckman-Johnson, 2006; Wolff & Shi, 2009). Without a control group of non-assaulted men, it is difficult to ascertain how these findings compare to non-victims.

Overall, consistency among researchers with regard to operational definitions and assessment of sexual victimization and sequelae, as well as the inclusion of appropriate comparison groups, is necessary

to draw accurate conclusions about the nature of this problem and its impact on men. Additionally, future qualitative research could be useful in helping to clarify statistical findings. For example, if studies demonstrate that men, on average, report more or less distress following ASA than women, qualitative data could help us to understand how men's and women's conceptualizations of their experiences might contribute to those gender differences.

6.3. General conclusions

It is clear from this systematic review of the existing literature that ASA among men is an important area for future research. Although the existing literature is inconsistent in terms of methodology and variable in terms of quality, as a body of work, it does refute cultural myths that suggest that men cannot be victims of sexual assault and that, if men are victims, they are unaffected by their victimization. Although reported prevalence rates of sexual victimization among men vary widely, the data leave little question as to the existence of male ASA—particularly among certain vulnerable populations. Similarly, although research on the consequences of male ASA remains in its infancy and much of the existing research has been relatively unsystematic, the literature illustrates that male ASA can have notable negative consequences. The invisibility of male ASA hinders providers' ability to provide treatment to male victims and to develop strategies to prevent future assaults. This review illuminates the problem of male ASA and points to the importance of continued research in this area.

References

- Acierno, R., Resnick, H. S., & Kilpatrick, D. G. (1997). Health impact of interpersonal violence I: Prevalence rates, case identification, and risk factors for sexual assault, physical assault, and domestic violence in men and women. *Behavioral Medicine*, 23, 53–65. doi:10.1080/08964289709596729.
- Aizenman, M., & Kelley, G. (1988). The incidence of violence and acquaintance rape in dating relationships among college men and women. *Journal of College Student Development*, 29, 305–311.
- American Prosecutors Research Institute (APRI) (2003a). State rape statutes. Retrieved from http://www.ndaa.org/pdf/vaw_rape_statute.pdf
- American Prosecutors Research Institute (APRI) (2003b). State definitions of penetration for sex crimes. Retrieved from http://www.ndaa.org/pdf/vaw_sex_acts.pdf
- Baier, J. L., Rosenzweig, M. G., & Whipple, E. G. (1991). Patterns of sexual behavior, coercion, and victimization of university students. *Journal of College Student Development*, 32, 310–322.
- Balsam, K. F., Rothblum, E. D., & Beauchaine, T. (2005). Victimization over the life span: A comparison of lesbian, gay, bisexual, and heterosexual siblings. *Journal of Consulting and Clinical Psychology*, 73, 477–487. doi:10.1037/0022-006X.73.3.477.
- Banyard, V. L., Ward, S., Cohn, E. S., Plante, E. G., Moorhead, C., & Walsh, W. (2007). Unwanted sexual contact on campus: A comparison of women's and men's experiences. *Violence and Victims*, 22, 57–70. doi:10.1891/088667007780482865.
- Basile, K. C., Chen, J., Black, M. C., & Saltzman, L. (2007). Prevalence and characteristics of sexual violence victimization among U.S. adults, 2001–2003. *Violence and Victims*, 22, 437–448. doi:10.1891/088667007781553955.
- Brener, N. D., McMahon, P. M., Warren, C. W., & Douglas, K. A. (1999). Forced sexual intercourse and associated health-risk behaviors among female college students in the United States. *Journal of Consulting and Clinical Psychology*, 67, 252–259. doi:10.1037/0022-006X.67.2.252.
- Briere, J., Elliott, D. M., Harris, K., & Cotman, A. (1995). Trauma symptom inventory: Psychometrics and association with childhood and adult victimization in clinical samples. *Journal of Interpersonal Violence*, 10, 387–401. doi:10.1177/088626095010004001.
- Burke, P. J., Stets, J. E., & Pirog-Good, M. A. (1998). Gender identity, self-esteem, and physical and sexual abuse in dating relationships. *Social Psychology Quarterly*, 51, 272–285. Stable URL: <http://www.jstor.org/stable/2786925>
- Burnam, M. A., Stein, J. A., Golding, J. M., Siegel, J. M., Sorenson, S. B., Forsythe, A. B., & Telles, C. A. (1988). Sexual assault and mental disorders in a community population. *Journal of Consulting and Clinical Psychology*, 56, 843–850. doi:10.1037/0022-006X.56.6.843.
- Campbell, R., Sefl, T., & Ahrens, C. E. (2004). The impact of rape on women's sexual health risk behaviors. *Health Psychology*, 23, 67–74. doi:10.1037/0278-6133.23.1.67.
- Comstock, G. D. (1989). Victims of anti-gay/lesbian violence. *Journal of Interpersonal Violence*, 4, 101–106. doi:10.1177/088626089004001007.
- Conway, M., Mendelson, M., Giannopoulos, C., Csank, P. A. R., & Holm, S. L. (2004). Childhood and adult sexual abuse, rumination on sadness, and dysphoria. *Child Abuse & Neglect*, 28, 393–410. doi:10.1016/j.chiabu.2003.05.004.
- Coxell, A. W., King, M. B., Mezey, G. C., & Gordon, D. (1999). Lifetime prevalence, characteristics, and associated problems of non-consensual sex in men: Cross sectional survey. *British Medical Journal*, 318, 846–850.
- Coxell, A. W., King, M. B., Mezey, G. C., & Kell, P. (2000). Sexual molestation of men: Interviews with 224 men attending a genitourinary medicine service. *International Journal of STD & AIDS*, 11, 574–578. doi:10.1258/0956462001916542.
- Cunradi, C., Ames, G., & Moore, R. (2005). Prevalence and correlates of interpersonal violence victimization in a junior enlisted Navy cohort. *Violence and Victims*, 20, 679–694.
- Davies, M. (2002). Male sexual assault victims: A selective review of the literature and implications for support services. *Aggression and Violent Behavior*, 7, 203–214. doi:10.1016/S1359-1789(00)00043-4.
- Donnelly, D. A., & Kenyon, S. (1996). "Honey, we don't do men": Gender stereotypes and the provision of services to sexually assaulted males. *Journal of Interpersonal Violence*, 11, 441–448. doi:10.1177/088626096011003009.
- Elliott, D. M., Mok, D. S., & Briere, J. (2004). Adult sexual assault: Prevalence symptomatology, and sex differences in the general population. *Journal of Traumatic Stress*, 17, 203–211. doi:10.1023/B:JOTS.0000029263.11104.23.
- Fiebert, M. S. (2000). References examining men as victims of women's sexual coercion. *Sexuality & Culture*, 4(3), 81–88. doi:10.1007/s12119-000-1023-7.
- Fiebert, M. S., & Osburn, K. (2001). Effects of gender and ethnicity on self reports of mild, moderate, and severe sexual coercion. *Sexuality & Culture*, 5(2), 3–11. doi:10.1007/s12119-001-1015-2.
- Fiebert, M. S., & Tucci, L. M. (1998). Sexual coercion: Men victimized by women. *The Journal of Men's Studies*, 6, 127–133.
- Fisher, G. J. (1992). Gender differences in college student sexual abuse victims and their offenders. *Annals of Sex Research*, 5, 215–226. doi:10.1007/BF00849922.
- Fisher, B. S., Daigle, L. E., Cullen, F. T., & Turner, M. G. (2003). Acknowledging sexual victimization as rape: Results from a national-level study. *Justice Quarterly*, 20, 535–570.
- Goodman, L. A., Koss, M. P., & Russo, N. F. (1993). Violence against women: Physical and mental health effects. Part I: Research findings. *Applied and Preventive Psychology*, 2, 79–89. doi:10.1016/S0962-1849(05)80114-3.
- Goodman, L. A., Salyers, M. P., Mueser, K. T., Rosenberg, S. D., Swartz, M., Essock, S. M., & Swanson, J. (2001). Recent victimization in women and men with severe mental illness: Prevalence and correlates. *Journal of Traumatic Stress*, 14, 615–632. doi:10.1023/A:1013026318450.
- Goodman, L. A., Thompson, K. M., Weinfurt, K., Corl, S., Acker, P., Mueser, K. T., & Rosenberg, S. D. (1999). Reliability of reports of violent victimization and posttraumatic stress disorder among men and women with serious mental illness. *Journal of Traumatic Stress*, 12, 587–599. doi:10.1023/A:1024708916143.
- Hartwick, C., Desmarais, S., & Hennig, K. (2007). Characteristics of male and female victims of sexual coercion. *Canadian Journal of Human Sexuality*, 16, 31–44.
- Heidt, J. M., Marx, B. P., & Gold, S. D. (2005). Sexual revictimization among sexual minorities: A preliminary study. *Journal of Traumatic Stress*, 18, 533–540. doi:10.1002/jts.20061.
- Helgeson, V. S. (2002). *The psychology of gender*. Upper Saddle River, NJ: Prentice Hall.
- Hensley, C., Koschieski, M., & Tewksbury, R. (2005). Examining characteristics of male sexual assault targets in a southern maximum-security prison. *Journal of Interpersonal Violence*, 20, 667–679. doi:10.1177/0886260505276069.
- Hensley, C., Tewksbury, R., & Castle, T. (2003). Characteristics of prison sexual assault targets in male Oklahoma correctional facilities. *Journal of Interpersonal Violence*, 18, 595–606. doi:10.1177/0886260503251132.
- Hillman, R., O'Mara, N., Tomlinson, D., & Harris, J. (1991). Adult male victims of sexual assault: An underdiagnosed condition. *International Journal of STD & AIDS*, 2, 258–260.
- Hines, D. A. (2007). Predictors of sexual coercion against women and men: A multilevel, multinational study of university students. *Archives of Sexual Behavior*, 36, 403–422. doi:10.1007/s10508-006-9141-4.
- Hogben, M., Byrne, D., & Hamburger, M. E. (1996). Coercive heterosexuality in dating relationships of college students: Implications of differential male–female experience. *Journal of Psychology and Human Sexuality*, 8, 69–78.
- Isely, P. (1998). Sexual assault of men: American research supports studies from the UK. *Medicine, Science, and the Law*, 38, 74–80.
- Johnson, T. J., & Stahl, C. (2004). Sexual experiences associated with participation in drinking games. *Journal of General Psychology*, 131, 304–320.
- Kalichman, S. C., Benotsch, E., Rompa, D., Gore-Felton, C., Austin, J., Webster, L., & Simpson, D. (2001). Unwanted sexual experiences and sexual risks in gay and bisexual men: Associations among revictimization, substance use, and psychiatric symptoms. *Journal of Sex Research*, 38, 1–9. Stable URL: <http://www.jstor.org/stable/3813257>
- Kalichman, S. C., & Rompa, D. (1995). Sexually coerced and noncoerced gay and bisexual men: Factors relevant to risk for Human Immunodeficiency Virus (HIV) infection. *Journal of Sex Research*, 32, 45–50. Stable URL: <http://www.jstor.org/stable/3813096>
- Kalichman, S. C., Sikkema, K. J., DiFonzo, K., Luke, W., & Austin, J. (2002). Emotional adjustment in survivors of sexual assault living with HIV-AIDS. *Journal of Traumatic Stress*, 15, 289–296. doi:10.1023/A:1016247727498.
- Kang, Dalager, Mahan, & Ishii (2005). The role of sexual assault on the risk of PTSD among Gulf War veterans. *Annals of Epidemiology*, 15, 191–195. doi:10.1016/j.annepidem.2004.05.009.
- Kerbs, J. J., & Jolly, J. M. (2007). Inmate-on-inmate victimization among older male prisoners. *Crime and Delinquency*, 53, 187–218. doi:10.1177/0011128706294119.
- Kimerling, R., Rellini, A., Kelly, V., Judson, P. L., & Learman, L. A. (2002). Gender differences in victim and crime characteristics of sexual assaults. *Journal of Interpersonal Violence*, 17, 526–532. doi:10.1177/0886260502017005003.
- King, M., Coxell, A., & Mezey, G. (2002). Sexual molestation of males: Associations with psychological disturbance. *British Journal of Psychiatry*, 181, 153–157.
- Koss, M. P. (1993). Rape: Scope, impact, interventions, and public policy responses. *American Psychologist*, 23, 55–69. doi:10.1037/0003-066X.48.10.1062.

- Koss, M. P. (1996). The measurement of rape victimization in crime surveys. *Criminal Justice and Behavior*, 23, 55–69. doi:10.1177/0093854896023001005.
- Koss, M. P., Abbey, A., Campbell, R., Cook, S., Norris, J., Testa, M., & White, J. (2007). Revising the SES: A collaborative process to improve assessment of sexual aggression and victimization. *Psychology of Women Quarterly*, 31, 357–370. doi:10.1111/j.1471-6402.2007.00385.x.
- Koss, M. P., & Dinero, T. E. (1989). Discriminant analysis of risk factors for sexual victimization among a national sample of college women. *Journal of Consulting and Clinical Psychology*, 57, 242–250. doi:10.1037/0022-006X.57.2.242.
- Koss, M. P., Gidycz, C. A., & Wisniewski, N. (1987). The scope of rape: Incidence and prevalence of sexual aggression and victimization in a national sample of higher education students. *Journal of Consulting and Clinical Psychology*, 55, 162–170. doi:10.1037/0022-006X.55.2.162.
- Koss, M. P., & Oros, C. J. (1982). Sexual experiences survey: A research instrument investigating sexual aggression and victimization. *Journal of Consulting and Clinical Psychology*, 50, 455–457. doi:10.1037/0022-006X.50.3.455.
- Krahe, B., Scheinberger-Olwig, R., & Bieneck, S. (2003). Men's reports of nonconsensual sexual interactions with women: Prevalence and impact. *Archives of Sexual Behavior*, 32, 165–175. doi:10.1023/A:1022456626538.
- Krahe, B., Scheinberger-Olwig, R., & Schutze, S. (2001). Risk factors of sexual aggression and victimization among homosexual men. *Journal of Applied Social Psychology*, 31, 1385–1408. doi:10.1111/j.1559-1816.2001.tb02679.x.
- Lapp, K. G., Bosworth, H. B., Strauss, J. L., Stechuchak, K. M., Horner, R. D., Calhoun, P. S., & Butterfield, M. I. (2005). Lifetime sexual and physical victimization among male veterans with combat-related Post-traumatic Stress Disorder. *Military Medicine*, 170, 787–790.
- Larimer, M. E., Lydum, A. R., Anderson, B. K., & Turner, A. P. (1999). Male and female recipients of unwanted sexual contact in a college student sample: Prevalence rates, alcohol use, and depression symptoms. *Sex Roles*, 40, 295–308. doi:10.1023/A:1018807223378.
- Lipscomb, G., Muram, D., Speck, P., & Mercer, B. (1992). Male victims of sexual assault. *The Journal of the American Medical Association*, 267, 3064–3066.
- Lottes, I. L. (1992). The relationship between nontraditional gender roles and sexual coercion. *Journal of Psychology and Human Sexuality*, 4(4), 89–101. doi:10.1300/J056v04n04_07.
- Lottes, I. L., & Weinberg, M. S. (1997). Sexual coercion among university students: A comparison of the United States and Sweden. *Journal of Sex Research*, 34, 67–76.
- Martin, L., Rosen, L. N., Durand, D. B., Stretch, R. H., & Knudson, K. H. (1998). Prevalence and timing of sexual assaults in a sample of male and female U.S. Army soldiers. *Military Medicine*, 163, 213–216.
- Masho, S. W., & Anderson, L. (2009). Sexual assault in men: A population-based study of Virginia. *Violence and Victims*, 24, 98–110. doi:10.1891/0886-6708.24.1.98.
- Mezey, G., & King, M. (1989). The effects of sexual assault on men: A survey of 22 victims. *Psychological Medicine*, 19, 205–209.
- Mitchell, D., Hirschman, R., & Hall, G. C. N. (1999). Attributions of victim responsibility, pleasure, and trauma in male rape. *Journal of Sex Research*, 36, 369–373.
- Moore, C. D., & Waterman, C. K. (1999). Predicting self-protection against sexual assault in dating relationships among heterosexual men and women, gay men, lesbians, and bisexuals. *Journal of College Student Development*, 40, 132–140.
- Muehlenhard, C. L., & Cook, S. W. (1988). Men's self-reports of unwanted sexual activity. *Journal of Sex Research*, 24, 58–72. Stable URL: <http://www.jstor.org/stable/3812822>
- Muehlenhard, C. L., Powch, I. G., Phelps, J. L., & Giusti, L. M. (1992). Definitions of rape: Scientific and political implications. *Journal of Social Issues*, 48, 23–44.
- Murdoch, M., Polusny, M., Hodges, J., & O'Brien (2004). Prevalence of in-service and post-service sexual assault among combat and noncombat veterans applying for Department of Veterans Affairs Posttraumatic Stress Disorder disability benefits. *Military Medicine*, 169, 392–395.
- Neville, H. A., & Heppner, M. J. (1999). Contextualizing rape: Reviewing sequelae and proposing a culturally inclusive ecological model of sexual assault recovery. *Applied and Preventive Psychology*, 8, 41–62. doi:10.1016/S0962-1849(99)80010-9.
- O'Sullivan, L. F., Byers, E. S., & Finkelman, L. (1998). A comparison of male and female college students' experiences of sexual coercion. *Psychology of Women Quarterly*, 22, 177–195. doi:10.1111/j.1471-6402.1998.tb00149.x.
- Peterson, Z. D., & Muehlenhard, C. L. (2004). Was it rape? The function of women's rape myth acceptance and definitions of sex in labeling their own experiences. *Sex Roles*, 51, 129–144. doi:10.1023/B:SERS.0000037758.95376.00.
- Peterson, Z. D., & Muehlenhard, C. L. (2007). Conceptualizing the "wantedness" of women's consensual and nonconsensual sexual experiences: Implications for how women label their experiences with rape. *Journal of Sex Research*, 44, 72–88. doi:10.1080/00224490709336794.
- Polusny, M., & Murdoch, M. (2006). Sexual assault among male veterans. *Psychiatric Times*, 22, 34–37.
- Poppen, P. J., & Segal, N. J. (1988). The influence of sex and sex role orientation on sexual coercion. *Sex Roles*, 19, 689–701. doi:10.1007/BF00288985.
- Ratner, P. A., Johnson, J. L., Shoveller, J. A., Chan, K., Martindale, S. L., Schilder, A. J., & Hogg, R. S. (2003). Non-consensual sex experienced by men who have sex with men: Prevalence and association with mental health. *Patient Education and Counseling*, 49, 67–74. doi:10.1016/S0738-3991(02)00055-1.
- Rentoul, L., & Appleboom, N. (1997). Understanding the psychological impact of rape and serious sexual assault on men: A literature review. *Journal of Psychiatric and Mental Health Nursing*, 4, 267–274. doi:10.1046/j.1365-2850.1997.00064.x.
- Resick, P. A. (1993). The psychological impact of rape. *Journal of Interpersonal Violence*, 8, 223–255. doi:10.1177/088626093008002005.
- Richman, J., Flaherty, J., Rospenda, K., & Christensen, M. (1992). Mental health consequences and correlates of medical student abuse. *Journal of the American Medical Association*, 267, 692–694.
- Robertson, J. E. (2003). Rape among incarcerated men: Sex, coercion and STDs. *AIDS Patient Care and STDs*, 17, 423–430. doi:10.1089/108729103322277448.
- Rosen, L., & Martin, L. (1998). Childhood maltreatment history as a risk factor for sexual harassment among U.S. Army soldiers. *Violence and Victims*, 13, 269–286.
- Rouse, L. P. (1988). Abuse in dating relationships: A comparison of Blacks, Whites, and Hispanics. *Journal of College Student Development*, 29, 312–319.
- Russell, D. E. H. (1984). *Sexual exploitation: Rape, child sexual abuse, and workplace harassment*. Beverly Hill, CA: Sage.
- Ryan, K. A. (1998). The relationship between courtship violence and sexual aggression in college students. *Journal of Family Violence*, 13, 377–394. doi:10.1023/A:1022875203346.
- Sandberg, G., Jackson, T. L., & Petretic-Jackson, P. (1987). College students' attitudes regarding sexual coercion and aggression: Developing educational and preventative strategies. *Journal of College Student Personnel*, 28, 302–311.
- Sigelman, C. K., Berry, C. J., & Wiles, K. A. (1984). Violence in college students' dating relationships. *Journal of Applied Social Psychology*, 14, 530–548. doi:10.1111/j.1559-1816.1984.tb02258.x.
- Smith, Frueh, Sawchuk, & Johnson (1999). Relationship between symptom over-reporting and pre- and post-combat trauma history in veterans evaluated for PTSD. *Depression and Anxiety*, 10, 119–124.
- Soares, J. F., Luo, J., Jablonska, B., & Sundin, O. (2007). Men's experiences of violence: Extent, nature and 'determinants'. *International Journal of Social Welfare*, 16, 269–277. doi:10.1111/j.1468-2397.2006.00461.x.
- Sorenson, S. B., & Siegel, J. M. (1992). Gender, ethnicity, and sexual assault: Findings from a Los Angeles study. *Journal of Social Issues*, 48, 93–104.
- Sorenson, S. B., Stein, J. A., Siegel, J. M., Golding, J. M., & Burnam, M. A. (1987). The prevalence of adult sexual assault: The Los Angeles Epidemiologic Catchment Area Project. *American Journal of Epidemiology*, 126, 1154–1164.
- Stermac, L., Del Bove, G., & Addison, M. (2004). Stranger and acquaintance sexual assault of adult males. *Journal of Interpersonal Violence*, 19, 901–915. doi:10.1177/0886260504266887.
- Stermac, L., Sheridan, P. M., Davidson, A., & Dunn, S. (1996). Sexual assault of adult males. *Journal of Interpersonal Violence*, 11, 52–64. doi:10.1177/088626096011001004.
- Stets, J. E., & Pirog-Good, M. A. (1989). Patterns of physical and sexual abuse for men and women in dating relationships: A descriptive analysis. *Journal of Family Violence*, 4, 63–76. doi:10.1007/BF00985657.
- Stevenson, M. R., & Gajarsky, W. M. (1991). Unwanted sexual experiences relate to later victimization and male perpetration. *Journal of Psychology and Human Sexuality*, 4, 57–70.
- Straus, M. A., Hamby, S. L., Boney-McCoy, S., & Sugarman, D. B. (1996). The revised Conflict Tactics Scale (CTS2). Development and preliminary psychometric data. *Journal of Family Issues*, 17, 283–315. doi:10.1177/019251396017003001.
- Struckman-Johnson, C. (1988). Forced sex on dates: It happens to men, too. *Journal of Sex Research*, 24, 234–241. Stable URL: <http://www.jstor.org/stable/3812842>
- Struckman-Johnson, C., & Struckman-Johnson, D. (1992). Acceptance of male rape myths among college men and women. *Sex Roles*, 27, 85–100. doi:10.1007/BF00299011.
- Struckman-Johnson, C., & Struckman-Johnson, D. (1994). Men pressured and forced into sexual experience. *Archives of Sexual Behavior*, 23, 93–114. doi:10.1007/BF01541620.
- Struckman-Johnson, C., & Struckman-Johnson, D. (2000). Sexual coercion rates in seven Midwestern prison facilities for men. *The Prison Journal*, 80, 379–390. doi:10.1177/0032885500080004004.
- Struckman-Johnson, C., & Struckman-Johnson, D. (2006). A comparison of sexual coercion experiences reported by men and women in prison. *Journal of Interpersonal Violence*, 21, 1591–1615. doi:10.1177/0886260506294240.
- Struckman-Johnson, C., Struckman-Johnson, D., & Anderson, P. B. (2003). Tactics of sexual coercion: When men and women won't take no for an answer. *Journal of Sex Research*, 40, 76–86.
- Struckman-Johnson, C., Struckman-Johnson, D., Rucker, B., & Donaldson (1996). Sexual coercion reported by men and women in prison. *Journal of Sex Research*, 33, 67–76. Stable URL: <http://www.jstor.org/stable/3813496>
- Teplin, L. A., McClelland, G. M., Abram, K. M., & Weiner, D. A. (2005). Crime victimization in adults with severe mental illness: Comparison with the National Crime Victimization Survey. *Archives of General Psychiatry*, 62, 911–921.
- Tewksbury, R. (1989). Fear of sexual assault in prison inmates. *The Prison Journal*, 69, 62–71. doi:10.1177/003288558906900109.
- Tewksbury, R., & Mustaine, E. E. (2001). Lifestyle factors associated with the sexual assault of men: A routine activity theory analysis. *The Journal of Men's Studies*, 9, 153–182. doi:10.3149/jms.0902.153.
- Tjaden, & Thoennes (2000). Prevalence and consequences of male-to-female and female-to-male interpersonal violence as measured by the National Violence Against Women Survey. *Violence Against Women*, 6, 140–159.
- U.S. Bureau of Justice Statistics (1994). *Technical background on the redesigned National Crime Victimization Survey (NCJ-151172)*. Washington, DC: Author Retrieved from <http://bjs.ojp.usdoj.gov/content/pub/ascii/NCSRTB.TXT>.
- Vearnals, S., & Campbell, T. (2001). Male victims of male sexual assault: A review of psychological consequences and treatment. *Sexual and Relationship Therapy*, 16, 279–286. doi:10.1080/14681990123228.
- Waldner-Haugrud, L. K., & Gratch, L. V. (1997). Sexual coercion in gay/lesbian relationships: Descriptives and gender differences. *Violence and Victims*, 12, 87–98.
- Waldner-Haugrud, L. K., & Magruder, B. (1995). Male and female sexual victimization in dating relationships: Gender differences in coercion techniques and outcomes. *Violence and Victims*, 10, 203–215.
- Walker, J., Archer, J., & Davies, M. (2005a). Effects of male rape on psychological functioning. *British Journal of Clinical Psychology*, 44, 445–451. doi:10.1348/014466505X52750.

- Walker, J., Archer, J., & Davies, M. (2005b). Effects of rape on men: A descriptive analysis. *Archives of Sexual Behavior*, 34, 69–80, doi:10.1007/s10508-005-1001-0.
- Waterman, C. K., Dawson, L. J., & Bologna, M. J. (1989). Sexual coercion in gay male and lesbian relationships: Predictors and implications for support services. *Journal of Sex Research*, 26, 118–124, doi:10.1016/S1359-1789(97)00054-2.
- Wenzel, S. L., Koegel, P., & Gelberg, L. (2000). Antecedents of physical and sexual victimization among homeless women: A comparison to homeless men. *American Journal of Community Psychology*, 28, 367–389, doi:10.1023/A:1005157405618.
- Wolff, N., Blitz, C. L., & Shi, J. (2007). Rates of sexual victimization in prison for inmates with and without mental disorders. *Psychiatric Services*, 58, 1087–1094, doi:10.1176/appi.ps.58.8.1087.
- Wolff, N., Blitz, C. L., Shi, J., Bachman, R., & Siegel, J. A. (2006). Sexual violence inside prisons: Rates of victimization. *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, 83, 835–848, doi:10.1007/s11524-006-9065-2.
- Wolff, N., & Shi, J. (2009). Contextualization of physical and sexual assault in male prisons: Incidents and their aftermath. *Journal of Correctional Health Care*, 15, 58–77, doi:10.1177/1078345808326622.
- Wolff, N., Shi, J., & Blitz, C. L. (2008). Racial and ethnic disparities in types and sources of victimization inside prison. *The Prison Journal*, 88, 451–472, doi:10.1177/0032885508325392.
- Yuan, N. P., Koss, M. P., Polacca, M., & Goldman, D. (2006). Risk factors for physical assault and rape among six Native American tribes. *Journal of Interpersonal Violence*, 21, 1566–1590, doi:10.1177/0886260506294239.
- Zweig, J. M., Barber, B. L., & Eccles, J. S. (1997). Sexual coercion and well-being in young adulthood. *Journal of Interpersonal Violence*, 12, 291–308, doi:10.1177/088626097012002009.