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**FACTORS ASSOCIATED WITH SEXUAL AGGRESSION
AMONG RAPISTS AND NON-OFFENDERS**

by

ANNE E. PAWLAK, B.A., M.A.

**A dissertation submitted to
the Faculty of Graduate Studies and Research
of Carleton University
in partial fulfilment of the requirements for the degree of**

Doctor of Philosophy (Psychology)

**Department of Psychology
Carleton University
Ottawa, Ontario, Canada**

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"FACTORS ASSOCIATED WITH SEXUAL AGGRESSION
AMONG RAPISTS AND NON-OFFENDERS"

submitted by

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in partial fulfilment of the requirements
for the degree of Doctor of Philosophy

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Abstract

Factors Associated with Sexual Aggression Among Rapists and Non-Offenders

This dissertation examined many of the factors purportedly associated with sexual aggression through a comprehensive sexual behaviours assessment of known rapists and non-offenders. Different theories of sexual aggression were explored and tested for empirical support.

The study was designed also to assess the validity of the procedures, particularly penile tumescence (PT) testing, which are commonly followed in the assessment of rapists. In addition to PT measures of deviant arousal, the assessment included the Derogatis Sexual Functioning Inventory (DSFI) (1980); the Buss-Durkee Hostility Inventory (BDHI) (Buss and Durkee, 1957); Burt's (1980) Rape Myth Acceptance (RMA), Acceptance of Interpersonal Violence (AIV) and Adversarial Sexual Beliefs (ASB) Scales; Rapaport and Burkhart's (1984) Coercive Sexuality Scale; the Michigan Alcoholism Screening Test (MAST) (Selzer, Vinokur and van Rooijan, 1975); the Bradford Sexual History Questionnaire (1987). Intelligence was assessed (Wechsler, 1981; Silverstein, 1982) and the MMPI (Hathaway and McKinley, 1982) was administered.

Deviant arousal (a preference for rape stimuli over consenting stimuli) was a poor predictor of sexually

aggressive behaviour. Other "sexual" factors also were unrelated to sexual aggression. Rapists were not more promiscuous, nor did they have higher sex drives, they did not use more pornography and they were not more likely to be frotteurs, voyeurs or exhibitionists. The results did not support the view of rape as a sexual deviation or paraphilia, i.e., as stemming from the abnormal sexual preference for coercive sex.

The best predictors were heterosexual/social competence (the DSFI, primarily Attitudes), general hostility (BDHI and AIV), anti-social personality (MMPI Psychopathic Deviance). History of sexual victimization also was a major predictor. Rapists were more likely to be unemployed and had lower levels of education than the non-offenders.

Results support some feminist hypotheses, i.e., rape is not primarily sexually motivated. However, attitudes condoning aggression specifically toward women and condoning rape were not predictors, suggesting rape is not so much an issue of sexist attitudes as a reflection of general anti-social tendencies.

The theory that men rape because of disinhibiting factors including attitudes supporting violence, anti-social tendencies, alcohol etc., was supported by these results. However, the disinhibition is to the rape behaviour not to the arousal. Deviant arousal was not a predictor and this challenges a central premise of the disinhibition hypothesis.

These findings do not support the heavy emphasis frequently placed on PT testing in assessment and treatment of rapists.

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The inspiration as well as the opportunity to conduct the research for this dissertation came from my work in the Sexual Behaviours Clinic at the Royal Ottawa Hospital. For this I am deeply indebted to John Bradford, who urged me initially to pursue my doctoral degree and whose continued support and encouragement facilitated achievement of it's completion. I am grateful to Nick Spanos for the guidance he has given me throughout my doctoral program and for the benefit of his tremendous research expertise and for his unique perspectives on psychology and human behaviour.

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This dissertation is dedicated to the memory of my mother Elizabeth Keyes. While her warnings about "burning the candle at both ends" haunted me throughout this project, my memories

of her own stamina and dedication to commitments have inspired me to persevere in the pursuit of my goals.

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**FACTORS ASSOCIATED WITH SEXUAL AGGRESSION
AMONG RAPISTS AND NON-OFFENDERS**

INTRODUCTION

The increasing demands on forensic clinicians by the courts and correctional institutions to assess and make recommendations about sexually aggressive men has necessitated the rapid implementation of "scientific" procedures and instruments. The development of this new specialty has sparked some lively debates over all aspects of the evaluation from the validity of the technical procedures (e.g., Hall, Proctor and Nelson, 1988; Quinsey and Laws, 1990; Hall, 1990; Schouten and Simon, 1992) to the appropriateness of the theoretical foundations and assumptions on which these new procedures are based (e.g., Darke, 1990). Much of the controversy concerns who commits rape, i.e., how are rapists distinguished from the rest of men, if at all, and why do they rape.

The feminist movement has helped increase public awareness of the extent of sexual assault as well as decrease tolerance for sexual aggression. In 1975 Brownmiller estimated that only one in 5 rapes were reported to the police. Between 1983 and 1988 reports of sexual assault in Canada more than doubled (Maclean's, 1992, Canadian Justice Statistics). Media coverage of high social profile cases (e.g., Thomas, Kennedy-Smith, Tyson) has helped dispel the perception that rape is a rare offense committed by a few

down-and-out sexual deviates.

The increased sensitivity to sexual aggression has inspired studies yielding startling statistics. Studies of college students in the U.S. (n=6,159 across U.S.) (Koss, Gidycz and Wisniewski, 1987) and in New Zealand (Koss and Oros, 1982) using the Sexual Experiences Survey revealed that over half of the women in this population had experienced "some form of sexual victimization" and 25% had been raped or experienced attempted rape. About 25% of the men in this study reported engaging in some form of sexual aggression. Looking at frequency of nonconsenting sex in a 30 day period, McDermott, Sarvela and Banracharya (1988) found 13.2% of their sample of 1,836 respondents had engaged in sex against their will and 6.8% against their partners will. Miller and Marshall (1987) found that 27% of their female students (n=323) reported date rape and 15% of the males (n=472) reported perpetrating date rape. In their fervour to reveal the pervasiveness of sexual aggression the authors of these studies expanded their definitions of sexual aggression to include even minor violations such as "psychological pressure". While the alarming statistics attract a great deal of attention, the various definitions of sexual aggression are so broad and vague (e.g., "some form of sexual aggression") it is difficult to make inferences concerning factors associated with rape.

The current study was designed to evaluate a procedure used to assess rapists seen in the Sexual Behaviours Clinic of

the Royal Ottawa Hospital. This entails examination of the theoretical foundations and assumptions concerning men who rape and why they do it. The assessment includes information about deviant sexual arousal, sexual history, attitudes towards sex, women, rape, and violence, sexual and social functioning, personality and psychological distress. This comprehensive assessment of men with a known history of sexual aggression, as well as of men who have not been charged with any sexual offense, provides an opportunity to test various hypothesis of sexual aggression while assessing the validity of the evaluation procedure itself.

THEORIES AND RESEARCH ON SEXUAL AGGRESSION (NON-OFFENDERS)

From the feminist perspective rape is primarily motivated by the desire for power and control as opposed to being essentially sexual in nature (Brownmiller, 1975). According to Brownmiller, rape is not the problem of a minority of deviant men but a symptom of society's pathology. Brownmiller discusses social, political and economic belief systems which place women in powerless positions relative to men, and which often imply an ownership of women by men - beliefs which implicitly condone, even encourage male aggression toward women. Brownmiller presents the extreme feminist perspective, the main premise being that men in our society are socialized to deprecate women. The pervasiveness of male sexual aggression toward women reported by several

investigators (e.g., Koss et al., 1987) supports the feminist perspective. The fact that some men rape and others apparently do not is less relevant than the pathology of our society and probably just means that some men carry out the abuse more overtly than do others.

Other investigators who support the feminist perspective place more importance on distinctions between men who rape and men who do not. Darke (1990) provides a compelling argument for the proposal that "men sexually assault in order to control, dominate and humiliate their victims. Humiliation is accomplished from a position of power; therefore, control and domination can be seen as necessary prerequisites, with forced sex providing the vehicle for humiliation" (p. 59). She distinguishes rapists from other men, for example, by suggesting studies comparing offender and control populations on hostility elicited by conditions of high female power.

Martha Burt (1980) has tested hypotheses about male aggression toward women by investigating prevailing beliefs and attitudes towards women, rape and interpersonal violence in the general population. Burt (1980) has reported that a substantial number of male non-offenders hold attitudes about women and rape which have come to be known as "rape myths". Burt (1980) and Burt and Albin (1981) argued that certain attitudes that are accepted within our society, particularly by rapists and potential rapists, are contributing factors to violence against women. These attitudes are what permit

sexually aggressive men to ignore social prohibitions against injuring others. She has devised several scales to measure attitudes that directly and indirectly support aggression, particularly toward women. Acceptance of these attitudes is reflected in agreement with statements such as "In the majority of rapes the victim is promiscuous or has a bad reputation." Burt (1980) found that in a sample of 598 men and women, acceptance of rape myths as measured by the Rape Myth Acceptance (RMA) Scale can be predicted from attitudes like Sex Role Stereotyping (SRS), Adversarial Sexual Beliefs (ASB), Sexual Conservatism and Acceptance of Interpersonal Violence (AIV).

Petty and Dawson (1989) investigated personality characteristics in relation to high and low use of force during sexual relations (self-reported) in a sample of 188 male college students. They found that the high and the low groups were discriminated by their self-report of likelihood to rape and by personality characteristics such as aggression, social cognizance, impulsivity and dominance. However, the high force subjects still had personality scores within the normal range leading to the conclusion that "men who use force in sexual relations reflect a non-deviant group of individuals".

Other studies have supported the salience of attitudes toward women and rape in "hypothetical" sexual aggression. College students who were rated high according to Burt's Sex-

Role Stereotyping showed higher subjective ratings of sexual arousal to rape depictions than low sex-role stereo-typers (Check and Malamuth, 1983). Fischer (1986) studied 823 college students and found that those more accepting of date rape were less sure it was rape, had more traditional attitudes toward women, were more sexually permissive, had less accurate sexual knowledge and were more likely to blame the situation.

Murphy, Coleman and Haynes (1986) studied the association among deviant arousal, social perceptions, personality, attitudes toward women and self-reported likelihood to rape in 208 males from the community. Rape Myth Acceptance (Burt 1980) was significantly correlated with self-reported coercive sexual behaviour as measured by their own sexual history questionnaire (similar to Koss and Oros (1982)). Both the self-report and penile tumescence (PT) measures of sexual arousal were significantly related to attitudes, social perceptions and likelihood to rape.

Mosher and Anderson (1986) found macho personality (MP), specifically scores on the Calloused Sex Attitude sub-scale, correlated with a history of sexual aggression in 175 male undergraduates. Muehlenhard and Linton (1987) studied the incidence of date rape among 341 female and 294 male university students and found that 77.6% of the women and 57.3% of the men had been involved in "some type of sexual aggression". Unwanted sexual intercourse was reported by 15% of the women and 7% of the men. Among the risk factors that

emerged from the survey were heavy use of alcohol or drugs, men's acceptance of traditional sex roles, interpersonal violence, adversarial attitudes about relationships and rape myths. Unfortunately, the broad and vague definition of sexual aggression ("some type") not only results in inflated rates but also challenges the validity of their results for making inferences about rape.

Lisak and Roth (1990) administered a battery of motivation measures to 15 college men who reported rape but were not charged and 15 students matched for sexual experience who had not been sexually aggressive. The sexually aggressive men were more hostile toward women, felt more betrayed or deceived by women, had stronger dominance motives, they felt more threatened or demeaned by women, and they expressed hypermasculine attitudes and interests.

Graff and Chartier (1988) in a study of 72 male non-offenders, found a positive correlation between Hostility Toward Women as measured by Check's 1985 scale and subjects' self-reported sexual arousal to coercive sexual depictions. They concluded that this negative attitude towards women is an important component in a constellation of cognitive attitudes and perceptions that lead to positive evaluation and acceptance of coercive sexuality.

Neil Malamuth and his colleagues have extensively studied aggression by men toward women among college students (e.g., Malamuth, 1981; Malamuth, 1983; Malamuth, Check and Briere,

1986; Malamuth, 1986; Malamuth, 1988; Malamuth, 1989; Malamuth and Ceniti, 1986). Their research has focused on predictors of sexual aggression as they measure it either by self-report of propensity or by subjects' behavioral response within a laboratory experimental paradigm, as exemplified by Malamuth (1988). In this study Malamuth also examined the relation between 2 measures of sexual aggression - "naturalistic" or self-report of sexually aggressive behaviour and "laboratory aggression" which is based on the degree of aggression the subject directs toward an experimental confederate in a Buss paradigm. In the first phase of this study 137 men (predominantly college students) were administered paper and pencil measures of attitudes (Burt's 1980 Acceptance of Interpersonal Violence and Sex-Role Stereotyping scales), motives (assessed motivations for sex particularly to identify dominance motives) and personality (specifically the psychoticism scale on the Eysenck Personality Questionnaire). A sub-sample of 88 of these men also were administered a self-report instrument assessing a continuum of aggressive behaviours including psychological pressure, physical coercion, attempted rape and rape (Koss and Oros, 1982).

In the second phase of the study sexual arousal (penile tumescence and self-report) were monitored in response to 3 written scenarios - one depicting a woman masturbating (non-relevant "warm-up"), one depicting a rape and one depicting mutually consenting sex. The third phase of the experiment

measured "laboratory aggression" against a female or male confederate in a bogus ESP experiment. Subjects were angered with some unflattering feedback given by the confederate regarding an attitude questionnaire they had completed. Then they were given the opportunity to administer an aversive noise to the confederate as a consequence of his or her errors in receiving ESP messages.

Malamuth found that all of the predictor variables except the penile tumescence rape index made a significant unique contribution to the level of aggression (noise level) against the female confederate. None were significant for the male target. He reports a significant correlation between the laboratory aggression index and the self-reported "naturalistic" aggression for both male and female targets, suggesting this supports the validity of both measures. Malamuth concludes that these data "support assertions that acts of aggression against women ... may be related to common underlying factors such as attitudes accepting of violence against women, dominance motives, antisocial personality characteristics and sexual arousal to aggression" (p. 491).

Similar results were found in other studies (Malamuth, 1983; Malamuth and Check, 1983). Malamuth (1986) found the same association between the motivation measures (dominance, hostility to women), attitudes condoning sexual aggression, anti-social personality, opportunity to be sexually aggressive as measured by sexual experience and sexual arousal to rape

and mutually consenting depictions - and subjects self-report of sexual aggression i.e., "naturalistic aggression". He found that most of these factors were significantly related to sexual aggression but the best prediction was achieved by an interaction of them all.

Rappaport and Burkhardt (1984) also examined correlates of self-reported sexually coercive behaviour in 201 male college students. Sexual coercion was measured using the Coercive Sexuality Scale (Rappaport and Burkhardt, 1984). They found that sexually coercive behaviour covaried with irresponsibility, lack of social conscience and acceptance of aggression toward women.

Other studies have looked at self-report measures of "likelihood to rape" (LR) and self-report of arousal-to-forced-sex as measures of proclivity to be sexually aggressive (e.g., Malamuth, Check and Briere, 1986; Malamuth and Ceniti, 1986; Malamuth, 1981; Malamuth and Check, 1983). In the first part of their study Malamuth, Check and Briere (1986) looked at self-reports of sexual arousal to scenarios varying according to aggressive/nonaggressive and sexual/nonsexual content for males (37) and females (43). They found an interaction between the 2 dimensions. For non-sexual depictions subjects reported more arousal for aggressive than for non-aggressive depictions. Malamuth et al. concluded that "aggression does not necessarily inhibit arousal of nonrapists".

In the second part of the same study Malamuth et al. classified male students according to how arousing they found the idea of forcing a woman to have sex (low, moderate or high). They measured ideological attitudes using Burts' (1980) Rape Myth Acceptance Scale, Acceptance of Interpersonal Violence Scale, Adversarial Sexual Beliefs, Sex Role Stereotyping, Sexual Conservatism. Subjects were asked to rate how attractive they found the idea of consenting sexual intercourse, forcing a woman to have sex etc. from 1 "very unattractive" to 4 "very attractive". They also were asked if they would ever try certain activities such as forcing a female to have sex, if they could be assured of not being caught and punished (i.e., "likelihood to rape" or LR). Ratings ranged from 1="no likelihood" to 5="very likely". Self-report and penile tumescence responses to audiotaped depictions like those used in the first phase of the experiment were monitored.

Discriminant analyses resulted in significant discriminations among the 3 levels of "arousal to force" based on the attitude measures (both those condoning aggression against women and general aggression) and based on the self-ratings. They report strong associations between "arousal-from-force" and self-reported attraction to the idea of raping and to reported likelihood of forcing sex if certain not to be caught and punished. MANOVA tests of the sexual arousal measures resulted in an interaction between

aggressive/nonaggressive depiction and "arousal-from-force" classification. Subjects who reported no or low "arousal-from-force" were less sexually aroused by the aggressive than by the non-aggressive stimuli whereas the high "arousal-from-force" group were more aroused by the aggressive depictions. Malamuth et al. concluded that these results support theoretical approaches like the feminist perspective that see cultural attitudes and roles as causes of aggression against women.

Malamuth and Ceniti (1986) hypothesized that higher likelihood to rape (LR) ratings would predict more laboratory aggression against a woman in a study that examined the effects of repeated exposure to violent and nonviolent pornography. LR and 3 measures of aggression were measured before and after pornography exposure. Analyses revealed that neither pre LR, post LR, nor pornography exposure had any effect on laboratory aggression. Correlations between pre LR and aggression were not significant although there were significant correlations between post-LR and aggression. On the basis of the latter significant finding the authors concluded that the results support "the validity of LR ratings as one index of inclinations to aggress against women that may under some circumstances be reflected in overt behaviours" (p.135).

Briere and Malamuth (1983) found that their sexuality variables, including knowledge, satisfaction, attitudes and

other information regarding sexual history did not predict "likelihood to rape" in 352 introductory psychology students. They propose that their results do not support the idea that rape is caused by sexual frustration or sexual maladjustment.

Malamuth's research has focused on factors predicting men's propensity or "proclivity" to rape using various indices of "sexual aggression". He and his colleagues have repeatedly concluded that this research supports the strong association between sexist attitudes, general hostility, anti-social personality, and sexual aggression. Despite concluding what may seem to be intuitively obvious and politically appropriate beliefs about sexual violence, on methodological grounds Malamuth's research did not warrant such conclusions. The foundation for his conclusions rests on the indices of sexual aggression he used, none of which were equivalent to actual rape. Much of his research consists of observed correlations between predictors and subjects' self-reports of "arousal-from-force". This is based on subjects' ratings of how attractive they found the idea of forcing a woman to have sex, or raping a woman. There was nothing in this question about wanting to rape, intending to rape, having raped. In fact, the question itself seems purposely worded in such a way as to encourage subjects to skirt the reality of rape. For many men the "idea" of rape may have little resemblance to an actual rape (which they have never, and probably would not ever commit). The "idea" of rape may be closer to the

eroticised version commonly portrayed in pornography. But regardless of what their idea of rape was, they were only rating how attractive they found it, which should not be confused with "propensity to rape".

Similarly Malamuth's measure of subjects' self-report of "likelihood to rape" if they were assured of no repercussions has questionable external validity. Perhaps the investigators felt subjects would reveal more about their "proclivity" if the question were couched in very hypothetical terms. Subjects say with varying degrees of likeliness what they think they might do under hypothetical circumstances which have little resemblance to reality in terms of the consequences and probably also in terms of the act itself. This measure, like "arousal-from-force", may reflect some offensive and sexist fantasies reported by a substantial proportion of the males tested, but it does not measure actual sexual aggression.

As distasteful as the idea of rape fantasy may be, it does not constitute committing rape. As Malamuth's work has shown, many men who by all indications were not rapists, admitted to feeling some arousal to or attraction to whatever was their perception (perhaps illusion) of rape. For example, Malamuth et al. (1986) found that almost one third of 359 male college students reported a high degree of sexual arousal from force - it is unlikely that they were all rapists. Malamuth et al. suggest that this indicates that arousal alone is

insufficient to cause rape and arousal alone is not equivalent to rape. Elsewhere, Malamuth (1981) notes that studies have shown that about 35% of "normal" men admit that they would likely rape if they were assured they would not be caught. While these figures suggest that these arousal and likelihood measures are not equivalent to actual rape, Malamuth's conclusions are based on the assumption that they are the same.

The most direct measure of sexual aggression used by Malamuth was self-report of past coercive sexual activities. The instrument employed was devised by Koss and Oros (1982) to assess a broad continuum of sexual aggression including psychological pressure, physical coercion, attempted rape and rape. Unfortunately, the utility of this measure is limited by how loosely sexual aggression is defined and by the willingness of subjects to report truthfully - which is particularly problematic when the activities in question are socially unacceptable at best.

Malamuth has proposed that "laboratory aggression" provides a more objective measure because it does not rely on self-report. However, again very little about the laboratory aggression compares to actual rape. It is conducted in a laboratory within the confines of a university-approved experiment. The opportunity to "aggress" is presented with the implication that it is expected and perhaps even condoned. Subjects are not face-to-face with their "victims" and the

aggression is not sexual. The setting is artificial and low in ecological validity and there is little about the situation that resembles an actual rape.

Malamuth's attempts to validate his measures tend to hinge on their "associations" with each other. For example, Malamuth, Check and Briere (1986) and Malamuth and Ceniti (1986) suggested that the relation between the arousal from force and "reported expectations of committing future acts of sexual coercion are consistent with the view that such arousal indeed is a motivator for coercive acts against women" (Malamuth et al., 1986, p. 338). He also argued for the validity of these measures based on other factors in common between men who rate themselves as high "likely to rape" and men who have raped. For example, Malamuth and Ceniti (1986) suggested "results consistently showed a relationship between one's reported likelihood to rape and responses associated with convicted rapists such a sexual arousal to rape stimuli, callous attitudes toward rape, beliefs in rape myths, and hostility toward women" (p. 130). Neither the circular reasoning of correlating unvalidated measures with each other, or similarities between subjects who rate themselves as high "likely to rape" and those who have raped, makes "likely to rape" equivalent to rape, as Malamuth assumed in his conclusions. There are many reasons one might expect to find similar attitudes among rapists and men who report arousal to and likelihood to rape, and these attitudes may be factors in

their rape activities and in how they answer the questionnaires about rape. Nevertheless, the correlation does not imply causation and "likelihood to rape" does not equal rape.

Malamuth's work and that of others looking at rape propensity is interesting as a study of attitudes towards rape and women and what these attitudes are associated with in the general population. However, the laboratory paradigms do not permit inferences about men who actually rape. Regardless of what the subjects in these studies say they might do, or what they act out in a contrived laboratory situation, one cannot assume that they have raped or will rape. This constitutes a critical difference between them and rapists.

The most reliable means of investigating the role of the many hypothesized factors in sexual aggression is to study men who are known to have raped as well as men who have not.

RESEARCH ON OFFENDERS

Deviant Arousal

Most of the research on known or convicted rapists, particularly the earlier studies, has focused on the sexual arousal to forced sex factor, i.e., deviant patterns of sexual arousal (e.g., Abel, Barlow, Blanchard and Guild, 1977; Abel, Blanchard, Becker and Djenderedjian, 1978; Abel Becker and Skinner, 1980; Baxter, Barbaree and Marshall, 1986; Davidson and Malcolm, 1985; Earls and Proulx, 1986; Earls, 1988;

Fedora, Reddon, Morrison, Fedora, Pascoe and Yeudall, 1992; Freund et al. 1986; Hall, 1989; Hall, Proctor and Nelson, 1988; Kercher and Walker, 1973; Knight, Roseberg and Schneider, 1985; Kolarky, Madlafousek and Novotna, 1978; Murphy, Krisak, Stalgaitis and Anderson, 1984; Quinsey, Chaplin and Upfold, 1984; Quinsey and Chaplin, 1984; Quinsey, Chaplin and Varney, 1981; Wydra, Marshall, Earls and Barbaree, 1983). Most studies of rapists included a measure of deviant arousal amongst other variables (e.g., Barbaree, Marshall and Lanthier, 1979; Baxter, Marshall, Barbaree, Davidson and Malcolm, 1984; Murphy, Coleman and Haynes, 1986; Wormith, 1986; Wormith, Bradford, Pawlak, Borzecki and Zohar, 1988). Some studies of sexual aggression in non-offenders also have included sexual arousal to rape stimuli (e.g, Darke, 1987; Malamuth, 1981, 1983; 1988; Malamuth and Check, 1983; Malamuth, Check and Briere, 1986; Murphy, Haynes, Coleman and Flanagan, 1985; Templeman and Stinnett, 1991). Erection measures may be less common among the latter type of studies of non-offenders as much because of the intrusivness of the measurement procedure as for socio-political reasons that discount it's relevance.

Laboratory assessment of deviant sexual arousal is a frequently used procedure in the assessment and treatment of sex offenders. However, the applicability of this to the assessment and understanding of sexually aggressive has been fervently debated on methodological and technical grounds, as

well as on theoretical grounds. Examination of the procedures used in measurement of sexual arousal and how they have been applied in assessment of sex offenders is warranted.

The assessment of deviant arousal generally involves presenting subjects with a series of sexual stimuli, either auditory, visual or both, which vary with respect to the age and the gender of the subject depicted or with respect to the degree of coercion and violence depicted (or whatever is considered relevant to the sexual behaviour in question). Sexual arousal patterns are analyzed to help determine sexual preference, and deviant patterns can be investigated further and treated (Earls and Marshall, 1983; Abel and Blanchard, 1976).

General Arousal Responses as Measures of Sexual Interest

Investigators have attempted to determine erotic preferences using various measures of general arousal as indicators. The major problem with these approaches stems from their lack of response specificity. Sexual preference can be inferred only when other causes of a response are controlled in the situation. However, general arousal responses can be generated by a variety of emotional states or autonomic responses, such as anxiety, anger, surprise, shock, as well as by sexual interest.

Freund (1981) reviewed several studies in which galvanic skin response was used as a measure of erotic arousal (e.g., Loisel and Mollenauer, 1965; Solyom and Beck, 1967; Wenger

et al., 1968; Hamrick, 1974). In all of these studies normal subjects were reported to have responded more to pictures of nudes than to pictures of clothed people, or more to erotically preferred versus non-preferred, or more to erotic than to neutral stimuli. However, none of these studies properly controlled for alternative explanations for the observed increases in general arousal. Freund cites two other studies, Servais and Hubin (1965) and Hain and Linton (1969), in which GSR did not differentiate between erotic stimulus categories. Craig and Wood (1971), testing ninety male undergraduates, found that GSR responses differentiated between neutral slides and either female nude or homicide victim slides but responses to the erotic and the gruesome slides were not different from each other.

Cardiovascular responses such as heart rate, blood pressure and finger pulse volume appear to be no more useful as indicators of erotic preference than GSR. Wenger et al. (1968) studied these 4 responses and reported that only blood pressure differentiated between erotic and neutral stimuli. Other investigators also reported differentiation between erotic and neutral or between erotic and unpleasant visual stimuli using blood pressure (Adamson et al., 1972, Corman, 1968). Romano (1969) found that none of the cardiovascular responses differentiated erotic from non-erotic stimuli. Monitoring GSR, heart rate, forearm blood flow and penile tumescence, Bancroft and Mathews (1971) successfully

differentiated between erotic and non-erotic stimuli only with the phallometry.

The first report of the use of pupil dilation as an indicator of sexual arousal was by Hess and Polt, (1960). Controlling for brightness, they presented 6 subjects (2 females and 4 males) with slides of a semi-nude male, a semi-nude female, a female with a baby, and a baby alone, each preceded by a neutral control slide. Calculating change in pupil diameter from control to stimulus slide, they found that the males' pupils dilated most while viewing the female semi-nude and the pupils of the two females dilated the least to this slide. Other studies are divided between those that support the validity of pupillary width as an indicator of specifically erotic arousal (Nunnally et al., 1967; Hamel, 1974; Atwood and Howell, 1971) and those that contest it (Scott et al., 1967; Lawless and Wake, 1969).

Attempts have been made to determine sexual preference on the basis of the amount of time subjects look at various visual stimuli. As early as 1942, Rosenzweig allowed subjects to press a button to change the pictures they were viewing, and exposure times were used as an indicator of preference. Zamansky (1956) added a rationale for subjects' looking (estimate amount of area occupied by each of 2 pictures at a time), in an attempt to disguise the real purpose of the experiment. Presenting pictures of males and females, he was able to successfully discriminate between 20 homosexual and 20

heterosexual males. More recently, Abel (1983) has used recordings of moment-to-moment eye movements to determine amount of time subjects spent looking at different parts of a visual display as an indicator of sexual preferences. However, because of technical problems which have impeded development of this technique, and also probably because of its questionable utility for use with non-admitter sexual offenders, he has not developed this procedure further.

Other physiological responses studied as potential indicators of sexual preference include respiration, electromyography, and electroencephalography. However, with the exception of Costell et al. (1972), who report successful predictions of sexual preference on the basis of cortical evoked potentials to slides of nude males and females, the little research done with these parameters does not support their utility as measures of sexual preference. For example Graber (1985) monitored EEG during masturbation and ejaculation and found no evidence for EEG changes specific to sexual arousal and orgasm.

In summary, studies indicate that under most circumstances measures of general arousal provide poor measures of specifically sexual arousal or interest. Zuckerman (1971) reviewed measures of sexual arousal and found penile tumescence to be a consistently more reliable measure of male sexual arousal than heart rate, pupillary dilation, GSR or blood pressure changes.

Physiology of Penile Tumescence

Before examining the technology of penile tumescence measurement, a brief discussion of the physiological changes that occur in the penis during sexual arousal is necessary. Masters and Johnson's (1966) research indicated that the human sexual response could be described as a cycle with four stages: excitement, plateau, orgasm, and resolution. Penile tumescence assessments involve measurement of responses occurring in the first two stages only. "The most prominent physical sign of excitation in men is erection of the penis, which usually occurs within a few seconds after sexual stimulation starts" (Masters, Johnson and Kolodny, 1982, p.59). Erection occurs as a result of vasocongestion of the spongy tissues, or blood flow into the corpora cavernosa of the penis. The exact mechanism of engorgement, i.e., the reason for the slowing down of the outflow of blood from the penis, is not agreed upon. The increased fluid pressure causes an increase in size (volume, length and circumference) and rigidity of the penis. The first change is a lengthening of the penis followed by increase in circumference. "In the plateau phase high levels of sexual arousal are maintained and intensified" (Masters, Johnson and Kolodny, 1982, p. 62). The diameter of the head of the penis near the coronal ridge increases slightly and sometimes it deepens in colour as a result of the vasocongestion. Measures of full erection, either circumference or volumetric, correspond to penis size

during the plateau phase.

Penile Tumescence Measurement

"Erectile responses are easy to measure, occur rapidly to a wide variety of sexual stimuli and can be easily reversed" (Earls and Marshall, 1983). However, there are several ways of measuring even so specific a response as erection. Some attempts have been made to quantify the vasocongestion in the penis using temperature change of the penis (Hammer and Webster, 1980; Seeley et al., 1980). However, because of its slow reversibility or return to baseline, temperature is very limited as an indicator of sexual arousal.

More direct measures of these blood flow changes have been investigated using electrical bioimpedance recordings of the penis. Bradford (1986) reports the use of a bioimpedance analyzer for obtaining records of heart-rate, pulse volume and total blood flow, all of which contribute to the calculation of a perfusion index of the penis. Although still plagued by some practical problems such as movement artifacts and electrode placement, this technique has interesting potential for the technology of penile tumescence assessments and warrants further investigation.

Circumference or Volume Measures

Most studies reported in the literature employ one of two types of measurements of penile tumescence. Freund reported measurement of overall volume changes to monitor this process (e.g., Freund, 1961; Freund, Sedlacek and Knob, 1965).

Subjects place their penis inside a tubular contraption which is sealed around the base of the penis. As tumescence occurs and the penis expands inside the vessel, the displaced air (or liquid) is forced through an output tube and is quantified to represent the volume increase in penis size.

The most popular measure of tumescence is penile circumference, a method which was pioneered by Bancroft (Bancroft et al. 1966) and by Barlow (Barlow et al. 1970). Investigators who employ circumference measures of penile tumescence generally use one of two types of devices. The Barlow gauge is a small horseshoe shaped metal band which is placed on the penis, at some point behind the coronal ridge. The mercury-in-rubber and the indium gallium gauges consist of fine hollow rubber tubes filled with the liquid metal. Subjects slip this rubber loop over the head of the penis and around the circumference, usually behind the coronal ridge. As penile circumference increases and the gauge stretches, the column of liquid metal narrows and lengthens and the electrical resistance, measured via a low voltage constant current passing through the gauge, increases. The changes in circumference of the gauge are recorded digitally as changes in millivolts and/or on an analogue graph. These changes can be converted to millimeters of penile circumference change and/or percentage of full erection.

There has been some debate as to which method is better for penile tumescence evaluations of sex offenders. In their

review, Earls and Marshall (1983) noted that circumferential devices are portable and more comfortable than the larger, more complex and more intrusive volumetric devices. Earls and Marshall (1983) challenged the suggestion (Rosen and Keefe, 1978) that the volumetric device is more sensitive. They cited two studies which compared the two measures. McConaghy (1974) reported some concordance between the two measures but "at times, the changes [in recordings of the two devices] can be opposite" (p. 387). They attributed this to the lengthening which occurs with initial blood flow into the cavernosa which often results in a brief decrease in the circumference measure.

Freund, Langevin and Barlow (1974) measured responses of male volunteers (non-offenders) to neutral slides and to slides of nudes of both sexes in 4 age categories, with the two types of devices. They reported discrimination between the slides of females of different ages using volume changes whereas circumference only discriminated between female adult and child. Earls and Marshall (1983) suggested that Freund et al.'s conclusion that volume changes are more accurate should be considered in light of the technical problems which precluded the use of the data of 34 out of the original 48 subjects in that study. The volumetric device is very awkward, cumbersome, and highly sensitive to measurement artifacts. Few investigators or clinicians could afford to discard the majority of their assessments because of technical problems.

This device is highly impractical for routine assessment and predisposes the investigator to measurement errors. Furthermore, Earls and Marshall suggest that there is evidence that it is not more sensitive at the early stages of erection since the penile lengthening and circumference decrease often result in no change in the total volume. McAnulty and Adams (1992) examined the penile tumescence responses of pedophiles and argue that penile volume responses (PVR) and penile circumference responses (PCR) have more similarities than differences.

While there is more general acceptance and use of PCR's than of PVR's, there is not agreement among investigators who use this measure as to how to score or summarize the circumference response. Quinsey has advocated conversion to z-scores. Earls, Quinsey and Castonguay (1987) looked at 3 methods of scoring penile circumference changes in 19 non-offenders who viewed 20 slides in 5 categories. They report that z-scores explained the highest proportion of variance (52.7%), % of full erection explained 32.5% and raw scores explained 30.1%. Abel (e.g., Abel et al., 1977) devised rape and pedophilic indices based on ratios of deviant to non-deviant responses. Ratios allow for between subject comparisons without the difficulty of variations in levels of sexual responding. Eccles, Marshall and Barbaree (1988) testing 15 students, reported stability of ratio measures (relative arousal to 2 classes of stimuli) across up to 9

sessions over a 3 week period, supporting the use of indexes.

Validity of Penile Tumescence Assessment of Sex Offenders

It has been established that erection is the single most reliable index of sexual arousal in males (e.g., Zuckerman, 1971). However, the process of making inferences about an individual's (particularly a sexual offender's) sexual tendencies and preferences based on their sexual response patterns is fraught with some major problems. These include the threat to the internal validity presented by the degree of voluntary control an individual has over his erection and the problem of testing and interpreting the responses of "non-admitters". The primary concern from an applied perspective is the external validity of the procedure, or the extent to which the assessment of sexual preference in the laboratory predicts behaviour outside of the laboratory. The assumption made by those who employ this procedure is that measurement of penile responses to stimuli in the lab allows "specification of a global aspect of sexual behaviour" (Earls and Marshall, 1983). It is assumed that measures of current sexual arousal (state) are reflective of overall sexual preferences or responsiveness (trait).

Assessment using penile circumference responses (PCR) has good face validity which probably accounts for its' popularity in the evaluation and treatment of sex offenders. However, research on the predictive validity of penile tumescence (PT) testing has not been consistent and results depend, among

other things, on the specific type of sex offenders being tested.

Enthusiasm was generated from a number of early studies which claimed to distinguish various types of sex offenders on the basis of PT results (e.g., Abel, Becker, Blanchard and Djenderedjian, 1975; Abel, Blanchard, Barlow and Mavissakalian, 1975; Abel and Blanchard, 1976; Abel et al., 1977; 1978; 1980; Abel, Becker, Murphy and Flanagan, 1981; Freund, 1963; Barbaree et al. 1979; Quinsey, Chaplin and Varney, 1981; Quinsey Chaplin and Upfold, 1984; Quinsey and Chaplin, 1984. Abel, Barlow, Blanchard and Guild (1977) examined deviant arousal in a small group of rapists and non-rapists. Subjects were presented descriptions of rape, non-sexual assault and mutually consenting sex (all heterosexual) while penile tumescence was monitored. They devised a rape index by dividing the rape response by the response to consenting sex so an index of 1 represented equal arousal to both stimuli. They reported higher indices among rapists than among non-rapists and higher indices also were associated with more sadistic and more frequent offenses. In another paper Abel, Becker, Blanchard, and Djenderedjian (1978) summarize their research and conclude that while rapists and non-rapists respond similarly to mutually consenting sexual cues, only rapists responded to rape scenarios. For non-rapists, subjective report of arousal was parallel to penile tumescence but the rapists minimized arousal to all cues. Arousal levels

varied highly across subjects so Abel suggested that indexes are more useful than raw responses. They found that sadistic rapists had very high indexes and suggested that when the Rape Index is greater than .70, there is a high probability that the respondent is a rapist. Among their subjects they found that 1/15 of their "normal" subjects had a RI greater than 1.0 compared to 12/19 of their rapists.

Quinsey, Chaplin and Varney (1981) measured sexual arousal responses to audiotapes comparing 20 incarcerated rapists, 10 incarcerated non-sex offenders and 20 volunteers from the community. Half of the community volunteers were given specific instructions indicating that sexual arousal to unusual stimuli was common among normal men. The rapists responded more to the rape descriptions than did the two comparison groups with normal instructions but not more than the community group with special instructions. The groups did not differ on their raw score responses to the mutually consenting scenario or to the physical abuse narratives. The investigators also calculated a rape index to compare groups on their relative responsiveness to the rape and the mutually consenting narratives. Rapist's mean index (1.28) was significantly higher than that of all of the non-rapist groups (mean=0.63) including those with special instructions. Using a cut-off of 0.80, 80% of the rapists and 73% of the non-rapists were correctly classified. The authors concluded that these sexual arousal patterns "appear to be of potential use

in the assessment and treatment of rapists" (p. 127).

Quinsey, Chaplin and Upfold (1984) also examined the responses of 20 rapists, 10 non-sex offenders and 20 non-patients to audiotaped stimuli. They reported that the rapists were differentiated from the control group on the basis of their responses to consenting sex and rape but they did not respond differently to the assault scenario. In another study, Quinsey and Chaplin (1984) reported that non-sex offenders (n=15) responded most to consenting sex narratives and least to stories where the victim suffered whereas rapists' (n=15) did not vary across categories. They suggest that their results support the theory that "nonrapists' sexual responses are inhibited by nonsexual cues given by the female whereas those of the rapists are not". They calculated z-scores and rape indexes and report mean rape indexes for the non-rapists of .41 and for rapists of 1.43.

Earls and Proulx (1986) compared 10 rapists and 10 non-rapists on responses to 4 classes of audiotaped stimuli (mutually consenting sex, rape, non-sexual assault and sexually neutral) and found a difference on the rape but not the mutually consenting scenario. They reported that the discrimination was even more marked when they analyzed the rape index. In his review of research on deviant sexual arousal to sexually aggressive and nonsexually aggressive cues in rapists and child molesters, Earls (1988) concluded that research supports the validity of erectile responses to sexual

violence for identifying these two offender groups.

Recall that Malamuth (1983) investigated the associations among attitudes about aggression toward women, sexual responsiveness to rape stimuli and "laboratory aggression" among 42 university students. He found that higher rape indexes were predictive of laboratory aggression. Men who were more aroused by rape depictions were more aggressive toward a female confederate in the laboratory but the rape index did not predict aggression toward a male. Malamuth suggests that these results support the construct validity of the rape index as a measure of aggressive tendencies toward women. He replicated these results in a larger study (n=137) (Malamuth, 1988).

Investigators have claimed responses to visual stimuli also discriminate sex offenders. Wormith (1986) tested the responses of incarcerated rapists, pedophiles and nonsexual offenders (N=36) to slides depicting men, women, children, couples and neutral scenes. On the basis of both subjective ratings on a 7-point Likert scale and physiological responses, he correctly classified 64% of the subjects. Fedora et al. (1992) presented sadistic slides to 60 control subjects and 227 sex offenders including 60 sexual aggressives. They found that the PCR's were greater for the sexually aggressive group than for the other sex offenders or the controls.

Other studies do not support the application of penile tumescence technology to the evaluation of rapists. Baxter

and his colleagues (1984) assessed 144 sexual offenders including rapists, homosexual pedophiles and heterosexual pedophiles. They found all groups were characterized by social and sexual inadequacies and they tended to be underassertive, had low self-esteem and negative sexual attitudes. However, the penile tumescence testing that revealed deviant arousal was a factor only for the pedophiles. In another study using audio-taped stimuli, Baxter, Barbaree and Marshall (1986) found that on average both rapists (n=60) and student comparison subjects (n=41) showed more arousal to descriptions of mutually consenting sex than to rape scenarios. However, the non-rapists showed greater discrimination between the consenting scenarios and the rape scenarios than did the rapists. More importantly, the non-rapists showed more sensitivity to subtle cues for eagerness-reluctance even in a consenting situation. Nevertheless, only 10% of the group of incarcerated rapists had rape indices greater than 1 compared to 2% of the non-rapists. Only 30% of the rapists exceeded a cut-off of 0.80 compared to 17% of comparison subjects. Baxter et al. suggested that deviant sexual arousal patterns, which did not characterize the majority of their group of rapists, may be characteristic only of the most dangerous or persistent rapists, or of preferential rapists. Nevertheless, their results did not support the application of this procedure for identifying rape proclivity.

Murphy, Krisak, Stalgaitis and Anderson (1984) found no

significant difference between the penile tumescence responses of incarcerated rapists and non-rapists. They reported that Abel's rape index did not reliably classify the rapists and they suggested that perhaps PT assessments have limitations with populations such as offenders who deny they have aggressive urges. Penile tumescence assessments of 203 volunteers from the community yielded 22% with a rape index greater than 1 in a study conducted by Murphy, Haynes, Coleman and Flanagan's (1985). Responses under suppress instructions misclassified 46% of them as rapists, and Murphy et al., attribute their result to low responses to rape in both conditions.

Hall, Proctor and Nelson (1988) addressed the external validity of penile tumescence in their assessment of sexual arousal to non-deviant and pedophilic audiotapes in 122 sex offenders. They noted that while penile tumescence measures are more reliable than self-report or other physiological measures, they have not had unequivocal success in identifying deviant sexual arousal patterns among sexual offenders. Hall et al. assessed 3 groups of sex offenders (rapist, hebophiles or men who had molested adolescents, and pedophiles) using audiotapes that varied with respect to age of subject and degree of force and violence depicted. They concluded that the penile tumescence testing has poor external validity because they found no relationship between the physiological responses to the audiotapes and the type of sexual offense.

"The validity of penile tumescence in classifying subtypes of sexual offenders, in determining the relationship of deviant to non-deviant sexual arousal, and correspondence of such measures to relevant behavioural measures remains to be established" (p. 118). Wormith, Bradford, Pawlak, Borzecki and Zohar (1988) also found no difference in the penile circumference responses of rapists and other sex offenders to audiotaped depictions of rape, consenting sex and non-sexual assault. They attributed this to small sample sizes (10 and 13) and large within group variances.

Hall (1989) examined the PT responses of 78 sex offenders to audiotapes depicting mutually consenting sex, rape and assault and found that arousal to the consenting scenario was higher than to the coercive ones. Subjects who were able to completely inhibit arousal with suppress instructions also showed less arousal to rape than the rest of the group when not instructed to suppress. Hall suggests that PT may be more related to arousability than to offending behaviour. He reports similar results looking at stimuli depicting child molesting (Hall, 1991).

McConaghy (1989) was critical of the use of penile circumference response (PCR) for diagnostic and treatment decisions for sex offenders. In his review of the research, he concluded that individual rapists and pedophiles cannot be identified from their PCR's. He suggested that penile volume responses (PVR's) are more sensitive than PCR's for assessing

sexual orientation (McConaghy, 1992). However, in his own treatment program he does not use PT at all, arguing it is not a valid measure of individual pedophile or rape tendencies (McConaghy, 1990). Instead, he weighs sex offenders' self-reports heavier in their assessments.

Simon and Schouten (1991) reviewed the theory and research on the use of PT to diagnose sexual deviance and to monitor the modification of sexual preference. They too concluded that the "validity and clinical utility of plethysmograph in the assessment and treatment of sexual deviance remains to be established" (p. 87). They argued that the technical accuracy is still questionable and the procedure is based on still untested assumptions about the relationship between sexual responding in the laboratory and overt sexuality.

In her review of the literature, Darke (1990) concluded that deviant arousal is neither inevitable in rapists nor limited to rapists. Despite a rapidly growing body of research in this area it seems that the validity of penile tumescence evaluation in the assessment and treatment of sexual offenders, particularly of rapists remains questionable.

Reliability of Penile Tumescence Tests

Studies specifically addressing the issue of reliability of deviant arousal measures also yield mixed results. Barbaree, Baxter and Marshall (1989) examined rape indexes of

60 rapists and 41 non-rapists and found stronger discrimination between consent and no consent scenarios for non-rapists than for the rapists but generally the test-retest reliability was poor. Eliminating low responders improved the reliability coefficients but their results still indicated that the rape index is questionable as a diagnostic test. Because there are no universal standards for this procedure they noted that these conclusions are only applicable to their procedures and stimuli.

Krisak, Murphy and Stalgaitis (1981) reported overall low test-re-test reliability for the rape index among 18 non-sex offender inmates. They presented both visual and auditory stimuli depicting mutually consenting sex, rape and aggression under arouse and suppress instructions. Davidson and Malcolm (1985) looked at the reliability of the rape index over 2 sessions and found highest reliability when low responders were eliminated and for peak rather than average responses. While they concluded that reliability was high under these conditions, validity was still questionable because of the problem of voluntary control.

Response Distortions and Validity

The degree to which subjects can exert voluntary control over their responses has important implications for the validity of PT assessment of sexual offenders. On the basis of an early study of non-offenders (male undergraduates),

Rosen (1973) concluded that penile tumescence is not an involuntary response under only reflexive control. He found that through instrumental conditioning subjects were able to suppress responses to 10-minute pornographic passages. However, with only instructions to suppress and without the external feedback subjects did not demonstrate response suppression.

It has been demonstrated that groups of homosexuals, pedophiles and non-offenders can produce sexual responses to non-preferred stimuli (Freund, 1961; 1963; 1967; Freund, Sedlacek and Knob, 1965; Quinsey and Bergerson, 1976; Quinsey and Carrigan, 1978; Laws and Holmen, 1978). There also is evidence that subjects are capable of suppressing responses to preferred stimuli (Laws and Rubin, 1969; Hensen and Rubin, 1971; Abel and Blanchard, 1976; Wydra, Marshall, Barbaree, and Earls, 1981). However, about half of the subjects in the Laws and Rubin (1969) and Hensen and Rubin (1971) studies failed to maintain their response suppression. Mahoney and Strassberg (1991) instructed 48 non-offenders to suppress arousal to an erotic videotape and to generate arousal to neutral videotape. They found that no subjects were able to produce a sexual response pattern that was misclassified as the condition he was trying to emulate. Kaine and Mersereau (1988) found that 10 sex offenders and 10 non-offenders could reduce PT when instructed to suppress responses to their stated sexual preference (age and gender) depicted in audio-visual stimuli.

However, attempts to generate arousal to non-preferred stimuli did not yield significant differences.

In another study, Abel, Barlow, Blanchard and Mavissakalian (1975) instructed 20 homosexuals to suppress arousal to preferred stimuli and found that subjects were able to reduce tumescence to videotapes and slides, but not to audiotapes. Abel et al. speculated that this failure to suppress to the auditory stimuli may have been related to the lower initial tumescence response levels to the tapes, i.e., the lower the initial response, the less room there is for suppression. However, Wydra, Marshall, Earls and Barbaree (1983) found that both rapists and non-deviants could significantly reduce their arousal to audiotapes of mutually consenting sex and rape when instructed to do so. Their subjects showed initial arousal levels similar to those reported by Abel et al., indicating that the failure to suppress in Abel's study was not because of low initial response levels. Wydra et al. suggested that high arousal levels are not necessary in order to get voluntary response suppression.

Malcolm, Davidson and Marshall (1985) speculated that it should be more difficult to inhibit at high levels of pre-suppress arousal where stimuli are more attractive or preferred. They found that 10 incarcerated rapists overall had more difficulty controlling their arousal at low levels (25 and 50%) than at high levels (75%) while viewing slides.

However, ability to suppress arousal depended on both the stimulus content and the level of pre-suppress arousal. When subjects were instructed to suppress at 50% of full erection, they were more successful for non-preferred than for preferred sexual stimuli. However, at 25% and at 75% levels of pre-suppress arousal, they suppressed equally well to both stimuli. At 25% and 75%, subjects had more difficulty suppressing for sexual than for non-sexual stimuli, whereas at moderate levels of arousal (50%) there was not a significant difference. Successful suppression seems to depend on a combination of factors.

Abel et al. (1975) suggested that suppression to audiotapes may have been more difficult because the auditory stimulus competes with thoughts or images which subjects use to distract themselves. Although a later study (Abel, Blanchard and Barlow, 1981) did not replicate this failure to suppress to audio-taped stimuli, distraction remains an issue. Geer and Fuhr (1976) support the distraction hypothesis. They presented subjects with an erotic tape through one earphone and a series of numbers which they were to repeat in the other. They found an inverse relationship between penile tumescence and the degree of difficulty subjects had attending to the digits. They concluded that the erotic value of a stimulus depends on the extent to which a subject attends directly to that stimulus. This would imply that successful reduction in sexual response to an erotic stimulus, could be

achieved by not attending to, or by distraction from a stimulus.

Acknowledging that patients may manipulate and distort their sexual responses, Abel and his colleagues have argued that the PT assessments must include instructions for the patient "to suppress his sexual arousal by any mental means. By varying the instructional set it is possible to determine not only the extent to which the patient becomes aroused to various stimuli, but also his ability to suppress that arousal in an attempt to falsify the objective recording of his erection responses. The difference between his erections to stimuli when instructed to become aroused versus when told to suppress his arousal is an objective measure of his ability to inhibit his sexual arousal.... This inhibitory skill may be a pivotal issue in the control of the aggressive's urges to rape" (Abel, Becker, and Skinner, 1980 p. 141).

Subjective Report of Sexual Arousal and Validity

Another threat to the internal validity of phallometric testing is the evidence of low congruence between self-reported arousal and arousal measured by penile circumference changes. The literature is mixed regarding this issue, with some investigators (e.g., Abel et al., 1977) testing rapists, finding "reasonable agreement" between the two measures and others reporting a poor relationship (e.g., Farkas et al., 1979; with student volunteers). Earls and Marshall (1983) suggest that the poor relationship observed in some studies

may be related to measurement issues such as the length versus circumference changes discussed earlier (i.e., the observation of a circumference decrease in the very early stages of erection corresponding to penile lengthening.) Perhaps the issue is level of arousal, with poor congruence at low levels and adequate to good congruence at higher levels.

Wormith (1986) monitored the PT and subjective ratings of 36 incarcerated rapists, child molesters and non-sex offenders in response to slides of men, women, children, couples and neutral scenes. His "multi-trait, multi-method analysis" favoured physiological data over self-reports.

Discrepancies in the literature may be partly explained by different investigators using not only different erection measures but also using different methods of measuring subjective arousal. Earls and Marshall (1983) observed higher correlations between self-report and physiological arousal when subjects reported a single estimate or maximum arousal rating to a stimulus than when moment-to-moment subjective ratings were obtained. They suggested that the more precise tracking of subjective arousal is probably more difficult. While there is clearly a need for improvement in the self-report measures used, many investigators still feel that the key to assessment of sexual preference is in the more "objective" procedures (Earls and Marshall, 1983).

Stimulus Modality for Penile Tumescence Testing

It has not been established if there is any one stimulus

modality which is most effective for penile tumescence testing. Julien and Over (1988) monitored PCR and SR responses of 24 students to erotic material depicting the same sequence of events in 5 different modalities (film, slides, spoken text, written text and fantasy). Film elicited the greatest arousal, slides the least and the other 3 modes were intermediate. Abel, Blanchard and Barlow (1981), and Abel et al. (1978) found also that the videotape was the most powerful stimulus modality (i.e., elicited the greatest erections). However, they noted the advantages of audio tapes. "Audio tape seems to combine flexibility with precision and this modality has been used .. to tease out erection responses to pure aggressive stimuli in rapists" (Abel et al. 1981, p. 31-32).

Furthermore, the purpose of penile tumescence tests of sex offenders is not to produce the highest responses possible but to assess the discriminability of subjects' responses to different categories of stimuli. If the sexual impact is too strong subjects may respond maximally to all stimuli resulting in no discriminability of responses to different stimulus categories (i.e., ceiling effect). On the other hand a floor effect will eliminate any discriminability if the stimulus impact is too weak. Stimuli that generally produce moderate levels of arousal, allowing for variation in either direction, are probably optimal. Audiotapes, apart from allowing for more flexibility in content than other modalities, meet this

criterion.

Despite the face validity, the utility of penile tumescence testing of sex offenders is not supported unequivocally in the literature. Obviously a major problem stems from a lack of consistency in important aspects of the procedure from study to study. Factors such as stimulus content, modality, type of measurement calculated, adaptation of subjects, populations from which samples are drawn etc., are important to the outcome and these vary across studies. As some investigators (e.g., Barbaree, Baxter and Marshall, 1989) have noted, this current lack of standardization in PT testing of sex offenders requires studies to validate the procedure as it is conducted in different clinics and laboratories and with different types of sex offenders.

Deviant Arousal and Theories of Rape

Investigations, either clinical or research, which focus on deviant arousal tend to come from one of two theoretical positions on rape behaviour. Many of the studies, particularly earlier ones in which deviant arousal was the primary or sole factor, explicitly or implicitly advocate the sexual preference hypothesis of rape. This perspective is based on the assumption that rape is a sexual deviation, stemming from an abnormal sexual preference for sexual aggression over consenting sex. Abel and Rouleau (1990) have argued for the diagnosis of rapists as paraphiliacs. Hence tests of sexual preference and arousal to rape stimuli are

pivotal to understanding rapists within this framework. Barbaree and his colleagues (e.g., Barbaree, Marshall and Lanthier, 1979; Barbaree, Marshall, Lightfoot and Yates, 1983) have proposed the disinhibition hypothesis of rape. According to this view rapists and non-rapists are similarly aroused by the sexual components of rape and consenting sex scenarios. For the non-rapists, the coercive or violent aspects of the rape scenario inhibit sexual arousal whereas for the rapists this inhibition has been broken down. It is suggested that any number of factors including anger, alcohol intoxication, attitudes supportive of rape, violence, hostility to women may "disinhibit" sexual arousal to rape in rapists.

Other Factors Associated with Rape

There has been substantial criticism of the emphasis placed on the sexual aspects of sexual assault, particularly of rape, to the exclusion of other considerations (e.g., Brownmiller, 1975; Groth, 1979). The implications often made implicitly and sometimes explicitly by many investigators who use penile tumescence in response to rape stimuli to assess sex offenders is that the deviant sexual arousal is the primary motivation for the assault (e.g., Abel et al., 1978; Quinsey et al., 1981). Many investigators, influenced by the feminist movement and authors such as Brownmiller who have heightened awareness of the non-sexual needs served by sexual assault, have recognized the importance of other factors in the etiology of sexual aggression. Research focusing on

attitudes - specifically toward women, rape and violence - has been reviewed already. Other characteristics of rapists have been reported in the literature.

Personality/MMPI Research

Research on personality characteristics among men who rape has yielded some consistent results. Zverina (1978) reported that their sample of 69 rapists were characterized as young (20-30), low intelligence, anti-social psychopaths, alcoholics, sexual deviates and frequently incapable of achieving adequate sexual relationships. Marshall, Abel and Quinsey (1983) have noted several characteristics that are prevalent among sexual offenders. Among these are social-sexual incompetence, stress, poor self-esteem and sexist attitudes.

Knight, Roseberg, and Schneider (1985) provide a good review of the psychometric research of sex offenders. They note that the Minnesota Multiphasic Personality Inventory (MMPI) is the self-report inventory most frequently used in sex offender research. While earlier MMPI research included heterogeneous samples of sex offenders and yielded inconsistent results, later studies have yielded a few 2-point codes prevalent in sex offender samples. They suggest that the 4-8 (Pd-Sc) code reported in some papers (Armentrout and Hauer, 1978; Rader, 1977) may have important implications for the study of some sexual offenders because of "its association with sexual preoccupations and crimes that are extremely

brutal, often bizarre and poorly planned" (p. 239). The rapists in Rader's (1977) study had significantly higher Pd, Pt and Sc scale scores than assaulters, whereas Karacan et al. (1974) found rapists' MMPI's no different than other inmates', with both prison groups showing significant psychopathology on several scales. Hartman (1967) found no differences on MMPI profiles between sexual deviates (n=18) and sociopaths without sexual deviations (n=18). All had elevated Pd scales. In Pantan's (1978) study there were no differences between rapists with adult victims and rapists of children. MMPI profiles for both groups revealed aggravated hostility, resentment, social alienation, self-centredness and impulsive seeking of immediate gratification. Profiles of a group of nonviolent child molesters were quite different from the rapists revealing self-alienation, low self-esteem, self-doubt, anxiety, inhibition of aggression, aversion to violence, feelings of inadequacy, fear of heterosexual failure etc. Hall et al., 1992 compared MMPI profiles of sex offenders against adults with sex offenders against children (N=261) and found they did not differ. Randomly dividing the total sample into 2 groups for cluster analysis revealed two clusters which were consistent for both halves of the sample. The first cluster was unelevated with scale 4 as the highest point. The second cluster had elevations on scales 8, 4, 2 and 7. They suggested that psychological variables may be more relevant for discriminating sex offenders than victim

maturity.

Personality assessments of 58 rapists in McDonald and Paitich's (1982-83) study revealed profiles which were overly assaultive, hypersexual, emotionally disturbed and from a criminal subculture. McDonald and Paitich concluded that they appeared to rape out of a habitual impulsive style of narcissistic gratification.

Erickson, Luxenberg, Walbeck and Seeley (1987) compared 2-point codes for a group of convicted rapists with 4 other sex offender groups (N=403), as well as with codes reported in previous studies for psychiatric patients and other criminals. The sex offenders showed more 4-5 (Pd-Mf) and 4-8 (Pd-Sc) codes than other inmates and the rapists showed more profiles that are usually associated with assaultiveness.

Analysis of only the MMPI validity scales correctly classified 83% of a group of indicted sex offenders (n=90) as denying or not denying offense (Lanyon and Lutz, 1984). Grossman and Cavanaugh (1990) also examined the relationship between admitting/denying paraphilia and tendency to minimize psychopathology on the MMPI in 36 sex offenders. They found that patients who denied paraphilia were significantly more likely to minimize psychopathology and the most frequent pathologies were anti-social attitudes, depressive features, somatization, and thought disorder. Wolf (1988) summarizes the personalities of sexual aggressors as character disordered with narcissism, distorted perceptions of surroundings and

tendencies toward being ruminative, chronically depressed and sexually preoccupied.

Baxter, Marshall, Barbaree, Davidson, and Malcolm (1984) conducted extensive psychometric testing on sexual offenders including rapists, homosexual pedophiles, heterosexual pedophiles and heterosexual hebophiles (preference for adolescents). They found no differences between the four groups, but overall subjects tended to be unassertive, had low self-esteem, high social anxiety, and negative puritanical attitudes towards women and sex. The authors concluded that social-sexual inadequacy appears to be a factor in deviant sexual behaviour, but there is no relationship between type of social incompetence and type of sexual deviation.

Overholser and Beck (1986) also observed more heterosocial skill deficits among rapists and child-molesters than among non-sex offender inmates, low SES volunteers and college students who were infrequent daters (n=12 for each group) in a role-play situation. However, contrary to common belief and prediction, they found that measures of hostility or impulsivity including the Multiple Affect Adjective Checklist, Rathus Assertiveness Scale, Buss-Durkee Hostility Inventory and Fear of Negative Evaluation Scale were not useful in distinguishing either the child-molesters or the rapists from the other 3 groups.

Scott and Tretreault (1987) examined attitudes among 20 incarcerated rapists, 20 non-sex related violent offenders and

20 male controls using the Attitudes Toward Women Scale. They too supported the hypothesis that the rapists had more "conservative attitudes" toward women, particularly with respect to sexual behaviour. Scully and Marolla (1985) reported that the rapists in their study tended to believe more in rape myths, especially those justifying violence against women, than did control groups of other inmates.

Segal and Stermac 1984 did not find that rapists as a group were conservative or negative in attitude toward women. On a 25-item version of the Attitude Toward Women (ATW) scale, hospitalized rapists, incarcerated rapists, nonsex offenders, low SES control subjects showed similar value orientations.

Recurrent attitude themes, particularly hostility and puritanical attitudes toward women, emerged from studies of men who have raped, although as the latter study indicated these factors may be more characteristic of inmates, or low SES males than of rapists. Research indicates a high frequency of 4-8 and 4-5 MMPI two-point codes among rapists. Investigators and clinicians also have observed that sex offenders are frequently socially and sexually inadequate.

Childhood and Sexual History

Some common experiences found in the histories of various types of sex offenders have been identified. Langevin, Wright and Handy (1989) investigated sexual history, parent-child relationships and personality in 462 sex offenders. Childhood sexual abuse was reported by 201 of their

subjects and while they were similar demographically to those who had not been abused, the abused offenders had a greater variety and frequency of sexual experiences as adults, committed more rapes, showed more emotional instability, had more disturbed father-son relationships, more parental alcohol, and parental aggression. Tingle, Barnard, Robbins, Newman et al. (1986) also found through interviewing 64 mentally disordered sex offenders, that rapists were more likely to come from disrupted families and to have a history of violence than child molesters who were more likely to have close attachments to their mothers.

Prentky, Knight, Sims, Straus et al. (1989) examined the severity of sexual and non-sexual aggression in 82 sex offenders and reported that severity of sexual aggression was predicted by developmental history - particularly caregiver constancy and sexual deviation in the family. Severity of nonsexual aggression was related to childhood institutional history, physical abuse and neglect. Based on their observation that sex offenders experienced a higher incidence of sexual abuse and are more likely to have been reared in dysfunctional families than are most groups they are compared to, Levant and Bass (1991) investigated to what extent rapists and pedophiles identified with their parents compared to general offenders and college students. Administration of the parental identifications scale to all 4 groups indicated that rapists and pedophiles did identify less with both parents

than did subjects in the other 2 groups.

Interested in other types of sexual activities sex offenders engaged in, Abel, Becker, Cunningham-Rathner, Mittleman and Rouleau (1988) analyzed the self-reported sexual experiences of 561 paraphiliacs with assured confidentiality. These subjects reported as many as 10 different types of deviant sexual behaviour. A study by Bradford, Boulet and Pawlak (1992) supported Abel's conclusion that sex offenders rarely have only one paraphilia in their history. However, research by Templeman and Stinnet (1991) indicted that such a diversity of past paraphilic activities may not necessarily distinguish sex offenders from "non-offenders". They investigated the sexual histories of 60 male college students - a subject pool which is often tapped for control subjects in sex research. Two thirds of their sample reported a history of sexual misconduct including child molesting, rape, voyeurism and frottage.

Pornography and Sexual Aggression

The relationship between pornography and sexual aggression has been investigated extensively but results are not consistent. The Meese Commission reported that pornography exposure leads to sexual offenses and emphasized the importance of developmental patterns of offenders. Studies of university students have found a greater "likelihood of rape" or use of force among subjects who use violent pornography than among those who use non-violent

pornography or none (Demare, Briere and Lips, 1988). Garcia (1986) also found that it was specifically exposure to coercive or violent sexual themes that was related to traditional attitudes toward women whereas subjects with greater exposure to sexual materials had more liberal attitudes toward women and sexual behaviour.

Linz, Donnerstein and Penrod (1988) tested the hypothesis that exposure to even non-violent sexually explicit material which portrays women in a degrading light will desensitize subjects to rape victims. They had subjects view 3 types of films - violent pornography, x-rated non-violent pornography and "soft porn" non-violent films which depict women as objects to be conquered - and assessed the effect on ratings of violence, enjoyment, negative arousal and attitudes to rape (Rape Myth Acceptance). They manipulated degree of exposure (2 films or 5 films) and found desensitization to violence occurred quickly (i.e., number of films subjects were exposed to made little difference). An interaction with type of film revealed that only subjects exposed to the violent pornography significantly decreased self-reported negative arousal from the first day to the last, while those viewing the other 2 types of films did not change on this measure. It is not clear if this difference between groups is a reflection of greater desensitization in the violent pornography group or a statistical artifact. The negative arousal ratings (at first day and last day) were 3 to 4 times higher for this group than

for subjects exposed to the other 2 types of films. Consequently, these results may reflect a regression toward the mean.

Malamuth (1981) exposed male students classified as either sexually "force oriented" or "non-force oriented" to a slide-audio show depicting either rape or mutually consenting sex and then had them create their own sexual fantasies. Subjects showed high sexual arousal (PT) to all stimuli and subjects exposed to rape stimuli, regardless of whether they were high or low force oriented, created more violent sexual fantasies than those exposed to the mutually consenting scenario.

Darke (1987) presented rape scenarios varying with respect to consent, aggression and female arousal to male university students. She found that the women's consent and the women's arousal both serve to disinhibit arousal regardless of how subjects rated the victims pain. Neither the aggressive cues nor empathy for victim inhibited arousal to sexually aggressive stimuli. Darke suggested that these results have implications for cultural attitudes and practices relating to violence to women including pornography.

Other studies, particularly those investigating sex offenders as well as non-offenders, do not substantiate the suggested association between pornography and sex offending. Condon and Nutter (1988) found no difference between sex offenders, paraphiliacs, sexual dysfunction patients and

controls on frequency of pornography use or age of first exposure to pornography. Langevin, Lang, Wright, Handy, Frenzel and Black (1988) also found that their control subjects reported greater exposure to erotica than did their sex offenders.

Goldstein (1973) looked at experience with pornography during adolescence and adulthood among rapists, child molesters, homosexuals, transsexuals, heavy porn users and control subjects. Offenders and homosexuals reported less exposure than controls during adolescents. In adulthood sex offenders and transsexuals reported less pornography use than controls and homosexuals. Goldstein suggests that these results do not support the view that exposure to pornography during adolescence is associated with sexual pathology.

Smeaton and Byrne (1987) examined the effects of viewing erotic, violent and neutral films among a group of university students. They found that type of film did not effect subjects reported likelihood to rape but hypermasculinity and past sexual aggression was associated with greater likelihood to rape.

Kutchinsky (1991) reviewed the literature on pornography and rape and concluded that among the laboratory studies a certain degree of increased aggressiveness has been found under certain circumstances but to extrapolate from laboratory effects to real-life rape is dubious. He also studied the development of rape in 4 countries in relation to the

availability of pornography including aggressive pornography. Results showed that in none of the countries did rape increase more than non-sexual violent crimes. Kutchinsky concluded that there is no evidence that pornography causes rape.

Hui (1986) reviewed 35 studies over a 15 year period addressing the effects of exposure to pornography. One study reported no psychosocial effects of pornography, 20 purportedly found a causal link between pornography exposure and aggression, 3 reported a link between exposure to pornography and rape, and in 11 studies there was an association between exposure to pornography and a greater acceptance by men of victimization of women. The author concludes that pornography does have psychosocial effects on users.

Much of the research on the effects of pornography is plagued by methodological problems as are other areas investigating sexual aggression. Results from different studies may be inconsistent partly due to conclusions reflecting socio-political views rather than sound empirical investigation. As Kutchinsky (1991) noted, the laboratory studies have questionable external validity. While in some studies (e.g., Demare and Briere, 1986) subjects have been shown to have higher "likeliness to rape" ratings following exposure to sexually aggressive pornography, the problems with associating these measures and actual rape have already been discussed.

Alcohol Abuse

An association between alcohol abuse and sexual violence has been assumed and has been reported in some studies (e.g., Bradford and MacLean, 1984; Bradford, Greenberg and Motayne, 1992). Rada 1975 noted that 35% of a group of 77 convicted rapists at Atascadero were alcoholics. Gray, Lesser, Rebach, Hooks et al. (1988) surveyed 430 university students regarding sexual activity. Thirty-five percent of the women reported being a victim of a sex offense although only 22% of the rape victims reported the crime. Subjects were more likely to be either a victim or perpetrator of sexual aggression when alcohol or drugs were involved.

It has been suggested that disinhibitors like anger and alcohol may be more relevant than sexual preference to rape (Barbaree, Marshall and Lanthier (1979). The theory is that sexual aggression is more likely when the cues for nonconsent fail to inhibit a man's arousal either as a result of anger, alcohol intoxication or cognitive distortions. Barbaree, Marshall, Lightfoot and Yates (1983) tested the sexual arousal responses of male social drinkers to rape and mutually consenting stimuli in a balanced placebo-drink design. On placebo, subjects increased the difference between arousal to mutually consenting (which was greater) and rape stimuli as the session progressed. However, after alcohol ingestion subjects did not develop the same magnitude of discrimination between sexual cues as with no alcohol. The authors suggest

that alcohol intoxication can disinhibit sexual arousal to rape cues in non-rapists.

Wormith et al. (1988) examined deviant arousal among rapists and non-rapists under sober conditions and after ingesting alcohol. They found that penile circumference responses to rape stimuli were reduced after alcohol only for the non-rapists but not for the rapists. Barbaree, Marshall, Lightfoot and Yates (1979) found alcohol intoxication of non-rapists produced sexual preference responses like rapists. Hypothesizing that this effect is mediated by an impairment of social cue reading associated with alcohol intoxication, Wydra et al. (1983) investigated the effects of alcohol on recognition of inappropriateness of forced sex. They found that non-offenders given alcohol detected inappropriate cues earlier in the stimulus presentation than either rapists or nonrapist inmates or than non-offenders with no alcohol.

Intelligence and Heterosexual Competence

The relevance of intelligence as a factor in sexual aggression has been considered by a few investigators. Wormith (1983) examined the assessment results of 205 incarcerated sex offenders, half of whom were rapists, and reported "intellectual limitations" in about 25% of them. Karacan et al. (1974) reported that the rapists in their study had lower IQ's than prison controls.

Wormith et al. (1988) reported an interaction between intelligence and deviant penile tumescence responding among a

group of rapists. Dividing the rapists into low and high IQ at the median, they found that low IQ rapists displayed greater responses to rape stimuli than high IQ rapists. Murphy, Haynes, Coleman and Flanagan (1985) also reported a significant association between subjects' IQ and Rape Index such that Rape Index decreased as IQ increased. These results indicate that intelligence may be a mediating factor in sexual arousal patterns.

Several investigators have suggested that rapists misinterpret heterosocial cues. Lipton, McDonel and McFall (1987) compared heterosocial cue reading accuracy in rapists, violent nonrapists and nonviolent nonrapists and found that the rapists did show deficits in social cue reading ability.

Marshall (1989) concluded from research and years of clinical experience that failure to achieve intimacy in relations with adults (perhaps as a result of lack of social competence) results in emotional loneliness and an aggressive disposition. He suggested this is critical to understanding sexual offenders and who tend to pursue intimacy through sexuality or less threatening partners.

CURRENT INVESTIGATION

To investigate many of the factors purportedly associated with sexual aggression, the present study employed a comprehensive assessment battery routinely administered to rapists evaluated at the Sexual Behaviours Clinic of the Royal Ottawa Hospital. Testing of rapists was done as part of their

clinical evaluation and the battery also was administered to a group of non-offenders from the general population.

One purpose of the study was to assess the validity of the procedures, particularly the penile tumescence testing, which is modelled after Abel, Becker and Skinner's (1980) assessment of rapists.

It was hypothesized that deviant sexual arousal would discriminate between men who have sexually assaulted women, i.e., rapists referred to the clinic, and non-offender comparison subjects. However, results of other studies indicated that "a large proportion of incarcerated rapists and a considerable segment of the general male population are aroused to both rape and non-rape pornography" (Darke, 1990 p. 56). It was expected that some comparison subjects also would show arousal to rape stimuli.

In addition to the penile tumescence testing, the assessment battery included several other measures considered relevant to sexual aggression. Subjects completed the Derogatis Sexual Functioning Inventory (DSFI) (1980) to obtain a measure of heterosexual and social functioning. The DSFI includes the "Symptoms" sub-scale, a complete instrument developed to measure psychopathology, known apart from the DSFI as the Brief Symptom Inventory (BSI) (Derogatis and Melisaratos, 1983). Also administered was the Buss-Durkee Hostility Inventory (BDHI) (Buss and Durkee, 1957) as a measure of general aggression and hostility, Burt's Rape Myth

Acceptance Scale (RMA), Acceptance of Interpersonal Violence Scale (AIV) and Adversarial Sexual Beliefs (ASB) (1980). Rapaport and Burkhart's (1984) Coercive Sexuality Scale was included to get a self-report measure of sexually coercive behaviour for both offenders and non-offenders. The relevance of alcohol abuse to sexually aggressive behaviour was assessed using the Michigan Alcoholism Screening Test (MAST) (Selzer, Vinokur and van Rooijan, 1975). The Bradford Sexual History Questionnaire (1987) provided information about the subject's own experience with sexual abuse as a child, their exposure to pornography and their paraphilic activities. The MMPI (Hathaway and McKinley, 1982) was administered to all of the non-offenders and to half of the offenders, as a measure of personality and psychopathology. Intelligence was assessed using either the full version or the abbreviated version of the WAIS-R (Wechsler, 1981; Silverstein, 1982).

The breadth of the assessment information permitted an analysis of several factors hypothesized to be predictors of sexual aggression. Sexual aggression was defined in 2 ways. The primary classification was according to offense history, with subjects being either offenders (identified rapists referred for assessment to the Sexual Behaviours Clinic of the Royal Ottawa Hospital) or non-offenders. It was expected that some non-offenders would report having engaged in forced sexual activities (Koss and Oros, 1982; Rapaport and Burkhart, 1984) so subjects also were classified according to self-

reported history of sexual coercion irrespective of offense history.

METHOD

SUBJECTS

Comparison group and screening

The comparison group consisted of 41 men between the ages of 18 and 45 recruited through a vaguely-worded advertisement placed in the local newspaper (Appendix A). Details of the study were explained to those who responded to the ad. They were told that the study was to assess stimuli used for the assessment of sexual preference. They also were told that they would be asked some questions about their sexual history.

Mandatory reporting of any information concerning abuse, including sexual abuse, of a child is required according to the Child and Family Services Act of the Province of Ontario (1984) so subjects were informed that if they disclosed information about any sexual activity involving children, the investigators were obliged by law to report it to the Children's Aid Society (C.A.S.). At this point, before respondents had identified themselves or disclosed any information about their sexual behaviour, they were given the opportunity to discontinue their involvement in the study. Eighty percent (49/60) of those who answered the ad agreed to participate after hearing about the study. While the warning concerning the Child and Family Services Act may have eliminated some potential volunteers, the effect of this on the volunteer sample would be to increase the probability that they were an appropriate comparison group of non-deviants.

Individuals who agreed to participate were screened for sexual dysfunction and any indication of sexual deviation (i.e., past arrests, or admission or suspicion of any sexual problems). Inferences regarding their sexual "non-deviancy" were based on their responses to questions regarding their motivation for volunteering, their stated sexual preferences, their mental and physical health history, etc. Eight people who answered the ad were not included on the basis of the screening.

Anonymity and confidentiality (within the constraints of the law) were maintained but demographic information such as age, marital and employment status and level of education was collected. Comparison subjects were paid \$50 for 4 to 5 hours of testing.

Offenders

The clinical group included 52 patients assessed in the Sexual Behaviours Clinic of the Royal Ottawa Hospital between July 1987 and August 1990. Patients included in the study were 18 to 51 year old males who were referred as a result of a rape charge (sexual assault against a woman). All clinical subjects admitted to having been sexually aggressive against a woman (i.e., those who denied were not included). All subjects gave written informed consent to participate. Complete data were obtained for all of the comparison subjects but limitations imposed by the clinical considerations resulted in missing data for some patients. A total of 93

subjects were included in the study.

PAPER AND PENCIL MEASURES

A questionnaire package, including the instruments described below, was administered. Subjects required approximately 3 hours to complete the questionnaires.

Sexual Functioning

The package included the Derogatis Sexual Functioning Inventory (DSFI) to assess general sexual functioning as well as specific dimensions (Derogatis, 1978, 1980) (Appendix B). The DSFI was intended to be an "omnibus" test of sexual functioning "measuring the fundamental components judged essential to effective sexual behaviour" (Derogatis, 1980, p 117). The instrument also taps features important to healthy social functioning and as such it provided a measure of social competence. The 10 sub-scales were designed to sample the most essential dimensions relevant to healthy sexual functioning.

1. Information (INF) assesses the respondent's knowledge of sexual anatomy, psychology etc. through 26 true-false items.
2. Experience (EXP) consists of a list of 24 sexual behaviours including "basic sexual activities", oral-genital sex etc., and respondents indicate whether they have experienced them and whether they have in the past 60 days.

3. Drive (DRI) taps frequency ratings for sexual intercourse, masturbation, kissing and petting, sexual fantasy, and ideal frequency of intercourse, to yield an overall measure of sexual drive.
4. Sexual Attitude (ATT) reflects the respondent's attitudes concerning sexual activity which has been operationalized on continuum ranging from liberal to conservative. Higher scores are more liberal and are considered positive for healthy sexual functioning.
5. Psychological Symptoms (SYM) also known apart from the DSFI as the Brief Symptom Inventory (BSI) is a multidimensional measure reflecting symptoms of distress on 9 primary dimensions although only one of the 3 global indices (Global Severity Index) contributes to the DSFI profile.
6. Affects (AFF) also known as the Affect Balance Scale (ABS), measures a wide range of negative emotions via a 40-item adjective check list.
7. Gender Role Definition (GEN) reflects the degree to which respondents polarize their definitions of masculine and feminine. More polarized are considered more rigid and these individuals are prone to unmet expectations and difficulties with sexual functioning.
8. Sexual Fantasy (FAN) consists of 20 sexual fantasy 'emes and the score is simply the number of the themes endorsed by the respondent.

9. Body Image (BOD) consists of 10 general body attributes and 5 gender specific features which respondents rate according to how satisfied they are with themselves.
10. Satisfaction (SAT) consists of 10 items reflecting the individual's level of sexual fulfilment.

A global measure called the Sexual Functioning Index (SEI) is derived by summing the 10 subtest scores and this provides a quantitative summary of the individual's level of sexual functioning.

Attitude Measures

The Buss-Durkee Hostility Inventory (BDHI) provided an overall measure of hostility which was standardized on the normal population (Buss and Durkee, 1957) (Appendix C). This is a measure of attitudes and behaviours reflective of hostility in general. Scores from the following 7 sub-scales are added to obtain a total score:

1. Negativism (usually oppositional behaviour against authority, refusing to cooperate);
2. Resentment (jealously, anger at the world over mistreatment);
3. Indirect Hostility (devious hostility like gossip);
4. Assault (physical violence against others);
5. Suspicion (projection of hostility onto others);
6. Irritability (quick temper, ready to explode at slight provocation);
7. Verbal Hostility (express negative feelings in content

and style e.g., shouting).

An eighth scale, Guilt, reflecting the degree of guilt feelings reported by the subject, is part of the inventory but not included in the total score. A total score of 38 and above is considered high according to Buss and Durkee (1957).

Burt's (1980) "Rape-Myth Acceptance (RMA) Scale" (13-items) was administered to assess the prevalence of cognitive distortions about rape among sex offenders and among the non-deviant comparison subjects (Appendix D). Two short scales also developed by Burt (1980) were included to assess "Acceptance of Interpersonal Violence" (AIV) (6-items) and "Adversarial Sexual Beliefs" (ASB) (9-items) (Appendices E and F). Overall scores for each scale were obtained by calculating the sum of the subject's ratings (strongly agree to strongly disagree) for all items. A few individual items on each scale are reversed and these are transformed to be consistent with the direction of the rest of the scale before summing. The RMA score was the sum of items 1 to 13 (items 14 to 19 were added by Burt to evaluate other forms of bigotry). On all 3 scales lower scores reflect attitudes condoning aggression (sexual and general) or supporting "rape myths". Higher scores reflect disagreement with such attitudes.

Self-reported Sexual Aggression

Because of the evidence of rape proclivity among the general population (e.g., Malamuth, 1981), subjects completed the Coercive Sexuality Scale (CSS) (Rapaport and Burkhart,

1984) to evaluate the prevalence of coercive sex among both groups (Appendix G). Subjects were asked to indicate on a 4-point scale how often they had engaged in various sexual activities. Items describe varying degrees of coercive heterosexual behaviour. The first 11 items range from less to more intrusive from - 1 "Held a woman's hand against her will." to 11 "Had intercourse with a woman against her will". Items in the second half of the questionnaire focus on the method of force used, again increasing in severity from - 12 "Attempted to verbally convince a woman to have sex with you" to 19 "Used a weapon on a woman to get her to have sex with you." The sum of responses yields an overall total score as well as scores for each half (items 1 to 11=CSSA and items 12 to 19=CSSB). A modified CSSB was calculated after eliminating item 12 which seems to tap a different dimension of behaviour than the rest of the items. Subjects were classified as having been sexually coercive if they endorsed any of items 13 to 19 at least once.

Alcohol Abuse

The Michigan Alcohol Screening Test (MAST), which is used in the general population to identify incidence or behaviours indicative of alcohol abuse (Selzer, Vinokur, van Rooijan, 1975; Gibbs, 1983), was included to examine the association between alcohol abuse and sexual aggression (Appendix H). Subjects check "yes" or "no" to 24 questions on their drinking practices, such as "Have you ever gotten into

fighting when drinking?" and "Do you ever drink before noon?".

Items are weighted according to the strength of their association with alcoholism and summed for a total score. Scores of 5 or 6 are considered suggestive of alcohol problems and a score of 7 or more is considered strongly indicative of alcohol abuse.

Sexual History and Activity

Finally, a questionnaire used in the Sexual Behaviours Clinic of the Royal Ottawa Hospital (the Bradford Sexual History Inventory - BSHI, Bradford et al., 1987) elicited information about the subject's sexual experiences and current activity (Appendix I). This questionnaire includes 65 items, some with multiple parts, tapping information about childhood sexual contact with adults and about sexual experiences as an adult. Examples are "During the past year approximately how many times a month did you have sexual contact with a female 16 or older?" (choices range from "none" to "over 50 times/month") and "How many times have you intentionally exposed yourself to a person in a public place?" ("none" to "over 100").

Since several different aspects of sexual experience are covered in this questionnaire, an overall or total score would be meaningless. The inventory was designed to provide descriptive clinical information although previous factor analysis of the responses of a larger sample of sex offenders tested in the SBC has verified a summary scheme for items 30

to 52 (pertaining to "paraphilic activities"). An "honesty" variable was created by summing responses to 3 items which most subjects are expected to endorse if they understand the question and answer truthfully (e.g, "Have you ever felt sexually aroused?"). Subjects who do not endorse at least 2 of these items are excluded from analyses of the BSHI.

A brief scale (Sexual Activity) was administered to get self-report of number of orgasms in the previous 7 days (Appendix J).

Personality / Psychopathology

The Minnesota Multiphasic Personality Inventory (MMPI: Hathaway and McKinley, 1982) was administered as a global personality assessment and to assess the association between psychopathology and sexual aggression. Although MMPI data were missing for almost half of the offenders, the inventories were scored and results were interpreted cautiously. The 10 clinical scales of the MMPI are;

- 1 Hypochondriasis (Hs)
- 2 Depression (D)
- 3 Hysteria (Hy)
- 4 Psychopathic Deviance (Pd)
- 5 Masculinity/Femininity (MF)
- 6 Paranoia (Pa)
- 7 Psychasthenia (Pt)
- 8 Schizophrenia (Sc)
- 9 Hypomania (Ma)

10 Social Introversion (Si)

The Brief Symptom Inventory (BSI) (Derogatis, 1975) was administered to all subjects. This is the DSFI "Symptoms" scale which Derogatis had devised independently as a self-report inventory to reflect the psychological symptom patterns of individuals (Derogatis and Melisaratos, 1983). It is a brief form of the SCL-90-R. The 53 items were selected to reflect the 9 primary symptom dimensions of the SCL-90-R.

Three global indices of distress are provided which convey level or depth of symptomatic distress currently experienced by the respondent. The General Severity Index (GSI) is the single best indicator of current distress levels. The GSI is a combination of frequency of symptoms and intensity of perceived distress. The Positive Symptom Distress Index (PSDI) is a pure intensity measure corrected for the number of symptoms and it conveys whether the respondent tends to augment or attenuate in reporting. The Positive Symptom Total (PST) is a count of the symptoms. Respondents rate each item of the BSI on a 5-point scale of distress (0-4) from "not at all" to "extremely".

The 9 symptom dimensions are: .

1. Somatization (SOM) which reflects psychological distress stemming from perception of bodily dysfunction such as cardiovascular, gastrointestinal, respiratory complaints and aches and pains of the gross musculature;
2. Obsessive-Compulsive (O-C) which reflects unwanted

thoughts and actions experienced by the respondent as unremitting or irresistible;

3. Interpersonal Sensitivity (I-S) focuses on feelings of personal inadequacy such as self-deprecation and intense discomfort during interpersonal interactions;
4. Depression (DEP) reflects symptoms of dysphoric affect and mood, feelings of hopelessness and futility;
5. Anxiety (ANX) includes symptoms associated with high anxiety such as restlessness, nervousness and tension.
6. Hostility (HOS) reflects hostile thoughts, feelings and actions, such as annoyance, irritability, urges to break things, and outbursts of temper.
7. Phobic Anxiety (PHOB) includes symptoms of phobic fears such as travel, crowds, open spaces etc.;
8. Paranoid Ideation (PAR) is based on the paranoia as a mode of thinking characterized by projection, hostility, suspiciousness, fear of loss of autonomy;
9. Psychoticism (PSY) is represented on a continuum from a mildly alien life-style to floridly psychotic.

The BSI was designed to be interpreted at 3 levels - the global scores, the primary symptom dimensions and the individual symptom items. Normative data were collected on 3 groups psychiatric in-patients, psychiatric outpatients and non-patients. Derogatis reports excellent convergence with the MMPI scales.

ASSESSMENT OF INTELLIGENCE

It has been suggested that intelligence may be a moderating variable in subjects penile tumescence responding in the laboratory (Wormith et al., 1988). Subject's intellectual level was estimated using an abbreviated version of the WAIS-R (Wechsler, 1981) which consists of the Vocabulary and the Block Design subtests. Scores from the combination of these two tests are highly correlated (McNemar's formula $r=.91$) with Full Scale I.Q. (Silverstein, 1982). Full scale I.Q. was used instead of the abbreviated version in cases where this was available for patients. As a result of limitations imposed by clinical constraints, raw I.Q. scores were not attainable for some of the patient sample although the I.Q. range was available for almost all patients.

ASSESSMENT OF DEVIANT AROUSAL

Apparatus

Penile circumference responses (PCR) were measured using a strain gauge manufactured by Farrall Instruments. The indium gallium sensors were manufactured by Parks. At the beginning of each session subjects measured their flaccid circumference by wrapping a strip of paper around their penis and marking it where it meets. An appropriate size sensor for the subject (flaccid circumference minus 10mm) was calibrated prior to every assessment. The first calibration step was 5mm below the sensor size. The maximum step allowed for at least

a 30mm expansion over the subject's flaccid baseline measure or for his maximum response. Subjects were instructed to place the sensor around the penis just behind the coronal ridge. A CAT analog-to-digital conversion interface (Computer Assisted Therapy, Farrall Instruments) monitored the conductance changes of the Indium Gallium loop, corresponding to changes in penile circumference. Data from the CAT was recorded and stored by an IBM/PC compatible computer (Kanetek Max-P.C.). Subject's responses were displayed graphically during testing on the computer video monitor.

Stimulus presentation was computer programmed using software provided by Farrall Instruments (CAT 3.05 and 4.50). Videotapes were run on a Toshiba VHS Video Cassette Recorder and were viewed on a Hitachi 14" colour television. Slides were projected onto a 40X40" screen by a Kodak Ektographic slide projector. Audiotapes were played on a Realistic portable cassette recorder to subjects through stereo headphones.

Stimulus Materials

Videotape

Because of a "warm-up" effect commonly observed during tests of sexual arousal (Baxter et al., 1986) stimuli presented first during a session often produce unreliable responses. To mitigate this order effect, subjects initially viewed an explicit videotape depicting sex between consenting adults. The videotape also was to facilitate the subject's

attainment of a full erection which was used as a measure of comparison for their responses to the relevant stimuli.

The use of a powerful erotic stimulus for the warm-up also serves to "prime" the subject for the relevant stimuli. Subjects invariably arrive at the lab apprehensive about the penile tumescence testing. Immediate introduction of the test stimuli may result in no or low arousal measures which are uninterpretable. Viewing the videotape serves to relax the subject, or to distract him from his anxiety and to heighten his overall arousability.

Slides

A series of 60 slides (Farrall Instruments Inc.) which depict a violent rape were presented during each session. The scenario began with a woman opening a door through which a man pushed his way. He brutally raped the woman at knife point. Slides were projected consecutively for 10 seconds each.

Audiotapes

Subjects listened to a series of audiotapes consisting of 6 two-minute segments each describing physical interactions with an adult female. The scenarios, narrated in the second person depicted either a violent rape, mutually consenting sex between a man and a woman or non-sexual violent assault. Transcripts of scenarios are in Appendix K.

In addition to evaluating subject's responses to different stimulus categories the study was designed to assess their ability to suppress their sexual responses during the

audio-tape presentation. Standard instructions informed them of the testing procedure. They were told to listen to the tapes, to relax and warned not to try to physically manipulate themselves in order to influence their responses since such attempts are easily recognized. With suppress instructions subjects were told to listen to the tape but to try to suppress their sexual arousal. They were told to use whatever mental means they wish as long as they did not physically manipulate themselves. Three scenarios (one from each category) were presented with standard instructions ("allow yourself to become aroused if you feel it"). Following this a comparable set of three scenarios were presented with instructions to suppress sexual arousal. Complete instructions are in Appendix L.

Penile Tumescence Response Definition

Penile circumference response (PCR) was recorded on a 0 to 100 scale with 100 calibrated to correspond to a circumference change of 30 mm. This covers the full range of responding observed in the SBC laboratory and was estimated to cover the maximum erection response for all subjects. PCR for each stimulus category was the maximum response that occurred during the stimulus interval or during the inter-stimulus interval immediately following it. Subject's maximum response during the session was recorded and all PCR's were converted to a percentage of their maximum. Clinical interpretations of PCR often are based only on responses greater than 5% or 10%

(or some clinical investigators require up to 20%) of full erection. No subjects in the present study obtained a maximum PCR of less than 5% of the estimated full erection response so none would have been excluded as "non-responders" on the basis on this minimal criterion. Furthermore, even low responses are of interest and since the sexual arousal measures are only a part of the present study no subjects were excluded from the study on the basis of the magnitude of their PCR's.

Self-Report of Sexual Arousal

In addition to monitoring physiological responses, at the end of each stimulus presentation subjects were asked to indicate their subjective arousal level on a Likert scale. They were asked to circle their response on a scale with alternatives ranging from 1 (no arousal) to 10 (maximum arousal) (Appendix M).

PROCEDURE

Questionnaires

When comparison subjects arrived for their appointment, the procedure was reviewed with them and informed consent was obtained. The offenders signed the consent forms prior to their clinical assessment (Appendix N). Comparison subjects completed the questionnaire package which including the MMPI and administration of the abbreviated WAIS-R. Offenders were administered these as part of their clinical psychological evaluation and therefore the data for this group were less

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PM-1 3½" x 4" PHOTOGRAPHIC MICROCOPY TARGET
NBS 1010a ANSI/ISO #2 EQUIVALENT

PRECISIONSM RESOLUTION TARGETS

complete than for comparison subjects. All testing took place in the laboratory of the Sexual Behaviours Clinic of the Royal Ottawa Hospital.

Penile Tumescence Testing

The erotic videotape was presented first during the penile tumescence testing. Subjects viewed a videotape depicting explicit consenting sex between a man and a woman. Following the videotape, when the subject's penile circumference response had returned to baseline (flaccid state as indicated by less than 10 on the 0 to 100 calibrated scale) the rape slide series was presented. After detumescence to baseline the audiotapes were presented with arouse and suppress instructions. The inter-stimulus interval between each scenario, varied (from a minimum of 30 seconds) depending on how long subjects required for their PCR to return to baseline. Penile tumescence testing took about an hour and a half in total.

Debriefing

After completion of testing, comparison subjects were debriefed in an interview with the investigator and paid. Information conveyed included the purpose of the study in relation to the problem of sexual aggression. Subjects were invited to inquire about the results of the study when the project was completed. Clinical subjects were given feedback about their assessment results by their physician.

RESULTS

Data were analyzed using 3 different group classification criteria. The major analyses were comparisons between the rapists and the non-offenders and predictions about associations between the factors studied and rape behaviour were tested. Comparisons also were made between subjects who reported past sexually coercive behaviour and those who reported none, collapsed across offense history. Because of the high degree of overlap between groups according to this classification criterion and the first, the results were similar and most of the analyses of coercive history are reported in the appendix. Separate analyses were done for non-offenders only, comparing those who reported coercive sexual behaviour (using questionnaire responses as criteria) and those who reported none. Finally, to test the assumptions supporting the heavy emphasis placed on deviant sexual arousal in rapists, subjects were classified a third way, according to whether or not their response patterns yielded any index greater than 1 (considered deviant arousal).

SPSS/PC+ (Marija J. Norusis/SPSS Inc., 1990) was used for analyses. Because of the large number of variables, analyses were initially conducted on smaller subsets of data. Apart from univariate descriptive statistics, analyses primarily were conducted using direct discriminant analysis and MANOVA.

RAPISTS VERSUS NON-OFFENDERS

DEMOGRAPHIC CHARACTERISTICS

The comparison sample was an average of 27 years old ($sd=6.6$, $n=41$) and the offenders were 29 years old on average ($sd=9.2$, $n=52$). The mean ages for the 2 groups were not significantly different ($t(91)=1.25$, $p=.216$).

Table 1 shows the breakdown of IQ category by subject group resulting in a Chi-square (with 6 degrees of freedom) $=6.48$ ($p=.372$, $N=88$). Because of very small numbers in the extreme cells (resulting in a large number (9/14) of cells with expected frequency of less than 5), categories were collapsed from 7 levels to 3. This breakdown is shown in Table 1B. The association between group and IQ level is not statistically significant ($X^2(2)=3.32$, $p=.190$, $N=88$).

The majority of subjects in both groups were single at the time of the study (59% of the comparison group and 73% of the offenders). The remaining were separated/divorced (12% of the comparison group and 14% of the offenders) or married/cohabiting (29% of comparison subjects and 14% of offenders). The association between marital status and group was not statistically significant ($X^2(2)=3.56$, $p=.17$, $N=93$) (Table 2).

Analysis of education level did indicate a difference between comparison subjects and rapists. Years of education consisting of actual years (up to a maximum of 14 representing

TABLE 1
IQ CATEGORY BY OFFENSE HISTORY

IQ LEVEL	Count		NON- OFFENDER	OFFENDER	Row Total
	Col	Pct			
VERY SUP			3 7.3	1 2.1	4 4.5
SUPERIOR			2 4.9	2 4.3	4 4.5
HIGH AVERAGE			4 9.8	6 12.8	10 11.4
AVERAGE			25 61.0	22 46.8	47 53.4
LOW AVERAGE			6 14.6	9 19.1	15 17.0
BORDERLINE			1 2.4	5 10.6	6 6.8
MENTALLY RETARDED				2 4.3	2 2.3
	Column Total		41 46.6	47 53.4	88 100.0

Chi-Square	DF	Significance	Min EF	Cells with EF <5
6.48	6	.372	.932	9 OF 14 (64.3%)

TABLE 1B
IQ CATEGORY BY OFFENSE HISTORY

IQ LEVEL	Count	NON-		Row Total
	Col Pct	OFFENDER	OFFENDER	
LOW AVG, BORDER- LINE, MR		7 17.1	16 34.0	23 26.1
AVERAGE		25 61.0	22 46.8	47 53.4
VER SUPERIOR, SUPERIOR, HI AVG		9 22.0	9 19.1	18 20.5
	Column Total	41 46.6	47 53.4	88 100.0

Chi-Square	DF	Significance	Min EF
3.32	2	.190	8

TABLE 2
MARITAL STATUS BY OFFENSE HISTORY

MARITAL STATUS	Count Col Pct	OFFENDER		Row Total
		NON- OFFENDER		
detached		5 12.2	7 13.5	12 12.9
single		24 58.5	38 73.1	62 66.7
attached		12 29.3	7 13.5	19 20.4
	Column Total	41 44.1	52 55.9	93 100.0

Chi-Square	DF	Significance	Min EF	Cells with EF <5
3.56	2	.169	5	0

all post-secondary education) was classified into 4 categories. The majority of non-offenders (56%) had more than 13 years of education whereas only 8% of the rapists had post-secondary education. About one third (34%) of the comparison subjects attended school to grade 12 or 13 and 24% of the offenders reached this level. The majority of offenders (64%) had between grade 8 and grade 11 whereas only 10% of the comparison subjects left school by grade 11. Four percent of the rapists and none of the non-offenders had a grade 7 or less education ($\chi^2(3)=36.77$, $p=.000$, $N=91$) (Table 3). Collapsing across the 2 lower levels ("grade 8 to 11" and "grade 7 or less") to eliminate the low frequency cells did not change the results (Table 3B).

Comparison between groups on highest occupational level attained and employment status revealed that more offenders were unemployed at the time of testing than were comparison subjects. Of the non-offenders 39% were unemployed compared to 62.5% of the offenders ($\chi^2(1)=4.88$, $p=.027$, $N=89$). Differences between the two groups on occupational level were not statistically significant ($\chi^2(5)=8.39$, $p=.136$, $N=90$) (Table 4).

Michigan Alcoholism Screening Test (MAST)

Average score on the MAST for non-offenders was 7.2 ($sd=9.92$) and for offenders it was 14.5 ($sd=17.77$) ($t(79)=2.46$, $p=.016$, $N=91$). Since MAST scores were highly skewed and variances between the two groups were heterogeneous

TABLE 3

EDUCATION LEVEL BY OFFENSE HISTORY

EDUCATION	Count Col Pct	NON- OFFENDER .00	OFFENDER 1.00	Row Total
7 and less			2 4.0	2 2.2
grade 8 to 11		4 9.8	32 64.0	36 39.6
12 & 13		14 34.1	12 24.0	26 28.6
post-secondary		23 56.1	4 8.0	27 29.7
	Column Total	41 45.1	50 54.9	91 100.0
Chi-Square	DF	Significance	Min EF	Cells with EF <5
36.77	3	.000	.9	2 of 8 (25%)

TABLE 3B

EDUCATION	Count Col Pct	NON- OFFENDER	OFFENDER	Row Total
		.00	1.00	
11 & less		4 9.8	34 68.0	38 41.8
12 & 13		14 34.1	12 24.0	26 28.6
post-secondary		23 56.1	4 8.0	27 29.7
	Column Total	41 45.1	50 54.9	91 100.0
Chi-Square	DF	Significance	Min EF	Cells with EF <5
36.68	2	.000	11.7	0

TABLE 4
OCCUPATIONAL LEVEL BY OFFENSE HISTORY

OCCUPATION	Count	NON-OFFENDER		OFFENDER	Row Total
	Col Pct				
nil		4 9.8		8 16.3	12 13.3
management/ supervisor etc		3 7.3		2 4.1	5 5.6
clerical		9 22.0		3 6.1	12 13.3
semi-skilled/ skilled manual		8 19.5		13 26.5	21 23.3
unskilled		4 9.8		11 22.4	15 16.7
student		13 31.7		12 24.5	25 27.8
	Column Total	41 45.6		49 54.4	90 100.0

Chi-Square	DF	Significance	Min EF	Cells with EF <5
8.39	5	.136	2	2 of 12 (16.7%)

they also were analyzed using a Mann-Whitney U test and this yielded a non-significant difference between groups ($U=902$, $p=.323$). MAST score was analyzed a third way as a dichotomous measure reflecting whether subjects were above or below the clinical cut-off. Scores of 7 and above are considered indicative of difficulty with alcohol and 5 or 6 are suggestive. Because subjects tended to be either less than 5 or greater than 6 with only a few scoring 5 or 6, scores were classified as either "7 and greater", or "6 and less". Table 5 shows the breakdown of offense history according to whether subjects were above or below the MAST cut-off. Forty-six percent of the rapists obtained scores indicative of alcohol abuse compared to 32% of non-offenders ($\chi^2(1)=1.93$, $p=.165$, $N=91$).

SEXUAL HISTORY

Analysis of the Bradford Sexual History Inventory revealed a significant difference between non-offenders and rapists in response to the first question. Significantly more rapists (52%) reported having had sexual contact with an adult prior to age 13, than did comparison subjects (19.5%) ($\chi^2(1)=10.16$, $p=.001$, $N=91$). Furthermore, rapists who were molested as children were significantly younger when it first occurred (mean age=10.1, $sd=2.75$, $n=25$) than were comparison subjects who were molested (mean age=12.3, $sd=1.39$, $n=8$) ($t(24)=2.94$, $p=.007$) (M-W $U=42.5$, $p=.017$).

At the time of the study, only 27% of offenders reported

TABLE 5
MICHIGAN ALCOHOL SCREENING TEST BY OFFENSE HISTORY

MAST	Count Col Pct	NON-OFFENDERS		Row Total
		NON-OFFENDER	OFFENDERS	
LE 6		28 68.3	27 54.0	55 60.4
GE 7		13 31.7	23 46.0	36 39.6
Column Total		41 45.1	50 54.9	91 100.0

Chi-Square	DF	Significance	Min EF	Cells with EF <5
1.93	1	.165	16.2	0

having a regular female sexual partner compared to 68% of the non-offenders ($X^2(1)=15.11$, $p=.000$, $N=89$). The number of female sexual partners since the age of 16 was significantly different (Non-offenders mean=16.7, sd=20.4; offenders mean=13.1, sd=30.84, $n=48$) (M-W $U=720$, $p=.044$, $N=88$). The average age of first sexual intercourse with a female was 16.3(sd=3.46, $n=40$) for non-offenders and 14.4 (sd=5.38, $n=44$) for the offenders (M-W $U=685$, $p=.079$, $N=84$).

A large portion of the BSHI concerns sexual activity with children. None of the comparison group reported having engaged in any such activity whereas 32.6% of the offenders had at least once ($X^2(1)=15.92$, $p=.000$, $N=91$). Among the offenders, there was a significant association between child molesting and having been molested as a child. The offenders who reported sexual activity with children were more likely (81%) to report childhood sexual victimization ($X^2(1)=6.43$, $p=.011$, $N=50$) (Table 6).

To reduce the number of variables on the BSHI which describe paraphilic activities, a factor analysis was performed on the responses to 23 items (items 30 to 52) given by the entire population of patients who had completed the questionnaire in the Sexual Behaviours Clinic by 1991 ($N=656$). Table 7 shows the factor matrix after varimax rotation.

Nine variables were computed based on the 9 factors in the factor solution. As Table 7 shows variables were well defined by the factor solution, i.e., each item loaded high on

TABLE 6
CHILD MOLESTING BY HISTORY OF CHILDHOOD
SEXUAL VICTIMIZATION
(RAPISTS ONLY)

	Count Row Pct Col Pct	VICTIM		Row Total
		NO	YES	
REPORTS NO CHILD MOLESTING		21 61.8 87.5	13 38.2 50.0	34 68.0
REPORTS CHILD MOLESTING		3 18.8 12.5	13 81.3 50.0	16 32.0
	Column Total	24 48.0	26 52.0	50 100.0

Chi-Square	D.F.	Significance	Min E.F.	Cells with E.F. < 5
6.43	1	.011	7.7	None

TABLE 7

FACTOR ANALYSIS OF BSHI PARAPHILIA ITEMS (N=656)

VARIMAX ROTATED FACTOR MATRIX

ITEM	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5	FACTOR 6	FACTOR 7	FACTOR 8	FACTOR 9
40	.943	.026	.040	.044	.001	.092	.047	.007	.008
42	.924	-.013	.014	.044	-.005	.131	.058	.013	.010
35	.889	-.019	-.002	-.020	.064	.109	.051	-.009	-.016
31	.881	-.001	.047	.004	.040	.057	.069	.014	.070
36	-.020	.959	.021	.047	.105	.021	.012	.096	-.001
43	.013	.952	.024	.040	.161	.030	.010	.056	.006
48	.060	-.023	.830	.052	.069	.046	.009	.138	.056
33	.000	.020	.814	.038	.175	-.010	-.054	-.010	-.140
51	.009	.070	.599	.044	-.040	.046	.208	-.059	.358
45	.019	.017	.059	.708	.033	.019	-.040	.078	.055
49	-.026	.052	.007	.749	-.041	.079	.053	-.118	.054
47	.065	.009	.038	.742	.030	-.123	.042	.099	-.005
41	-.024	.098	.077	.030	.869	.076	.085	.043	.079
32	.114	.166	.129	-.012	.853	-.069	.024	.010	-.001
38	.004	-.071	-.041	.022	.145	.832	-.012	.113	-.019
37	.440	.012	-.052	.031	-.035	.759	.064	-.006	-.102
46	.147	.073	.225	-.089	-.153	.511	-.001	-.008	.182
39	-.007	-.022	.060	.015	-.027	-.045	.899	.063	-.057
30	.340	.061	.016	.058	.214	.109	.728	-.019	.169
34	.016	.046	.054	-.022	.005	-.034	.035	.041	-.038
44	.011	.065	.021	.080	.043	.130	.011	.079	.173
50	.083	-.026	.069	.062	.098	.039	-.095	-.018	.704
52	-.043	.020	-.003	.030	-.024	-.015	.130	.153	.097

only one factor. The factor loadings confirmed the obvious paraphilia categories that the authors of the inventory were attempting to assess. The nine factors clearly reflect behaviours defined as 1) rape, 2) exhibitionism, 3) fetishism, 4) frotteurism, 5) sadism and masochism, 6) voyeurism, 7) obscene phone-calling, 8) bestiality and sadism and 9) "honesty" or validity. The "honesty" factor was comprised of 3 items that all honest subjects who understand the questions are expected to endorse i.e., admit to. Subjects who responded "no" to 2 or 3 of the three items probably have invalid history questionnaires. None of the comparison subjects and two of the offenders answered "no" to at least two of these questions and their responses were excluded in analyses of the BSHI. Table 8 is a list of the 23 original items sorted according to the factors they loaded highly on. Paraphilia measures were computed by summing the items loading on each factor. Three factors were derived from a combination of both dichotomous and categorical frequency variables and in these cases categorical items were converted to dichotomous scores.

A direct discriminant function analysis was performed using the 8 measures based on the paraphilia factors and one variable for child molesting, as predictors of membership in the 2 groups. Of the original sample 2 cases from the offender group were excluded from the analysis because they had "honesty" scores less than 2 and 5 were dropped because of

TABLE 8

BSHI PARAPHILIA ITEMS SORTED ACCORDING TO FACTORS

Factor 1 Rape

- 40 Physically tried to force a woman to have sex.
- 42 Physically forced females to have sex.
- 35 Sexual intercourse with a female against her will.
- 31 Attempted to have sexual intercourse with a female against her will.

Factor 2 Exhibitionism

- 36 Intentionally exposed yourself to a person in a public place.
- 43 Intentionally exposed you penis in a public place.

Factor 3 Fetishism

- 48 Sexually aroused by wearing female clothing.
- 33 Worn garments of the opposite sex.
- 51 Found objects (e.g., clothing) more sexually arousing than people.

Factor 4 Honesty

- 45 Ever wanted to have sexual contact with a person but didn't.
- 49 Ever felt sexually aroused.
- 47 Ever fantasized about sex.

Factor 5 Frotteurism

- 41 Intentionally touched a female stranger in a crowd for sexual pleasure.
- 32 Intentionally rubbed up against a female, unknown to you, in a public place.

Factor 6 Sadomasochism

- 38 Felt sexually aroused by inflicting pain or humiliating people.
- 37 Felt sexually aroused by someone hurting or threatening you.
- 46 Felt pleasure from being cruelly treated.

Factor 7 Voyeurism

- 39 Secretly attempted to watch people having sexual relations.
- 30 Secretly attempted to look at a woman undressing (e.g., through a window, with binoculars)

Factor 8 Obscene Phoning

- 34 Phoned a stranger for the purpose of having a sexual conversation.
- 44 Sexually aroused by "talking dirty" to a stranger on the phone.

Factor 9 Bestiality (Sadism & Animals)

- 50 Wished to inflict pain on a partner while having sexual relations.
- 52 Derived sexual satisfaction from animals.

missing data. None of the comparison subjects were excluded.

For the remaining 86 cases (41 non-offenders and 45 offenders) evaluation of assumptions of multivariate analyses including linearity, normality, multicollinearity or singularity and homogeneity of variance-covariance matrices revealed problems with the distributions. Although there were no outliers, the data distribution were skewed. Several types of transformations were performed on the factor-based variables (log, square root) but none resulted in acceptable distributions. Dichotomous measures best met the requirements of the multivariate assumptions and also best represented the salient information. Examination of the raw measures revealed highly skewed distributions with many 0 responses and a few reports of the activity with varying frequencies. Transforming the data to either 0 (no report of that activity) or 1 (some report of that activity) provided a satisfactory solution.

One discriminant function was calculated with a chi-square (9 df) of 44.11, $p=.000$ (Wilks Lambda=.574; canonical $r=.653$). For 2 groups only 1 discriminant function can be computed accounting for 100% of the between group variability. Table 9 shows the means, standard deviations, univariate F 's, pooled within groups correlations among predictors and pooled within groups correlations between discriminating variables and the canonical discriminant function. The loading matrix of correlations between predictors and discriminant functions in

TABLE 9

DISCRIMINANT ANALYSIS FOR CLASSIFICATION BY OFFENSE HISTORY
WITH PARAPHILIAS AS PREDICTORS

WILKS LAMBDA	CANONICAL r	CHI-SQUARE(9)	PROB	N
.574	.653	44.12	.000	86

(NON-OFFENDERS n=41, OFFENDERS n=45)

PREDICTOR	NON-OFF(41) MEAN (SD)	OFFEND(45) MEAN (SD)	F(1,84)	PROB.	CORR W FUNC
RAPE	.12 (.33)	.64 (.48)	33.46	.000	.733
CHILDMOL	.0 (0)	.31 (.47)	18.09	.000	.539
SADOMASO	.02 (.16)	.20 (.41)	6.80	.011	.330
EXHIBIT	.10 (.30)	.24 (.44)	3.26	.075	.229
VOYEURISM	.59 (.50)	.64 (.48)	0.31	.579	.071
BESTIALIT	.12 (.33)	.16 (.37)	0.20	.658	.056
OBS PHONE	.29 (.46)	.33 (.48)	0.16	.658	.051
FROTTEUR	.37 (.49)	.38 (.49)	0.01	.910	.014
FETISHISM	.20 (.40)	.20 (.41)	0.00	.955	.007

Pooled Within-Groups Correlation Matrix

	RAPE	CHIL	SADO	EXHI	VOYE	BEST	PHON	FROT	FETI
RAPE	1.0								
CHILDMOL	.33	1.0							
SADOMASO	.01	.14	1.0						
EXHIBIT	-.04	-.13	-.13	1.0					
VOYEURISM	.08	.07	-.03	.10	1.0				
BESTIALIT	.23	.18	.27	-.02	.11	1.0			
OBS PHONE	-.01	.03	.22	.08	.33	.23	1.0		
FROTTEUR	-.10	-.09	-.14	.02	.26	.04	.36	1.0	
FETISHISM	.23	.19	.10	.08	.21	.14	.23	.04	1.0

Table 9 confirms that the best predictors for distinguishing between groups (in order of the size of the correlation with the function) are rape (sharing 54% of variance with the function), child-molesting (sharing 29% of variance with the function) and sadomasochism (sharing 11% of variance with the function) (these are full not partial correlations, i.e., shared variance with other predictors is not partialled out). Following Pedhazur (1982) and Tabachnick and Fidell (1989) correlations in excess of .30 are considered substantial and eligible for interpretation.

As expected, offenders reported more rape or attempted rape activities (mean (reflecting proportion of group)=.64) than did non-offenders (mean=.12) and they reported more child-molesting (mean=.31) than non-offenders who reported none. Rapists also reported more sadomasochistic activities (mean=.20) than did comparison subjects (mean=.02). These three were the only predictors significant in univariate analyses ($F(1,84)=33.46$, $p=.000$ for rape, $F(1,84)=18.09$, $p=.000$ for child-molesting and $F(1,84)=6.80$, $p=.011$ for sadomasochism). The function correctly classified 83% of the cases ($N=86$) according to offense history. The percentage classification rate was achieved by correctly classifying 90% of non-offenders and 76% of rapists.

The above analysis was repeated excluding rape as a predictor, using the 8 remaining dichotomous paraphilias to predict group membership. Since the groups were defined on

the basis of their history of rape, showing an association between rape activity and group increased confidence in the group classifications but was not otherwise meaningful. Excluding rape, the discriminant function significantly accounted for group differences ($X^2(8)=26.37$, $p=.001$, $N=86$; Wilks Lambda=.719; canonical $r=.530$). Table 10 shows the correlations between the predictors and the discriminant function. Child-molesting (sharing 55% of variance with the function), sadomasochism (sharing 21% of variance with the function) and exhibitionism (sharing 10% of variance with the function) were the primary predictors based on their correlations with the function although exhibitionism was not significant in univariate analysis. The function correctly classified 76% of cases (93% of non-offenders and 60% of the offenders).

Child-molesting was not reported by any of the non-offenders which resulted in a singular group covariance matrix for non-offenders. Because of the statistical problem and because there is reason to suspect the validity of this information, the analysis was repeated a third time excluding child-molesting and rape. Although Box's M test for equality of group covariance matrices was significant, for inference, discriminant analysis is robust to violation of the assumption of homogeneity of the variance-covariance matrices when sample sizes are large and equal (Tabachnick and Fidell (1989) although classification is not robust with respect to

TABLE 10

DISCRIMINANT ANALYSIS FOR CLASSIFICATION BY OFFENSE HISTORY
WITH PARAPHILIAS AS PREDICTORS, EXCLUDING RAPE

WILKS LAMBDA	CANONICAL r	CHI-SQUARE(8)	PROB	N
.719	.530	26.37	.001	86

(NON-OFFENDERS n=41, OFFENDERS n=45)

PREDICTOR	CORREL WITH FUNCTION
CHILDMOL	.743 (UNIVARIATE STATISTICS DO NOT CHANGE)
SADOMASOCHISM	.455
EXHIBITIONISM	.315
VOYEURISM	.097
BESTIALITY	.078
OBSCENE PHONE	.070
FROTTEURISM	.020
FETISHISM	.010

TABLE 11

DISCRIMINANT ANALYSIS FOR CLASSIFICATION BY OFFENSE HISTORY
WITH PARAPHILIAS AS PREDICTORS,
EXCLUDING RAPE AND CHILD MOLESTING

WILKS LAMBDA	CANONICAL r	CHI-SQUARE(7)	PROB	N
.870	.361	11.26	.128	86

(NON-OFFENDERS n=41, OFFENDERS n=45)

PREDICTOR	CORREL WITH FUNCTION
SADOMASOCHISM	.734 (UNIVARIATE STATISTICS DO NOT CHANGE)
EXHIBITIONISM	.509
VOYEURISM	.157
BESTIALITY	.125
OBSCENE PHONE	.113
FROTTEURISM	.032
FETISHISM	.016

heterogeneity of variance-covariance matrices. The discriminant function based on the 7 remaining paraphilias did not significantly account for group differences ($X^2(7)=11.26$, $p=.128$, $N=86$; Wilks Lambda=.870; canonical $r=.361$) (Table 11).

PORNOGRAPHY

The Sexual History Inventory elicited information about use of pornography (items 57 to 64). Of most interest were measures of frequency of exposure to pornography and whether they had been exposed to violent pornography. Subjects estimated the number of pornographic films they had seen and the number of pornographic books they had read by checking off a frequency range (items 57 and 61). They also indicated what types of activities were depicted in the films and books (items 58 and 62). Two subjects with "honesty" scores less than 2 were excluded from analysis of the pornography data.

Descriptive statistics showed no statistically significant differences between the two groups on the number of pornographic films they had seen (item 57). Among the rapists, 11% reported never have seen even 1 pornographic film while all of the non-offenders had seen at least 2 ($X^2(7)=9.61$, $p=.212$, $N=86$) (Mann-Whitney $U=756$, $p=.136$).

With regard to the content of these films (item 58), all of the non-offenders reported having seen films depicting heterosexual intercourse as did 89% of the offenders ($X^2(1)=4.84$, $p=.028$, $N=86$). Exposure to films showing homosexual intercourse was reported by 17% of the comparison

group and by 22% of the offenders ($X^2(1)=0.36$, $p=.549$, $N=86$). None of the comparison group reported exposure to child pornography compared to 3 (7%) of the offenders ($X^2(1)=2.83$, $p=.092$, $N=86$). Films of sexual violence were seen by 19.5% of the non-offenders and by 27% of the offenders ($X^2(1)=0.62$, $p=.433$, $N=86$). Bestiality was among the themes viewed by 5% ($n=2$) of non-offenders and by 7% ($n=3$) of rapists ($X^2(1)=0.13$, $p=.723$, $N=86$).

Most (85.4%) of the comparison group reported that pornographic films sexually excited them compared to 57% of offenders. The rest of the offenders reported either that they found them not sexually exciting (20%) or they did not know (20%). Of the non-offenders, 10% found them not exciting and 5% did not know ($X^2(2)=7.24$, $p=.027$).

Comparisons for pornographic literature yielded similar results to those for films. The association between frequency of use (item 61) and group was not significant ($X^2(7)=6.52$, $p=.481$, $N=86$). Results for the content of pornographic literature (item 62) also were similar. (Books of heterosexual intercourse, $X^2(1)=3.73$, $p=.054$, $N=83$; books of homosexual intercourse, $X^2(1)=0.61$, $p=.437$, $N=83$; books of sex with children, $X^2(1)=2.39$, $p=.122$, $N=83$; books of sexual violence, $X^2(1)=0.90$, $p=.638$, $N=83$; books of bestiality, $X^2(1)=0.23$, $p=.629$, $N=83$).

Direct discriminant analysis was conducted on the frequency measures and the items indicating use of violent

pornography to determine their combined relationship with group. Predictors were frequencies of films (item 57) and of books (item 61) and exposure to violent material (items 58 and 62). The two frequency measures were highly skewed so log transformed measures were entered into the multivariate analysis. Two offenders were excluded from analysis because they did not meet the validity criterion and 8 were excluded because of missing data (2 controls and 6 offenders). Groups consisted of 39 non-offenders and 44 offenders.

As Table 12 shows, none of the univariate F's were significant. The discriminant function did not represent a significant underlying dimension to account for group differences ($X^2(4)=2.66$, $p=.616$, $N=83$; Wilks Lambda=.967; canonical $r=.182$).

SEXUAL FUNCTIONING (DSFI)

Analysis of the Derogatis Sexual Functioning Inventory sub-scale scores also was done using direct discriminant function analysis. Raw scores were converted to area t scores for comparability across scales. Higher t scores indicate better functioning on that dimension. Of the original sample no cases were dropped from the analysis because of missing data or out of range scores. Groups consisted of 41 non-offenders and 52 offenders. Evaluation of statistical assumptions revealed no threat to multivariate analysis.

The discriminant function represented a significant underlying dimension accounting for group differences

TABLE 12

**DISCRIMINANT ANALYSIS RESULTS
FOR CLASSIFICATION BY OFFENSE HISTORY
WITH PORNOGRAPHY AS PREDICTORS**

WILKS LAMBDA	CANONICAL r	CHI-SQUARE(4)	PROB	N
.967	.182	2.66	.616	83

(NON-OFFENDERS n=39, OFFENDERS n=44)

PREDICTOR	NON-OFF (41) MEAN (SD)	OFFEND (45) MEAN (SD)	F(1,81)	PROB	CORR W FUNC
# FILMS (LOG)	2.08 (1.00)	1.79 (1.18)	1.36	.248	.699
VIOLENT FILMS	0.21 (.41)	0.27 (.45)	0.51	.478	-.428
VIOLENT BOOKS	0.21 (.41)	0.30 (.70)	0.50	.483	-.423
# BOOKS (LOG)	2.83 (1.20)	2.64 (1.51)	0.41	.523	.386

Pooled Within-Groups Correlation Matrix

	# BOOKS	# FILMS	VIOLENT FILMS	V I O L E N T BOOKS
# BOOKS	1.0			
# FILMS	.50	1.0		
VIOLENT FILMS	.17	.21	1.0	
VIOLENT BOOKS	.25	.26	.53	1.0

TABLE 13

DISCRIMINANT ANALYSIS RESULTS
FOR CLASSIFICATION BY OFFENSE HISTORY
WITH DEROGATIS SEXUAL FUNCTIONING INVENTORY SCALES
AS PREDICTORS

WILKS LAMBDA	CANONICAL r	CHI-SQUARE(10)	PROB	N
.595	.636	44.64	.000	93

PREDICTOR	NON-OFF (41) MEAN (SD)	OFFEND (52) MEAN (SD)	F(1,84)	PROB	CORR W FUNC
ATTITUDE	52 (10.9)	41 (8.2)	31.88	.000	.718
INFORMAT	48 (10.9)	39 (9.8)	19.58	.000	.562
EXPERIEN	51 (8.5)	42 (11.4)	16.67	.000	.519
BODY IMGE	45 (9.1)	38 (9.6)	13.22	.001	.462
GENDER RL	48 (8.8)	41 (8.6)	12.74	.001	.454
DRIVE	58 (10.0)	51 (10.4)	12.34	.001	.447
AFFECT	48 (11.7)	39 (12.8)	11.87	.001	.438
SATISFACT	52 (7.37)	48 (9.6)	6.08	.016	.313
SYMPTOMS	49 (14.0)	43 (12.7)	5.00	.028	.284
FANTASY	53 (8.9)	49 (12.2)	3.04	.085	.222

Pooled Within-Groups Correlation Matrix

	INFO	EXP	DRIV	ATTI	SYMP	AFF	GEND	FANT	BODY	SAT
INF	1.0									
EXP	.18	1.0								
DRIV	.16	.38	1.0							
ATTIT	.33	.37	.30	1.0						
SYMP	.29	-.08	-.02	.09	1.0					
AFF	.16	-.01	-.07	.12	.67	1.0				
GENDR	.12	-.01	.04	.24	.25	.24	1.0			
FANT	.13	.38	.30	.43	-.20	-.05	-.04	1.0		
BODY	.05	-.00	.07	.14	.39	.45	.19	-.20	1.0	
SAT	.21	.22	.23	.27	.03	.11	.15	-.02	.35	1.0

($X^2(10)=44.64$, $p=.000$, $N=93$; Wilks Lambda=.595; canonical $r=.636$). Table 13 shows means and standard deviations, univariate F's, correlations among predictors and correlations between predictors and the canonical discriminant function.

Attitude was the principal variable in distinguishing between the offenders and the controls. The Attitude score reflects the respondents liberalism (high score) or conservatism (low score) towards sex. Non-offenders (mean=52, $sd=10.9$) had more liberal attitudes towards sex than did rapists (mean=41, $sd=8.2$) ($F(1,91)=31.88$, $p=.000$). Approximately 52% of the variance of Attitude was accounted for by the discriminant function.

Information was the second best predictor of offense history. The Information scale reflects the respondent's general fund of sexual knowledge. The comparison group (mean=48, $sd=10.9$) had better sexual knowledge than did the rapists (mean=39, $sd=9.8$) ($F(1,91)=19.58$, $p=.000$). Approximately 32% of the variance of Information was accounted for by the discriminant function. Twenty-seven percent of the variance of Experience was accounted for by the discriminant function. Experience reflects the diversity of past sexual activities reported by the individual. The offenders had less varied experiences (mean=42, $sd=11.4$) than did the comparison subjects (mean=51, $sd=8.5$) ($F(1,91)=16.67$, $p=.000$).

Body Image shared 21% of it's variance with the

discriminant function. The rapists had poorer perceptions of their own bodies (mean=38, sd=9.6) than did non-offenders (mean=45, sd=9.1) ($F(1,91)=13.22$, $p=.001$). Body Image was the lowest score of the 10 scales for offenders. Gender Role Definition also shared 21% of variance with the function. Offenders had more polarized gender role definitions (mean=41, sd=8.6) than did the non-offenders (mean=48, sd=8.8) ($F(1,91)=12.74$, $p=.001$). Sexual Drive, Affect and Satisfaction all had loadings in excess of .3 on the discriminant function (sharing 20%, 19% and 10% of their respective variances with the function). Rapists had lower Drive (mean=51, sd=10.4) than did non-offenders (mean=58, sd=10.0) ($F(1,91)=12.34$, $p=.001$) and they scored lower on the Affect dimension i.e., they manifested a greater range of negative emotions (mean=39, sd=12.8) than did comparison subjects (mean=48, sd=11.7) ($F(1,91)=11.87$, $p=.001$). Offenders were lower on sexual satisfaction (mean=48, sd=9.55) than were comparison subjects (mean=52, sd=7.37) ($F(1,91)=6.08$, $p=.016$). The Symptom scale correlated less than .3 with the function despite a significant univariate F. Rapists endorsed significantly more symptoms of psychological distress (mean=43, sd=12.65) than did non-offenders (mean=49, sd=14.0) ($F(1,91)=5.00$, $p=.028$). Fantasy had a low correlation with the function and a non-significant univariate F. The function correctly classified 82% of cases (76% of non-offenders and 87% of rapists).

Analysis of the DSFI subscales was repeated after partialling out the variance associated with level of education. Recall that education level was different for the 2 groups and it was speculated that this may account for other significant effects - particularly for measures like the DSFI Information and Attitude scores. SPSS MANOVA was used to derive the discriminant results after including years of education as a covariate in a regression of the 10 DSFI scales on offense history. With the effects due to education partialled out, the 10 scores still represented a significant difference between groups. Approximation of $F(10,79)=4.91$, $p=.000$, $N=91$ (2 offenders were missing the covariate); Wilks Lambda=.617; canonical $r=.619$. Table 14 shows the univariate F's and the correlations between the predictors and the canonical function. Attitude, Information, Experience, Body Image, Affect, Gender Role Definition, Drive, Symptoms and Satisfaction loaded substantially on the function (in that order) and they were significantly different for the two groups in univariate analysis. Fantasy still was not significant and had a low loading on the function. Partialling out effects due to education did not essentially change the results.

FANTASY

The Fantasy measure on the DSFI was not significantly different for the 2 groups but this score reflects only the total number of fantasy themes endorsed and tells nothing

TABLE 14

DISCRIMINANT FUNCTION ANALYSIS
FOR CLASSIFICATION BY OFFENSE HISTORY
WITH DEROGATIS SEXUAL FUNCTIONING INVENTORY SCALES AS
PREDICTORS, WITH EDUCATION PARTIALED OUT

(NON-OFFENDERS n=41, OFFENDERS n=50)

WILKS LAMBDA	CANONICAL r	F(10,79)	PROB	N
.617	.619	4.91	.000	91

Predictor	F(1,88)	Sig. of F	Correlation with function
ATTITUDE	24.81	.000	-.674
INFORMATION	20.63	.000	-.614
EXPERIENCE	14.25	.000	-.510
BODY IMAGE	14.03	.000	-.507
AFFECT	11.53	.001	-.459
GENDER ROLE DEF	10.62	.002	-.441
DRIVE	9.57	.003	-.418
SYMPTOMS	5.80	.018	-.326
SATISFACTION	5.23	.025	-.309
FANTASY	2.06	.155	-.194

TABLE 15
FACTOR LOADINGS FOR DSFI FANTASY ITEMS

ITEM	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4
DEGRADING PARTNER	.768	.064	.166	.101
BEING DEGRADED	.710	-.026	.143	.196
BEATING PARTNER	.697	.094	.052	.154
FORCING PARTNER	.678	.246	.152	-.068
BEING FORCED	.571	.112	.049	.443
ORAL-GENITAL SEX	.122	.701	.146	.055
MULTIPLE PARTNERS	.052	.693	.058	.246
UNUSUAL POSITIONS	.077	.661	.079	.134
SEXUAL INTERCOURSE	-.016	.569	.015	-.142
CROSS DRESSING	.027	-.028	.661	.387
SEX WITH ANIMALS	.023	.139	.658	-.035
BEING A WOMAN	.162	-.003	.622	.259
HOMOSEXUAL FANTASY	.287	.159	.613	-.224
EROTIC GARMENTS	.088	.107	.353	.653
BEING TIED OR BOUND	.423	.171	-.042	.542
MATESWAPPING	.209	.443	-.091	.362
FORBIDDEN LOVER	.144	.437	.021	.387
ARTIFICIAL DEVICES	.130	.428	.231	.322
ANAL INTERCOURSE	.353	.423	.331	-.019
BEING A PROSTITUTE	.269	.182	.349	.301

about the nature of the fantasies. In order to examine the content of the sexual fantasies reported by respondents, the items of the DSFI Fantasy scale were examined.

The scale consists of 20 major fantasy themes which respondents report having experienced or not. To reduce the 20 items to fewer general themes, a factor analyses was conducted on the responses of 825 subjects seen previously in the Sexual Behaviours Clinic. Adopting a stringent criterion and considering only factor loadings greater than .50, four factors emerged. Table 15 shows the factor loadings for the items. Factor 1 represented the most dominant dimension and accounted for 26.1% of the variance. This also was the most salient fantasy theme for the present study as it covers the themes of domination, denigration and inflicting pain which characterize rape. The items loading high on factor one were degrading a sex partner, being sexually degraded, whipping or beating your sexual partner, forcing a partner to submit to sexual acts, and being forced to submit to sexual acts. Factors 2, 3 and 4 together accounted for 22.1% of the total variance. The last 5 items in Table 14 are those with no loading greater than .50 which tended to have lower loadings on more than one factor.

The factor analysis on the larger sample provided the basis for the scheme used to summarize the fantasy items in the present study. Four fantasy measures were computed by summing the items loading on each of the 4 factors. These

TABLE 16

DISCRIMINANT ANALYSIS RESULTS FOR CLASSIFICATION
BY OFFENSE HISTORY
WITH SEXUAL FANTASY THEMES AS PREDICTORS

WILKS LAMBDA	CANONICAL r	CHI-SQUARE(9)	PROB	N
.729	.520	28.11	.000	93

PREDICTOR	NON-OFF (41) MEAN (SD)	OFFEND (52) MEAN (SD)	F(1,91)	SIG.	CORR W FUNC
CONSENT VARIATIONS	3.66 (.62)	2.85 (1.06)	19.13	.000	.752
BONDAGE	0.76 (.83)	0.39 (.66)	5.77	.018	.413
CONFUSED IDENTITY	0.34 (.69)	0.65 (.95)	3.13	.080	-.304
SADOMASO	0.61 (1.05)	0.64 (.99)	0.01	.907	-.020

POOLED WITHIN-GROUPS CORRELATION MATRIX (df=91)

	SADO	CONS	CONF	BOND
SADOMASOCHISM	1.0			
CONSENTING VAR	.15	1.0		
CONFUSED ID	.49	.31	1.0	
BONDAGE	.52	.30	.31	1.0

measures represented the themes of 1) sadomasochism, 2) consenting sexual variation, 3) confused sexual identity and 4) bondage. There were no missing data in either group and all subjects endorsed at least one fantasy.

The four fantasy measures were included in a direct discriminant analysis. Groups consisted of 41 non-offenders and 52 offenders. The discriminant function represented a significant underlying dimension accounting for group differences ($X^2(4)=28.11$, $p=.000$, $N=93$; Wilks Lambda=.729; canonical $r=.520$) (see Table 16). Consenting sexual variation was the principal variable in distinguishing between the groups with non-offenders endorsing more of these themes (mean=3.7, $sd=0.62$) than offenders (mean=2.9, $sd=1.06$) ($F(1,91)=19.13$, $p=.000$). Consenting sexual variation had 57% of its variance in common with the function. Bondage had the second highest correlation with the function (sharing 17% of variance) again with non-offenders endorsing more (mean=0.76, $sd=0.83$) than offenders (mean=0.39, $sd=0.66$) ($F(1,91)=5.77$, $p=.018$). Confused sexual identity was not significantly different between groups in univariate analysis but it shared 9% of its variance with the function. Sadomasochism did not have a significant univariate F and it had a low correlation with the function. The function correctly classified 75% of the cases (73% of non-offenders and 77% of offenders). Partialling out the effects of education did not change the results (Appendix O, Table A3).

Because of the importance usually attributed to fantasy in deviant sexual activity and because the sadomasochism theme had no association with group, more microscopic analyses were explored. The 3 individual items that describe the salient aspects of rape, namely 5) "forcing sex partner to submit to sexual acts"; 4) "whipping or beating your sexual partner"; and 13) "degrading a sex partner", were examined. Proportion of subjects endorsing each of these items was analyzed and only item 5 (forcing sex partner), was significantly different between groups ($X^2(1)=4.03$, $p=.045$). Ten percent (4/41) of the non-offenders endorsed this fantasy compared to 29% (15/52) of the rapists.

THE BRIEF SYMPTOM INVENTORY - PSYCHOPATHOLOGY

The Symptom score on the DSFI provides an index of the psychological distress experienced by the respondent but this overall score does not reflect the extent of information about psychopathology available in the scale. The 53 items of this scale, also known as the Brief Symptom Inventory (BSI), were scored according to the BSI scoring manual (Derogatis and Spencer, 1982) and analyzed. The psychological symptoms patterns are profiled on the BSI in terms of 9 primary symptom dimensions. These are: Somatization, Obsessive-Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation and Psychotic symptoms. Three global indices which are purported to reflect distinct aspects of psychological disorder are Global Severity Index

TABLE 17

DISCRIMINANT ANALYSIS RESULTS
FOR CLASSIFICATION BY OFFENSE HISTORY
WITH THE BRIEF SYMPTOM INVENTORY SCALES AS PREDICTORS

WILKS LAMBDA	CANONICAL r	CHI-SQUARE(9)	PROB	N
.779	.470	21.56	.010	93

PREDICTOR	NON-OFF (41) MEAN (SD)	OFFEND (52) MEAN (SD)	F(1,91)	SIG.	CORR W FUNC
PARANOIA	54 (11.96)	62 (10.81)	9.54	.003	.609
PHOBIA	55 (10.62)	61 (11.33)	7.34	.008	.535
PSYCHOSIS	59 (11.39)	65 (11.72)	7.31	.008	.533
ANXIETY	56 (11.71)	62 (12.83)	4.78	.031	.431
DEPRESS	60 (10.89)	65 (13.13)	3.96	.050	.392
INTERPER	58 (11.85)	62 (12.67)	3.32	.072	.359
SENSITIVITY					
SOMATIZ	53 (10.98)	56 (11.77)	1.74	.191	.260
HOSTILITY	55 (3.36)	56 (14.15)	0.31	.580	.109
OBSESSIVE	58 (12.07)	59 (12.15)	0.05	.829	.043
COMPULSIVE					

Pooled Within-Groups Correlation Matrix

	SOM	OBS	INS	DEP	ANX	HOS	PHO	PAR	PSY
SOM	1.0								
OBS	.57	1.0							
INS	.50	.66	1.0						
DEP	.48	.65	.56	1.0					
ANX	.55	.65	.52	.74	1.0				
HOS	.43	.69	.62	.61	.66	1.0			
PHO	.50	.51	.47	.52	.54	.49	1.0		
PAR	.61	.67	.69	.59	.58	.65	.53	1.0	
PSY	.52	.68	.59	.72	.63	.53	.56	.69	1.0

(GSI), Positive Symptom Distress Index (PSDI) and Positive Symptom Total (PST). The offenders tended to show more symptoms in both number and intensity than the comparison group but none of the global indices were significantly higher (Mean PST non-offenders=17.8, sd=13.42, rapists=22.9, sd=13.19, $t(91)=1.82$, $p=.073$; mean GSI non-offenders=.554, sd=.623, rapists=.800, sd=.660, $t(91)=1.83$, $p=.071$; mean PSDI non-offenders=1.57, sd=.666, rapists=1.73, sd=.652, $t(86)=1.10$, $p=.272$).

Direct discriminant analysis was conducted using the 9 symptom dimensions as predictors of offense history. No subjects had missing or out of range data so groups consisted of 41 non-offenders and 52 offenders. Evaluation of statistical assumptions revealed no threats to multivariate analysis. The discriminant function represented a significant underlying dimension accounting for group differences ($X^2(9)=21.56$, $p=.010$; Wilks Lambda=.779; canonical $r=.470$) (see Table 17). Paranoid Ideation, sharing 37% of its variance with the function, was the primary predictor of offense history. Phobic Anxiety shared 29% of the variance and Psychosis shared 28% of its variance with the function. Anxiety, Depression and Interpersonal Sensitivity shared 19, 15 and 13% of their respective variances with the canonical discriminant function. For all of these predictors offenders were higher than non-offenders although the difference between groups was significant only for Paranoia ($F(1,91)=9.54$,

$p=.003$), Phobic Anxiety ($F(1,91)=7.37$, $p=.008$), Psychosis ($F(1,91)=7.31$, $p=.008$), Anxiety ($F(1,91)=4.78$, $p=.031$) and Depression ($F(1,91)=3.96$, $p=.05$). Somatization, Hostility and Obsessive Compulsivity had low correlations with the function and were not significant in univariate analyses. The function correctly classified 72% of the cases (71% of non-offenders and 73% of offenders). After partialling out education effects the results were essentially the same (Appendix O, Table A4).

GENERAL HOSTILITY - BUSS-DURKEE HOSTILITY INVENTORY (BDHI)

A direct discriminant function analysis using the 8 Buss-Durkee Hostility scores as predictors was conducted. Of the original sample 1 offender was dropped from the analysis because of missing data and no cases were excluded because of extreme scores. Groups consisted of 41 non-offenders and 51 offenders. Evaluation of statistical assumptions revealed no threat to multivariate analysis.

The discriminant function represented a significant underlying dimension accounting for group differences ($X^2(8)=29.01$, $p=.000$, $N=92$; Wilks Lambda=.714; canonical $r=.535$) (see Table 18). Guilt was the principle variable in distinguishing between the groups. The Guilt score reflects the respondent's general guilt feelings and it is the only scale which does not contribute to the total score. While guilt feelings are associated with hostility, they are not equivalent to hostility per se. Results indicated that rapists

TABLE 18

**DISCRIMINANT ANALYSIS RESULTS
FOR CLASSIFICATION BY OFFENSE HISTORY
WITH BUSS-DURKEE HOSTILITY INVENTORY SCALES AS PREDICTORS**

WILKS LAMBDA	CANONICAL r	CHI-SQUARE(8)	PROB	N
.714	.535	29.01	.000	92

PREDICTOR	NON-OFF (41) MEAN (SD)	OFFEND (51) MEAN (SD)	F(1,90)	SIG.	COR W FUNC
GUILT	2.93 (2.47)	5.33 (2.28)	23.50	.000	.807
SUSPICI	2.66 (2.37)	4.59 (2.79)	12.37	.001	.585
RESENT	2.32 (2.04)	3.67 (2.10)	9.60	.003	.516
IRRITAB	3.93 (2.82)	5.65 (3.03)	7.77	.007	.464
INDIRECT HOSTILITY	4.39 (2.14)	5.37 (2.52)	3.93	.050	.330
ASSAULT	3.71 (2.80)	4.69 (3.02)	2.54	.114	.265
VERBAL HOSTILITY	7.02 (2.91)	7.51 (2.80)	0.66	.419	.135
NEGATIVE	2.24 (1.48)	2.35 (1.37)	0.13	.715	.061

Pooled Within-Groups Correlation Matrix

	NEG	RES	IND	ASS	SUS	IRR	VER	GUI
NEG1.00								
RES	.49	1.0						
IND	.26	.27	1.0					
ASS	.38	.52	.45	1.0				
SUSP	.45	.71	.12	.49	1.0			
IRR	.34	.70	.46	.59	.56	1.0		
VERB	.40	.40	.42	.49	.28	.53	1.0	
GUILT	.39	.61	.25	.37	.40	.47	.17	1.0

(mean Guilt=5.3, sd=2.28) endorsed more guilt feelings than did non-offenders (mean Guilt=2.9, sd=2.47) ($F(1,90)=23.50$, $p=.000$). Approximately 65% of the variance of Guilt was accounted for by the discriminant function.

Suspiciousness loaded high on the function with 34% of its variance accounted for by the function. Offenders were significantly more suspicious (4.6, sd=2.79) than non-offenders (2.7, sd=2.37) ($F(1,90)=12.37$, $p=.001$). Resentment had the third highest correlation with the function with 27% of its variance in common, again with offenders scoring significantly higher (3.7, sd=2.10) than non-offenders (2.3, sd=2.04) ($F(1,90)=9.60$, $p=.003$). Irritability also correlated substantially with the discriminant function. The rapists had significantly higher scores (mean=5.7, sd=3.03) on this scale than non-offenders (3.9, sd=2.82) ($F(1,90)=7.77$, $p=.007$). Twenty-two percent of the variance of Irritability was accounted for by the discriminant function. Finally, 11% of the variance of Indirect Hostility was accounted for by the discriminant function. Rapists were significantly higher (mean=5.4, sd=2.52) than were non-offenders (mean=4.4, sd=2.14) ($F(1,90)=3.93$, $p=.050$). Assaultiveness, Verbal Hostility and Negativism were not associated with group discrimination. The function correctly classified 75% of the cases (71% of non-offenders and 78% of offenders).

Including education as a covariate in analysis of the BDHI scores still yielded a significant discrimination between

groups ($F(8,80)=2.38$, $p=.024$, $N=90$; Wilks Lambda=.808; canonical $r=.438$). However, the only significant univariate effects were for Guilt, Suspiciousness and Irritability which also loaded highest on the canonical function. Overall, results were essentially the same after education was partialled out (see Appendix O, Table A5).

ATTITUDE QUESTIONNAIRES

Total scores on the questionnaires measuring general aggression (Buss-Durkee Hostility Inventory (BDI), Acceptance of Interpersonal Violence (AIV)), hostility/aggression toward women (Adversarial Sexual Beliefs (ASB)), and attitudes condoning rape (Rape Myth Acceptance (RMA)) were included in a discriminant analysis.

Of the original sample 12 cases from the offender group were excluded from the analysis because of missing data. Groups consisted of 41 non-offenders and 40 offenders. Evaluation of statistical assumptions revealed no threat to multivariate analysis. The discriminant function represented a significant underlying dimension accounting for group differences ($X^2(4)=10.54$, $p=.032$; Wilks Lambda=.872; canonical $r=.358$) (see Table 19). Acceptance of Interpersonal Violence (AIV) was the primary predictor of offense history. Offenders mean AIV score (32, $sd=6.8$) was significantly lower than the controls (36, $sd=5.9$) indicating that rapists had greater acceptance of interpersonal violence than did non-offenders ($F(1,79)=6.80$, $p=.011$). Approximately 59% of the variance of

TABLE 19

**DISCRIMINANT ANALYSIS RESULTS
FOR CLASSIFICATION BY OFFENSE HISTORY
WITH THE ATTITUDE SCALES TOTALS AS PREDICTORS**

WILKS LAMBDA	CANONICAL r	CHI-SQUARE(4)	PROB	N
.872	.358	10.54	.032	81

PREDICTOR	NON-OFF (41) MEAN (SD)	OFFEND (40) MEAN (SD)	F(1,79)	SIG.	COR W FUNC
ACCEPT INTERPERSONAL VIOLENCE	36 (5.94)	32 (6.76)	6.80	.011	-.766
BUSSDURKE HOSTILITY	26 (12.03)	34 (14.19)	6.52	.013	.750
RAPE MYTH ACCEPTANCE	76 (14.83)	72 (11.49)	2.05	.156	-.421
ADVERSAR SEXUAL BELIEFS	48 (9.97)	45 (11.24)	1.56	.215	-.367

Pooled Within-Groups Correlation Matrix

	AIV	BDI	RMA	ASB
AIV	1.0			
BDI	-.36	1.0		
RMA	.67	-.46	1.0	
ASB	.58	-.53	.67	1.0

AIV was accounted for by the discriminant function. Buss-Durkee Hostility also loaded high on the function with 56% of its variance shared. Offenders had significantly higher BDI scores (34, $sd=14.2$) than non-offenders (26, $sd=12.0$) ($F(1,79)=6.52$, $p=.013$). Rape Myth Acceptance and Adversarial Sexual Beliefs shared 18% and 14% of their variances with the function but neither of them was significant in univariate analyses. The function correctly classified 64% of cases by offense history (71% of non-offenders and 58% of offenders).

After partialling out the effects due to education, the 4 attitude measures still represented a significant underlying dimension between groups ($F(4,73)=2.67$, $p=.039$; Wilks Lambda=.872; canonical $r=.357$) and the order of predictors did not change (see Table 20).

SELF-REPORT OF SEXUALLY AGGRESSIVE BEHAVIOURS

- COERCIVE SEXUALITY SCALE (CSS)

The coercive sexuality scale scores were significantly different for the two groups. Total CSS score was higher for rapists (mean=26.1, $sd=7.67$) than for non-offenders (mean=21.5, $sd=2.96$) ($t(49)=3.46$, $p=.001$, $N=79$). Mean sum for the first part (items 1 to 11) for non-offenders was 12.5 ($sd=2.56$) and for rapists it was 15.4 ($sd=5.00$) ($t(56)=3.28$, $p=.002$). For items 12 to 19, mean total for non-offenders was 9.0 ($sd=.88$) and for offenders it was 10.7 ($sd=2.96$) ($t(46)=3.40$, $p=.001$, $N=81$). Because item 12 was expected to be endorsed to some degree by most respondents ("...ever tried

TABLE 20

DISCRIMINANT ANALYSIS RESULTS
FOR CLASSIFICATION BY OFFENSE HISTORY
WITH THE ATTITUDE SCALES TOTALS AS PREDICTORS
WITH EDUCATION PARTIALLED OUT

WILKS LAMBDA	CANONICAL r	F(4,73)	PROB	N
.872	.357	2.67	.039	79
PREDICTOR	F(1,76)	PROB.	CORR WITH FUNCTION	
ACCEPTANCE INTERPERSONAL VIOLENCE	6.75	.011	-.780	
BUSS-DURKEE HOSTILITY	4.41	.039	.630	
RAPE MYTH ACCEPTANCE	1.27	.263	-.338	
ADVERSARIAL SEXUAL BELIEFS	0.88	.315	-.282	

to verbally convince a woman to have sex with you...."), analysis was conducted on the sum for second part excluding item 12. For items 13 to 19 mean total for non-offenders was 7.1 (sd=.30) and for rapists it was 8.8 (sd=2.61) ($t(40)=4.04$, $p=.000$, $N=81$).

A breakdown of responses to each item by group is shown in Table 21. For the first 3 items on the scale responses were not different for rapists and non-offenders. Item 4 was significantly different ($X^2(2)=6.74$, $p=.034$, $N=80$) with more offenders (46%) reporting some frequency of "placing your hand on a woman's breast against her will" than non-offenders (22%). Items 5 to 11 all were significantly different at least at the .01 level, with more rapists than non-offenders reporting the behaviour. Responses to item 12 were not different for the 2 groups. As expected most subjects in both groups reported some frequency of "attempting to verbally convince a woman to have sex with you" (68% of controls and 63% of offenders). Four (10%) of the comparison group reported having "ignored a woman's protests to have sex with you" (item 13) once or twice whereas 43% of the rapists reported this either "once or twice" or "several times" ($X^2(2)=13.18$, $p=.001$, $N=81$). All comparison subjects responded "never" to all of the remaining items and were significantly different from rapists for all except item 19. This last item was endorsed by only 2 of the rapists which was not significantly different than non-offenders.

Table 21

RESPONSES TO COERCIVE SEXUALITY SCALE
 BROKEN DOWN BY OFFENSE HISTORY
 (PERCENTAGE OF SUBJECTS GIVING EACH RESPONSE)

ITEM	RESPONSE = 1 OR 2		SEVERAL		OFTEN		CHI-SQ	PROB	N
	NONOFF	OFFEND	NONOFF	OFFEND	NONOFF	OFFENDER			
1	22	23	2	10	0	0	2.19	.335	80
2	20	18	5	5	0	0	0.03	.984	80
3	20	21	0	5	0	0	2.14	.344	79
4	22	39	0	8	0	0	6.74	.034	80
5	15	41	0	8	0	0	11.59	.003	80
6	10	36	0	5	0	0	10.78	.005	80
7	5	28	0	5	0	0	10.79	.005	80
8	5	26	0	5	0	0	9.47	.009	80
9	7	31	0	5	0	3	11.52	.009	80
10	5	28	0	5	0	0	10.79	.005	80
11	2	23	0	0	0	0	7.78	.005	80
12	46	38	20	20	2	5	0.94	.817	81
13	10	23	0	20	0	0	13.18	.001	81
14	0	23	0	5	0	0	13.05	.002	81
15	0	15	0	3	0	0	7.85	.020	81
16	0	15	0	5	0	0	9.10	.011	81
17	0	13	0	3	0	0	6.64	.036	81
18	0	15	0	0	0	0	6.64	.010	81
19	0	5	0	0	0	0	2.10	.147	81

PERSONALITY - MMPI

Analysis of the MMPI T scores for the clinical scales also was achieved using direct discriminant function analysis. Of the original sample 26 offenders were excluded from the analysis because they had at least one missing discriminating variable. No cases were excluded because of extreme scores. Groups consisted of 41 non-offenders and 26 offenders. Evaluation of statistical assumptions revealed no threat to multivariate analysis. The discriminant function represented a significant underlying dimension accounting for group differences, (Wilks Lambda=.583; $X^2(10)=32.40$, $p=.000$, $N=67$; canonical $r=.646$) (Table 22).

Scale 4, Psychopathic Deviate (Pd), was the primary predictor of offense history. The rapists on average had an elevated Pd score (mean=81, sd=11) compared to a mean of 66 (sd=12.5) for the comparison subjects ($F(1,65)=25.8$, $p=.000$). Approximately 55% of the variance of Pd was accounted for by the discriminant function. Psychasthenia (Pt) shared 28% of its variance with the discriminant function and had a significant univariate F ($F(1,65)=13.04$, $p=.001$). Rapists (mean=74, sd=13.8) were higher on PT than non-offenders (mean=63, sd=12.2) indicating more negative affect. Schizophrenia (Sc) shared 21% of its variance with the function with offenders (mean=79, sd=19.3) manifesting significantly more schizotypal traits than non-offenders (mean=66, sd=14.7) ($F(1,65)=9.99$, $p=.002$). Paranoia (Pa),

TABLE 22

DISCRIMINANT ANALYSIS RESULTS
FOR CLASSIFICATION BY OFFENSE HISTORY
WITH THE MMPI SCALES AS PREDICTORS

WILKS LAMBDA	CANONICAL r	CHI-SQUARE(10)	PROB	N
.583	.646	32.40	.000	67

PREDICTOR	NON-OFF (41) MEAN (SD)	OFFEND (26) MEAN (SD)	F(1,65)	SIG.	COR W FUNC
PSYCHOPAT	66 (12.49)	81 (10.97)	25.80	.000	.745
PSYCHASTH	63 (12.22)	74 (13.85)	13.04	.001	.529
SCHIZOPH	66 (14.68)	79 (19.25)	9.99	.002	.463
PARANOIA	62 (9.80)	69 (9.46)	8.52	.005	.428
HYSTERIA	59 (6.93)	66 (12.02)	7.84	.007	.411
DEPRESS	61 (13.19)	69 (16.29)	5.76	.019	.352
SOC INTROV	50 (10.83)	56 (11.32)	5.35	.024	.339
HYPOCHOND	56 (9.19)	62 (16.70)	4.78	.032	.321
HYPOMANIA	64 (10.93)	69 (12.77)	7.84	.007	.262
MASC-FEM	68 (11.29)	64 (8.82)	1.52	.222	-.181

Pooled Within-Groups Correlation Matrix

	PD	PT	SC	PA	HY	D	SI	HS	M	A
PSYCHOPATH	1.0									
PSYCHASTH(PT)	.55	1.0								
SCHIZOPHR(SC)	.50	.75	1.0							
PARANOIA (PA)	.41	.53	.59	1.0						
HYSTERIA (HY)	.28	.38	.23	.22	1.0					
DEPRESSION (D)	.41	.65	.44	.32	.54	1.0				
SOC INTROV(SI)	.22	.53	.53	.32	-.01	.57	1.0			
HYPOCHOND (HS)	.29	.45	.46	.23	.67	.45	.18	1.0		
HYPOMANIA (MA)	.12	.12	.33	.12	-.04	-.17	-.10	.01	1.0	
MASCUL-FEM(MF)	.25	.16	.01	.27	.26	.23	.12	.07	-.21	1.0

Hysteria (Hy), Depression (D), Social Introversion (Si) and Hypochondriasis (Hs), all had correlations in excess of .30 with the discriminant function and significant univariate F's. For all of these predictors rapists had significantly higher scores than non-offenders. Hypomania (Ma) and Masculinity-Femininity (MF) had negligible correlations with the function and non-significant univariate F's. The function correctly classified 81% of the total sample of 67 subjects into offender or non-offender groups. The % correct classification was the same for both groups.

Examination of cases with missing MMPI data

Because MMPI data were missing on so many of the offenders, analyses were conducted to explore differences between those who had a personality assessment and those who did not. Table 23 shows the comparisons between the two halves of the offender sample on several of the assessment measures. There were few differences between offenders with and without MMPI's. Two (Drive and Symptoms) out of the 10 DSFI scores were significantly different ($p < .05$) and 2 (Indirect Hostility and Guilt) out of 8 Buss-Durkee scales were different ($p < .05$).

Because of the high convergence for the dimensions of the BSI with MMPI scales (Derogatis and Melisaratos, 1983) the BSI results for offenders with and without MMPI's were compared (Table 24). Results indicate that rapists who were administered MMPI's did manifest more psychopathology as

TABLE 23

COMPARISON OF OFFENDERS WITH AND WITHOUT MMPI'S

VARIABLE	WITH MMPI (n=27) MEAN (SD)	NO MMPI (n=25) MEAN (SD)	TEST	P
AGE	29.0 (7.82)	29.4 (10.73)	F(1,50) 0.02	.877
DSFI SFI	32.7 (11.78)	33.5 (14.03)	F(1,50) 0.05	.829
INFORMATION	38.8 (8.00)	38.2 (11.65)	F(1,50) 0.04	.835
EXPERIENCE	44.9 (11.01)	39.7 (11.44)	F(1,50) 2.84	.098
DRIVE	53.8 (8.49)	47.3 (11.30)	F(1,50) 5.55	.022 *
ATTITUDE	41.5 (6.46)	39.9 (9.72)	F(1,50) 0.50	.484
SYMPTOMS	38.7 (9.62)	47.6 (14.07)	F(1,50) 7.05	.011 *
AFFECT	36.1 (12.95)	42.4 (12.06)	F(1,50) 3.23	.078
GENDER ROLE	40.5 (8.86)	42.0 (8.40)	F(1,50) 0.40	.529
FANTASY	51.1 (13.36)	45.8 (10.34)	F(1,50) 2.51	.120
BODY IMAGE	36.7 (8.88)	39.4 (10.29)	F(1,50) 1.09	.302
SATISFACTION	47.7 (7.77)	48.0 (11.32)	F(1,50) 0.01	.911
GSSI	47.7 (11.54)	54.64 (9.66)	F(1,48) 5.29	.026 *
RAPE MYTH	58.4 (12.31)	61.7 (8.09)	F(1,38) 1.03	.316
ADVERS SEX B	43.3 (11.38)	46.5 (11.17)	F(1,38) 0.78	.382
ACCEPT IP VIOL	31.6 (6.27)	32.2 (7.27)	F(1,38) 0.08	.778
MAST	16.7 (18.25)	12.2 (17.35)	F(1,48) 0.79	.378

TABLE 23 (Continued)

COMPARISON OF OFFENDERS WITH AND WITHOUT MMPI'S
(CONT)

VARIABLE	WITH MMPI MEAN (SD)	NO MMPI MEAN (SD)	TEST	P
BDI TOTAL	36.9 (13.05)	29.8 (12.41)	F(1,50)=3.97	.052
NEGATIVISM	2.52 (1.48)	2.01 (1.29)	F(1,50) = 1.29	.261
RESENTMENT	4.04 (2.19)	3.12 (2.03)	F(1,50)=2.44	.125
INDIRECT HOST	6.07 (2.45)	4.60 (2.36)	F(1,50) = 4.87	.032 *
ASSAULT	5.25 (3.02)	3.92 (2.96)	F(1,50)=2.60	.113
SUSPICION	4.78 (2.71)	4.24 (2.95)	F(1,50)=0.47	.496
IRRITABILITY	6.30 (2.98)	4.76 (3.02)	F(1,50)=3.40	.071
VERBAL HOST	7.89 (2.79)	7.08 (2.75)	F(1,50)=1.10	.298
GUILT	6.11 (1.85)	4.46 (2.43)	F(1,49)=7.57	.008 *
RAPE INDEX A (LOG)	0.67 (0.37)	0.73 (0.45)	F(1,50)=0.30	.587
RAPE INDEX S (LOG)	0.58 (0.57)	0.46 (0.50)	F(1,49) = 0.60	.443
ASSAULT IND A (LOG)	0.46 (0.37)	0.36 (0.34)	F(1,47)=0.98	.329
ASSAULT IND S (LOG)	0.47 (0.39)	0.44 (0.38)	F(1,46)=0.08	.778
RAPE SLIDE (LOG)	4.29 (0.63)	4.17 (0.42)	F(1,45)=0.51	.478

TABLE 23 (Continued)

COMPARISON OF OFFENDERS WITH AND WITHOUT MMPI'S
(CONT)

VARIABLE	WITH MMPI PROPORTION	NO MMPI PROPORTION	TEST	P
CHILD SEX VICTIM	41% (11/25)	60% (15/25)	X ² (1) 0.72	.396
FEMALE PARTNER	30% (7/23)	24% (6/25)	X ² (1) 0.03	.860
EDUCATION			X ² (3) 1.38	.710
MARITAL STATUS			X ² (2) 3.75	.154
ANY DEV RESP	63% (17/27)	64% (16/25)	X ² (1) 0.00	1.00
RI AR GT 1	44% (12/27)	48% (12/25)	X ² (1) 0.00	1.00
RI SUP GT 1	41% (11/27)	29% (7/24)	X ² (1) 0.33	.589
AI AR GT 1	22% (6/27)	18% (4/22)	X ² (1) 0.00	1.00
AI SUP GT 1	22% (6/27)	24% (5/21)	X ² (1) 0.00	1.00

TABLE 24

BSI FOR OFFENDERS WITH AND WITHOUT MMPI'S

BSI INDEX	NO MMPI	WITH MMPI	t (50 df)	p (2-tail)
PST	17.6 (12.49)	27.7 (12.10)	2.96	.005 **
GSI	.609 (.601)	.976 (.673)	2.07	.044 *
PSDI	1.664 (.691)	1.778 (.624)	0.62	.540

BSI INDEX	NO MMPI	WITH MMPI	t (50 df)	p (2-tail)
SOMATIZATION	52.2 (9.92)	59.0 (12.54)	2.18	.034 *
OBSESSIVE COMPULSIVE	54.0 (11.52)	63.6 (11.03)	3.06	.004 **
INTERPERSONAL SENSITIVITY	56.8 (13.67)	67.2 (9.42)	3.20	.002 **
DEPRESSION	61.0 (13.20)	67.9 (12.31)	1.93	.059
ANXIETY	57.6 (12.71)	65.2 (12.01)	2.18	.034 *
HOSTILITY	53.2 (15.40)	59.20 (12.49)	1.54	.129
PHOBIC ANXIETY	59.5 (11.11)	62.2 (11.6)	0.85	.402
PARANOID IDEATION	59.76 (11.84)	63.4 (9.64)	1.23	.223
PSYCHOTICISM	61.6 (11.56)	68.9 (10.93)	2.35	.023 *

measured by the BSI than those who were not administered MMPI's. MMPI tested offenders were higher on both the Positive Symptoms Total (PST) and on the Global Severity Index (GSI) than untested offenders. They also scored higher on 5 out of the 9 subscales (Somatization, Obsessive-Compulsive, Interpersonal Sensitivity, Anxiety, and Psychoticism). These results suggest that the missing MMPI data may bias the results and the BSI with complete data on all subjects may provide less biased information about psychopathology in the groups.

SEXUAL DRIVE

To assess the association between offense history and sexual drive a direct discriminant function analysis was conducted on 4 measures of sexual drive. Sexual activity (SA) (self-report of number of orgasms in the previous 7 days), the Drive score from DSFI, monthly frequency of heterosexual intercourse over past year and monthly frequency of masturbation over past year (items #9 and #65 on the BSHI) were included as predictors of group membership. SA was log transformed for the analysis because of skewed data. Of the original sample 6 rapists and 1 non-offender were excluded from the analysis because they had at least one missing discriminating variable. No cases were excluded because of extreme scores. Groups consisted of 40 non-offenders and 46 offenders. Evaluation of statistical assumptions revealed no threat to multivariate analysis.

TABLE 25

DISCRIMINANT ANALYSIS RESULTS
FOR CLASSIFICATION BY OFFENSE HISTORY
WITH THE MEASURES OF SEXUAL DRIVE AS PREDICTORS

WILKS LAMBDA	CANONICAL r	CHI-SQUARE(4)	PROB	N
.816	.429	16.69	.002	86

PREDICTOR	NON-OFF (40) MEAN (SD)	OFFEND (46) MEAN (SD)	F(1,84)	SIG.	COR W FUNC
SEXUAL ACTIVITY	1.8 (.68)	1.2 (.78)	13.86	.001	.855
DSFI DRIV	58 (10.07)	51 (9.71)	12.39	.001	.808
INTERCOUR FREQUENCY	6.5 (8.25)	3.4 (7.87)	3.05	.085	.401
MASTURBATE FREQUENCY	11.7 (16.08)	8.8 (11.38)	0.98	.326	.227

Pooled Within-Groups Correlation Matrix

	SEX ACT	DSFI DRIV	INTERCOURSE	MASTURB
SEXUAL ACTIVITY	1.00			
DSFI DRIVE	.48	1.00		
INTERCOURSE FREQUENCY	.21	.38	1.00	
MASTURBATION FREQUENCY	.52	.25	-.19	1.00

Results are summarized in Table 25. The discriminant function represented a significant underlying dimension accounting for group differences ($X^2(4)=16.69$, $p=.002$, $N=86$; Wilks Lambda=.816; canonical $r=.429$). The loading matrix of correlations between predictor variables and the discriminant function indicated that Sexual Activity (SA) and the DSFI Drive score were the primary predictors of offense history. The rapists on average had significantly lower self-reports of sexual activity (mean SA (log)=1.2, $sd=.78$) than did the controls (mean SA (log)=1.8, $sd=.68$) ($F(1,84)=13.86$, $p=.000$). (Mean of untransformed SA for non-offenders was 6.6 ($sd=6.0$) and for offenders it was 3.3 ($sd=4.1$)). Approximately 73% of the variance of SA was accounted for by the discriminant function. The non-offenders had a mean DSFI Drive score of 58 ($sd=10.1$) and the offenders were significantly lower with a mean of 51 ($sd=9.7$) ($F(1,84)=12.39$, $p=.001$). Approximately 65% of the variance of Drive was accounted for by the discriminant function. Frequency of heterosexual intercourse was substantially correlated with the function (16% of variance in common) but was not significantly different in univariate analysis. The function correctly classified 70% of the cases ($N=86$) by offense history (65% of the non-offenders and 74% of the offenders).

PENILE TUMESCENCE MEASURES OF SEXUAL AROUSAL

DESCRIPTIVE STATISTICS

All subjects responded with the minimum arousal level

required in the SBC laboratory (5), to be considered "responders". PCR'S (penile circumference responses) which reflect change over baseline, were transformed to percentages of maximum response in order to equate for the differences in levels of responding between subjects.

Maximum response

The maximum response occurred during the videotape for 78% (32/41) of the non-offenders and for 64% (33/52) of the rapists (n.s.). Maximum response was reached during the rape slides for 29% of comparison subjects and for 23% of offenders (n.s.). Twelve percent of the comparison subjects and none of the offenders responded maximally during the rape audiotape with arouse instructions ($\chi^2(1)=4.52$, $p=.034$). Table 26 shows which stimuli elicited maximum arousal for each group. The mean raw maximum response was not significantly different for the 2 groups (mean=67.8, sd=28.70 for comparison subjects and mean=61.5, sd=29.90 for offenders) ($t(91)=1.03$, $p=0.308$).

Videotape

The two groups were not different on mean response (% of maximum) to the videotape. The comparison group mean was 93.3 (sd=16.20) and the offenders responded on average with 90.3 (sd=18.57) ($t(89)=0.81$, $p=0.422$).

Rape Slides

Mean peak response to rape slides for non-offenders was 61.7 (sd=31.7, n=41) and for rapists it was 72.5 (sd=25.54, n=47) but this difference was not statistically significant

TABLE 26

STIMULI ELICITING MAXIMUM PT RESPONSES

STIMULUS	COMPARISON SUBJECTS %	OFFENDERS %	CHI SQUARE	PROBABILITY
VIDEOTAPE	78	64	1.68	.195
RAPE SLIDES	29	23	0.19	.661
RAPE TAPE AROUSE	12	0	4.52	.034
CONSENT TAPE AROUSE	12	6	0.53	.469
ASSAULT TAPE AROUSE	0	0		
RAPE TAPE SUPPRESS	0	8	1.69	.193
CONSENT TAPE SUPPRESS	5	8	0.02	.902
ASSAULT TAPE SUPPRESS	2	2	0.00	1.00

($t(86)=1.75$, $p=0.084$). Distribution of responses to the rape slides was skewed so analysis also was conducted on log transformed responses and this measure was significantly different for the 2 groups (mean non-offenders=3.97, $sd=.643$, $n=41$; mean offenders=4.24, $sd=.544$, $n=47$) ($t(86)=2.07$, $p=.041$).

Audiotapes

Penile tumescence responses to audiotapes were analyzed a number of ways. Besides analyses of peak response to each audiotape category, responses were summarized as the following four ratios. A Rape Index was the rape response divided by the mutually consenting response and an Assault Index was the response to the assault scenario divided by response to the mutually consenting scenario. Each index was calculated for both arouse and suppress instructions resulting in 4 indexes in total - Rape Index Arouse (RIA), Rape Index Suppress (RIS), Assault Index Arouse (AIA) and Assault Index Suppress (AIS).

Comparison of the mean indexes for each group yielded no significant differences (see Table 27). Analyses were done using t tests and Mann Whitney U tests because of skewed data and unequal variances. The 4 indexes were converted to dichotomous measures reflecting whether they were greater than 1 (clinically significant) or less than/equal to 1, for further analyses. More rapists (33%) than non-offenders (15%) had high Rape Suppress Indexes ($X^2(1)=4.24$, $p=.040$, $N=92$) but groups were not different on any of the other indexes (Rape

TABLE 27
DESCRIPTIVE STATISTICS FOR INDEXES BY OFFENSE HISTORY

INDEX	NON-OFFENDER MEAN (SD)	OFFENDERS MEAN (SD)	t(df)	SIG.	M-W U PROB
RAPE AROUSE	0.95 (1.21)	1.05 (1.09)	0.40 (91)	.69	.39
RAPE SUPPRESS	0.72 (0.77)	0.96 (1.25)	1.08 (90)	.29	.83
ASSAULT AROUSE	0.32 (0.39)	0.42 (0.55)	1.00 (88)	.32	.98
ASSAULT SUPPRESS	0.58 (1.26)	0.50 (0.70)	0.38 (87)	.71	.50

INDEX	NON-OFFEND % GT 1	OFFENDERS % GT 1	CHI-SQUARE	N	PROB
RAPE AROUSE	24.4	42.3	3.26	93	.071
RAPE SUPPRESS	14.6	33.3	4.24	92	.040
ASSAULT AROUSE	4.9	12.2	1.50	90	.221
ASSAULT SUPPRESS	9.8	16.7	0.91	89	.341

Arouse $X^2(1)=3.26$, $p=.071$, $N=93$; Assault Arouse $X^2(1)=1.50$, $p=.221$, $N=90$; Assault Suppress $X^2(1)=0.91$, $p=.341$, $N=89$).

Collapsing the 4 index responses into 1 measure reflecting whether or not any index was "clinically" significant (i.e., greater than 1), revealed that 16/41 (39%) of the non-offenders showed a deviant response. Among the rapists, 31/52 or 60% showed a deviant response and this was significant ($X^2(1)=3.89$, $p=.049$, $N=93$).

Distribution problems with both the indexes and the raw responses necessitated transforming them before submitting them to multivariate analyses. Log transformations improved the distributions for all of the measures.

MANOVA'S

Peak Responses to Audiotapes

Multivariate analysis of variance (MANOVA) was conducted on the log-transformed penile tumescence responses to the audiotapes in a 2 (group, between subjects) by 3 (tape, within subjects) by 2 (instruction, within subjects) design. One offender was excluded from analysis because of extremely low responses to both assault tapes compared to the rest of the group. Four offenders were not included because of missing data. Eighty-eight subjects were included in analysis (41 non-offenders and 47 offenders).

Cell means and standard deviations are shown in Table 28 and Manova results are in Table 29. There were significant main effects for instruction (arouse versus suppress) and for

TABLE 28
Means and Standard Deviations
for Peak Penile Tumescence Response
to Audiotapes (Log Transformed)

		Non-Offenders (n=41)	Offenders (n=47)	Total (n=88)
Rape	Arouse	3.34 (0.88)	3.29 (0.93)	3.31 (0.90)
	Suppress	3.00 (0.72)	2.99 (0.96)	2.99 (0.86)
Mutually Consenting	Arouse	3.71 (0.64)	3.42 (0.90)	3.56 (0.80)
	Suppress	3.53 (0.86)	3.35 (1.00)	3.44 (0.94)
Assault	Arouse	2.46 (0.63)	2.63 (0.87)	2.55 (0.76)
	Suppress	2.58 (0.72)	2.69 (0.82)	2.64 (0.77)

TABLE 29

MANOVA RESULTS FOR PEAK PENILE TUMESCENCE
RESPONSES TO AUDIOTAPES
INSTRUCT X TAPE X OFFENSE HISTORY

N=88 (41 NON-OFFENDERS AND 47 OFFENDERS)

Tests of Between-Subjects Effects.

Source of Variation	SS	DF	MS	F	Sig
WITHIN CELLS	193.04	86	2.24		
CONSTANT	4995.01	1	4995.01	2225.32	.000
GROUP	.24	1	.24	.11	.746

Tests involving 'INSTRUCT' Within-Subject Effect.

WITHIN CELLS	29.71	86	.35		
INSTRUCT	1.81	1	1.81	5.25	.024
GROUP BY INSTRUCT	.04	1	.04	.11	.746

Tests involving 'TAPE' Within-Subject Effect.

WITHIN CELLS	106.06	172	.63		
TAPE	74.46	2	37.23	59.26	.000
GROUP BY TAPE	3.16	2	1.58	2.52	.084

Tests involving 'INSTRUCT BY TAPE' Within-Subject Effect.

WITHIN CELLS	33.93	172	.20		
INSTRUCT BY TAPE	3.71	2	1.86	9.41	.000
GROUP BY INSTRUCT BY TAPE	.16	2	.08	.41	.662

Tests involving 'INSTRUCT W RAPE' Within-Subject Effect.

WITHIN CELLS	21.68	86	.25		
INSTRUCT W RAPE	4.49	1	4.49	17.82	.000
GROUP BY INSTRUCT W RAPE	.02	1	.02	.07	.790

Tests involving 'INSTRUCT W CONSENTING' Within-Subject Effect.

WITHIN CELLS	23.39	86	.27		
INSTRUCT W CONSENT	.67	1	.67	2.47	.120
GROUP BY INSTRUCT W CONSENTING	.15	1	.15	.54	.464

Tests involving 'INSTRUCT W ASSAULT' Within-Subject Effect.

WITHIN CELLS	18.58	86	.22		
INSTRUCT W ASSAULT	.37	1	.37	1.70	.196
GROUP BY INSTRUCT W ASSAULT	.03	1	.03	.16	.689

tape (rape, consenting, assault) and a significant tape by instruction interaction ($F(2,172)=9.41, p=.000$).

Tests of simple effects within the interaction yielded a significant effect for instruction within the rape tape ($F(1,86)=17.82, p=.000$). Subjects responses were significantly lower with suppress instructions than with arouse instructions during the rape audiotape. Instruction was not different for the other 2 tapes.

Indexes

Index measures (log transformed) also were analyzed using MANOVA in a 2 (group) by 2 (index) by 2 (instruction) design. Two non-offenders were excluded as outliers, one because of an extremely high rape index (arouse) and one because of an extremely high assault suppress index. Four other cases were excluded because of missing data. Eighty-seven cases were included in analysis - 39 offenders and 48 non-offenders. Table 30 shows the MANOVA results for the index measures and Table 31 shows the cell means. A significant main effect for index was found and again the instruction by index interaction was significant ($F(1,85)=5.51, p=0.021$). Tests of simple effects of instruction within each index yielded no significant differences for either index.

SELF-REPORT and PENILE TUMESCENCE RESPONSES

Correlations between self-reported arousal to each stimulus and PT (% of maximum) were calculated for each experimental group separately as well as for the total group

TABLE 30

**MANOVA RESULTS FOR PENILE TUMESCENCE INDEXES
INSTRUCT X INDEX X OFFENSE HISTORY**

N=87 (OFFENDERS=39, NON-OFFENDERS= 48)

Tests of Between-Subjects Effects.

<u>Source of Variation</u>	<u>SS</u>	<u>DF</u>	<u>MS</u>	<u>F</u>	<u>Sig</u>
WITHIN CELLS	21.66	85	.25		
CONSTANT	54.36	1	54.36	213.30	.000
GROUP	.22	1	.22	.87	.353

Tests involving 'INDEX' Within-Subject Effect.

WITHIN CELLS	12.38	85	.15		
INDEX	4.30	1	4.30	29.55	.000
GROUP BY INDEX	.04	1	.04	.28	.601

Tests involving 'INSTRUCT' Within-Subject Effect.

WITHIN CELLS	7.24	85	.09		
INSTRUCT	.01	1	.01	.10	.758
GROUP BY INSTRUCT	.02	1	.02	.23	.629

Tests involving 'INDEX BY INSTRUCT' Within-Subject Effect.

WITHIN CELLS	6.41	85	.08		
INDEX BY INSTRUCT	.42	1	.42	5.51	.021
GROUP BY INDEX BY INSTRUCT	.00	1	.00	.04	.841

Tests involving 'INSTRUCT W RAPE INDEX' Within-Subject Effect.

WITHIN CELLS	8.56	85	.10		
INSTRUCT W RAPE IND	.27	1	.27	2.68	.105
GROUP BY INSTRUCT W RAPE INDEX	.02	1	.02	.19	.662

Tests involving 'INSTRUCT W ASSAULT INDEX' Within-Subject Effect.

WITHIN CELLS	5.09	85	.06		
INSTRUCT W ASSAULT	.15	1	.15	2.56	.113
GROUP BY INSTRUCT W ASSAULT INDEX(2)	.00	1	.00	.06	.804

TABLE 31

Means and Standard Deviations for Penile Tumescence Indexes
(Log Transformed)

		Non-Offenders (n=39)	Offenders (n=48)	Total (n=87)
Rape	Arouse	0.50 (0.35)	0.60 (0.46)	0.55 (0.42)
	Suppress	0.44 (0.30)	0.50 (0.53)	0.47 (0.44)
Assault	Arouse	0.24 (0.23)	0.28 (0.31)	0.26 (0.28)
	Suppress	0.31 (0.27)	0.33 (0.39)	0.32 (0.34)

TABLE 32
CORRELATIONS BETWEEN PENILE TUMESCENCE
AND SELF-REPORTED AROUSAL

STIMULUS	TOTAL (N)	NON-OFFENDERS	OFFENDERS	FISHER'S Z* TEST
RAPE AROUSE	** .63 (93)	** .77 (41)	** .48 (52)	p < .05
RAPE SUPPRESS	** .50 (93)	** .73 (41)	** .42 (52)	p < .05
CONSENT AROUSE	** .56 (93)	** .49 (41)	** .60 (52)	
CONSENT SUPPRESS	** .62 (92)	** .61 (41)	** .63 (51)	
ASSAULT AROUSE	.23 (90)	.24 (41)	* .35 (49)	
ASSAULT SUPPRESS	* .27 (89)	.29 (41)	.25 (48)	
VIDEO TAPE	.18 (91)	.09 (41)	.23 (50)	
RAPE SLIDES	.17 (86)	* .46 (40)	.02 (46)	p < .05

** .01 probability for r

* .05 probability for r

Z* test of differences between group r's

(Table 32). High and significant correlations were found for both groups for the rape and consenting tapes under both instructions. However, for the assault tapes, self-reports were significantly correlated with physiological arousal only for offenders with arouse instructions.

Fisher's "r-to-z* transformations" (Horowitz, 1974) were used to test for differences between correlations for the 2 groups. As Table 32 shows, correlations for non-offenders were significantly higher on both rape audiotapes and on the rape slides. Correlations were not significantly different for the other stimuli.

Self-report of arousal to videotape and slides

Comparing non-offenders and rapists on the self-report measures to the videotape yielded no significant difference (mean non-offenders=6.3, sd=2.29, n=41; mean offenders=5.8, sd=2.86, n=52) ($t(91)=0.34$, $p=.403$). Self-reported arousal to the rape slides was significantly higher for rapists (mean=3.5, sd=2.78, n=48) than for non-offenders (mean=2.0, sd=1.39, n=40) ($t(72)=3.29$, $p=.002$). Rape slides analyzed using a Mann-Whitney U test, because of skewed and unequal distributions, still resulted in a significantly higher mean rank for rapists ($U=663$, $p=.009$).

Self-Report of Arousal to Audiotapes

Multivariate analysis of variance (MANOVA) was conducted on the log-transformed self-reported sexual arousal responses to the audiotapes in a 2 (group) by 3 (tape) by 2

(instruction) design. Four cases were excluded because of missing data and 89 cases were included in the analysis - 41 non-offenders and 48 offenders. Mauchly sphericity tests were significant so the hypotheses of equal variance/covariance matrices was rejected and appropriate Geisser-Greenhouse adjustments were made to the degrees of freedom for the tests involving within-subjects factors.

As Table 33 shows, there were significant main effects for instruction (arouse versus suppress) and for tape (rape, consenting, assault) and a significant tape by instruction interaction ($F(2,87)=5.94$, $p<0.01$, Geisser-Greenhouse corrected df). Cell means (log transformed) are shown in Table 34.

The simple effects of instruction within tape were significant for the rape ($F(1,87)=26.48$, $p=.000$) and the mutually consenting ($F(1,87)=20.33$, $p=.000$) tapes but not for the assault tape. Subjects reported significantly less arousal with suppress instructions for the rape and the mutually consenting scenarios.

IQ and DEVIANT RESPONSE

Proportion of deviant responders in each of the 3 IQ categories was examined. No association between level of intellectual functioning and deviant arousal was found for either the total sample ($X^2(2)=1.08$, $p=.583$, $N=88$) or for the offender group alone ($X^2(2)=3.95$, $p=.139$, $N=47$) (Table 35).

TABLE 33

MANOVA RESULTS FOR SELF-REPORTED AROUSAL TO AUDIO TAPES
INSTRUCTION X TAPE X OFFENSE HISTORY

N=89 (41 NON-OFFENDERS AND 48 OFFENDERS)

Tests of Between-Subjects Effects.

Source of Variation	SS	DF	MS	F	Sig
WITHIN CELLS	99.97	87	1.15		
CONSTANT	157.86	1	157.86	137.38	.000
GROUP	1.16	1	1.16	1.01	.317

Tests involving 'INSTRUCT' Within-Subject Effect.

WITHIN CELLS	11.56	87	.13		
INSTRUCT	3.80	1	3.80	28.62	.000
GROUP BY INSTRUCT	.14	1	.14	1.02	.314

Tests involving 'TAPE' Within-Subject Effect

WITHIN CELLS	73.93	174	.42		
TAPE	109.63	2	54.82	129.01	.000
GROUP BY TAPE	1.97	2	.98	2.32	.102

Tests involving 'INSTRUCT BY TAPE' Within-Subject Effect
(G-G ADJUSTED).

WITHIN CELLS	14.16	87	.16		
INSTRUCT BY TAPE	1.71	1.8	.95	5.94	<.01
GROUP BY INSTRUCT BY TAPE	.07	2	.04	.45	.641

Tests involving 'INSTRUCT W RAPE' Within-Subject Effect.

WITHIN CELLS	9.01	87	.10		
INSTRUCT W RAPE	2.74	1	2.74	26.48	.000
GROUP BY INSTRUCT W RAPE	.05	1	.05	.48	.492

Tests involving 'INSTRUCT W CONSENT' Within-Subject Effect.

WITHIN CELLS	11.85	87	.14		
INSTRUCT W CONSENT	2.77	1	2.77	20.33	.000
GROUP BY INSTRUCT W CONSENT	.16	1	.16	1.17	.283

Tests involving 'INSTRUCT W ASSAULT' Within-Subject Effect.

WITHIN CELLS	4.86	87	.06		
INSTRUCT W ASSAULT	.00	1	.00	.06	.807
GROUP BY INSTRUCT W ASSAULT	.00	1	.00	.01	.939

TABLE 34

Means and Standard Deviations for Self-Reported Arousal
to Audiotapes (Log Transformed)

		Non-Offenders (n=41)	Offenders (n=48)	Total (N=89)
Rape	Arouse	0.57 (0.72)	0.47 (0.67)	0.51 (0.69)
	Suppress	0.28 (0.51)	0.26 (0.55)	0.27 (0.53)
Mutual Consent	Arouse	1.45 (0.64)	1.13 (0.94)	1.27 (0.83)
	Suppress	1.14 (0.76)	0.94 (0.90)	1.03 (0.84)
Assault	Arouse	0.07 (0.34)	0.10 (0.29)	0.09 (0.31)
	Suppress	0.06 (0.27)	0.10 (0.26)	0.08 (0.26)

TABLE 35
IQ LEVEL BY DEVIANT RESPONSE

IQ LEVEL	Count			Row Total
	Col Pct	NON- DEVIANT	DEVIANT	
LOW AVG, BORDER- LINE, MR		12 26.7	11 25.6	23 26.1
AVERAGE		22 48.9	25 58.1	47 53.4
VERY SUPERIOR, SUPERIOR, HI AVG		11 24.4	7 16.3	18 20.5
	Column	45	43	88
	Total	51.1	48.9	100.0

Chi-Square	DF	Significance	Min EF	Cells with EF <5
1.08	2	.583	8.8	0

SUMMARY ASSESSMENT INFORMATION

The large number of variables included in this study required analyses of measures in subsets as well as some factor analyses reported above. The summary measures or primary predictors that emerged from these were included in an overall analysis to assess how well the combined information predicted offense history and to compare the relative predictive powers of the different measures. The variables included in this set were selected to represent the most statistically and/or clinically relevant assessment information using the preliminary analyses to help guide the selection.

Included in a direct discriminant function analysis were the Sexual Functioning Index (SFI) (the summary measure from the DSFI), the Buss-Durkee Hostility Inventory total score (BDI), the Global Severity Index (GSI) from the BSI, deviant response (i.e., any index (RIA, RIS, AIA or AIS) greater than 1), the peak response to the rape slides (log transformed), the Michigan Alcoholism Screening Test score (log transformed) (MAST) and the first question on the BSHI concerning the subjects own history of sexual victimization as a child. A few other measures were considered but were not included because of statistical considerations limiting the number of variables. Variables excluded were either insignificant in preliminary results (e.g., RMAS, pornography), redundant (e.g., drive which contributes to the SFI) or they were minor

contributors to the clinical assessment (e.g., items on the DSFI Fantasy scale).

Of the original sample 7 offenders were excluded from the analysis because they had at least one missing discriminating variable. Groups consisted of 41 non-offenders and 45 offenders. Evaluation of statistical assumptions revealed no threats to multivariate analysis.

The discriminant function represented a significant underlying dimension accounting for group differences ($X^2(7)=52.65$, $p=.000$; Wilks lambda=.520; canonical $r=.693$) (Table 36). The loading matrix of correlations between predictor variables and the discriminant function indicated that the Sexual Functioning Index (SFI) was the primary predictor of offense history. The rapists on average had lower SFI's (mean SFI=33, $sd=13.02$) than did non-offenders (mean SFI=50, $sd=12.6$) (univariate $F(1,84)=36.75$, $p=.000$). Approximately 47% of the variance of SFI was accounted for by the discriminant function. History of sexual victimization as a child contributed second to the discrimination. Recall that 51% of the offenders reported sexual contact with an adult prior to age 13 compared to 19.5% of non-offenders. Thirteen percent of the variance of childhood history of sexual abuse was accounted for by the discriminant function. The Buss-Durkee Hostility total also predicted offense history. Mean BDI for rapists was 34 ($sd=12.76$) and for non-offenders it was 26 ($sd=12.03$) ($F(1,84)=7.25$, $p=.009$).

TABLE 36

DISCRIMINANT ANALYSIS RESULTS
FOR CLASSIFICATION BY OFFENSE HISTORY
WITH SUMMARY MEASURES AS PREDICTORS

WILKS LAMBDA	CANONICAL r	CHI-SQUARE(7)	PROB	N
.520	.693	52.65	.000	86

PREDICTOR	NON-OFF (41) MEAN (SD)	OFFEND (45) MEAN (SD)	F(1,84)	SIG.	COR W FUNC
SEXUAL FUNCTION INDEX	50 (12.61)	33 (13.02)	36.75	.000	.688
HISTORY AS VICTIM	.20 (.40)	.51 (.51)	10.18	.002	-.362
BUSS-DURKEE HOSTILITY	26 (12.03)	34 (12.76)	7.25	.009	-.306
DEVIANT RESPONSE	.39 (.49)	.60 (.50)	3.86	.053	-.223
RAPE SLIDES	3.97 (.64)	4.19 (.49)	3.12	.081	-.201
GLOBAL SEVERITY INDEX	.55 (.62)	.78 (.64)	2.80	.098	-.190
M.ALCOHOL SCREEN	1.52 (1.09)	1.86 (1.46)	1.47	.229	-.138

Pooled Within-Groups Correlation Matrix

	SFI	VICT	BDI	DEVI	SLID	GSI	MAST
SFI	1.0						
HIST VICTIM	.20	1.0					
BDI	-.32	.23	1.0				
DEVIANT RESP	-.08	.06	.01	1.0			
RAPE SLIDES	.19	.05	.12	.19	1.0		
GSI	-.57	.13	.51	-.01	-.26	1.0	
M.ALCOHOL	.07	.13	.31	.09	.16	.15	1.0

Approximately 9% of the variance of BDI was accounted for by the discriminant function. The remaining variables had loadings less than .3 with the function and were not significant in univariate analyses. The function correctly classified 85% of cases (N=86) by offense history (83% of the controls and 87% of the offenders).

Including the 4 PT indexes (log transformed RIA RIS AIA AIS) rather than one measure of "deviant response" improved the discrimination only slightly. With the 10 predictor variables, a discriminant function was calculated with a Wilks Lambda of .485, canonical $r=.718$ and a Chi-square approximation (10 df) of 56.50 ($p=.000$, $N=85$). The function correctly classified 87% of subjects (88% of non-offenders and 86% of offenders). All 4 indexes had very low correlations with the discriminant function and none were significant in univariate analyses.

The first analyses was repeated after partialling out the variance due to education. The discriminant function still represented a significant underlying dimension accounting for group differences ($F(7,76)=8.71$, $p=.000$; Wilks Lambda=.555; canonical $r=.667$). Table 37 shows the univariate F 's and correlations between the predictors and the canonical function. The primary predictor still was the SFI ($F(1,82)=32.62$, $p=.000$) which shared 50% of its variance with the function. History of childhood sexual victimization remained the second best predictor, with 13% common variance

TABLE 37

DISCRIMINANT ANALYSIS RESULTS
FOR CLASSIFICATION BY OFFENSE HISTORY
WITH SUMMARY MEASURES AS PREDICTORS
AND WITH EDUCATION PARTIALLED OUT

WILKS LAMBDA	CANONICAL r	F(7,76)	PROB	N
.555	.667	8.71	.000	85

PREDICTOR	F(1,82)	PROB.	CORR WITH FUNCTION
SEXUAL FUNCTION INDEX	32.62	.000	.704
HISTORY OF VICTIMIZATION	8.72	.004	-.364
BUSS-DURKEE HOSTILITY	4.56	.036	-.263
GLOBAL SEVERITY INDEX	3.81	.054	-.241
DEVIANT RESPONSE	3.20	.077	-.221
RAPE SLIDES	1.82	.181	-.166
MICHIGAN ALCOHOL SCREENING TEST	0.76	.386	-.107

($F(1,82)=8.72$, $p=.004$) and the Buss-Durkee Hostility Inventory remained third. Although the BDI loaded less than .3 on the function it was still significant in univariate analysis ($F(1,82)=4.56$, $p=.036$). No other predictors were significant in univariate analyses or had loadings with the function in excess of .3.

CLASSIFICATION BY USE OF PORNOGRAPHY

The association between the use of violent pornography (items 58 and 62) and other assessment measures was examined. Subjects were collapsed across experimental groups and classified according to whether or not they reported exposure to pornographic material (literature or films) depicting violence. Twenty subjects said they had viewed violent pornographic films and 17 reported they had read violent pornographic literature. In total 25 subjects reported exposure to at least one, while 62 subjects reported they had never used either films or literature depicting sexual violence.

A direct discriminant analysis was conducted with the log transformed sexual preference indexes (RIA, RIS, AIA, AIS), scores on the 3 Burt's scales (RMA, AIV, ASB), the Buss-Durkee total score (BDI), the Coercive Sexuality Scale total (CSS) and report of previous sadomasochistic activity, as predictors of previous use of violent pornography.

Of the original sample 2 non-users were excluded from analyses because they responded "no" to 2 or 3 of the

"honesty" questions on the BSHI. Two were excluded from analysis because of extreme scores - 1 non-user had an extremely high Rape Index Arouse and 1 user had an extremely high Assault Index Suppress. Sixteen subjects were not included because they had at least 1 missing discriminating variable (11 or 18% non-users and 5 or 20% users). Groups consisted of 54 non-users and 19 users. The discriminant function did not represent a significant underlying dimension accounting for group differences ($\chi^2(10)=11.75$, $p=.302$, $N=73$; Wilks lambda=.837; canonical $r=.404$) (see Table 38). Only the univariate F for the Assault Index Suppress (log) was significant ($F(1,71)=3.98$, $p=.050$) with users being higher (mean=.44, $sd=.393$) than non-users (mean=.27, $sd=.287$).

COMPARISON OF SUBJECTS CLASSIFIED BY SELF-REPORT OF COERCIVE HISTORY

Subjects were classified as having a history of coercive sexual behaviour if they scored above 7 on the second half of the Coercive Sexuality Scale (sum of items 13 to 19) i.e., if they reported at least once any one of the behaviours ranging from 13. "Ignored a woman's protests to have sex with you" to 19. "Used a weapon on a woman to get her to have sex with you". Subjects also were classified as sexually coercive if they reported attempted rape or rape at least once on the BSHI (items 31, 35, 40 and 42).

Table 39 shows the breakdown of the coercive history classification by offense history. Forty eight subjects

TABLE 38

DISCRIMINANT ANALYSIS RESULTS FOR CLASSIFICATION
BY USE OF VIOLENT PORNOGRAPHY

WILKS LAMBDA	CANONICAL r	CHI-SQUARE(10)	PROB	N	
.837	.404	11.75	.302	73	
PREDICTOR	NON-USER (54) MEAN (SD)	USER (19) MEAN (SD)	F(1,71)	SIG.	COR W FUNC
ASSAULT INDEX SUPPRESS	0.27 (.29)	0.44 (.39)	3.93	.050	.536
RAPE INDEX SUPPRESS	0.40 (.36)	0.56 (.41)	2.67	.106	.440
RAPE INDEX AROUSE	0.45 (.40)	0.64 (.32)	2.49	.119	.424
BUSS DURKKEE HOSTILITY	28 (13.0)	34 (15.6)	1.98	.164	.378
SADOMASOCHIST ACTIVITY	0.07 (.26)	0.16 (.38)	1.13	.292	.285
COERCIVE SEX TOTAL	23.7 (6.4)	25.2 (6.4)	0.78	.382	.237
ASSAULT INDEX AROUSE	0.24 (.26)	0.29 (.24)	0.48	.491	.186
ADVERSARIAL SEXUAL BELIEFS	47 (9.62)	46 (13.36)	0.33	.566	-.155
RAPE MYTH ACCEPTANCE	62 (11.87)	64 (10.58)	0.31	.582	.149
ACCEPT INTERP VIOLENCE	34 (5.82)	34 (5.96)	0.04	.840	.055

POOLED WITHIN-GROUPS CORRELATION MATRIX

	AIS	RIS	RIA	BDI	SM	CSS	AIA	ASB	RMA	AIV
AIS	1.0									
RIS	.29	1.0								
RIA	.11	.51	1.0							
BDHI	.02	.00	.01	1.0						
SM	.02	-.26	-.16	.06	1.0					
CSS	.12	-.08	.11	.02	-.08	1.0				
AIA	.22	.29	.33	.02	.21	.05	1.0			
ASB	.10	.02	-.01	-.57	-.13	.09	.08	1.0		
RMA	.11	.01	.03	-.54	.01	-.06	-.01	.65	1.0	
AIV	-.01	-.21	-.11	-.52	.12	-.08	-.05	.60	.60	1.0

TABLE 39
COERCIVE HISTORY BY OFFENSE HISTORY

	Count Col Pct	NON- OFFENDER	OFFENDER	Row Total
NON-COERCIVE		34 82.9	14 28.6	48 53.3
COERCIVE		7 17.1	35 71.4	42 46.7
	Column Total	41 45.6	49 54.4	90 100.0

Chi-Square	DF	Significance	Min EF	Cells with EF <5
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26.50	1	.000	19	0

reported no coercive sexual behaviour ("non-coercive") and 42 subjects reported some coercive sexual behaviour ("coercive"). Predictably, the majority of the coercive group were offenders (83%) and the majority of the non-coercive group were non-offenders (71%). Three offenders were excluded from any analyses involving coercive history because they were missing the group classification criterion data. There was a significant association between classification by offense history and classification by coercive history ($\chi^2(1)=26.50$, $p=.000$, $N=90$). Because of the high degree of overlap between the two classification schemes, the results were similar for the two sets of analyses and did not warrant repeating in the main body of the paper. Only summary analyses are included here and the rest of the results are reported in Appendix P.

ANALYSIS OF OVERALL ASSESSMENT RESULTS BY COERCIVE HISTORY

A direct discriminant function analysis was conducted to assess prediction of coercive history from the summary measures. Predictors were Sexual Functioning Index (SFI), peak response to the rape slides (log transformed), deviant response (any index greater than 1), Buss-Durkee Hostility total (BDI), Michigan Alcohol Screening Test (MAST) log transformed, Global Severity Index (GSI), and childhood history of sexual victimization. Besides 3 subjects missing group codes, 5 were excluded because of at least one missing discriminating variable (4 from the non-coercive group and 1 from the coercive group). Included were 44 non-coercive and 41

coercive subjects. Evaluation of assumptions revealed no threats to multivariate analysis.

A statistically significant separation between groups based on the 7 predictors was found (Wilks Lambda=.693; canonical $r=.555$; $X^2(7)=29.22$, $p=.000$, $N=85$) (see Table 40). The loading matrix of correlations between predictor variables and the discriminant function indicated that the Sexual Functioning Index was the primary predictor of coercive history with 38% of it's variance accounted for by the discriminant function. Univariate F 's indicated that the coercive subjects had significantly lower SFI's (mean=35, $sd=13.4$) than the non-coercive (mean=47, $sd=14.8$) ($F(1,83)=13.89$, $p=.000$). Childhood sexual victimization contributed second to the discrimination sharing 26% of it's variance with the discriminant function. More coercive subjects were sexually abused (51%) than were non-coercive (21%) ($F(1,83)=2.58$, $p=.003$). Buss-Durkee Hostility Total shared a substantial amount of variance with the discriminant function (20%). Coercive subjects were higher on BDI (mean=34, $sd=12.3$) than were non-coercive (mean=27, $sd=12.6$) ($F(1,83)=7.35$, $p=.008$). Penile tumescence response to rape slides shared 12% of it's variance with the function with coercive subjects responding significantly higher (mean=4.2,

TABLE 40

DISCRIMINANT ANALYSIS RESULTS
FOR CLASSIFICATION BY COERCIVE HISTORY
WITH SUMMARY MEASURES AS PREDICTORS

WILKS LAMBDA	CANONICAL r	CHI-SQUARE(7)	PROB	N	
.693	.555	29.22	.000	85	
PREDICTOR	NON-COER(44) MEAN (SD)	COERCIVE(41) MEAN (SD)	F(1,83)	SIG.	COR W FUNC
SEXUAL FUNCTION INDEX	47 (14.82)	35 (13.39)	13.89	.000	-.614
HISTORY AS VICTIM	.21 (.41)	.51 (.51)	9.58	.003	.510
BUSS-DURKEE HOSTILITY	27 (12.61)	34 (12.31)	7.35	.008	.447
RAPE SLIDES	3.96 (.64)	4.21 (.48)	4.27	.042	.340
M.ALCOHOL SCREENING	1.44 (1.20)	2.00 (1.36)	3.98	.049	.329
GLOBAL SEVERITY INDEX	.54 (.62)	.80 (.64)	3.90	.052	.325
DEVIANT RESPONSE	.41 (.50)	.59 (.50)	2.66	.107	.269

POOLED WITHIN-GROUPS CORRELATIONS BETWEEN PREDICTORS AND
FUNCTION

	SFI	VICT	BDI	SLID	MAST	GSI	DEVI
SFI	1.0						
HIST VICTIM	.13	1.0					
BDI	-.36	.24	1.0				
RAPE SLIDES	.17	.03	.12	1.0			
M.ALCOHOL	.06	.12	.29	.16	1.0		
GSI	-.53	.10	.51	-.30	.15	1.0	
DEVIANT RESP	-.11	.05	.02	.18	.09	-.03	1.0

sd=.48) to rape slides than non-coercive subjects (mean=4.0, sd=.63) ($F(1,83)=4.27$, $p=.042$). MAST and GSI also had loadings higher than .3 with the canonical discriminant function and were significantly different for the 2 groups. Coercive subjects had higher MAST scores and higher GSI's than did non-coercive subjects. Deviant response was not significant in univariate analysis and loaded less than .3 on the function. The function correctly classified 71% of cases (73% of the 44 non-coercive and 68% of the 41 coercive subjects).

Partialling out the effects of education yielded similar results. The discriminant function represented a significant underlying dimension accounting for group differences ($F(7,75)=4.07$, $p=.001$; Wilks Lambda=.725; canonical $r=.525$) (Table 41). The order of loadings (according to the size of the correlation with the function) are similar to those before education was partialled out. Log transformed responses to rape slides and MAST were not significant in univariate analyses after variance due to education was removed.

ANALYSIS OF COERCIVE HISTORY AMONG NON-OFFENDERS ONLY

In order to examine some of the predictors of coercive sexual behaviour apart from the "criminal" factor, classification by coercive history was examined among non-offenders only. However, this resulted in quite unequal groups with only 7 coercive subjects so parametric analyses were not useful. Non-parametric tests (Mann-Whitney U and Chi-square)

TABLE 41

DISCRIMINANT ANALYSIS RESULTS
FOR CLASSIFICATION BY COERCIVE HISTORY
WITH SUMMARY MEASURES AS PREDICTORS
AND WITH EDUCATION PARTIALLED OUT

WILKS LAMBDA	CANONICAL r	F(7,75)	PROB	N
.725	.525	4.07	.001	84

PREDICTOR	F(1,81)	PROB.	CORR WITH FUNCTION
SEXUAL FUNCTION INDEX	11.27	.001	.605
HISTORY OF VICTIMIZATION	8.46	.005	-.525
BUSS-DURKEE HOSTILITY	4.93	.029	-.401
GLOBAL SEVERITY INDEX	4.63	.034	-.388
RAPE SLIDES	2.96	.089	-.310
M.ALCOHOL SCREENING TEST	2.93	.091	-.309
DEVIANT RESPONSE	2.26	.137	-.271

TABLE 42

ANALYSES BY COERCIVE HISTORY AMONG NON-OFFENDERS ONLY
MANN-WHITNEY U TESTS

VARIABLE	NON-COERCIVE (n=34) MEAN RANK	COERCIVE (n=7) MEAN RANK	U	PROB (2 TAILED)
AGE	20.7	22.4	109.0	.728
FSIQ	23.1	10.9	48.0	.014 *
DSFI ATHT	22.0	15.9	83.5	.218
DSFI BODY	21.1	20.4	114.5	.876
DSFI GEND R	22.3	14.6	74.0	.118
DSFI AFFECT	20.9	21.3	117.0	.945
DSFI SYMPTOM	22.4	14.2	71.5	.099
DSFI DRIVE	21.7	17.4	94.0	.385
DSFI SFI	22.1	15.4	80.0	.176
BDHI TOTAL	19.6	27.6	72.5	.107
RMA5	22.3	14.9	76.0	.136
ASB	21.8	17.0	91.0	.331
AIV	21.1	20.6	116.0	.917
VIOL PORN FILMS	21.2	19.9	111.5	.705
SADOMASO FANTASY	21.9	16.5	87.5	.194
CONFUSED ID FANT	20.2	24.8	92.5	.221
SEXUAL ACTIVITY	22.9	11.6	53.0	.021
BSI SOMATIZATION	18.3	34.3	26.0	.001 *

TABLE 42 (Continued)

ANALYSES BY COERCIVE HISTORY AMONG NON-OFFENDERS ONLY
 MANN-WHITNEY U TESTS
 (CONTINUED)

VARIABLE	NON-COERCIVE MEAN RANK	COERCIVE MEAN RANK	U	PROB (2 TAILED)
BSI SOMATIZATION	18.3	34.3	26.0	.001 *
BSI PSYCHOTIC	20.0	26.1	83.5	.202
BSI PARANIOA	19.5	28.4	67.5	.065
BSI INTERPERS SENS	19.6	27.6	72.5	.100
BSI ANXIETY	19.2	29.6	59.0	.035 *
BSI PHOBIA	20.2	21.7	93.0	.296
BSI DEPRESSION	20.0	25.7	86.0	.248
BSI HOSTILITY	20.3	24.2	96.5	.432
BDHI GUILT	19.3	29.5	59.5	.037 *
BDHI SUSPICIOUS	19.6	27.7	72.0	.098
BDHI RESENTMENT	19.7	27.3	75.0	.121
BDHI ASSAULT	19.8	27.0	77.0	.143
BDHI IRRITABILITY	20.0	25.7	86.0	.248

TABLE 42 (Continued)

ANALYSES BY COERCIVE HISTORY AMONG NON-OFFENDERS ONLY
 MANN WHITNEY U TESTS
 (CONTINUED)

VARIABLE	NON-COERCIVE MEAN RANK	COERCIVE MEAN RANK	U	PROB (2-TAILED)
MMPI PD	19.0	30.7	51.0	.018 *
MMPI PA	18.7	32.4	39.0	.005 *
MMPI SC	19.5	28.1	69.0	.083
MMPI PT	20.2	24.9	92.0	.348
RAPE SLIDES	19.7	27.4	74.0	.114
MAST	19.3	29.2	61.5	.045 *
BSI GSI	19.5	28.1	69.0	.083

TABLE 42 (Continued)

ANALYSES BY COERCIVE HISTORY AMONG NON-OFFENDERS ONLY
CHI SQUARE TESTS
(CONTINUED)

VARIABLE	NON-COERCIVE %	COERCIVE %	CHI SQUARE	PROB
HIST VICTIMIZATION	17.6	28.6	0.44	.507
UNEMPLOYED	32.4	71.4	3.73	.054
PRESENT FEMALE PARTNER	70.6	57.1	0.49	.486
OCCUPATION LEVEL				.839
VIOLENT FILMS	20.6	14.3	0.15	.702
VIOLENT BOOKS	21.9	14.3	0.20	.652
DEVIANT RESPONSE	32.4	71.4	3.73	.054
RAPE AR INDEX GT 1	17.6	57.1	4.91	.027 *
RAPE SU INDEX GT 1	11.8	28.6	1.31	.252
ASSAULT AR IND GT 1	2.9	14.3	1.61	.205
ASSAULT SU IND GT 1	8.8	14.3	0.20	.657
EDUCATION LEVEL			2.40	.303
BSHI EXHIBITIONISM	5.9	28.6	3.39	.065
BSHI FETISHISM	17.6	28.6	0.44	.505
BSHI FROTTEURISM	38.2	28.6	0.23	.629
BSHI SADOSMASO	2.9	0	0.21	.646
BSHI VOYEURISM	55.9	71.4	0.58	.447
BSHI OBSCENE PHONE	26.5	42.9	0.75	.386
BSHI BESTIALITY	8.8	28.6	2.11	.146

were used to test for differences between the groups on the most relevant predictors. Some variables found non-significant in the larger sample were re-examined to test their effect after ruling out the criminal factor. The small n in the coercive group resulted in very low power which was a consideration in interpretation.

Table 42 shows these results. Full Scale IQ was available on all non-offenders so this rather than IQ level was analyzed. IQ was significantly different (Mann-Whitney $U=48$, $p=.0137$) with coercive subjects having lower IQ's than non-coercive. Analysis of employment status yielded a difference with a probability of $p=.054$, ($X^2(1)=3.73$). Eleven out of 34 (32%) non-coercive subjects were unemployed compared to 5/7 (71%) coercive subjects. Sexual activity was significantly different (Mann-Whitney $U=53$, $p=.021$). Consistent with previous analyses, the coercive subjects had significantly lower sex drive than the non-coercive group. Somatization and Anxiety were the only 2 BSI scale scores that were significantly different. Coercive subjects were higher on both (Mann-Whitney $U=26$, $p=.001$ for Somatization; $U=59$, $p=.035$ for Anxiety). Again, the Guilt score from the Buss-Durkee Hostility Inventory was significantly higher for coercive than for non-coercive subjects ($U=59.5$, $p=.037$).

MMPI results were particularly interesting because in analysis of non-offenders only there was no bias due to missing data. Psychopathic Deviance, which was the primary

predictor in previous analyses, also was significantly different among the non-offenders only ($U=51$, $p=.018$) as was Paranoia ($U=39$, $p=.005$) but no other differences on the MMPI were found. Michigan Alcoholism Screening Test (log transformed) was significantly higher for the coercive non-offenders than for those who were not coercive ($U=61.5$, $p=.045$). No differences were found on self-reported paraphilic activities. Analysis of the 4 fantasy themes yielded no significant differences and the item analysis revealed that none of the coercive subjects endorsed any of the rape fantasies including item 5 "forcing sex partner to submit to sexual acts".

Analysis of deviant response by coercive history showed that 5 of the 7 (71%) coercive subjects had a deviant response compared to 11/34 (32%) of the non-coercive subjects. The chi-square ($X^2(1)=3.73$) did not reach statistical significance ($p=.054$) because of the small n . The Rape Index with arouse instructions was greater than 1 for 4/7 (57%) coercive subjects compared to 6/34 (18%) non-coercive ($X^2(1)=4.91$, $p=.027$).

ANALYSES BY DEVIANT RESPONSE

Comparisons were made according to a third classification criterion based on deviant arousal. Subjects with any of the 4 indexes (RIA, RIS AIA, AIS) clinically significant (above 1) were considered deviant responders and others were not deviant responders. In the total sample 46 subjects were not deviant

responders and 47 had at least one index greater than 1.

A discriminant analysis was conducted with the summary measures as predictors of deviant response (excluding penile tumescence Indexes which were the grouping criteria). Included in a direct discriminant function analysis were the Sexual Functioning Index (SFI), the peak response to the rape slides (log transformed), the Buss-Durkee Hostility Inventory total score (BDI), the Michigan Alcoholism Screening Test score (log transformed), the Global Severity Index and history of childhood sexual victimization.

Of the original sample 4 deviant responders and 3 non-deviant responders were excluded because of at least one missing discriminating variable. Groups consisted of 43 non-deviant responders and 43 deviant responders. The function did not represent a significant underlying dimension accounting for group differences ($X^2(6)=9.70$, $p=.138$; Wilks Lambda=.887; canonical $r=.336$) (see Table 43). Only the univariate F for the rape slides was significant ($F(1,84)=4.36$, $p=.040$). Deviant responders showed higher arousal (mean (log)=4.21, $sd=.545$) to the rapes slides than subjects with no deviant response (mean (log)=3.96, $p=.583$).

TABLE 43

**DISCRIMINANT ANALYSIS RESULTS
FOR CLASSIFICATION BY DEVIANT RESPONSE
WITH SUMMARY MEASURES AS PREDICTORS**

WILKS LAMBDA	CANONICAL r	CHI-SQUARE(6)	PROB	N
.887	.336	9.70	.138	86

PREDICTOR	NON-DEV (43) MEAN (SD)	DEVIANT (43) MEAN (SD)	F(1,84)	SIG.	COR W FUNC
RAPE SLIDES	3.96 (.58)	4.21 (.55)	4.36	.040	-.639
SEXUAL FUNCTION INDEX	44 (14.95)	38 (15.3)	2.83	.096	.515
HISTORY AS VICTIM	.30 (.47)	.42 (.50)	1.25	.267	-.342
M.ALCOHOL SCREENING	1.54 (1.15)	1.85 (1.43)	1.19	.279	-.333
BUSS-DURKEE HOSTILITY	29 (13.48)	31 (12.32)	0.36	.549	-.184
GLOBAL SEVERITY INDEX	.66 (.73)	.69 (.55)	0.05	.819	-.070

Pooled Within-Groups Correlation Matrix

	SLIDES	SFI	VICT	MAST	BDI	GSI
RAPE SLIDES	1.0					
SFI	.10	1.0				
VICTIM	.09	-.00	1.0			
MAST	.16	.01	.16	1.0		
BDI	.16	-.41	.29	.33	1.0	
GSI	-.23	-.57	.17	.17	.53	1.0

DISCUSSION

The rapists and the non-offenders were similar on basic demographic measures (age and marital status) but differences on other demographics may indicate predisposing factors for sexual aggression. While intellectual level did not distinguish offenders and non-offenders, there was a significant difference when subject classification was based on self-report of coercive history. For the total sample, more coercive subjects were in the low IQ range than were non-coercive subjects. This was seen also in the analysis of non-offenders only. However, intelligence did not appear to be a moderating influence on deviant arousal in this study, i.e., there was no association between IQ and deviant response, consistent with the results of Murphy et al., (1985).

More offenders than non-offenders were unemployed at the time of testing and this does not appear to be a temporary result of their legal situation at the time of their assessment. Classification by coercive history also indicated that a greater proportion of coercive subjects than of non-coercive subjects were unemployed and this trend also was seen in the analysis of non-offenders only. Job stability as a component of social competence has been cited in relation to sexual aggression. For example, Prentky (1992) found that the offender's social competence which includes job stability, was related to how early he started raping.

Level of education was lower for offenders compared to non-offenders and for coercive compared to non-coercive subjects in the total sample. However among the non-offenders only, coercive and non-coercive subjects had similar levels of education. It is not clear how much of the difference observed in the total sample is a reflection of the educational trend of the general criminal population. Given that it held up in the classification by coercive history suggests that to some extent education is a factor over and above the criminal factor, perhaps having some association with social competence. However, statistically removing the effect of education in the discriminant analyses did not change the primary predictors of sexual aggression. Partialling out education tended to reduce the between group variance but made little difference to the relationship among predictors.

While marital status was similar for the sexually aggressive men and the comparison subjects with most of them being single at the time of the study, more of the comparison subjects reported having a regular female sexual partner at the time. If the assumption is that having a regular sexual partner is desirable, then the majority of rapists without girlfriends may be interpreted as a reflection of low social competence.

Sexual History

The history data were consistent with other reports of

PM-1 3½"x4" PHOTOGRAPHIC MICROCOPY TARGET
NBS 1010a ANSI/ISO #2 EQUIVALENT

higher prevalence of sexual victimization in childhood among rapists and other sex offenders than among non-offenders (e.g., Hanson and Slater, 1988). More than half of the offenders reported that they'd had sex with an adult before they were 13 years old. What is more surprising is that almost 20% of the comparison group also reported this, which is higher than estimates found in other studies (e.g., Finklehor, 1979). Results were similar for analysis by coercive history.

None of the non-offenders reported any sexual activity with children although one third of the rapists admitted to having sexual contact with someone 15 or younger since they were at least 20 years old. Results were similar for analysis by coercive history. Among the offenders, those who reported their own childhood sexual victimization were significantly more likely to report having sex with a child since they were an adult. This is consistent with other findings that child molesters were more likely to be victims of childhood sexual abuse than were other individuals (Groth and Burgess, 1979).

The relationship between offense history and reports of child-molesting must be interpreted in the context of the screening interview conducted with non-offenders. The investigator was required by law and professional ethical standards to inform subjects of the legal consequences of disclosing any information about child abuse. While sex offenders were given the same caution, it could be argued that

it had less impact on what they reported as they had less to lose than did the non-offenders, and often this information had already been disclosed.

Examination of self reports of paraphilic activities indicated that the rapists were distinguished from the non-offenders by a history of rape, child-molesting and sadomasochistic behaviours. Since the groups were defined on the basis of their history of rape, differences on this measure increased confidence in the group classifications but were not otherwise meaningful. Child-molesting is suspect because of the probable differential bias caused by the warning given. As expected, the offenders reported more sadomasochistic activity than non-offenders. However, even sadomasochism was a weak predictor of history of coercive sexual activity. The other paraphilias were not predictive of sexual aggression.

What is interesting is that the majority of all subjects reported some voyeuristic behaviour, more than a third of each group admitted to frotteurism and almost a third had made obscene phone calls. This is consistent with research by Templeman and Stinnet (1991) which showed that a large proportion of non-offenders reported a history of diverse paraphilic activities. These results have implications for suggestions by Freund (Freund, 1990) that these activities are preludes to rape, being variations of "courtship disorder". If most men in the general population report such activities

i.e., they are not specific to rapists, then their relevance to rape is questionable. Also, other reports of multiple paraphilias among sex offenders must be re-interpreted (e.g., Bradford, Boulet and Pawlak, 1992). The multiplicity of paraphilias discovered among sex offenders including rapists has been cited to support the "diagnosis" of rape as a paraphilia (Bradford et al., 1992). These results challenge the view of rape as a sexual deviation and the sexual preference hypothesis.

Use of pornography had no relationship to history of sexual aggression except that sex offenders were less likely to report use of pornography and if they used it they were more likely to report that they did not find it sexually exciting. This difference between groups could be the result of under-reporting by sex offenders attempting to present themselves in the best possible light. Given other observations that rapists hold sexually conservative or prudish attitudes (Baxter, Marshall, Barbaree, Davidson and Malcolm, 1984) this group may have perceived use of erotic films as bad and hence denied use or enjoyment of them.

Additional analyses based on classification of subjects according to exposure to violent pornography resulted in no discrimination between users and non-users. Of several predictors included in the analysis only one of the penile tumescence indexes (assault suppress) was significantly different for users and non-users. These results do not

support the hypothesis that experience with pornography has a deleterious effect on sexual behaviour and preferences.

The sexual history results did not substantiate other reports that rapists or sexually aggressive men are more sexually promiscuous than are non-offenders (e.g., Malamuth, Sockloskie, Koss and Tanaka, 1991; Fischer, 1986). Sexually aggressive men were not more promiscuous than comparison subjects as indicated by number of female sexual partners since age 16 or by age of first sexual intercourse. Studies reporting associations between promiscuity and sexual aggression were done with college students and based on indirect inferences of sexual aggression. For example, Fischer's "sexually aggressive" men were college students accepting of date-rape.

Heterosexual/Social Functioning - The DSFI

Rather than supporting the notion that rapists are promiscuous, the DSFI results in the present study indicated the contrary. The primary predictor among the DSFI scales was Sexual Attitude. The sexually aggressive men were substantially more conservative and restrictive in their attitudes toward sex than were the comparison subjects. If promiscuity is more closely associated with restrictive than with liberal sexual attitudes, these results are not consistent with the notion of rapists as sexually promiscuous.

The DSFI also indicated that the offenders had poorer sexual knowledge than non-offenders even after effects due to

level of education were removed. However, this did not predict coercive history. Briere and Malamuth (1983) had found that sexual knowledge did not predict likelihood to rape in college students and Fischer (1986) found college students "accepting of date rape" had less accurate sexual knowledge. Results of the current study suggested that sexual knowledge may be less relevant to sexual aggression than to criminality.

Similarly, while sexual experience discriminated offenders from non-offenders, this was a weak predictor of coercive history. While range of sexual experience probably is related to how liberal or constricted are the respondent's sexual attitudes, experience also may be attributable to other differences between the non-offenders and the offenders such as whether they had opportunity (i.e. a partner) to experiment sexually. Sexually aggressive subjects had more negative perceptions of their own bodies than comparison subjects. This supports other suggestions (Baxter et al., 1984) that rapists and other sex offenders are characterized by low self-esteem.

Gender-role definition predicted sexual aggression even after the effects of education level were removed. The rapists viewed the roles of men and women as more polarized than did comparison subjects. This is consistent with other observations of sex role stereotyping and hyper-masculine attitudes among sexually aggressive men (e.g., Mosher and Anderson, 1986; Burt, 1980; Lisak and Roth, 1990).

The DSFI drive score predicted sexual aggression but the difference was in the opposite direction to what would be expected if rape were the result of a need for sex. The rapists had lower sexual drive than comparison subjects. Further analysis, combining 4 measures of sexual drive discriminated significantly between offenders and non-offenders. These results suggest that rape is not primarily sexually motivated.

Sexually aggressive men reported experiencing significantly more negative affect and more symptoms of psychological distress, based on the DSFI than did the comparison groups, indicating generally poorer psychological health. Sexual satisfaction was significantly higher for non-offenders than for offenders although it did not predict coercive history. Satisfaction, like experience, probably is moderated by opportunity and offenders were less likely to have a sexual partner.

To summarize the DSFI results, the sexually aggressive men tended to have more conservative, restrictive attitudes toward sex, they had more negative perceptions of their own bodies, more traditional and rigid views of the roles of men and women, lower sex drive and less experience, and they reported feeling more negative affect and distress. Despite comprising a scale called "Sexual Functioning", most of these measures reflect what are labelled "non-sexual" factors in the literature, having more to do with views of the world, views

of self and emotional health than with sexuality per se.

The Sexual Fantasy score on the DSFI was not related to sexual aggression. Considering the importance attributed to the sexual fantasies of sexually aggressive men by many investigators and clinicians, (e.g., MacCulloch, Snowden, Wood and Mills, 1983; Burgess, Hartmen, Ressler, Douglas and McCormack, 1986), this was unexpected and warranted further exploration. The overall fantasy score is very general reflecting only the breadth of sexual fantasies reported by the subject, revealing nothing of their content. Analysis of the 4 fantasy themes covered by the scale indicated that endorsement of sadomasochistic fantasies was not associated with sexual aggression. The only differences were for consenting sexual variety and bondage which were endorsed more often by non-offenders than by offenders. Analysis of individual items that describe the salient aspects of rape did reveal a significant difference on the one that defines rape - "forcing sex partner to submit to sexual acts". Significantly more of the sexually aggressive men reported experiencing this particular fantasy although still about 70% did not. The majority of sexually aggressive men who did not report this fantasy present a challenge for investigators who view the deviant fantasy as a precursor and fundamental to the offense.

Attitudes Condoning Rape and Aggression

As expected, the rapists were more hostile than comparison subjects, but it was not expected that general

hostility would be more predictive of sexual aggression than were attitudes specific to rape and gender relationships. When Burt's scales (Rape Myth Acceptance, Adversarial Sexual Beliefs and Acceptance of Interpersonal Violence) were combined with the Buss-Durkee total to evaluate how well the attitude measures together discriminated groups, Acceptance of Interpersonal Violence was the primary predictor of offense history and the Buss-Durkee was second. Rape Myth Acceptance and Adversarial Sexual Beliefs were not significantly different for the 2 groups.

Rapists were distinguished from non-offenders on 5 of the 8 sub-scales of the BDHI and Guilt was the primary predictor. The sexually aggressive subjects expressed significantly more guilt feelings, more suspiciousness, more resentment and irritability than did the comparison subjects. Associating guilt with negative self-concept, these results are consistent with other reports that rapists have low self-esteem (e.g. Baxter et al. 1984).

The MMPI results were consistent with other research reported in the literature despite the number of offenders with missing data. High psychopathic deviance (Pd) was the primary predictor of sexual aggression. All of the remaining scales except hypomania and masculinity/femininity significantly discriminated between offenders and non-offenders indicating more psychopathology overall in the criminal group. Among the non-offenders only, even with the

limited power resulting from the small number of coercive subjects, significant differences were found on psychopathic deviance and paranoia suggesting that these are factors in sexual aggression apart from the general criminality factor.

Brief Symptom Inventory

The Brief Symptom Inventory scales discriminated sexual aggressors from comparison subjects. The rapists were experiencing significantly more distress - specifically more paranoia, more phobic anxiety, more psychotic ideation, anxiety and depression. The hostility sub-scale of the BSI did not predict sexual aggression. This was unexpected, especially given evidence of higher general hostility among rapists as measured by the Buss-Durkee. This discrepancy may be explained by the context of the testing and the specific instructions on the BSI for subjects to indicate how much they had been bothered by the problem "in the past two weeks including to-day". The Buss-Durkee Hostility Inventory included no such limits on the time-frame in which subjects rated themselves. The Buss-Durkee is a more in-depth scale providing a measure of the hostility the subject generally feels, whereas the BSI hostility sub-scale is a briefer scale measuring hostility at present. It is possible that the offenders, many of whom were in the throws of legal problems relating to their sexual aggression, might have been experiencing more distress generally and perhaps their hostility was quelled somewhat by more immediate feelings of

anxiety. The different circumstances of testing for the 2 groups may account for other differences found on the BSI. It is not clear how much of the distress observed among offenders is situational (i.e., state) and how much is trait.

Evidence that alcohol abuse is more prevalent among rapists than among non-offenders was found in their higher average MAST score. However, looking simply at whether their score is indicative of alcohol problems or not (above or below the clinical cut-off), the groups were significantly different only in analysis by coercive history. While evidence of alcohol abuse was not a primary predictor, it was a secondary factor in this study.

Deviant Arousal

While several studies (e.g., Abel, Barlow, Blanchard and Guild, 1977; Abel et al., 1978; Quinsey, Chaplin and Varney 1981; Quinsey Chaplin and Upfold, 1984; Quinsey and Chaplin 1984; Earls and Proulx 1986; Barbaree, Marshall and Lanthier, 1979; Wormith 1986) are presented in the literature in support of the discriminatory powers of sexual arousal profiles in sexually aggressive men, this was not found in the present study. Deviant arousal was measured and analyzed a number of ways. In terms of discriminating between sexually aggressive men and comparison subjects, it provided at best a weak discrimination between the groups when coded as a single dichotomous measure - deviant response or not. More offenders had at least one index greater than 1 than did non-offenders

(non-aggressive men). However, a large portion (16/41 or 39%) of the non-offenders showed a deviant response. The dichotomous measure of deviant response did not predict sexual aggression in the overall analyses. Penile tumescence response to the rape slides yielded similar results to those for indexes. Offenders and non-offenders were not significantly different on peak response to the rape slides although the difference between coercive subjects and non-coercive subjects was significant. In the overall analysis, response to rape slides was a minor factor.

None of the MANOVA's on sexual arousal to audiotapes yielded any significant effects involving subject group (either by offender status or coercive history) for either the penile tumescence measures or the self-report measure.

In all analyses there were significant main effects for tape, significant main effects for instruction and significant instruction by tape interactions. Responses to rape tapes

Footnote 1. Several explanations may account for the suppress effect only for the rape tape. Maybe the violent cues did make it easier to suppress to rape than to consenting scenarios which had no aversive elements. The order of the tape presentations may have been a factor. The rape tape (with arouse instructions) was presented first and maybe responses were higher due to a primacy effect. However, this explanation is less tenable given that the audiotapes were not the first stimuli set presented. Subjects had already seen the "warm-up" video-tape and the rape slides. Furthermore, the first rape tape still was lower than the consenting tape suggesting that any primacy effect is weak at best. Subjects may have been sensitive to what was socially appropriate and felt more compelled to suppress to the rape scenario than to the consenting. Perhaps the aversive elements of the rape scenario made it easier to suppress to this than to the consenting scenario.

were consistently lower with suppress instructions than with arouse instructions. There were no differences between assault tapes for the two instructions in any of the analyses. This may have been due to a "floor effect" given how low the assault responses were with both instructions. Arouse and suppress were different for the consenting scenarios on the self-report measure but not on the PT measure (Footnote 1).

Analysis of the indexes yielded similar results with an instruction by index interaction but no significant effects involving group. These results do not support the rationale for the instruction manipulation in penile tumescence assessments of rapists. While there were significant effects for instruction both alone and in interaction with stimulus category, this had nothing to do with offense history. The instruction for subjects to try to suppress their sexual arousal did not facilitate discrimination between rapists and comparison subjects.

These results do not substantiate claims for the power of penile tumescence measures in identifying sexually aggressive men. Results are consistent with other reports of higher arousal to depictions of consenting sex than to rape scenarios in both rapists and non-offenders (e.g., Baxter, Barbaree and Marshall 1986, Baxter et al., 1984). Recent research, incorporating the rapist typology developed by Knight, Prentky and Cerce (1994) indicated that deviant arousal was more common among certain sub-types of rapists than others

(Barbaree, Seto, Serin, Amos and Preston, 1994). However, in the current study deviant arousal was not associated with any of the other measures including subject characteristics that would be criteria in this type of classification scheme. It is possible that most (or all) of the rapists in the current investigation happen to fall into the nonsexual subtypes and this explains the weak association between deviant arousal and rape. However, this is not only statistically improbable, but examination of offense characteristics revealed a variety of both sexual and nonsexual motives.

The similarity between results of the PT and the self-report measures support the validity of self-report as a measure of sexual arousal even with rapists. However, the offenders in the present study all admitted to sexually aggressive offenses and it is not clear how non-admitters would differ in their self-report measures. It was interesting that while PT-SR correlations were significant for most assessment stimuli this correlation was significantly higher for the non-offenders than for the rapists for the 3 rape stimuli only. These results suggest that the rapists may have been differentially adjusting their self-reported arousal to the different stimulus categories. If this were the case, how they were adjusting it is not clear given that at least for the rape slides they reported higher arousal than did comparison subjects. Nonetheless, the rapists' self-reports were less consistent with their physical arousal for these

stimuli either because they were less aware of their physical responses to the rape stimuli or less willing to reveal them, resulting in more erratic responses.

Conclusions

To summarize the results, the best predictors of sexual aggression were the non-sexual factors. Groups were best discriminated by the Derogatis Sexual Functioning Inventory (primarily attitudes), Buss-Durkee Hostility Inventory (primarily guilt), Brief Symptom Inventory (primarily somatization or physical symptoms of distress), MMPI (primarily psychopathic deviance). History of sexual victimization also was a major predictor.

The "sexual" factors were at best minor contributors to the discrimination between groups. Deviant arousal was a poor predictor of offense history and of self-reported coercive history. There were no significant effects involving group for either analysis of PT or self-report to audiotapes. There was some association between sexual drive and sexual aggression but sexually aggressive men had lower drive than the comparison subjects. Sexual promiscuity was not relevant, nor was use of pornography. Analyses of sexual fantasies revealed no relationship between endorsement of sadomasochistic fantasies and sexual aggression. Apart from self-reported rape and child-molesting, there was some association between sadomasochistic sexual activity and sexual aggression but other sexually deviant activities were poor

predictors. The rapists manifested no more exhibitionism, voyeurism or frotteurism than did the comparison subjects, challenging some of the premises for viewing rape as a "paraphilia". Analysis of the sexual measures did not support the view of rape as a sexual deviation, as stemming from the abnormal sexual preference for coercive sex (e.g., Abel and Rouleau, 1990; Freund, Scher, Racansky, Campbell and Heasman, 1986). These results are consistent with Darke's (1990) conclusion, that sexual arousal to rape stimuli is neither inevitable in nor limited to rapists. The findings do not support the heavy emphasis often placed on PT testing in assessment and treatment of rapists.

The relatively minor predictive role of the sexual factors is consistent with part of the feminist perspective in that rape is not primarily sexually motivated. However, the non-significance of attitudes specific to women and rape does not support views like Burt's that rape is primarily a result of sexist attitudes or negative attitudes toward women. The rapists were more hostile towards everyone, not just toward women. From the extreme feminist perspective such as Brownmiller's, rape is the result of the attitudes prevalent in our male dominated society i.e., of men in general, which subordinate women to men and which require men to dominate women. Finding that the rapists and the non-offenders did not differ in rape myth acceptance or adversarial sexual beliefs, would not be inconsistent with the feminist premise that this

a societal pathology rather than the problem of a minority of deviant men. However, responses to the Rape Myth Acceptance scale and the Adversarial Sexual Beliefs scale indicate low acceptance of these attitudes by both groups which does not support the view that these attitudes are prevalent in either group. Within the extreme feminist framework, the distinction between men who rape and men who do not is inconsequential, and a comparison between men identified as sexually aggressive and men not would be considered off the mark. However, research including the current study has shown important differences between men who rape and men who do not.

Results of this study are not consistent with the disinhibition hypothesis of rape, i.e., that men rape because they do not experience the usual inhibitions to sexual arousal induced by the violence. According to the disinhibition hypothesis, any number of factors may operate to block the inhibitions to sexual arousal including anger, cognitive distortions, alcohol, attitudes supportive of violence, etc. While several hypothesized disinhibitors were predictors of sexual aggression in the present study, they were not associated with deviant arousal. The weak differentiation between rapists and comparison subjects on the basis of sexual arousal patterns challenges the central premise of the disinhibition hypothesis - that arousal to rape is disinhibited in rapists.

The deviant arousal results indicate that some non-rapists

are aroused by a depiction of rape. Nevertheless, these men have not raped (by all indications). Even though these men found rape stimuli sexual arousing, something prevented them from committing rape. On the other hand among the offenders, whether they had arousal to rape or not, something motivated them to rape. Significant predictors were associated with offense history, i.e., with the act of sexual aggression not with arousal to a hypothetical or "fantasy" rape. Results of this study indicate that the rapists had higher general hostility and more antisocial tendencies (higher Psychopathic Deviance) both of which could be motivators or disinhibitors to rape behaviour. These factors probably interact with other predictors in this study such as low self-esteem (body image and guilt), poorer social competence generally (DSFI, higher unemployment, lower education) and abuse of alcohol - to increase the likelihood of disinhibition to rape.

There are a number of reasons why these disinhibiting factors may not have effected arousal to rape and hence why deviant arousal was a poor discriminator between rapists and non-offenders. As feminists have argued, sexual attraction to rape may not be relevant to sexual aggression. Alternatively, it could be argued that there is disinhibition to arousal but it is to arousal during actual rape not arousal in the laboratory. Subjects in the study were aware that the rape depicted in the laboratory was not real and their responses would have no repercussions, i.e, they were not hurting anyone

or committing any crime. Furthermore, many of the predictors or disinhibitors were probably "inactive" within the confines of the laboratory testing. That is, the offenders were not feeling particularly hostile at the time nor were they intoxicated at the time of testing.

Finally, conclusions from this study do not entirely support either the extreme feminist perspective or the disinhibition hypothesis of sexual aggression. Both hypotheses provide some good postulates for sexual aggression which are not necessarily inconsistent with each other. The idea that rapists are prompted to rape by disinhibiting factors including attitudes supporting violence, anti-social tendencies, etc., is supported by these results. However, the disinhibition is to the rape behaviour not to the arousal. The disinhibition hypothesis like the sexual preference hypothesis places heavy emphasis on deviant sexual arousal and the importance of sexual arousal patterns to sexual aggression was not supported in this study. The position initially proposed by feminists that rape is not primarily sexually motivated is supported by the research and is generally accepted. However, the over-generalizations of the extreme feminist perspective seem to ignore findings such as those of the present study, that indicate important differences between men who rape and men who do not - differences which facilitate an understanding of what motivates men to rape.

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Appendix A**RESEARCH PARTICIPANTS NEEDED****EARN \$50.00****for 4 or 5 hours of your time.**

Males between 18 and 45 years of age are needed for a study being conducted at the Royal Ottawa Hospital. Participants will be requested to disclose some personal information which will be kept confidential. The study involves some intrusive (but not painful) procedures.

Phone 722-6521 ext 6375 between 9 and noon or 1 and 4 p.m. for more information.

DSFI

DEROGATIS SEXUAL FUNCTIONING INVENTORY

PATIENT ID NO. _____

VISIT DATE _____

STL-NY-91-003

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INSTRUCTIONS

Below you will be asked to report certain attitudes and opinions, and provide information about some of your sexual experiences. These questions are focused on your thoughts and feelings. Your answers and responses will be kept in the utmost confidence, and only those members of the staff directly involved with your treatment will have access to this information. It will not be made available to anyone else unless you request it. The inventory is divided into 10 sections, and in each section you are asked something slightly different. In some you are asked to answer questions, while in others you are asked to describe yourself. We also ask about problems you may be having and about some of your sexual thoughts, fantasies, and experiences.

Each section has a brief instruction which will tell you what you are to do in that section. Please work quickly, and do not skip any items. If you have any questions, please ask the technician to help you.

SECTION I

Below are some statements concerning general information about sexual functioning. Please read each statement carefully. Once you have read it, indicate whether you agree with the statement or not by marking TRUE for those you agree with, and FALSE for those you do not.

	<u>TRUE</u>	<u>FALSE</u>
1. USUALLY MEN ACHIEVE ORGASM MORE QUICKLY THAN WOMEN	☐	☐
2. HAVING INTERCOURSE DURING MENSTRUATION IS NOT A HEALTHY PRACTICE	☐	☐
3. THE PENIS MUST BE ERECT BEFORE EJACULATION MAY OCCUR	☐	☐
4. SIMULTANEOUS ORGASM IS NOT NECESSARY FOR A GOOD SEXUAL RELATIONSHIP	☐	☐
5. MASTURBATION BY EITHER PARTNER IS AN INDICATOR OF POOR MARITAL ADJUSTMENT	☐	☐
6. A WOMAN WHO HAS HAD A HYSTERECTOMY CAN NO LONGER EXPERIENCE ORGASM	☐	☐
7. MEN REACH THE PEAK OF THEIR SEXUAL DRIVE IN THEIR LATE TEENS WHILE WOMEN REACH THEIR PEAK DURING THEIR 30'S	☐	☐
8. A WOMAN CAN BECOME PREGNANT DURING MENSTRUATION	☐	☐
9. MOST MEN AND WOMEN LOSE INTEREST IN SEX AFTER AGE 60	☐	☐
10. A MALE'S ORGASM IS MORE SATISFYING THAN A FEMALE'S ORGASM	☐	☐
11. THE PROPHYLACTIC (RUBBER) PROTECTS AGAINST CONCEPTION AND AGAINST VENEREAL DISEASE	☐	☐
12. LUBRICATION IN THE FEMALE SHOWS SEXUAL EXCITEMENT LIKE THE MALE'S ERECTION	☐	☐
13. ORAL-GENITAL SEX IS UNHEALTHY BECAUSE IT ENHANCES THE POSSIBILITY OF CONTRACTING VENEREAL DISEASE	☐	☐
14. WOMEN WHO HAVE FANTASIES DURING INTERCOURSE ARE DISSATISFIED WITH THEIR SEX LIVES	☐	☐
15. FREQUENCY OF INTERCOURSE IS AN ACCURATE MEASURE OF SUCCESS OF A RELATIONSHIP	☐	☐
16. A WOMAN MAY BE BROUGHT TO ORGASM BY MANUAL STIMULATION OF HER GENITALS	☐	☐
17. MENOPAUSE IN A WOMAN CREATES A SHARP REDUCTION IN HER SEXUAL DRIVE	☐	☐
18. WOMEN DESIRE SEX ABOUT AS FREQUENTLY AS MEN	☐	☐
19. AN EFFECTIVE FORM OF CONTRACEPTION IS DOUCHING AFTER INTERCOURSE	☐	☐
20. AFTER INTERCOURSE THERE IS A PERIOD WHEN A MAN CANNOT RESPOND TO SEXUAL STIMULATION	☐	☐
21. FEMALES CAN MAINTAIN A SEXUAL RESPONSE THROUGH MULTIPLE ORGASMS	☐	☐
22. MOST WOMEN ARE ABLE TO ENJOY SEX EVEN WITHOUT EXPERIENCING ORGASM	☐	☐
23. THE BIGGER THE PENIS THE MORE SATISFYING IT IS TO THE FEMALE IN INTERCOURSE	☐	☐
24. A WOMAN CAN NO LONGER BECOME PREGNANT ONCE MENOPAUSE HAS BEGUN	☐	☐
25. ERECTION IN THE MALE IS BROUGHT ABOUT BY CONGESTION OF BLOOD IN THE PENIS	☐	☐
26. THE CLITORIS IS NOT A PARTICULARLY SENSITIVE AREA OF THE FEMALE'S GENITALS	☐	☐

SECTION II

Below are a list of sexual experiences that people have. We would like to know which of these sexual behaviors you have experienced. Please indicate those experiences you have personally had by placing a check ([]) under the YES column for that experience. If you have not had the experience place your check under the NO column. In addition, if you have had the experience during the past two months please place an additional check under the column marked PAST 60 DAYS. Make your marks carefully and do not skip any items.

	YES	NO	PAST 60 DAYS
1. MALE LYING PRONE ON FEMALE (CLOTHED)	[]	[]	[]
2. STROKING AND PETTING YOUR SEXUAL PARTNER'S GENITALS	[]	[]	[]
3. EROTIC EMBRACE (CLOTHED)	[]	[]	[]
4. INTERCOURSE-VAGINAL ENTRY FROM REAR	[]	[]	[]
5. HAVING GENITALS CARESSED BY YOUR SEXUAL PARTNER	[]	[]	[]
6. MUTUAL ORAL STIMULATION OF GENITALS	[]	[]	[]
7. ORAL STIMULATION OF YOUR PARTNER'S GENITALS	[]	[]	[]
8. INTERCOURSE-SIDE BY SIDE	[]	[]	[]
9. KISSING OF SENSITIVE (NON-GENITAL) AREAS OF THE BODY	[]	[]	[]
10. INTERCOURSE-SITTING POSITION	[]	[]	[]
11. MASTURBATING ALONE	[]	[]	[]
12. MALE KISSING FEMALE'S NUDE BREASTS	[]	[]	[]
	YES	NO	PAST 60 DAYS
13. HAVING YOUR ANAL AREA CARESSED	[]	[]	[]
14. BREAST PETTING (CLOTHED)	[]	[]	[]
15. CARESSING YOUR PARTNER'S ANAL AREA	[]	[]	[]
16. INTERCOURSE-FEMALE SUPERIOR POSITION	[]	[]	[]
17. MUTUAL PETTING OF GENITALS TO ORGASM	[]	[]	[]
18. HAVING YOUR GENITALS ORALLY STIMULATED	[]	[]	[]
19. MUTUAL UNDRESSING OF EACH OTHER	[]	[]	[]
20. DEEP KISSING	[]	[]	[]
21. INTERCOURSE-MALE SUPERIOR POSITION	[]	[]	[]
22. ANAL INTERCOURSE	[]	[]	[]
23. KISSING ON THE LIPS	[]	[]	[]
24. BREAST PETTING (NUDE)	[]	[]	[]

SECTION III

Below we would like you to indicate the frequency with which you typically engage in certain sexual activities. Please indicate how often you experience each of the sexual activities below by checking ([]) the category that is closest to your personal frequency. Categories range from "NOT AT ALL" to "4 OR MORE TIMES A DAY". Please do not skip any items.

	NOT AT ALL	LESS THAN 1 MONTH	1-2 MONTH	1 WEEK	2-3 WEEK	4-6 WEEK	1 DAY	2-3 DAY	4 OR MORE DAY
1. INTERCOURSE	[]	[]	[]	[]	[]	[]	[]	[]	[]
2. MASTURBATION	[]	[]	[]	[]	[]	[]	[]	[]	[]
3. KISSING AND PETTING	[]	[]	[]	[]	[]	[]	[]	[]	[]
4. SEXUAL FANTASIES	[]	[]	[]	[]	[]	[]	[]	[]	[]
5. WHAT WOULD BE YOUR IDEAL FREQUENCY OF SEXUAL INTERCOURSE ?							[]		
6. AT WHAT AGE DID YOU FIRST BECOME INTERESTED IN SEXUAL ACTIVITY ?							[]		
7. AT WHAT AGE DID YOU FIRST HAVE SEXUAL INTERCOURSE ?							[]		

SECTION IV

Below are a series of statements about various aspects of sexual behavior. We would like to know to what extent you agree or disagree with each one. Please indicate how much you agree or disagree with each statement by placing the appropriate number from the alternatives below in the space alongside the statement. Please do not skip any statements and work quickly.

-2	-1	0	1	2
STRONGLY DISAGREE	DISAGREE	NEITHER AGREE NOR DISAGREE	AGREE	STRONGLY AGREE
1. []				
2. []				
3. []				
4. []				
5. []				
6. []				
7. []				
8. []				
9. []				
10. []				
11. []				
12. []				
13. []				
14. []				
15. []				
16. []				
17. []				
18. []				
19. []				
20. []				
21. []				
22. []				
23. []				
24. []				
25. []				
26. []				
27. []				
28. []				
29. []				
30. []				

SECTION V

Below is a list of problems and complaints that people sometimes have. Please read each one carefully. After you have done so, please fill in one of the numbered spaces to the right that best describes HOW MUCH THAT PROBLEM HAS BOTHERED OR DISTRESSED YOU IN THE PAST TWO WEEKS INCLUDING TODAY. Mark only one numbered space for each problem and do not skip any items.

HOW MUCH WERE YOU BOTHERED BY :	not at all	slightly	moderately	quite a bit	extremely
1. NERVOUSNESS OR SHAKINESS INSIDE	=0=	-1=	-2=	-3=	-4=
2. FAINTNESS OR DIZZINESS	=0=	-1=	-2=	-3=	-4=
3. THE IDEA THAT SOMEONE ELSE CAN CONTROL YOUR MIND	=0=	-1=	-2=	-3=	-4=
4. FEELING OTHERS ARE TO BLAME FOR MOST OF YOUR TROUBLES	=0=	-1=	-2=	-3=	-4=
5. TROUBLE REMEMBERING THINGS	=0=	-1=	-2=	-3=	-4=
6. FEELING EASILY ANNOYED OR IRRITATED	=0=	-1=	-2=	-3=	-4=
7. PAINS IN HEART OR CHEST	=0=	-1=	-2=	-3=	-4=
8. FEELING AFRAID IN OPEN SPACES	=0=	-1=	-2=	-3=	-4=
9. THOUGHTS OF ENDING YOUR LIFE	=0=	-1=	-2=	-3=	-4=
10. FEELING THAT MOST PEOPLE CANNOT BE TRUSTED	=0=	-1=	-2=	-3=	-4=
11. POOR APPETITE	=0=	-1=	-2=	-3=	-4=
12. SUDDENLY SCARED FOR NO REASON	=0=	-1=	-2=	-3=	-4=
13. TEMPER OUTBURSTS THAT YOU COULD NOT CONTROL	=0=	-1=	-2=	-3=	-4=
14. FEELING LONELY EVEN WHEN YOU ARE WITH PEOPLE	=0=	-1=	-2=	-3=	-4=
15. FEELING BLOCKED IN GETTING THINGS DONE	=0=	-1=	-2=	-3=	-4=
16. FEELING LONELY	=0=	-1=	-2=	-3=	-4=
17. FEELING BLUE	=0=	-1=	-2=	-3=	-4=
18. FEELING NO INTEREST IN THINGS	=0=	-1=	-2=	-3=	-4=
19. FEELING FEARFUL	=0=	-1=	-2=	-3=	-4=
20. YOUR FEELINGS BEING EASILY HURT	=0=	-1=	-2=	-3=	-4=
21. FEELING THAT PEOPLE ARE UNFRIENDLY OR DISLIKE YOU	=0=	-1=	-2=	-3=	-4=
22. FEELING INFERIOR TO OTHERS	=0=	-1=	-2=	-3=	-4=
23. NAUSEA OR UPSET STOMACH	=0=	-1=	-2=	-3=	-4=
24. FEELING THAT YOU ARE WATCHED OR TALKED ABOUT BY OTHERS	=0=	-1=	-2=	-3=	-4=
25. TROUBLE FALLING ASLEEP	=0=	-1=	-2=	-3=	-4=
26. HAVING TO CHECK AND DOUBLE CHECK WHAT YOU DO	=0=	-1=	-2=	-3=	-4=
27. DIFFICULTY MAKING DECISIONS	=0=	-1=	-2=	-3=	-4=
28. FEELING AFRAID TO TRAVEL ON BUSES, SUBWAYS OR TRAINS	=0=	-1=	-2=	-3=	-4=
29. TROUBLE GETTING YOUR BREATH	=0=	-1=	-2=	-3=	-4=
30. HOT OR COLD SPELLS	=0=	-1=	-2=	-3=	-4=
31. HAVING TO AVOID CERTAIN THINGS, PLACES OR ACTIVITIES BECAUSE THEY FRIGHTEN YOU	=0=	-1=	-2=	-3=	-4=
32. YOUR MIND GOING BLANK	=0=	-1=	-2=	-3=	-4=
33. NUMBNESS OR TINGLING IN PARTS OF YOUR BODY	=0=	-1=	-2=	-3=	-4=
34. THE IDEA THAT YOU SHOULD BE PUNISHED FOR YOUR SINS	=0=	-1=	-2=	-3=	-4=
35. FEELING HOPELESS ABOUT THE FUTURE	=0=	-1=	-2=	-3=	-4=
36. TROUBLE CONCENTRATING	=0=	-1=	-2=	-3=	-4=
37. FEELING WEAK IN PARTS OF YOUR BODY	=0=	-1=	-2=	-3=	-4=
38. FEELING TENSE OR KEED UP	=0=	-1=	-2=	-3=	-4=
39. THOUGHTS OF DEATH OR DYING	=0=	-1=	-2=	-3=	-4=
40. HAVING URGES TO BEAT, INJURE OR HARM SOMEONE	=0=	-1=	-2=	-3=	-4=
41. HAVING URGES TO BREAK OR SMASH THINGS	=0=	-1=	-2=	-3=	-4=
42. FEELING VERY SELF CONSCIOUS WITH OTHERS	=0=	-1=	-2=	-3=	-4=
43. FEELING UNEASY IN CROWDS	=0=	-1=	-2=	-3=	-4=
44. NEVER FEELING CLOSE TO ANOTHER PERSON	=0=	-1=	-2=	-3=	-4=
45. SPELLS OF TERROR OR PANIC	=0=	-1=	-2=	-3=	-4=
46. GETTING INTO FREQUENT ARGUMENTS	=0=	-1=	-2=	-3=	-4=
47. FEELING NERVOUS WHEN YOU ARE LEFT ALONE	=0=	-1=	-2=	-3=	-4=
48. OTHERS NOT GIVING YOU PROPER CREDIT FOR YOUR ACHIEVEMENTS	=0=	-1=	-2=	-3=	-4=
49. FEELING SO RESTLESS YOU COULDN'T SIT STILL	=0=	-1=	-2=	-3=	-4=
50. FEELING OF WORTHLESSNESS	=0=	-1=	-2=	-3=	-4=
51. FEELING PEOPLE WILL TAKE ADVANTAGE OF YOU IF YOU LET THEM	=0=	-1=	-2=	-3=	-4=
52. FEELINGS OF GUILT	=0=	-1=	-2=	-3=	-4=
53. THE IDEA THAT SOMETHING IS WRONG WITH YOUR MIND	=0=	-1=	-2=	-3=	-4=

SECTION VI

Below is a list of words that describe the way people sometimes feel. We would like you to tell us whether you have been having any of these feelings during the past TWO WEEKS. Please indicate the degree to which you have typically felt each emotion by filling in one of the numbered spaces that best describes your experience.

	never	rarely	sometimes	frequently	always		never	rarely	sometimes	frequently	always
1. NERVOUS	=0=	=1=	=2=	=3=	=4=	21. CHEERFUL	=0=	=1=	=2=	=3=	=4=
2. SAD	=0=	=1=	=2=	=3=	=4=	22. SATISFIED	=0=	=1=	=2=	=3=	=4=
3. REGRETFUL	=0=	=1=	=2=	=3=	=4=	23. ACTIVE	=0=	=1=	=2=	=3=	=4=
4. IRRITABLE	=0=	=1=	=2=	=3=	=4=	24. FRIENDLY	=0=	=1=	=2=	=3=	=4=
5. HAPPY	=0=	=1=	=2=	=3=	=4=	25. ANXIOUS	=0=	=1=	=2=	=3=	=4=
6. PLEASED	=0=	=1=	=2=	=3=	=4=	26. MISERABLE	=0=	=1=	=2=	=3=	=4=
7. EXCITED	=0=	=1=	=2=	=3=	=4=	27. GUILTY	=0=	=1=	=2=	=3=	=4=
8. PASSIONATE	=0=	=1=	=2=	=3=	=4=	28. ENRAGED	=0=	=1=	=2=	=3=	=4=
9. TIMID	=0=	=1=	=2=	=3=	=4=	29. DELIGHTED	=0=	=1=	=2=	=3=	=4=
10. HOPELESS	=0=	=1=	=2=	=3=	=4=	30. RELAXED	=0=	=1=	=2=	=3=	=4=
11. BLAMEWORTHY	=0=	=1=	=2=	=3=	=4=	31. VIGOROUS	=0=	=1=	=2=	=3=	=4=
12. RESENTFUL	=0=	=1=	=2=	=3=	=4=	32. AFFECTIONATE	=0=	=1=	=2=	=3=	=4=
13. GLAD	=0=	=1=	=2=	=3=	=4=	33. AFRAID	=0=	=1=	=2=	=3=	=4=
14. CALM	=0=	=1=	=2=	=3=	=4=	34. UNHAPPY	=0=	=1=	=2=	=3=	=4=
15. ENERGETIC	=0=	=1=	=2=	=3=	=4=	35. REMORSEFUL	=0=	=1=	=2=	=3=	=4=
16. LOVING	=0=	=1=	=2=	=3=	=4=	36. BITTER	=0=	=1=	=2=	=3=	=4=
17. TENSE	=0=	=1=	=2=	=3=	=4=	37. JOYOUS	=0=	=1=	=2=	=3=	=4=
18. WORTHLESS	=0=	=1=	=2=	=3=	=4=	38. CONTENTED	=0=	=1=	=2=	=3=	=4=
19. ASHAMED	=0=	=1=	=2=	=3=	=4=	39. LIVELY	=0=	=1=	=2=	=3=	=4=
20. ANGRY	=0=	=1=	=2=	=3=	=4=	40. WARM	=0=	=1=	=2=	=3=	=4=

SECTION VII

Below is a list of personality characteristics that are often used to describe people. We would like you to describe yourself in terms of these characteristics. To do this, please indicate the degree to which each trait is typical of you--in other words, how much of each characteristic you have. Use the numbered scale given below, and place the appropriate number alongside each trait.

0	1	2	3	4
NOT AT ALL	A LITTLE BIT	MODERATELY	QUITE A BIT	EXTREMELY
1. SYMPATHETIC []		11. SENSITIVE []		21. GRACEFUL []
2. DECISIVE []		12. INDEPENDENT []		22. DOMINANT []
3. FRIVOLOUS []		13. DOMESTIC []		23. SEDUCTIVE []
4. PRACTICAL []		14. BOLD []		24. AUTHORITATIVE []
5. SENTIMENTAL []		15. DEPENDENT []		25. WHIMSICAL []
6. RATIONAL []		16. ADVENTUROUS []		26. ATHLETIC []
7. SECRETIVE []		17. FELINE []		27. FASHIONABLE []
8. CONFIDENT []		18. STRONG []		28. AGGRESSIVE []
9. COMPASSIONATE []		19. FLIRTATIOUS []		29. GENTLE []
10. VIGOROUS []		20. MECHANICAL []		30. ASSERTIVE []

SECTION VIII

In this section we have listed a variety of sexual ideas, and fantasies that people sometimes have. We would like you to indicate which of these fantasies you have experienced either in daydreams or dreams while asleep. For each fantasy that you have experienced place a check (✓) in the space alongside that item.

1. { } HAVING MORE THAN ONE SEXUAL PARTNER AT THE SAME TIME
2. { } HAVING INTERCOURSE IN UNUSUAL POSITIONS
3. { } HAVING SEXUAL RELATIONS WITH ANIMALS
4. { } WHIPPING OR BEATING YOUR SEXUAL PARTNER
5. { } FORCING A PARTNER TO SUBMIT TO SEXUAL ACTS
6. { } DRESSING IN CLOTHES OF THE OPPOSITE SEX
7. { } USING ARTIFICIAL DEVICES FOR SEXUAL STIMULATION
8. { } BEING A PROSTITUTE
9. { } FORBIDDEN LOVER OR MISTRESS IN SEXUAL ADVENTURES
10. { } HOMOSEXUAL FANTASIES
11. { } MATESWAPPING FANTASIES
12. { } BEING TIED UP OR BOUND DURING SEXUAL ACTIVITIES
13. { } DEGRADING A SEX PARTNER
14. { } BEING SEXUALLY DEGRADED
15. { } ANAL INTERCOURSE
16. { } DRESSING IN EROTIC GARMENTS
17. { } SEXUAL INTERCOURSE
18. { } FANTASIZING THAT YOU ARE OF THE OPPOSITE SEX
19. { } ORAL-GENITAL SEX
20. { } BEING FORCED TO SUBMIT TO SEXUAL ACTS

SECTION IX

Below are some statements concerning how you view your body. Please indicate to what degree each of the following statements is true of you by circling the number that best describes your experience. Note that Part A is for both sexes, Part B is for men only, and Part C is for women only.

PART A (BOTH SEXES)		not at all	slightly	moderately	quite a bit	extremely
		0	1	2	3	4
1.	I AM LESS ATTRACTIVE THAN I WOULD LIKE TO BE	0	1	2	3	4
2.	I AM TOO FAT	0	1	2	3	4
3.	I ENJOY BEING SEEN IN A BATHING SUIT	0	1	2	3	4
4.	I AM TOO THIN	0	1	2	3	4
5.	I WOULD BE EMBARRASSED TO BE SEEN NUDE BY A LOVER	0	1	2	3	4
6.	I AM TOO SHORT ;	0	1	2	3	4
7.	THERE ARE PARTS OF MY BODY I DON'T LIKE AT ALL	0	1	2	3	4
8.	I AM TOO TALL	0	1	2	3	4
9.	I HAVE TOO MUCH BODY HAIR	0	1	2	3	4
10.	MY FACE IS ATTRACTIVE	0	1	2	3	4

PART B (MEN ONLY)

11. I HAVE A WELL PROPORTIONED BODY
 12. I AM SATISFIED WITH THE SIZE OF MY PENIS
 13. WOMEN WOULD FIND MY BODY ATTRACTIVE
 14. I AM WELL-COORDINATED AND ATHLETIC
 15. I AM PLEASED WITH THE PHYSICAL CONDITION OF MY BODY

not at all
 0 1 2 3 4
 slightly
 moderately
 quite a bit
 extremely

PART C (WOMEN ONLY)

16. I HAVE A SHAPELY AND WELL PROPORTIONED BODY
 17. I HAVE ATTRACTIVE BREASTS
 18. MEN WOULD FIND MY BODY ATTRACTIVE
 19. I HAVE ATTRACTIVE LEGS
 20. I AM PLEASED WITH THE WAY MY VAGINA LOOKS

not at all
 0 1 2 3 4
 slightly
 moderately
 quite a bit
 extremely

SECTION X

Below are some statements about sexual satisfaction. Please indicate whether each statement is true of you by checking either true or false for each item.

	<u>TRUE</u>	<u>FALSE</u>
1. USUALLY, I AM SATISFIED WITH MY SEXUAL PARTNER	T	F
2. I FEEL I DO NOT HAVE SEX FREQUENTLY ENOUGH	T	F
3. THERE IS NOT ENOUGH VARIETY IN MY SEX LIFE	T	F
4. USUALLY AFTER SEX I FEEL RELAXED AND FULFILLED	T	F
5. USUALLY, SEX DOES NOT LAST LONG ENOUGH	T	F
6. I AM NOT VERY INTERESTED IN SEX	T	F
7. USUALLY, I HAVE A SATISFYING ORGASM WITH SEX	T	F
8. FOREPLAY BEFORE INTERCOURSE IS USUALLY VERY AROUSING FOR ME	T	F
9. OFTEN, I WORRY ABOUT MY SEXUAL PERFORMANCE	T	F
10. USUALLY, MY PARTNER AND I HAVE GOOD COMMUNICATION ABOUT SEX	T	F

GSSI - Below is a rating scale upon which we would like you to record your personal evaluation of how satisfying your sexual relationship is. The rating is simple. Make your evaluation by placing a check in the appropriate box that best describes your present sexual relationship.

- { } 8 COULD NOT BE BETTER
 { } 7 EXCELLENT
 { } 6 GOOD
 { } 5 ABOVE AVERAGE
 { } 4 ADEQUATE
 { } 3 SOMEWHAT INADEQUATE
 { } 2 POOR
 { } 1 HIGHLY INADEQUATE
 { } 0 COULD NOT BE WORSE

DSFI Answer Sheet (Rev)

NAME _____	IDENT. NO. _____	VISIT _____
LOCATION _____	TECHNICIAN _____	
AGE _____ SEX M ____ F ____	DATE _____ REMARKS _____	

BELOW YOU WILL FIND SPACES TO REPORT YOUR ANSWERS TO THE QUESTIONS OF THE DSFI. DO NOT MARK YOUR ANSWERS IN THE TEST BOOKLET. THE ANSWER SHEET IS ORGANIZED INTO 10 SECTIONS, WHICH MATCH THE 10 SECTIONS OF THE INVENTORY. KEEP YOUR ANSWER SHEET WITH THE BOOKLET AND AFTER YOU HAVE READ THE INSTRUCTIONS IN THE BOOKLET FOR EACH SECTION FILL OUT YOUR ANSWERS ON THE SHEET. DO NOT SKIP ANY ITEMS, AND IF YOU HAVE ANY QUESTIONS PLEASE ASK THE TECHNICIAN TO HELP YOU.

SECTION I						SECTION II						SECTION V *																			
T		F		T		F		Yes		No		Past 60 Days		Yes		No		Past 60 Days		0 1 2 3 4					0 1 2 3 4						
1	0	0	14	0	0															1	0	0	0	0	0	28	0	0	0	0	0
2	0	0	15	0	0															2	0	0	0	0	0	29	0	0	0	0	0
3	0	0	16	0	0															3	0	0	0	0	0	30	0	0	0	0	0
4	0	0	17	0	0															4	0	0	0	0	0	31	0	0	0	0	0
5	0	0	18	0	0															5	0	0	0	0	0	32	0	0	0	0	0
6	0	0	19	0	0															6	0	0	0	0	0	33	0	0	0	0	0
7	0	0	20	0	0															7	0	0	0	0	0	34	0	0	0	0	0
8	0	0	21	0	0															8	0	0	0	0	0	35	0	0	0	0	0
9	0	0	22	0	0															9	0	0	0	0	0	36	0	0	0	0	0
10	0	0	23	0	0															10	0	0	0	0	0	37	0	0	0	0	0
11	0	0	24	0	0															11	0	0	0	0	0	38	0	0	0	0	0
12	0	0	25	0	0															12	0	0	0	0	0	39	0	0	0	0	0
13	0	0	26	0	0															13	0	0	0	0	0	40	0	0	0	0	0
																				14	0	0	0	0	0	41	0	0	0	0	0
																				15	0	0	0	0	0	42	0	0	0	0	0
																				16	0	0	0	0	0	43	0	0	0	0	0
																				17	0	0	0	0	0	44	0	0	0	0	0
																				18	0	0	0	0	0	45	0	0	0	0	0
																				19	0	0	0	0	0	46	0	0	0	0	0
																				20	0	0	0	0	0	47	0	0	0	0	0
																				21	0	0	0	0	0	48	0	0	0	0	0
																				22	0	0	0	0	0	49	0	0	0	0	0
																				23	0	0	0	0	0	50	0	0	0	0	0
																				24	0	0	0	0	0	51	0	0	0	0	0
																				25	0	0	0	0	0	52	0	0	0	0	0
																				26	0	0	0	0	0	53	0	0	0	0	0
																				27	0	0	0	0	0						

SECTION III										(4)
Not At All (0)	Less Than (1)	Month (2)	Month (3)	Week (4)	Week (5)	Week (6)	Day (7)	Day (8)	Day (9)	or More (10)
1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0
6 { }										
7 { }										

SECTION IV *									
-2	-1	0	1	2	-2	-1	0	1	2
1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0

* 0 Not At All
1 Slightly
2 Moderately
3 Quite a Bit
4 Extremely

* -2 Strongly disagree
-1 Disagree
0 Neither agree or disagree
1 Agree
2 Strongly agree

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SECTION VI*

	0	1	2	3	4		0	1	2	3	4
	---	---	---	---	---		---	---	---	---	---
1	0	0	0	0	0	21	0	0	0	0	0
2	0	0	0	0	0	22	0	0	0	0	0
3	0	0	0	0	0	23	0	0	0	0	0
4	0	0	0	0	0	24	0	0	0	0	0
5	0	0	0	0	0	25	0	0	0	0	0
6	0	0	0	0	0	26	0	0	0	0	0
7	0	0	0	0	0	27	0	0	0	0	0
8	0	0	0	0	0	28	0	0	0	0	0
9	0	0	0	0	0	29	0	0	0	0	0
10	0	0	0	0	0	30	0	0	0	0	0
11	0	0	0	0	0	31	0	0	0	0	0
12	0	0	0	0	0	32	0	0	0	0	0
13	0	0	0	0	0	33	0	0	0	0	0
14	0	0	0	0	0	34	0	0	0	0	0
15	0	0	0	0	0	35	0	0	0	0	0
16	0	0	0	0	0	36	0	0	0	0	0
17	0	0	0	0	0	37	0	0	0	0	0
18	0	0	0	0	0	38	0	0	0	0	0
19	0	0	0	0	0	39	0	0	0	0	0
20	0	0	0	0	0	40	0	0	0	0	0

- * 0 Never
 1 Rarely
 2 Sometimes
 3 Frequently
 4 Always

SECTION VII*

	0	1	2	3	4		0	1	2	3	4		0	1	2	3	4
	---	---	---	---	---		---	---	---	---	---		---	---	---	---	---
1	0	0	0	0	0	11	0	0	0	0	0	21	0	0	0	0	0
2	0	0	0	0	0	12	0	0	0	0	0	22	0	0	0	0	0
3	0	0	0	0	0	13	0	0	0	0	0	23	0	0	0	0	0
4	0	0	0	0	0	14	0	0	0	0	0	24	0	0	0	0	0
5	0	0	0	0	0	15	0	0	0	0	0	25	0	0	0	0	0
6	0	0	0	0	0	16	0	0	0	0	0	26	0	0	0	0	0
7	0	0	0	0	0	17	0	0	0	0	0	27	0	0	0	0	0
8	0	0	0	0	0	18	0	0	0	0	0	28	0	0	0	0	0
9	0	0	0	0	0	19	0	0	0	0	0	29	0	0	0	0	0
10	0	0	0	0	0	20	0	0	0	0	0	30	0	0	0	0	0

- *0 Not at all
 1 A little bit
 2 Moderately
 3 Quite a bit
 4 Extremely

GSSI

0 7 6 5 4 3 2 1 0

SECTION VIII*

1 0	6 0	11 0	16 0
2 0	7 0	12 0	17 0
3 0	8 0	13 0	18 0
4 0	9 0	14 0	19 0
5 0	10 0	15 0	20 0

*For each fantasy experienced place a clear mark in the oval along side of that item.

SECTION IX*

	0	1	2	3	4		0	1	2	3	4
	---	---	---	---	---		---	---	---	---	---
1	0	0	0	0	0	11	0	0	0	0	0
2	0	0	0	0	0	12	0	0	0	0	0
3	0	0	0	0	0	13	0	0	0	0	0
4	0	0	0	0	0	14	0	0	0	0	0
5	0	0	0	0	0	15	0	0	0	0	0
6	0	0	0	0	0	16	0	0	0	0	0
7	0	0	0	0	0	17	0	0	0	0	0
8	0	0	0	0	0	18	0	0	0	0	0
9	0	0	0	0	0	19	0	0	0	0	0
10	0	0	0	0	0	20	0	0	0	0	0

- * 0 Not at all
 1 Slightly
 2 Moderately
 3 Quite a bit
 4 Extremely

SECTION X

	T	F
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0

Appendix C

Buss-Durkee Hostility Inventory
(Buss and Durkee, 1957)

Use the "Answer Sheet" for recording your answers to the seventy-five statements listed below and on the next page. Decide if each of the statements is true (T) or false (F) as it pertains to you and record your response on the appropriate line on the answer sheet.

1. Unless somebody asks me in a nice way, I won't do what they want.
2. I don't seem to get what's coming to me.
3. I sometimes spread gossip about people I don't like.
4. Once in a while I cannot control my urge to harm others.
5. I know that people tend to talk about me behind my back.
6. I lose my temper easily but get over it quickly.
7. When I disapprove of my friends' behaviour, I let them know it.
8. When someone makes a rule I don't like, I am tempted to break it.
9. Other people always seem to get the breaks.
10. I never get mad enough to throw things.
11. I can think of no good reason for ever hitting anyone.
12. I tend to be on my guard with people who are somewhat more friendly than I expected.
13. I am always patient with others.
14. I often find myself disagreeing with people.
15. When someone is bossy, I do the opposite of what he asks.
16. When I look back on what's happened to me, I can't help feeling mildly resentful.
17. When I am mad, I sometimes slam doors.
18. If somebody hits me first, I let him have it.
19. There are a number of people who seem to dislike me very much.
20. I am irritated a great deal more than people are aware of.
21. I can't help getting into arguments with people when they disagree with me.
22. When people are bossy, I take my time just to show them.
23. Almost every week I see someone I dislike.
24. I never play practical jokes.
25. Whoever insults me or my family is asking for a fight.
26. There are a number of people who seem to be jealous of me.
27. It makes my blood boil to have somebody make fun of me.
28. I demand that people respect my rights.
29. Occasionally when I am mad at someone I will give him the "silent treatment".
30. Although I don't show it, I am sometimes eaten up with jealousy.

31. When I am angry, I sometimes sulk.
32. People who continually pester you are asking for a punch in the nose.
33. I sometimes have the feeling that others are laughing at me.
34. If someone doesn't treat me right, I don't let it annoy me.
35. Even when my anger is aroused, I don't use "strong language".
36. I don't know any people that I downright hate.
37. I sometimes pout when I don't get my own way.
38. I seldom strike back, even if someone hits me first.
39. My motto is "Never trust strangers".
40. Sometimes people bother me by just being around.
41. If somebody annoys me, I am apt to tell him what I think of him.
42. If I let people see the way I feel, I'd be considered a hard person to get along with.
43. Since the age of ten, I have never had a temper tantrum.
44. When I really lose my temper, I am capable of slapping someone.
45. I commonly wonder what hidden reason another person may have for doing something nice for me.
46. I often feel like a powder keg ready to explode.
47. When people yell at me, I yell back.
48. At times I feel I get a raw deal out of life.
49. I can remember being so angry that I picked up the nearest thing and broke it.
50. I get into fights about as often as the next person.
51. I used to think that most people told the truth but now I know otherwise.
52. I sometimes carry a chip on my shoulder.
53. When I get mad, I say nasty things.
54. I sometimes show my anger by banging on the table.
55. If I have to resort to physical violence to defend my rights, I will.
56. I have no enemies who really wish to harm me.
57. I can't help being a little rude to people I don't like.
58. I could not put someone in his place, even if he needed it.
59. I have known people who pushed me so far that we came to blows.
60. I seldom feel that people are trying to anger or insult me.
61. I don't let a lot of unimportant things irritate me.
62. I often make threats I don't really mean to carry out.
63. Lately, I have been kind of grouchy.
64. When arguing, I tend to raise my voice.
65. I generally cover up my poor opinion of others.
66. I would rather concede a point than get into an argument about it.

67. The few times I have cheated, I have suffered unbearable feelings of remorse.
68. I sometimes have bad thoughts, which make me feel ashamed of myself.
69. People who shirk on the job must feel very guilty.
70. It depresses me that I did not do more for my parents.
71. I am concerned about being forgiven for my sins.
72. I do many things that make me feel remorseful afterward.
73. Failure gives me a feeling of remorse.
74. When I do wrong, my conscience punishes me severely.
75. I often feel that I have not lived the right kind of life.

Appendix D

Rape Myth Acceptance Scale, Burt 1980

For each question below, choose the number that best reflects your belief.

	Strongly Agree 1	2	3	4	5	6	Strongly Disagree 7
1. A woman who goes to the home or apartment of a man on their first date implies that she is willing to have sex.....	1	2	3	4	5	6	7
2. Any female can get raped....	1	2	3	4	5	6	7
3. One reason that women falsely report a rape is that they frequently have a need to call attention to themselves.	1	2	3	4	5	6	7
4. Any healthy woman can successfully resist a rapist if she really wants to.....	1	2	3	4	5	6	7
5. When women go around braless or wearing short skirts and tight tops, they are just asking for trouble.....	1	2	3	4	5	6	7
6. In the majority of rapes, the victim is promiscuous or has a bad reputation.....	1	2	3	4	5	6	7
7. If a girl engages in necking or petting and she lets things get out of hand, it is her own fault if her partner forces sex on her.....	1	2	3	4	5	6	7
8. Women who get raped while hitchhiking get what they deserve.....	1	2	3	4	5	6	7
9. A woman who is stuck-up and thinks she is too good to talk to guys on the street deserves to be taught a lesson.....	1	2	3	4	5	6	7

10. Many women have an unconscious wish to be raped, and may then unconsciously set up a situation in which they are likely to be attacked.....

1 2 3 4 5 6 7

11. If a woman gets drunk at a party and has intercourse with a man she has just met there, she should be considered "fair game" to other males at the party who want to have sex with her too, whether she wants to or not.....

1 2 3 4 5 6 7

12. What percentage of women who report a rape would you say are lying because they are angry and want to get back at the man, the accused?

1 2 3 4 5 6 7
almost none a few some about half many a lot almost all

13. What percentage of reported rapes would you guess were merely invented by women who discovered they were pregnant and wanted to protect their reputation?

1 2 3 4 5 6 7
almost none a few some about half many a lot almost all

A person comes to you and claims they were raped. How likely would you be to believe their statement if the person were:

1 2 3 4 5 6 7
never rarely sometimes half the time often usually always

14. Your best friend..... 1 2 3 4 5 6 7
15. An Indian woman..... 1 2 3 4 5 6 7
16. a neighborhood woman..... 1 2 3 4 5 6 7
17. a young boy..... 1 2 3 4 5 6 7
18. a black woman..... 1 2 3 4 5 6 7
19. a white woman..... 1 2 3 4 5 6 7

Appendix E

Acceptance of Interpersonal Violence Scale
Burt, 1980

For each item below, choose the number that best reflects your belief.

	Strongly Agree						Strongly Disagree
	1	2	3	4	5	6	7
1. People today should not use "an eye for an eye and a tooth for a tooth" as a rule for living.....	1	2	3	4	5	6	7
2. Being roughed up is sexually stimulating for most women..	1	2	3	4	5	6	7
3. Many times a woman will pretend she doesn't want to have intercourse because she doesn't want to seem loose, but she's really hoping the man will force her.....	1	2	3	4	5	6	7
4. A wife should move out of the house if her husband hits her	1	2	3	4	5	6	7
5. Sometimes the only way a man can get a cold woman turned on is to use force.....	1	2	3	4	5	6	7
6. A man is never justified in hitting his wife.....	1	2	3	4	5	6	7

Appendix F

Adversarial Sexual Beliefs, Burt, 1980

For each item below, choose the number that best reflects your belief.

	Strongly Agree 1	2	3	4	5	6	Strongly Disagree 7
1. A woman will only respect a man who will lay down the law to her.....	1	2	3	4	5	6	7
2. Many women are so demanding sexually that a man just can't satisfy them.....	1	2	3	4	5	6	7
3. A man has to show the woman who's boss right from the start or he'll end up henpecked.....	1	2	3	4	5	6	7
4. Women are usually sweet until they've caught a man, but then they let their true self show.....	1	2	3	4	5	6	7
5. A lot of men talk big, but when it comes down to it, they can't perform well sexually.....	1	2	3	4	5	6	7
6. In a dating relationship a woman is largely out to take advantage of a man...	1	2	3	4	5	6	7
7. Men are out for only one thing.....	1	2	3	4	5	6	7
8. Most women are sly and manipulating when they are out to attract a man....	1	2	3	4	5	6	7
9. A lot of women seem to get pleasure in putting men down.....	1	2	3	4	5	6	7

Appendix G
Coercive Sexuality Scale (CSS)

(Rapaport and Burkhart, 1984)

Please indicate on the 4-point scale how frequently you have engaged in the following behaviours.

	1 Never	2 Once or twice	3 Several times	4 Often
1. Held a woman's hand against her will.	1	2	3	4
2. Kissed a woman against her will.	1	2	3	4
3. Placed your hand on a woman's knee against her will.	1	2	3	4
4. Placed your hand on a woman's breast against her will.	1	2	3	4
5. Placed your hand on a woman's thigh or crotch against her will.	1	2	3	4
6. Unfastened a woman's outer clothing against her will.	1	2	3	4
7. Removed or disarranged a woman's outer clothing against her will.	1	2	3	4
8. Removed or disarranged a woman's under clothing against her will.	1	2	3	4
9. Removed your own underclothing against a woman's will.	1	2	3	4
10. Touched a woman's genital area against her will.	1	2	3	4
11. Had intercourse with a woman against her will.	1	2	3	4

	1 Never	2 Once or twice	3 Several times	4 Often
12. Attempted to verbally convince a woman to have sex with you.	1	2	3	4
13. Ignored a woman's protests to have sex with you.	1	2	3	4
14. Used verbal threats to get a woman to have sex with you.	1	2	3	4
15. Used physical restraint with a woman to get her to have sex with you.	1	2	3	4
16. Used threats of physical aggression with a woman to get her to have sex.	1	2	3	4
17. Used physical aggression with a woman to get her to have sex with you.	1	2	3	4
18. Threatened to use a weapon on a woman to get her to have sex with you.	1	2	3	4
19. Used a weapon on a woman to get her to have sex with you.	1	2	3	4

Appendix H

**Michigan Alcoholism Screening Test
(Selzer, Vinokur, van Roojian, 1975)**

"Questionnaire on Drinking Practices (MAST)"

DIRECTIONS: Check (✓) YES or NO; answer all questions.

Scoring Key

1. Do you feel you are a normal drinker?.....	1. Yes ___ 2. No ___
2. Have you ever awakened the morning after some drinking the night before and found that you could not remember a part of the evening before?.....	1. Yes ___ 2. No ___
3. Does your spouse (or parents) ever worry or complain about your drinking?.....	1. Yes ___ 2. No ___
4. Can you stop drinking without a struggle after one or two drinks?.....	1. Yes ___ 2. No ___
5. Do you ever feel bad about your drinking?....	1. Yes ___ 2. No ___
6. Do friends or relatives think you are a normal drinker?.....	1. Yes ___ 2. No ___
7. Are you always able to stop drinking when you want to?.....	1. Yes ___ 2. No ___
8. Have you ever attended a meeting of Alcoholics Anonymous (AA) because of your drinking?.....	1. Yes ___ 2. No ___
9. Have you gotten into fights when drinking?...	1. Yes ___ 2. No ___
10. Has drinking ever created problems with you and your spouse?.....	1. Yes ___ 2. No ___
11. Has your spouse (or other family member) ever gone to anyone for help about your drinking?	1. Yes ___ 2. No ___
12. Have you ever lost friends or girlfriends/boy-friends because of drinking?.....
1	1. Yes ___ 2. No ___
13. Have you ever gotten into trouble at work because of drinking?.....	1. Yes ___ 2. No ___
14. Have you ever lost a job because of drinking?.....	1. Yes ___ 2. No ___

15. Have you ever neglected your obligations, your family or your work for two or more days in a row because you were drinking?..... 1.Yes___2.No___
16. Do you ever drink before noon?..... 1.Yes___2.No___
17. Have you ever been told you have liver trouble? Cirrhosis?..... 1.Yes___2.No___
18. Have you ever had delirium tremens (DTs), severe shaking, heard voices, or seen things that weren't there after heavy drinking?..... 1.Yes___2.No___
19. Have you ever gone to anyone for help about your drinking?..... 1.Yes___2.No___
20. Have you ever been in a hospital because of drinking?..... 1.Yes___2.No___
21. Have you ever been a patient in a psychiatric hospital or on a psychiatric ward of a general hospital where drinking was part of the problem?..... 1.Yes___2.No___
22. Have you ever been seen at a psychiatric or mental health clinic, or gone to a doctor, social worker, or clergyman for help with an emotional problem in which drinking had played a part?..... 1.Yes___2.No___
23. Have you ever been arrested, even for a few hours, because of drunk behaviour?..... 1.Yes___2.No___
24. Have you ever been arrested for drunk driving or driving after drinking?..... 1.Yes___2.No___

**Appendix I
Bradford Sexual History Inventory**

(Bradford, Pawlak, Boulet)

SECTION A

1. When you were 13 and younger did you ever have sexual contact with anyone 16 or older?

yes _____ no _____

if you answered no then skip to section B

2. When you were 12 and younger how many times did you have sexual contact with someone 16 or older?

once _____ 2 - 5 _____ 6 - 10 _____
11 - 50 _____ 51 - 100 _____ over 100 _____

3. What was the nature of the contact?
(you may check off more than one)

touching _____

oral sex _____

intercourse _____

anal intercourse _____

other (specify) _____

4. What was the relationship between you and the adult(s) who had sexual contact with you, when you were 12 and younger? Please write how many adults for each type of relationship.

	<u>male</u>	<u>female</u>
stranger	_____	_____
acquaintance	_____	_____
brother/sister/cousin	_____	_____
relative (aunt, uncle, etc)	_____	_____
parent (mother, father)	_____	_____
step-parent	_____	_____

5a. How old were you when the first sexual contact (referred to in question 2) occurred?

_____ years

5b. How old were you when the sexual contact stopped?

_____ years

SECTION B

6. Do you have a regular female sexual partner now?

no _____ yes _____

7. Since you were 16 years old, approximately how many different women (16 or older) have you had sexual intercourse with?

8. How old were you when you first had sexual intercourse with a female?

_____ years

9. During the past year approximately how many times a month did you have sexual contact with a female 16 or older?

none _____ once a month _____ 2 - 5 times/month _____

6 - 10 times/month _____ 11-50 times/month _____

over 50 times/month _____

SECTION C

If there has been no sexual contact between you and a male, 16 or older, skip section C and continue at section D.

10. Do you have a regular male sexual partner now?

no _____ yes _____

11. Since you were 16 years old, approximately how many different men (16 or older) have you had sexual contact with?

12. How old were you when you first had sexual contact with a male?

_____ years

13. During the past year approximately how many times a month did you have sexual contact with a male 16 or older?

none ____ once a month ____ 2 - 5 times/month ____
 6 - 10 times/month ____ 11-50 times/month ____
 over 50 times/month ____

SECTION D (These questions apply to when you were 16 and older)

If you have never had sexual contact with a girl 12 or younger, skip section D and continue with section E.

14. Since you were 16 years old, how many different girls, 12 years old or younger, have you touched in a sexual way?

one ____ 2 - 5 ____ 6 - 10 ____ 11 - 20 ____
 21 - 50 ____ 51 - 100 ____ over 100 ____

15. In total, how many times have you had sexual contact (touching, intercourse etc.) with girls 12 years old or younger?

once ____ 2 - 5 ____ 6 - 10 ____ 11 - 50 ____
 51 - 100 ____ 101 - 200 ____ over 200 ____

16. What types of sexual contact did you engage in ?
 (you may check off more than one)

touching _____
 performing oral sex _____
 having oral sex performed on you _____
 intercourse _____
 anal intercourse _____
 other (specify) _____

17. What was the girls's (or girls) relationship to you?
Write how many girls for each type of relationship.

stranger	_____
acquaintance	_____
sister, cousin	_____
relative (granddaughter, niece)	_____
step-daughter	_____
daughter	_____

SECTION E (These questions apply to when you were 16 or older)

If you have never had sexual contact with a boy 12 years old or younger, skip section E and continue with section F.

18. Since you were 16 years old, how many different boys, 12 years old or younger, have you touched in a sexual way?

one _____ 2 - 5 _____ 6 - 10 _____ 11 - 20 _____
21 - 50 _____ 51 - 100 _____ over 100 _____

19. In total, how many times have you had sexual contact (touching, oral sex, anal intercourse etc.) with boys 12 years old or younger?

once _____ 2 - 5 _____ 6 - 10 _____ 11 - 50 _____
51 - 100 _____ 101 - 200 _____ over 200 _____

20. What types of sexual contact did you engage in ?
(you may check off more than one)

touching	_____
performing oral sex	_____
having oral sex performed on you	_____
anal intercourse	_____
other (specify)	_____

21. What was the boys's (or boys) relationship to you? Write how many boys for each type of relationship.

stranger	_____
acquaintance	_____
brother, cousin	_____
relative (grandson, nephew)	_____
step-son	_____
son	_____

SECTION F (These questions apply to when you were 20 and older)

If you have never had sexual contact with a girl 13 to 15 years old, skip section F and continue with section G.

22. Since you were 20 years old, how many different girls, 13 to 15 years old, have you touched in a sexual way?

one _____ 2 - 5 _____ 6 - 10 _____ 11 - 20 _____
 21 - 50 _____ 51 - 100 _____ over 100 _____

23. In total, how many times have you had sexual contact (touching, intercourse etc.) with girls 13 to 15 years old?

once _____ 2 - 5 _____ 6 - 10 _____ 11 - 50 _____
 51 - 100 _____ 101 - 200 _____ over 200 _____

24. What types of sexual contact did you engage in ? (you may check off more than one)

touching	_____
performing oral sex	_____
having oral sex performed on you	_____
intercourse	_____
anal intercourse	_____
other (specify)	_____

25. What was the girls's (or girls) relationship to you?
Write how many girls for each type of relationship.

stranger	_____
acquaintance	_____
sister, cousin	_____
relative (granddaughter, niece)	_____
step-daughter	_____
daughter	_____

SECTION G (These questions apply to when you were 20 or older)

If you have never had sexual contact with a boy 13 to 15 years old, skip section G and continue with section H.

26. Since you were 20 years old, how many different boys, 13 to 15 years old, have you touched in a sexual way?

one _____ 2 - 5 _____ 6 - 10 _____ 11 - 20 _____
21 - 50 _____ 51 - 100 _____ over 100 _____

27. In total, how many times have you had sexual contact (touching, oral sex, anal intercourse etc.) with boys 13 to 15 years old?

once _____ 2 - 5 _____ 6 - 10 _____ 11 - 50 _____
51 - 100 _____ 101 - 200 _____ over 200 _____

28. What types of sexual contact did you engage in ?
(you may check off more than one)

touching	_____
performing oral sex	_____
having oral sex performed on you	_____
anal intercourse	_____
other (specify)	_____

29. What was the boys's (or boys) relationship to you? Write how many boys for each type of relationship.

stranger	_____
acquaintance	_____
brother, cousin	_____
relative (grandson, nephew)	_____
step-son	_____
son	_____

SECTION H

The remaining questions all apply to when you were 16 years or older.

please attempt to answer all questions

30. How many times have you secretly attempted to look at someone undressing (eg., through a window, with binoculars)?

none ____ once ____ 2 - 5 ____ 6 - 10 ____
 11 - 50 ____ 51 - 100 ____ over 100 ____

31. How many times have you attempted to have sexual intercourse with an adult female against her will?

none ____ once ____ 2 - 5 ____ 6 - 10 ____
 11 - 50 ____ 51 - 100 ____ over 100 ____

32. How many times have you intentionally rubbed up against a stranger in a public place?

none ____ once ____ 2 - 5 ____ 6 - 10 ____
 11 - 50 ____ 51 - 100 ____ over 100 ____

33. How many times have you worn women's clothing (eg., stockings, underpants), other than for costume parties?

none ____ once ____ 2 - 5 ____ 6 - 10 ____
 11 - 50 ____ 51 - 100 ____ over 100 ____

34. How many times have you phoned a stranger for the purpose of having a sexual conversation?
- none ____ once ____ 2 - 5 ____ 6 - 10 ____
- 11 - 50 ____ 51 - 100 ____ over 100 ____
35. How many times have you had sexual intercourse with an adult female against her will?
- none ____ once ____ 2 - 5 ____ 6 - 10 ____
- 11 - 50 ____ 51 - 100 ____ over 100 ____
36. How many times have you intentionally exposed yourself to a stranger in a public place?
- none ____ once ____ 2 - 5 ____ 6 - 10 ____
- 11 - 50 ____ 51 - 100 ____ over 100 ____
37. How many times have you felt sexually aroused by someone hurting or threatening you?
- none ____ once ____ 2 - 5 ____ 6 - 10 ____
- 11 - 50 ____ 51 - 100 ____ over 100 ____
38. How many times have you felt sexually aroused by inflicting pain or humiliating someone?
- none ____ once ____ 2 - 5 ____ 6 - 10 ____
- 11 - 50 ____ 51 - 100 ____ over 100 ____
39. How many times have you secretly attempted to watch people having sexual relations?
- none ____ once ____ 2 - 5 ____ 6 - 10 ____
- 11 - 50 ____ 51 - 100 ____ over 100 ____
40. How many times have you physically tried to force a woman to have sexual relations with you?
- none ____ once ____ 2 - 5 ____ 6 - 10 ____
- 11 - 50 ____ 51 - 100 ____ over 100 ____

41. How many times have you intentionally touched a stranger in a crowd for sexual pleasure?
- none ____ once ____ 2 - 5 ____ 6 - 10 ____
- 11 - 50 ____ 51 - 100 ____ over 100 ____
42. How many times have you physically forced a woman to have sexual relations with you?
- none ____ once ____ 2 - 5 ____ 6 - 10 ____
- 11 - 50 ____ 51 - 100 ____ over 100 ____
43. How many times have you intentionally exposed your penis in a public place?
- none ____ once ____ 2 - 5 ____ 6 - 10 ____
- 11 - 50 ____ 51 - 100 ____ over 100 ____
44. Have you ever been sexually aroused by "talking dirty" to a stranger on the phone?
- yes ____ no ____
45. Have you ever wanted to have sexual contact with a person but didn't?
- yes ____ no ____
46. Have you ever felt pleasure from being cruelly treated?
- yes ____ no ____
47. Have you ever fantasized about sex?
- yes ____ no ____
48. Have you ever been sexually aroused by wearing female clothing?
- yes ____ no ____
49. Have you ever felt sexually aroused?
- yes ____ no ____
50. Have you ever wished to inflict pain on a partner while having sexual relations?
- yes ____ no ____

51. Have you ever found objects (eg., articles of clothing) more sexually arousing than people?

yes ____ no ____

52. Have you ever had sexual contact with an animal?

yes ____ no ____

53. In general, how does drinking alcohol affect your sexual desire?

increase ____ decrease ____ no effect ____ unknown ____

54. How does drinking alcohol affect your sexual pleasure?

increase ____ decrease ____ no effect ____ unknown ____

55. In general, how does smoking marijuana (grass, hash, etc) affect your sexual desire?

increase ____ decrease ____ no effect ____ unknown ____

56. How does smoking marijuana (grass, hash, etc) affect your sexual pleasure?

increase ____ decrease ____ no effect ____ unknown ____

57. Approximately how many sexually explicit (pornographic or "dirty") films have you seen?

none ____ once ____ 2 - 5 ____ 6 - 10 ____

11 - 50 ____ 51 - 100 ____ 101 - 200 ____ over 200 _

58. These films contained scenes of;
(you may check more than one)

heterosexual intercourse (male-female sexual acts) ____

homosexual intercourse (male-male sexual acts) ____

lesbian sex (female-female sexual acts) ____

children engaging in sexual acts ____

violence (whipping, beating, bondage) ____

sexual activity between people and animals ____

59. Do you usually find pornographic films sexually exciting?
(check only one)
- yes _____ no _____ unknown _____
60. Do pornographic films usually increase your sexual desire?
(check only one)
- yes _____ no _____ unknown _____
61. Approximately how many sexually explicit (pornographic or "dirty") magazines or books have you looked at?
- none _____ once _____ 2 - 5 _____ 6 - 10 _____
- 11 - 50 _____ 51 - 100 _____ 101 - 200 _____ over 200 _____
62. These magazines (books) contained scenes of;
(you may check more than one)
- heterosexual intercourse (male-female sexual acts) _____
- homosexual intercourse (male-male sexual acts) _____
- lesbian sex (female-female sexual acts) _____
- children engaging in sexual acts _____
- violence (whipping, beating, bondage) _____
- sexual activity between people and animals _____
63. Do you find pornographic magazines (books) sexually exciting?
- yes _____ no _____ unknown _____
64. Do pornographic magazines (books) increase your sexual desire?
- yes _____ no _____ unknown _____
65. In the past year how often have you masturbated (played with yourself)?
- never _____ less than 1 time/month _____
- 1 - 5 times/month _____ 6 - 10 times/month _____
- 11 - 20 times/month _____ 20 - 50 times/month _____
- over 50 times/month _____

Appendix J

Sexual Activity

How many times in the previous seven days have you had an orgasm, either by masturbation or any overt sexual acts, not including nocturnal emissions (wet dreams)?

indicate number _____

Appendix K

Transcripts of Audiotapes

RAPE 1

It's late in the evening. It's late in the evening and you've been watching a girl that you want to rape in her twenties. You see her right there, she's opening up the door to her apartment, you're watching her there, very attractive. You see her right there, very attractive. You're going to rape her. You're knocking on her door, she opens the door. You see her right there, very attractive, smooth skin, nice breasts, nice legs. You just force your way into the apartment. You just push your way into the apartment and slam the door behind you. You're going to rape her. You tell her to not be frightened, you're just going to rape her. If she doesn't try and stop you she's not going to get hurt. You grab a hold of her, she screams out, you put your hands around her mouth, you stop her from screaming. You struggle with her, pulling her to the ground, you pull her to the ground. You are going to rape her. You feel her body right underneath you there. You feel here body. She's got nice legs, nice tits, you're going to screw her. You just tear her blouse off, tear her blouse off. You can see her tits there, you see her bra. Now you're just pulling her panties off, you're tearing her panties off. You're going to rape her right there on the floor. She's crying and pleading with you, crying and pleading with you not to rape her. You're just going to rape her. You are just going to screw her right there on the floor. Now you're prying her legs apart. She's really got nice legs. You've got a nice stiff hard-on. You're prying her legs apart, you're going to screw her right there on the floor. She's trying to get away, it's no use. You've pinned her down, you've overpowered her. You've pinned her down and now you're shoving your dick right into her, just shoving your penis right into her. You're really getting deep into her. You're just humping her there on the floor, screwing her there on the floor. She's trying to stop you, it's no use. You're just holding her down, pinning her down. You are too powerful and too strong. You're screwing her there, raping her there, right there on the floor. There's nothing she can do.

RAPE 2

It's very late at night. You've broken in, broken in to a house where you know a woman is. You're going to rape her. She's there alone. You've found ... found the bedroom. You see her lying there on the bed with a few covers on. You're going to rape her. You're moving up to the bed very quietly. You put your hands out. You put them right over her mouth so she can't scream out. She's really startled and frightened. She's waking up. You tell her lie still, you've got a knife. If she doesn't lie still you're going to kill her. It's very dark. She's really frightened. You can feel her tits. She's

right underneath you now. You're holding her down, pinning her down. She's trying to scream out, shout out, but it's no use. You've got her mouth covered. You're holding her down right there. You're holding her down. She's trying to get away. It's no use. You're going to rape her right there on the bed. You've got her pinned down, right to the bed. You can feel her body right underneath you. You can feel her body right underneath you. You're really holding her down. You're going to spread her 'legs. You tell her "Come on spread your legs. Spread your legs or I'll kill you." But she still won't do it. You have to reach down and pry her legs apart. You're pushing her legs apart. It's very hard to get her legs apart. She's strong and young, very attractive. You're feeling her tits there. You're prying her legs apart. You've got a nice stiff erection and you're just starting to shove it right into her. You tell her to lie still. You're holding her down...holding her down. She's got nice tits, a nice ass. You're right on top of her there. You're starting to screw her. You're shoving you're dick right into her. You tell her to lie still and she won't get killed. She's really frightened and scared. She's trying to get away. It's no use. You've overpowered her. You're holding her down. Pinning her down. Just pinning her down to the bed. There's no one around. You're just raping her there. Just raping her...raping her right on the bed. There's nothing she can do. You're just too powerful and too strong. You're raping her.

MUTUALLY CONSENTING 1

It's late in the evening. You're going to the apartment of a girl that you've met recently. She's in her twenties, very attractive. She really cares about you. She really likes you. You're really hitting it off. She's very attractive. You're knocking on her door. She wanted you to come over. You're really turned on. She opens the door. She really cares about you. She just comes right up to you, she puts her arms around you. You see her there, you feel her breasts. She's very attractive. You see her right there, she's close to you. She just kind of pulls you in. Time has passed and you see her there. She says "Let's make love..let's have sex". She's undoing her blouse and you see her blouse falling to the floor there. She's unsnapping her bra. She really wants to have intercourse. She really cares about you, you really hit it off well. She's stepping out of her panties. She's lying, just lying right down on the floor. She wants to have intercourse right there. You've got a nice erection. She really cares about you. She is pulling you down, pulling you down to the floor. She is spreading her legs. She's guiding your penis into her vagina. She really wants to have intercourse. She is putting her arms around you. You can feel her pulling, pulling you very close to her, very tightly. She's holding on very tightly. She starting to move, move her ass. You can feel yourself starting to come. You've got a nice stiff erection. She's pulling you very close to her. She

really cares about you. She's moving her ass. She's really getting into it. She really likes you. You're starting to come. You feel yourself starting to come. She's really getting excited. She's really getting turned on. You're just starting to ejaculate now. She really enjoys it. She's holding you really tight, she's holding you really tight. Her arms are around you. She really cares about you.

MUTUALLY CONSENTING 2

It's late in the evening. You're in a bedroom with an attractive girl who knows you. She really cares about you. She's sleeping. You can see her right there on the bed. There are some covers around her. You see her tits. She's just sleeping there. You're going over to the bed. She wakes up, looks over and sees you. She just puts her arm out, reaches for you, kind of pulls you down to the bed. She really cares about you. She's putting her arms around you and just pulls you right into bed with her. She really cares about you. She's just kind of pulling you down. She says "Let's make love." She's just turned on all of a sudden. She really enjoys you. She's unsnapping..unsnapping your pants, unzipping your pants. She's lying there right beneath you now. You can feel the weight of your body on her there. Her arms are around you. She really cares about you. You can feel her arms around you. She's holding you very tight, very close. She spreads her legs, spreads her legs and she's helping you get you penis into her. You can feel, feel her hands around your penis. She's directing your penis into her. She really enjoys feeling your dick in her. She really wants to screw. You can feel her right underneath you there. You just feel her right underneath you. You're moving up and down on her now. She really likes that. She's taking your hands and moving your hands over her breasts so you can feel her tits. She really likes to feel your hands on her tits. She really likes to make love. She really likes you to screw her. She's starting to move her ass now. She's really getting turned on. She's really enjoying feeling your dick in her. She really likes that. You're right on top of her there. You're starting to come. You feel your dick in her. You're moving up and down on her. She really likes that. She's holding you tight, very close. She's making some noises. She really likes, really likes you making love to her. She's moving her ass now, really getting into it. She really enjoys you.

ASSAULT 1

It's late in the evening, you're outside of an apartment. There's an attractive girl living in the apartment. You're angry with her for some reason, you don't know why. She's in her twenties, attractive, nice legs, nice breasts. You just knock on the door. She's opening the door and you just barge in. You just barge in. You're really angry. You're going to beat the hell out of her. You're just going to beat her up,

you don't know why. You're just angry. You see her right there, she's really frightened, she's scared. She doesn't know who you are. You slam the door behind you, slam the door behind you and you grab a hold of her. She starts to scream out. You just put you're hand, put your hand over her mouth and tell her to shut-up, and you just hit her, hit her right across the face. She's really staggering back now and you're just going to beat the hell out of her. You're really going to beat her up. She's trying to get away now. She's screaming, going towards the other room. You grab a hold of her and you pull her to the ground. You're going to beat her up. You're just going to beat her up. You pin her down to the ground, you start slapping her across the face. You just slap her across the face. She's bleeding already. You see the blood coming out of her mouth. She's really frightened and scared. You're just going to beat her up. You don't know why. You're just angry with her. You're holding her down now. You've pinned her down to the ground and you're just slapping her, slapping her across the face and the shoulders, across the face and the shoulders. You're beating her up. She's crying and pleading with you to stop. She's pleading with you, she's fighting with you, trying to get you to stop and it's no use. You've overpowered her, you're holding her down and you're just beating her up. You just slap her across the face again. She's really frightened and scared. She's crying and pleading with you to stop. You just hold her down. You're just going to beat her up now. You're really knocking her in the face and knocking her about the shoulders. You're slapping her, slapping her across the neck. She's crying and her mouth is bleeding. You're really beating her up. You don't know why, you're just holding her down there and beating her up. There's nothing she can do. You're too powerful and strong for her.

ASSAULT 2

It's late in the evening. You've broken into an apartment, broken into a bedroom. There's a girl lying there on the bed. You're angry, just angry. You don't know why but you just want to beat her up. You see her lying there, lying there naked. She has a few covers over her. You're just going to beat the hell out of her. She doesn't know you're there. You just carefully take off your belt, nice long leather belt. You're just going to beat the shit out of her. You don't know why but you're just angry and you're going to beat the hell out of her. You come up, come up to her. You put your hands carefully down across her mouth, across her face so she can't scream out. She wakes up. She's really frightened. She's really frightened and scared. You're just holding her down now. She's screaming now, trying to get away, but you just pull her down. You pin her down. You pin her down to the bed. You've got her on her stomach. You just going to beat the hell out of her. You take that belt and you just slash her across the back. You just hit her across the back with the belt. You see the red marks sticking up on her back. You're really going to beat the hell out of her. She's pleading with

you to stop. You just hold her down. You're just angry. You don't know why but you're just angry. You see her right there. Right beneath you there. You've got her pinned down. You've pinned her down to the mattress there, right on the bed. You just start to hit her, hit her with the belt. You strap her, strap her with that belt. You hit her on the back. She's screaming, trying to get away. It's no use. You're too powerful. You're just going to beat the hell out of her. You just start hitting her again and again with the belt. You take your fist. You're just going to hit her on the back. You just give her your fist right into her back. You can see the bruises starting to form now. She's screaming and pleading with you to stop. You just take your fist and punch her on the back, punch her on the shoulders. You slap her on the back with your hands now. You take that belt out and you hit her across the back. She screams out, screams out but it's no use. You're too powerful. There's no one around. You're just going to beat her there, beat the hell out of her.

Appendix L

Penile Tumescence Instructions

You will be watching a videotape and a series of slides and hearing a series of audio tapes. You are to pay attention to what you are hearing and seeing, and to think about what is being shown or described.

Your sexual arousal will be monitored and recorded on the computer in the next room. It is important that you sit still, especially while the tapes or slides are on. Any movement or attempt to manipulate yourself physically will be obvious on the recording in the next room. If it is necessary for you to move to get more comfortable, try to wait until the end of the slide or tape series.

Apart from monitoring your physical arousal, we also need you to tell us how you feel. We want your own estimate of how sexually excited you feel. You will notice a piece of paper on the table beside you. At the end of each tape you will be asked to indicate on the paper how aroused you are feeling. The choices range from 1 (no arousal) to 10 (extreme or maximum arousal). Extremely aroused would be the way you feel when you are the most sexually excited that you get. This would usually correspond to a full erection. Estimate your sexual arousal level in terms of degrees of maximum arousal. For example if you feel something half-way between no and extreme arousal, circle a 5 or 6 on the scale. If you feel only slightly aroused, circle a 2 or a 3. You are to circle the number that represents your sexual arousal at the time you are asked.

Now the lab assistant will leave you to attach the penile sensor.

(Pause for sensor placement)

(VCR instructions)

The first thing you will be shown is a videotape. You are to watch the videotape. It is important that you think about what you are seeing and allow yourself to become aroused if you feel it. The purpose of this videotape is to sexually excite you and to help you have a full erection, since we need a measure of this for your assessment. At the end of the videotape you will be asked to report your arousal level on the 1 to 10 scale.

Make sure that you get comfortable before we begin so you can avoid movement during recording. If you have any questions ask the laboratory assistant now.

(Stop audio tape and play video tape)

(After video tape is over.)

Please indicate how aroused you are feeling on the scale marked "for videotape". Circle the number that corresponds to the way you feel right now. (PAUSE)

(Pause in tape but IF SUBJECT HAS TROUBLE WITH SELF-REPORT STOP TAPE. Otherwise instructions will continue for RAPE slides.)

Now you will be shown a series of slides that tell a story. There is nothing for you to do except relax, watch the slides and think about what is happening in the story. Allow yourself to become aroused if you feel it.

STOP TAPE AND START RAPE SLIDES

(WHEN RAPE SLIDES OVER)

Please indicate how aroused you are feeling on the scale marked "for slides". Circle the number that corresponds to the way you feel right now. (PAUSE)

(pause in tape but STOP TAPE IF SUBJECT NEEDS MORE TIME. Otherwise instructions will continue for rape audiotapes.)

Now you are going to hear a series of audiotaped descriptions each lasting a few minutes. There is nothing for you to do except relax, listen to each scenario and imagine yourself doing what is being described. Allow yourself to become aroused if you feel it. At the end of each scenario you will be asked to indicate how you feel on one of the scales on the paper beside you. For example, if you feel no or low arousal circle the 1 or a number at the low end of the scale and if you feel highly sexually aroused circle a number at the upper end of the scale, corresponding to the degree of arousal that you feel.

(STOP TAPE AND SET UP RAPE AUDIOTAPE)

(Suppress instructions given before each scenario in the second set).

For the next tape continue to listen as you have been doing but try to suppress your sexual arousal. Use whatever mental means you wish to prevent yourself from feeling any sexual excitement.

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Tape Series:_____

[illegible]

#2 1 2 3 4 5 6 7 8 9 10
No Slight Mild Moderate Strong Extremely
Arousal

#3

	1	2	3	4	5	6	7	8	9	10
No	Slight		Mild		Moderate		Strong		Extremely Aroused	
Arousal										

#4 1 2 3 4 5 6 7 8 9 10
No Slight Mild Moderate Strong Extremely
Arousal

#5 1 2 3 4 5 6 7 8 9 10
No Slight Mild Moderate Strong Extremely
Arousal Aroused

#6

	1	2	3	4	5	6	7	8	9	10
No	Slight		Mild		Moderate		Strong		Extremely	
Arousal									Aroused	

Appendix N
Consent Forms
Clinical Subjects

Consent Form for the Penile Tumescence Assessment

I, _____ of _____ hereby consent to the assessment of penile tumescence as part of the assessment of sexual disorders/dysfunction under the care of Dr(s)_____

I understand that I will be undergoing this special test(s) to assess and monitor my present condition. The procedure has been fully explained to me and I understand that explanation. I also understand that I am free to withdraw from this programme at any time. I agree that my results from these tests may be used in a research study, which has been explained to me, provided that my identity is kept confidential.

Signature: _____

Witness: _____

I hereby confirm that I have explained this assessment programme to:_____.

Signature: _____

Date: _____

Consent Form
Comparison Subjects

Consent Form for the Penile Tumescence Assessment

I, _____ of _____ hereby consent to the assessment of penile tumescence as part of the research project, conducted by Dr. Bradford and Ms. Pawlak, that has been explained to me. Results from my tests may be used for their study provided that my identity is kept confidential.

The procedure has been fully explained to me and I understand that explanation. I also understand that I am free to withdraw from this study at any time.

Signature: _____

Witness: _____

I hereby confirm that I have explained this procedure to:

_____.

Signature: _____

Date: _____

Consent for Questionnaires (All Subjects)**PLEASE READ CAREFULLY**

I understand that if I disclose information concerning the abuse of a child, including sexual abuse, if this has not been reported to the Children's Aid Society, the investigators are obliged to do so.

Many of the questions in this package concern issues which are highly personal. Therefore, whether you answer them or not is your choice. However, if you choose to respond to them, it is important that your answers be as honest and as accurate as possible.

CONSENT

I _____, hereby consent to answer the attached questionnaires. I consent to the use of this information for the research project described to me, provided that my name is kept confidential.

Date _____

Signature _____

Date _____

Witness _____

Appendix O

Tables of Results for Analyses with Education Partialled Out
for Classification by Offense History

TABLE A1

DISCRIMINANT FUNCTION ANALYSIS RESULTS
FOR CLASSIFICATION BY OFFENSE HISTORY
WITH PARAPHILIAS AS PREDICTORS
WITH EDUCATION PARTIALED OUT

WILKS LAMBDA	CANONICAL r	F(7,78)	PROB	N
.937	.250	0.75	.634	87

NON-OFFENDERS	41
OFFENDERS	46

Predictor	F(1,84)	Sig.	Corr w func
SADOMASOCHISM	4.11	.046	.855
EXHIBITIONISM	0.18	.673	.179
VOYEURISM	0.12	.729	.146
FETISHISM	0.11	.747	-.137
PHONING	0.00	.946	-.029
FROTTEURISM	0.00	.949	-.027
BESTIALITY	0.00	.981	.010

TABLE A2

DISCRIMINANT FUNCTION ANALYSIS RESULTS
FOR CLASSIFICATION BY OFFENSE HISTORY
WITH PORNOGRAPHY AS PREDICTORS
WITH EDUCATION PARTIALLED OUT

WILKS LAMBDA	CANONICAL r	F(4,75)	PROB	N
.941	.243	1.18	.327	81

NON-OFFENDERS	41
OFFENDERS	40

Predictor	F(1,78)	Sig.	Correlation with function
FREQ FILMS	11.45	.001	-.909
FREQ BOOKS	8.34	.005	-.775
BOOKS OF VIOLENCE	1.02	.315	-.271
FILMS OF VIOLENCE	0.06	.809	-.065

TABLE A3

DISCRIMINANT FUNCTION ANALYSIS FOR CLASSIFICATION BY OFFENSE
HISTORY WITH FANTASY THEMES AS PREDICTORS
WITH EDUCATION PARTIALLED OUT

WILKS LAMBDA	CANONICAL r	F(4,85)	PROB	N
.814	.431	4.85	.001	91

NON-OFFENDERS	41
OFFENDERS	50

Predictor	F(1,88)	Sig.	Correlation with function
CONSENTING VAR	12.95	.001	.803
BONDAGE	6.08	.016	.550
CONFUSED SEXUAL IDENTITY	0.17	.682	-.092
SADOMASOCHISM	0.04	.851	.042

TABLE A4

DISCRIMINANT FUNCTION ANALYSIS
FOR CLASSIFICATION BY OFFENSE HISTORY
WITH BRIEF SYMPTOM INVENTORY SCALES AS PREDICTORS
WITH EDUCATION PARTIALLED OUT

WILKS LAMBDA	CANONICAL r	F(9,80)	PROB	N
.774	.476	2.60	.011	91

NON-OFFENDERS	n=41
OFFENDERS	n=50

Predictor	F (1,88)	Sig.	Correlation with function
Psychotic	9.27	.003	-.600
Phobia	9.25	.003	-.599
Anxiety	7.02	.010	-.522
Paranoia	5.89	.017	-.478
Depression	4.44	.038	-.415
Somatization	2.93	.090	-.337
Interpersonal Sensitivity	1.79	.184	-.264
Obsessive Compulsive	0.22	.644	-.091
Hostility	0.09	.764	-.059

TABLE A5
DISCRIMINANT FUNCTION ANALYSIS
FOR CLASSIFICATION BY OFFENSE HISTORY
WITH BUSS-DURKEE HOSTILITY SCALES AS PREDICTORS
WITH EDUCATION PARTIALLED OUT

WILKS LAMBDA	CANONICAL r	F(8,80)	PROB	N
.808	.438	2.38	.024	90
NON-OFFENDERS	n=41			
OFFENDERS	n=49			
PREDICTOR	F(1,87)	Sig.	Correlation with function	
Suspiciousness	8.64	.004	-.646	
Guilt	8.05	.006	-.623	
Irritability	4.63	.034	-.473	
Resentment	2.72	.103	-.362	
Assault	1.98	.163	-.309	
Verbal Hostility	0.62	.434	-.173	
Indirect Hostility	0.54	.465	-.161	
Negativism	0.08	.772	.064	

Appendix P

RESULTS OF ANALYSES FOR CLASSIFICATION OF SUBJECTS BY
SELF-REPORTED COERCIVE HISTORYDemographic Information

Coercive subjects were slightly older (30.3, $sd=9.0$) than non-coercive subjects (26.7, $sd=7.3$) ($t(88)=2.11$, $p=.037$, $N=90$). Analysis of the IQ broken down into 3 categories (low average and less, average, or high average and greater) showed that more coercive subjects than non-coercive subjects were in the low range and more non-coercive than coercive were in the high range (see Table A7) ($X^2(2)=8.28$, $p=.016$, $N=85$). A similar relationship was seen between coercive history and education. More of the non-coercive subjects had higher education than did coercive subjects as seen in Table A8 ($X(3)=12.58$, $p=.006$, $N=88$).

Neither marital status ($X^2(2)=3.08$, $p=.215$, $N=90$) nor highest occupational level attained ($X^2(6)=9.15$, $p=.165$, $N=87$) were significantly associated with coercive history. Employment status was statistically significant ($X^2(1)=4.65$, $p=.031$, $N=86$) with more coercive subjects being unemployed at the time of testing (62%) than non-coercive subjects (39%).

More coercive subjects had MAST scores in the significant range ($X^2(1)=5.03$, $p=.025$, $N=90$) (Table A9). Comparison of mean raw MAST and log transformed MAST for the coercive and non-coercive subjects both yielded significant t tests ($t(88)=2.23$, $p=.029$ and $t(88)=2.27$, $p=.025$ respectively, $N=90$)

TABLE A7
IQ LEVEL BY COERCIVE HISTORY

IQ LEVEL	Count			Row Total
	Col Pct	NON- COERCIVE	COERCIVE	
LOW AVG, BORDER- LINE, MR		6 13.0	15 38.5	21 24.7
AVERAGE		27 58.7	19 48.7	46 54.1
VERY SUPREIOR, SUPERIOR, HI AVG		13 28.3	5 12.8	18 21.2
	Column Total	46 54.1	39 45.9	85 100.0

Chi-Square	DF	Significance	Min EF	Cells with EF <5
8.28	2	.016	8.3	0

TABLE A8
EDUCATION LEVEL BY COERCIVE HISTORY

EDUCATION	COUNT COL PCT	NON- COERCIVE	COERCIVE	Row Total
le 7			2 4.9	2 2.3
grade 8 to 11		15 31.9	19 46.3	34 38.6
12 & 13		11 23.4	15 36.6	26 29.5
post-secondary		21 44.7	5 12.2	26 29.5
	Column Total	47 53.4	41 46.6	88 100.0

Chi-Square	DF	Significance	Min EF	Cells with EF <5
12.58	3	.006	.9	2 of 8 (25%)

COLLAPSING ACROSS 2 LOWER LEVELS

EDUCATION	Count Col Pct	NON- COERCIVE	COERCIVE	Row Total
LE GRADE 11		15 31.9	21 51.2	36 40.9
12 & 13		11 23.4	15 36.6	26 29.5
post-secondary		21 44.7	5 12.2	26 29.5
	Column Total	47 53.4	41 46.6	88 100.0

Chi-Square	DF	Significance	Min EF	Cells with EF <5
11.10	2	.004	12	0

TABLE A9
MAST BY COERCIVE HISTORY

MAST	Count Col Pct	NON- COERCIVE	COERCIVE	Row Total
6 & less		34 70.8	20 47.6	54 60.0
7 & greater		14 29.2	22 52.4	36 40.0
	Column Total	48 53.3	42 46.7	90 100.0

Chi-Square	DF	Significance	Min EF	Cells with EF <5
5.03	1	.025	16.8	0

with coercive subjects scoring significantly higher.

Sexual History

Subjects with a coercive history more often reported having experienced sexual victimization as a child (52%) compared to non-coercive subjects (23%), as indicated by their response to question 1 of the BSHI ($\chi^2(1)=8.37$, $p=.004$, $N=90$). Age of first sexual intercourse (question #8) (mean non-coercive=16.0, $sd=4.16$, $n=44$; mean coercive=14.7, $sd=5.02$, $n=39$, $t(81)=1.23$, $p=.223$) and number of female partners since age 16 (#7) ($t(85)=0.30$, $p=.762$) were not significantly different for the 2 groups. Proportion of non-coercive subjects who reported having a regular female partner (57%) was significantly more than for coercive (34%) ($\chi^2(1)=4.78$, $p=.029$, $N=88$). Significantly more coercive subjects reported sexual activity with children (36%) than did non-coercive subjects (1%) ($\chi^2(1)=17.33$, $p=.000$, $N=90$).

A direct discriminant function analysis was conducted including the dichotomous paraphilia variables from the BSHI (excluding the rape variable since this information contributed to the classification criteria) as predictors of membership in the 2 groups. Of the original sample 2 cases were excluded from the analysis because they had "honesty" scores less than 2 (1 in each group) and 2 from the coercive group were dropped because they were missing at least one discriminating variable. For the remaining 86 cases (47 non-coercive and 39 coercive subjects) evaluation of assumptions of multivariate analyses revealed heterogeneous variance-covariance matrices (Box's $M=119.4$, $p=.000$).

The discriminant function represented a significant underlying dimension accounting for group differences with a chi-square (8 df) of 23.40, $p=.003$ (Wilks Lambda=.746, canonical $r=.504$) (see Table A10). Only the univariate F for child-molesting was significant ($F(1,84)=18.08$, $p=.000$). Thirty-three percent of the coercive subjects reported child-molesting compared to 2% of the non-coercive. Childmolesting was the primary predictor of coercive history with 63% of shared variance with the function. Exhibitionism, Fetishism, Sadomasochism and Bestiality each had from 12% to 9% of their respective variances in common with the discriminant function. The function correctly classified 72% subjects (83% of non-coercive and 59% of coercive).

Although singularity did not pose a statistical problem in this analysis, there still was the possible bias in responses because of the caution given prior to testing. For this reason and for comparability of results with the analyses by offense history, the discriminant analysis was repeated omitting child-molesting. The discriminant function based on the 7 remaining predictors did not represent a significant underlying dimension accounting for group differences $X^2(7)=10.65$, $p=.155$ (Wilks Lambda=.876; canonical $r=.352$) (see Table A11). No univariate F 's were significant. Results did not change after education was partialled out.

TABLE A10

DISCRIMINANT ANALYSIS RESULTS FOR CLASSIFICATION BY
COERCIVE HISTORY WITH THE BSHI PARAPHILIAS AS PREDICTORS

WILKS LAMBDA	CANONICAL r	CHI-SQUARE(8)	PROB	N
.746	.504	23.40	.003	86

PREDICTOR	NON-COER (47) MEAN (SD)	COERCIVE (39) MEAN (SD)	F(1,84)	SIG.	COR W FUNC
CHILDMOL	.02 (.14)	.33 (.38)	18.08	.000	.796
EXHIBIT	.11 (.31)	.26 (.44)	3.39	.069	.344
FETISHISM	.13 (.34)	.28 (.46)	3.25	.075	.337
SADOMASO	.06 (.25)	.18 (.39)	2.80	.098	.313
BESTIAL	.09 (.28)	.21 (.41)	2.57	.112	.300
OBS PHONE	.26 (.44)	.39 (.49)	1.65	.203	.240
VOYEURISM	.57 (.50)	.67 (.48)	0.76	.387	.163
FROTTEUR	.40 (.50)	.33 (.48)	0.45	.504	-.126

Pooled Within-Groups Correlation Matrix

	CHILDMOL	EXI	FET	SM	BEST	PHON	VOY	FROT
CHILDMOL	1.00							
EXHIBITION	-.13	1.00						
FETISHISM	.11	.04	1.00					
SADOMASO	.18	-.11	.06	1.00				
BESTIALITY	.13	-.04	.11	.25	1.00			
PHONING	-.02	.06	.21	.20	.22	1.00		
VOYEURISM	.05	.09	.20	-.03	.10	.32	1.00	
FROTTEUR	-.05	.04	.06	-.12	.05	.38	.27	1.00

TABLE A11

DISCRIMINANT ANALYSIS RESULTS FOR CLASSIFICATION BY COERCIVE
HISTORY WITH THE BSHI PARAPHILIAS (EXCLUDING CHILD MOLESTING)
AS PREDICTORS

WILKS LAMBDA	CANONICAL r	CHI-SQUARE(7)	PROB	N
.876	.352	10.65	.155	86
PREDICTOR	CORR WITH FUNCTION			
EXHIBITION	.534			
FETISHISM	.523			
SADOMASOCHISM	.486			
BESTIALITY	.466			
OBSCENE PHONE	.375			
VOYEURISM	.252			
FROTTEURISM	-.195			

Pornography

Direct discriminant analysis of the pornography frequency measures (log transformed responses to items 57 and 61) and the items measuring use of violent pornography was conducted to determine their combined relationship with coercive history. Of the original sample 1 subject from each group was excluded because they did not meet the validity criterion, and 5 were excluded because they had at least one missing discriminating variable (3 non-coercive and 2 coercive). The final sample included 83 cases - 44 non-coercive and 39 coercive. Evaluation of statistical assumptions revealed no threat to multivariate analysis.

The discriminant function did not represent a significant underlying dimension to account for group differences (Wilks Lambda=.964; canonical $r=.191$; $X^2(4)=2.93$, $p=.569$) (Table A12). None of the univariate F 's were significant. Results did not change with education partialled out.

Derogatis Sexual Functioning Inventory

The 10 subscales of the DSFI were included in a direct discriminant function analysis to predict coercive history. No subjects were excluded because of missing discriminating variables or extreme scores. Groups consisted of 48 non-coercive and 42 coercive subjects. Multivariate assumptions were not violated. The function represented a significant underlying dimension separating groups ($X^2(10)=23.65$, $p=.009$; Wilks Lambda=.752; canonical $r=.498$) (Table A13).

TABLE A12

DISCRIMINANT ANALYSIS RESULTS
FOR CLASSIFICATION BY COERCIVE HISTORY
WITH USE OF VIOLENT PORNOGRAPHY AS PREDICTORS

WILKS LAMBDA	CANONICAL r	CHI-SQUARE(4)	PROB	N
.964	.191	2.93	.569	8 3

PREDICTOR	NON-COER (44) MEAN (SD)	COERCIVE (39) MEAN (SD)	F(1,81)	SIG.	COR W FUNC
VIOL FILM	.18 (.39)	.31 (.47)	1.79	.185	.764
VIOL BOOK	.18 (.39)	.33 (.74)	1.41	.238	.679
# FILMS	1.98 (1.06)	1.86 (1.16)	0.23	.635	-.273
# BOOKS	2.79 (1.30)	2.66 (1.45)	0.16	.689	-.229

Pooled Within-Groups Correlation Matrix

	VIOLFILM	VIOLBOOK	# FILMS	# BOOKS
VIOLENT FILMS	1.00			
VIOLENT BOOKS	.53	1.00		
# FILMS	.21	.26	1.00	
# BOOKS	.17	.25	.50	1.00

TABLE A13

DISCRIMINANT ANALYSIS RESULTS
FOR CLASSIFICATION BY COERCIVE HISTORY
WITH DSFI SCALES AS PREDICTORS

WILKS LAMBDA	CANONICAL r	CHI-SQUARE(10)	PROB	N
.752	.498	23.65	.009	90

PREDICTOR	NON-COER (48) MEAN (SD)	COERCIVE (42) MEAN (SD)	F(1,88)	SIG.	COR W FUNC
ATTITUDE	49 (12.5)	42 (7.7)	10.02	.002	.588
SYMPTOMS	50 (14.6)	42 (10.7)	9.31	.003	.567
BOD IMAG	44 (8.1)	38 (10.6)	8.24	.005	.533
GEND ROL	46 (9.4)	41 (3.1)	7.10	.009	.495
AFFECT	46 (12.9)	40 (12.8)	4.73	.032	.404
DRIVE	56 (10.8)	51 (10.2)	4.58	.035	.397
EXPERIEN	48 (11.0)	44 (11.2)	2.85	.095	.313
INFORMAT	45 (12.3)	41 (9.6)	2.30	.133	.281
SATISFACT	51 (8.9)	49 (9.1)	0.57	.451	.141
FANTASY	50 (10.1)	51 (12.1)	0.42	.520	-.120

Pooled Within-Groups Correlation Matrix

	ATT	SYM	BOD	GEN	AFF	DRI	EXP	INF	SAT
ATTITUDE	1.00								
SYMPTOMS	.09	1.00							
BODY IMAGE	.26	.44	1.00						
GENDER ROLE	.31	.25	.26	1.00					
AFFECT	.21	.66	.51	.29	1.00				
DRIVE	.38	-.02	.17	.05	.00	1.00			
EXPERIENCE	.46	-.06	.12	.09	.08	.45	1.00		
INFORMATION	.46	.29	.21	.22	.24	.26	.28	1.00	
SATISFACTION	.35	.05	.42	.21	.16	.28	.28	.27	1.00
FANTASY	.50	-.16	-.08	.03	.03	.35	.43	.20	.03

Consistent with classification by offense history, Attitude was the primary predictor of coercive history. Coercive subjects had significantly more conservative attitudes toward sex (mean=42, sd=7.7) than non-coercive subjects (mean=49, sd=12.5) $F(1,88)=10.02, p=.002$. Attitude shared 35% of its variance with the canonical discriminant function. Symptom had the second highest correlation with the discriminant function, sharing 32% of its variance with the function. Coercive subjects had significantly more symptoms of psychological distress (mean=42, sd=10.69) than did non-coercive subjects (mean=50, sd=14.61) ($F(1,88)=9.314, p=.003$). Body image had 28% of shared variance with the function. Coercive history was associated with more negative body perceptions (coercive mean=38, sd=10.6; non-coercive mean=44, sd=8.1) ($F(1,88)=8.24, p=.005$). Gender role definition shared 25% of its variance with the canonical discriminant function. Coercive subjects held more polarized views of sex roles (mean=41, sd=8.1) than did non-coercive (mean=46, sd=9.4) $F(1,88)=7.102, p=.009$.

Affect, Drive and Experience all correlated substantially with the canonical discriminant function (sharing 18%, 16% and 10% of their variances with the function) and with the exception of Experience, all were significant in univariate analyses. On all scales coercive subjects scored lower. Information, Satisfaction and Fantasy had correlations less than .3 with the function and had non-significant univariate F 's. The function correctly classified 71% of subjects (73% of non-coercive and 69% of coercive).

Partialling out the variance due to education still resulted in a discriminant function representing a significant underlying dimension accounting for group differences ($F(10,76)=2.23$), $p=.025$; Wilks Lambda=.773; canonical $r=.476$) and results were essentially the same (Table A14).

Sexual Fantasy

The 4 factor-based fantasy measures were entered into a direct discriminant analysis to predict coercive history. The variables reflected themes of sadomasochistic fantasies, consenting sexual variations, confused sexual identity and bondage. No cases were excluded because of missing discriminating variables or outliers. Groups consisted of 48 non-coercive and 42 coercive subjects. Evaluation of assumptions of multivariate analyses revealed no threats.

Results are in Table A15. The discriminant function did not represent a significant underlying dimension to account for group differences (Wilks Lambda=.924, canonical $r=.275$, $X^2(4)=6.76$, $p=.149$). A significant univariate F was obtained for confused sexual identity ($F(1,88)=5.14$, $p=.026$) with more coercive subjects reporting this than non-coercive subjects. After education was partialled out, the discriminant function still was not significant and no univariate analyses were significant.

Further analyses of the 3 individual fantasy items that

TABLE A14

DISCRIMINANT ANALYSIS RESULTS
FOR CLASSIFICATION BY COERCIVE HISTORY
WITH DSFI SCALES AS PREDICTORS
AND WITH EDUCATION PARTIALLED OUT

WILKS LAMBDA	CANONICAL r	F(10,76)	PROB	N
.773	.476	2.23	.025	88

PREDICTOR	F(1,85)	PROB.	CORR WITH FUNCTION
SYMPTOMS	9.63	.003	-.622
BODY IMAGE	8.13	.005	-.571
ATTITUDE	6.90	.010	-.525
GENDER ROLE	5.29	.024	-.461
AFFECT	4.59	.035	-.429
DRIVE	4.08	.047	-.405
EXPERIENCE	2.88	.094	-.340
INFORMATION	1.48	.228	-.244
FANTASY	0.53	.468	.146
SATISFACTION	0.51	.477	-.143

TABLE A15

DISCRIMINANT ANALYSIS RESULTS
FOR CLASSIFICATION BY COERCIVE HISTORY
WITH FANTASY THEMES AS PREDICTORS

WILKS LAMBDA	CANONICAL r	CHI-SQUARE(4)	PROB	N
.924	.275	6.76	.149	90

PREDICTOR	NON-COER (48) MEAN (SD)	COERCIVE (42) MEAN (SD)	F(1,88)	SIG.	COR W FUNC
CONFUS ID	0.33 (.66)	0.74 (1.01)	5.14	.026	.845
SADOMAS	0.54 (1.01)	0.69 (.98)	0.50	.480	.264
CONSENT	3.27 (.94)	3.14 (1.03)	0.38	.538	-.230
BONDAGE	0.60 (.79)	0.52 (.74)	0.25	.622	-.185

Pooled Within-Groups Correlation Matrix

	CONFUSED ID	SADOMAS	CONSENT	BONDAGE
CONFUSED ID	1.00			
SADOMASOCHISM	.47	1.00		
CONSENT VAR	.24	.18	1.00	
BONDAGE	.26	.54	.36	1.00

characterize rape revealed that significantly more coercive (13/42 or 31%) than non-coercive subjects (5/48 or 10%) endorsed item 5, "forcing sex partner to submit to sexual acts" ($X^2(1)=5.90$, $p=.015$). No differences were found for the other two rape items.

Brief Symptom Inventory

Direct discriminant analysis was conducted on the 9 symptom dimensions of the BSI as predictors of coercive history. Other than the three subjects missing the information for group criterion, no cases were excluded because of missing data or extreme scores. Groups consisted of 48 non-coercive and 42 coercive subjects. Statistical assumptions were not violated. The discriminant function represented a significant underlying dimension accounting for group differences, (Wilks Lambda=.716, canonical $r=.535$, $X^2(9)=27.88$, $p=.001$) (Table A16).

Somatization was the primary predictor with coercive subjects being significantly higher (mean=59, sd=11.5) than non-coercive subjects (mean=51, sd=10.0) ($F(1,88)=12.79$, $p=.001$). Somatization shared 37% of its variance with the function. Psychoticism was the second best predictor with 34% of variance in common with the function. Coercive subjects were significantly higher on psychotic symptoms (mean=67, sd=10.9) than were non-coercive (mean=58, sd=11.7) ($F(1,88)=11.98$, $p=.001$). Paranoia had 33% of its variance in common with the function and again coercive subjects scored

TABLE A16

DISCRIMINANT ANALYSIS RESULTS
FOR CLASSIFICATION BY COERCIVE HISTORY
WITH BSI SUB-SCALES AS PREDICTORS

WILKS LAMBDA	CANONICAL r	CHI-SQUARE(9)	PROB	N
.716	.535	27.88	.001	90

PREDICTOR	NON-COER (48) MEAN (SD)	COERCIVE (42) MEAN (SD)	F(1,88)	SIG.	COR W FUNC
SOMATIZ	51 (9.9)	59 (11.5)	12.79	.001	.606
PSYCHOTIC	58 (11.7)	67 (10.9)	11.98	.001	.586
PARANOIA	55 (11.6)	63 (10.4)	11.17	.001	.566
INTERSENS	57 (12.2)	64 (11.7)	8.28	.005	.487
ANXIETY	56 (11.9)	62 (12.2)	6.09	.016	.418
PHOBIA	56 (11.2)	61 (10.9)	5.79	.018	.407
DEPRESS	59 (12.2)	65 (11.9)	4.20	.043	.347
OBSESSIVE	57 (11.6)	61 (12.8)	2.13	.148	.247
HOSTILITY	55 (13.4)	55 (14.0)	0.00	.957	.009

Pooled Within-Groups Correlation Matrix

	SOM	PSY	PAR	INT	ANX	PHO	DEP	OBS
SOMATIZATION	1.00							
PSYCHOTIC	.45	1.00						
PARANOIA	.57	.68	1.00					
INTERPERSONAL SENS	.46	.57	.66	1.00				
ANXIETY	.53	.62	.58	.50	1.00			
PHOBIA	.46	.56	.57	.48	.57	1.00		
DEPRESSION	.46	.72	.59	.54	.72	.55	1.00	
OBSESSIVE	.58	.67	.65	.65	.65	.49	.66	1.00
HOSTILITY	.46	.54	.67	.64	.66	.51	.60	.73

higher on the scale (mean=63, sd=10.4) than did non-coercive (mean=55, sd=11.6) ($F(1,88)=11.17$, $p=.001$).

Interpersonal Sensitivity, Anxiety, Phobia and Depression all correlated substantially with the function (sharing from 24% to 12% of their respective variances) and in all cases coercive subjects were significantly higher than non-coercive subjects. Obsessive Compulsivity and Hostility were not associated with groups. The function correctly classified 78% of the cases (79% of non-coercive and 76% of coercive subjects). Results were similar after education was partialled out.

MMPI

Results of analysis of the MMPI are presented although the large proportion of cases with missing data (most from the coercive group) makes interpretation speculative. Direct discriminant analysis was conducted using the 10 MMPI subscales as predictors. Twenty-five cases were excluded because of missing data (9 from the non-coercive group and 16 from the coercive. Groups consisted of 39 subjects with no coercive history and 26 subjects with a history of coercive sex. Evaluation of statistical assumptions revealed no threat to multivariate analysis. The discriminant function represented a significant underlying dimension separating groups (Wilks Lambda=.562; canonical $r=.662$; $X^2(10)=33.41$, $p=.000$, $N=65$) (see Table A17).

Consistent with analyses by offense history, Psychopathic

TABLE A17

DISCRIMINANT ANALYSIS RESULTS
FOR CLASSIFICATION BY COERCIVE HISTORY
WITH THE MMPI SCALES AS PREDICTORS

WILKS LAMBDA	CANONICAL r	CHI-SQUARE(10)	PROB N
.562	.662	33.41	. 0 0 0 65

PREDICTOR	NON-COER (39) MEAN (SD)	COERCIVE (26) MEAN (SD)	F(1,63)	SIG.	COR W FUNC
PSYCHOPA	66 (12.60)	80 (11.76)	20.65	.000	.649
PARANOIA	61 (9.69)	70 (8.59)	15.86	.000	.569
HYPOCHOND	54 (8.19)	64 (14.98)	12.73	.001	.509
SCHIZOPHR	65 (14.54)	79 (17.97)	12.05	.001	.495
PSYCHASTH	63 (12.83)	73 (13.41)	9.07	.004	.430
HYSTERIA	59 (8.15)	64 (10.55)	5.30	.025	.329
HYPOMANIA	64 (12.65)	69 (10.5)	3.03	.087	.248
SOC INTR	51 (10.74)	55 (12.35)	2.20	.143	.212
DEPRESS	62 (13.63)	66 (16.53)	1.01	.318	.144
MASC-FEM	67 (11.40)	65 (9.36)	0.26	.616	-.072

Pooled Within-Groups Correlation Matrix

	PD	PA	HS	SC	PT	HY	MA	SI	D
PSYCHOPATH	1.0								
PARANOIA (PA)	.38	1.0							
HYPOCHONDR (HS)	.24	.12	1.0						
SCHIZOPHR (SC)	.50	.56	.36	1.0					
PSYCHASTH (PT)	.58	.52	.38	.74	1.0				
HYSTERIA (HY)	.30	.20	.64	.18	.37	1.0			
HYPOMANIA (MA)	.13	.10	-.04	.33	.13	-.04	1.0		
SOC INTROV (SI)	.30	.34	.19	.58	.58	.04	-.08	1.0	
DEPRESS (D)	.49	.36	.46	.62	.68	.55	-.14	.62	1.0
MASC-FEM(MF)	.17	.25	.03	-.05	.10	.21	-.23	.08	.17

Deviance was the primary predictor of coercive history (coercive mean=80, sd=11.8; non-coercive mean=66, sd=12.6) ($F(1, 63)=20.65, p=.000$). Psychopathic Deviance shared 42% of it's variance with the canonical discriminant function. Paranoia had the second highest correlation with the function with 32% of it's variance shared with the function. Coercive subjects were significantly higher (mean=70, sd=8.6) than were non-coercive (mean=61, sd=13.6) ($F(1,63)=15.86, p=.000$). Hypochondriasis had 26% of it's variance in common with the function and again coercive subjects scored higher (mean=64, sd=14.9) than did non-coercive (mean=54, sd=8.2) ($F(1,63)=12.73, p=.001$). Schizophrenia shared 25% of its variance with the function. Coercive subjects were elevated (mean=79, sd=18.0) and significantly higher than non-coercive (mean=65, sd=14.5).

Psychasthenia and Hysteria shared 19% and 11% of their variances with the function and both are significantly higher for coercive subjects (mean PT coercive=73, sd=13.4; mean PT non-coercive=63, sd=12.8) (mean HY coercive=65, sd=10.6; mean HY non-coercive=59, sd=8.1). The remaining 4 scales (Hypomania, Social Introversion, Depression and Masculinity/Femininity) had low correlations with the function and were not significant in univariate analyses. The function correctly classified 82% of cases (85% of non-coercive and 77% of coercive subjects).

Buss-Durkee Hostility Inventory

A direct discriminant function analysis was performed

using the 8 subscale scores of the Buss-Durkee Hostility Inventory as predictors of coercive history. One subject (coercive) was excluded from analysis because of at least one missing discriminating variable ($n=48$ non-coercive and 41 coercive subjects). The discriminant function represented a significant underlying dimension accounting for group differences with a chi-square (8 df) of 27.88, $p=.001$ (Wilks Lambda=.731; canonical $r=.519$) (Table A18).

Guilt was the primary predictor with 80% of its variance in common with the function. Coercive subjects were higher on Guilt (mean=5.6, $sd=2.06$) than were non-coercive subjects (mean=3.0, $sd=2.6$) ($F(1,87)=25.62$, $p=.000$). Suspiciousness shared 36% of its variance with the function and coercive subjects were more suspicious (mean=4.8, $sd=2.7$) than non-coercive subjects (mean=2.9, $sd=2.6$) ($F(1,87)=11.56$, $p=.001$). Resentment had 30% variance in common with the function, again with coercive subjects scoring higher (mean=3.9, $sd=2.0$) than non-coercive subjects (mean=2.5, $sd=2.2$) ($F(1,87)=9.64$, $p=.003$). Assaultiveness shared 24% of variance and was significantly higher for coercive (mean=5.1, $sd=2.77$) than for non-coercive subjects (mean=3.5, $sd=3.1$).

Irritability and Negativism shared 17% and 11% of their variances with the function but only Irritability was significantly different (coercive mean=5.6, $sd=3.07$; non-

TABLE A18

DISCRIMINANT ANALYSIS RESULTS
FOR CLASSIFICATION BY COERCIVE HISTORY
WITH BUSS-DURKEE HOSTILITY SCALES AS PREDICTORS

WILKS LAMBDA	CANONICAL r	CHI-SQUARE(8)	PROB N
.731	.519	25.99	.001 89

PREDICTOR	NON-COER (48) MEAN (SD)	COERCIVE (41) MEAN (SD)	F(1,87)	SIG.	COR W FUNC
GUILT	3.1 (2.59)	5.6 (2.06)	25.62	.000	.895
SUSPIC	2.9 (2.57)	4.8 (2.71)	11.56	.001	.601
RESENT	2.5 (2.17)	3.9 (1.97)	9.64	.003	.549
ASSAULT	3.5 (2.85)	5.1 (2.77)	7.74	.007	.492
IRRITABLE	4.2 (2.88)	5.6 (3.07)	5.39	.023	.411
NEGATIVE	2.1 (1.44)	2.6 (1.34)	3.42	.068	.327
INDIRECT	4.5 (2.16)	5.4 (2.51)	2.91	.091	.302
VERB HOS	6.9 (2.89)	7.6 (2.74)	1.34	.251	.204

Pooled Within-Groups Correlation Matrix

	GUI	SUS	RES	ASS	IRR	NEG	IND	VER
GUILT	1.0							
SUSPICIOUSNESS	.41	1.0						
RESENTMENT	.53	.71	1.0					
ASSAULTIVE	.32	.46	.51	1.0				
IRRITABILITY	.49	.57	.73	.56	1.0			
NEGATIVISM	.34	.44	.48	.40	.35	1.0		
INDIRECT HOST	.27	.16	.32	.44	.47	.24	1.0	
VERBAL HOST	.14	.28	.42	.46	.51	.42	.39	1.0

coercive mean=4.2, sd=2.88). Indirect Hostility and Verbal Hostility had low correlations with the function and were not different for the two groups. The function correctly classified 73% of subjects (71% of non-coercive and 76% of coercive subjects). Removing variance due to education did not change the results.

Attitude Questionnaires

Total scores on the questionnaires measuring general aggression (Buss-Durkee Hostility Inventory, BDI), Acceptance of Interpersonal Violence (AIV), hostility/aggression toward women (Adversarial Sexual Beliefs (ASB)), and attitudes condoning rape (Rape Myth Acceptance (RMA)) were included in a discriminant analysis. Eighty-one subjects were included in the analysis, 9 were excluded because they had at least one missing discriminating variable (1 non-coercive and 8 coercive). Groups consisted of 47 non-coercive and 34 coercive subjects. Examination of data revealed no threats to multivariate analysis.

Table A19 includes the results. The function did not significantly discriminate between groups (Wilks Lambda=.897, canonical $r=.321$; $X^2(4)=8.39$, $p=.078$). The Buss-Durkee is the only predictor significant in univariate analyses (coercive mean=35, sd=13.6; non-coercive mean=26, sd=12.5) ($F(1,79)=8.35$, $p=.005$). After removing the variance due to education the results did not change.

TABLE A19

DISCRIMINANT ANALYSIS RESULTS
FOR CLASSIFICATION BY COERCIVE HISTORY
WITH ATTITUDE SCALES AS PREDICTORS

WILKS LAMBDA	CANONICAL r	CHI-SQUARE(4)	PROB N	
.897	.321	8.39	.078 8	1

PREDICTOR	NON-COER (47) MEAN (SD)	COERCIVE (34) MEAN (SD)	F(1,79)	SIG.	COR W FUNC
BDI	26 (12.54)	35 (13.63)	8.35	.005	.958
RMA	76 (13.87)	71 (12.27)	2.77	.100	-.552
ASB	48 (10.35)	45 (10.94)	1.75	.190	-.439
AIV	34 (6.45)	33 (6.79)	0.83	.365	-.303

Pooled Within-Groups Correlation Matrix

	BDI	RMA	ASB	AIV
BUSS-DURKEE (BDI)	1.0			
RAPE MYTH (RMA)	-.46	1.0		
ADVERS SEX (ASB)	-.53	.70	1.0	
ACCEPT VIOL (AIV)	-.39	.68	.59	1.0

Sexual Drive

Discriminant analysis was used to assess prediction of coercive history from 4 measures of sexual drive. Predictors were score on the Drive subscale of the DSFI, self-report of sexual activity (log transformed), and response to questions 9 (frequency of heterosexual intercourse) and 65 (frequency of masturbation) on the BSHI. Five cases were excluded because they were missing at least one discriminating variable (2 from the non-coercive group and 3 from the coercive group). Forty-six subjects in the non-coercive group and 39 subjects in the coercive group were included in the analysis. There were no threats to multivariate assumptions.

The canonical discriminant function did not represent a significant underlying dimension separating groups (Wilks Lambda=.924; canonical $r=.275$, $X^2(4)=6.37$, $p=.174$) (Table A20). Coercive subjects had lower sex drive based on the univariate analyses of sexual activity and DSFI Drive (mean logSA coercive=1.30, $sd=.72$; mean logSA non-coercive=1.67, $sd=.80$) ($F(1,83)=4.99$, $p=.028$) (mean DSFI drive coercive=52, $sd=9.35$; mean DSFI drive non-coercive=56, $sd=10.91$) ($F(1,83)=4.26$, $p=.042$).

Penile Tumescence Measures of Sexual Arousal

Descriptive Statistics

Comparisons between coercive and non-coercive subjects on penile tumescence measures revealed no differences on maximum response (mean non-coercive=64, $sd=28.3$, $n=48$; mean

TABLE A20

DISCRIMINANT ANALYSIS RESULTS
FOR CLASSIFICATION BY COERCIVE HISTORY
WITH MEASURES OF SEXUAL DRIVE AS PREDICTORS

WILKS LAMBDA	CANONICAL r	CHI-SQUARE(4)	PROB	N
.924	.275	6.37	.174	85

PREDICTOR	NON-COER (46) MEAN (SD)	COERCIVE (39) MEAN (SD)	F(1,83)	SIG.	COR W FUNC
SEX ACTIVITY	1.67 (.80)	1.30 (.72)	4.99	.028	.858
DSFI DRIVE	56 (10.9)	52 (9.4)	4.26	.042	.723
INTERCOURSE	5.5 (8.0)	4.1 (8.4)	0.57	.452	.290
MASTURBATION	11.0 (15.3)	9.3 (11.9)	0.33	.566	.221

Pooled Within-Groups Correlation Matrix

	SEX ACT	DSF DRI	INTERCOURSE	MASTURBATION
SEX ACTIVITY	1.0			
DSFI DRIVE	.51	1.0		
INTERCOURSE	.25	.41	1.0	
MASTURBATION	.52	.26	-.17	1.0

coercive=62, $sd=30.2$, $n=42$; $t(88)=0.44$, $p=.659$) or on response to the videotape (mean non-coercive=93, $sd=15.3$, $n=48$ and mean coercive=90, $sd=19.9$, $n=42$; $t(88)=0.91$, $p=.366$). PT response to the rape slides was significantly different with coercive subjects showing higher responses. Mean for non-coercive subjects was 61 ($sd=29.9$, $n=44$) and mean for coercive subjects was 73 ($sd=26.3$, $n=41$) ($t(83)=2.01$, $p=.048$).

Deviant Arousal

Group means were not different for any of the 4 indexes (Rape Arouse, Rape Suppress, Assault Arouse and Assault Suppress). Analysis of the dichotomous index measures also revealed no differences (Table A21). Collapsing across indexes, 21/48 (44%) of the non-coercive subjects had at least one index greater than 1 (i.e. showed a deviant response) and 24/42 or 57% of coercive subjects showed a deviant response ($\chi^2(1)=1.61$, $p=.206$, $N=90$).

MANOVAS

Peak PT Responses to Audiotapes

MANOVA was conducted on penile tumescence responses (% maximum, log transformed) to the audiotapes in a 2 (instruction) X 3 (tape) X 2 (coercive history) design. Four cases were excluded from analysis because of missing data (3 non-coercive and 1 coercive) and 1 coercive subject was excluded because of extremely low scores on both assault tapes. Included in analysis were 85 subjects (45 non-coercive and 40 coercive). Table A22 is the MANOVA summary table and

TABLE A21

DESCRIPTIVE STATISTICS FOR INDEXES BY COERCIVE HISTORY

INDEX	NON-COER MEAN (SD)	COERCIVE MEAN (SD)	t(df)	SIG.
RAPE AROUSE	0.87 (0.90)	1.09 (1.27)	0.92 (88)	.36
RAPE SUPPRESS	0.76 (0.66)	0.85 (1.25)	0.44 (87)	.66
ASSAULT AROUSE	0.39 (0.49)	0.32 (0.42)	0.65 (85)	.52
ASSAULT SUPPRESS	0.42 (0.42)	0.63 (1.37)	0.97 (84)	.34

INDEX	NON-COERCIVE % GT 1	COERCIVE % GT 1	CHI-SQUARE	N	PROB
RAPE AROUSE	25.0	42.9	3.21	90	.073
RAPE SUPPRESS	21.3	26.2	0.30	89	.586
ASSAULT AROUSE	6.5	7.3	0.02	87	.884
ASSAULT SUPPRESS	8.9	17.1	1.29	86	.256

TABLE A22
MANOVA RESULTS FOR PEAK PENILE TUMESCENCE RESPONSES
TO AUDIOTAPES INSTRUCT X TAPE X COERCIVE HISTORY
N=85

Tests of Between-Subjects Effects.

Source of Variation	SS	DF	MS	F	Sig of F
WITHIN CELLS	183.07	83	2.21		
CONSTANT	4802.89	1	4802.89	2177.57	.000
COERHIST	7.23	1	7.23	3.28	.074

Tests involving 'INSTRUCT' Within-Subject Effect.

WITHIN CELLS	27.56	83	.33		
INSTRUCT	2.27	1	2.27	6.84	.011
COERHIST BY INSTRUCT	.00	1	.00	.01	.934

Tests involving 'TAPE' Within-Subject Effect.

WITHIN CELLS	100.65	166	.61		
TAPE	70.38	2	35.19	58.04	.000
COERHIST BY TAPE	1.92	2	.96	1.59	.208

Tests involving 'INSTRUCT BY TAPE' Within-Subject Effect.

WITHIN CELLS	33.65	166	.20		
INSTRUCT BY TAPE	3.94	2	1.97	9.71	.000
COERHIST BY INSTRUCT BY TAPE	.18	2	.09	.44	.644

Tests involving 'INSTRUCT W RAPE' Within-Subject Effect.

WITHIN CELLS	20.26	83	.24		
INSTRUCT W RAPE	5.15	1	5.15	21.10	.000
COERHIST BY INSTRUCT W RAPE	.13	1	.13	.53	.469

Tests involving 'INSTRUCT W CONSENT' Within-Subject Effect.

WITHIN CELLS	22.93	83	.28		
INSTRUCT W CONSENT	.77	1	.77	2.79	.099
COERHIST BY INSTRUCT W CONSENT	.00	1	.00	.01	.915

Tests involving 'INSTRUCT W ASSAULT' Within-Subject Effect.

WITHIN CELLS	18.02	83	.22		
INSTRUCT W ASSAULT	.29	1	.29	1.32	.253
COERHIST BY INSTRUCT W ASSAULT	.05	1	.05	.22	.637

cell means are in table 23. Main effects for instruction and for tape were significant as was the interaction between tape and instruction ($F(2,166)=9.71$, $p=.000$). Testing simple effects of instruction within each tape yielded a significant difference between arouse and suppress for the rape tape ($F(1,83)=21.10$, $p=.000$) but not for the other 2 tapes.

Indexes

Indexes (log transformed) also were analysed using MANOVA in a 2 (instruction) X 2 (index) X 2 (group) design. Eighty-six cases had complete data but two coercive subjects were excluded because of extreme scores - one with high rape index arouse and one with high assault index suppress. Forty-five non-coercive and 39 coercive subjects were included in analysis. MANOVA results in Table A24 show a main effect for index and a significant index by instruction interaction ($F(1,82)=6.40$, $p=.013$). Table 25 shows the cell means. Testing simple effects revealed no significant difference between arouse and suppress for either the rape index or the assault index.

Self-Report to Audiotapes

MANOVA was conducted on the log transformed self-report measures of arousal to the audiotapes in a 2 (instruction) X 3 (tape) X 2 (group) design. No cases were excluded because of outliers and 4 cases were excluded because of missing data (3 non-coercive and 1 coercive). The sample was comprised of 86 cases, 45 non-coercive and 41 coercive. Table A26 is the

TABLE A23

Means and Standard Deviations
for Peak Penile Tumescence Response
to Audiotapes (Log Transformed)

		Non-Coercive (n=45)	Coercive (n=40)
Rape	Arouse	3.41 (0.92)	3.21 (0.87)
	Suppress	3.12 (0.87)	2.80 (0.81)
Mutual Consent	Arouse	3.76 (0.71)	3.37 (0.80)
	Suppress	3.61 (0.80)	3.25 (1.05)
Assault	Arouse	2.61 (0.77)	2.49 (0.78)
	Suppress	2.65 (0.75)	2.61 (0.82)

TABLE A24
MANOVA RESULTS FOR PENILE TUMESCENCE RESPONSES
TO AUDIOTAPES (INDEXES) - INSTRUCT X INDEX X COERCIVE HISTORY
N=84

Tests of Between-Subjects Effects.

Source of Variation	SS	DF	MS	F	Sig.
WITHIN CELLS	16.96	82	.21		
CONSTANT	49.38	1	48.38	238.73	.000
COERHIST	.09	1	.09	.44	.510

Tests involving 'INDEX' Within-Subject Effect.

WITHIN CELLS	11.66	82	.14		
INDEX	4.09	1	4.09	28.77	.000
COERHIST BY INDEX	.00	1	.00	.02	.899

Tests involving 'INSTRUCT' Within-Subject Effect.

WITHIN CELLS	7.16	82	.09		
INSTRUCT	.02	1	.02	.23	.631
COERHIST BY INSTR	.05	1	.05	.55	.462

Tests involving 'INDEX BY INSTRUCT' Within-Subject Effect.

WITHIN CELLS	6.29	82	.08		
INDEX BY INSTRUCT	.49	1	.49	6.40	.013
COERHIST BY INDEX BY INSTRUCT	.07	1	.07	.85	.360

Tests involving 'INSTRUCT W RAPE INDEX' Within-Subject Effect.

WITHIN CELLS	8.38	82	.10		
INSTRUCT W RAPE	.36	1	.36	3.48	.066
COERHIST BY INSTR W RAPE INDEX	.11	1	.11	1.10	.298

Tests involving 'INSTRUCT W ASSAULT INDEX' Within-Subject Effect.

WITHIN CELLS	5.07	82	.06		
INSTRUCT W ASSAULT	.16	1	.16	2.52	.116
COERHIST BY INSTR W ASSAULT INDEX	.00	1	.00	.01	.917

TABLE A25

Means and Standard Deviations for Penile Tumescence Indexes
(Log Transformed)

		Non-Coercive (n=45)	Coercive (n=39)
Rape	Arouse	0.53 (0.39)	0.55 (0.42)
	Suppress	0.49 (0.35)	0.40 (0.49)
Assault	Arouse	0.26 (0.25)	0.23 (0.27)
	Suppress	0.32 (0.27)	0.29 (0.39)

TABLE A26
MANOVA RESULTS FOR SELF-REPORTED AROUSAL TO AUDIOTAPES
INSTRUCT X TAPE X COERCIVE HISTORY

N=86

Tests of Between-Subjects Effects.

Source of Variation	SS	DF	MS	F	Sig of F
WITHIN CELLS	96.10	84	1.14		
CONSTANT	154.99	1	154.99	135.48	.000
COERHIST	.85	1	.85	.74	.392

Tests involving 'INSTRUCT' Within-Subject Effect.

WITHIN CELLS	11.52	84	.14		
INSTRUCT	3.65	1	3.65	26.61	.000
COERHIST BY INSTR	.07	1	.07	.53	.471

Tests involving 'TAPE' Within-Subject Effect (*G-G ADJUSTED).

WITHIN CELLS	71.12	84	.85		
TAPE	105.44	1.6	65.90	77.53	.000 *
COERHIST BY TAPE	.55	2	.27	.64	.526

Tests involving INSTRUCT BY TAPE Within-Subject (*GG ADJUSTED)

WITHIN CELLS	13.96	84	.17		
INSTRUCT BY TAPE	1.70	1.8	.94	5.55	<.01 *
COERHIST BY INSTR BY TAPE	.14	2	.07	.85	.430

Tests involving 'INSTRUCT W TAPE(1)' Within-Subject Effect.

WITHIN CELLS	8.89	84	.11		
INSTRUCT W RAPE	2.63	1	2.63	24.85	.000
COERHIST BY INSTR W RAPE	.01	1	.01	.08	.773

Tests involving 'INSTRUCT W CONSENT' Within-Subject Effect.

WITHIN CELLS	11.92	84	.14		
INSTRUCT W CONSENT	2.72	1	2.72	19.19	.000
COERHIST BY INSTR W CONSENT	.02	1	.02	.11	.741

Tests involving 'INSTRUCT W ASSAULT' Within-Subject Effect.

WITHIN CELLS	4.67	84	.06		
INSTRUCT W ASSAULT	.00	1	.00	.03	.874
COERHIST BY INSTR W ASSAULT	.19	1	.19	3.39	.069

MANOVA summary table and Table A27 shows cell means. Greenhouse-Geisser adjustments were made to the degrees of freedom for tests involving tape and instruction by tape because of significant Mauchly sphericity tests.

Results were similar to those for the PT measure. A significant main effect for tape and a significant instruction by tape interaction were found ($F(1.8, 84) = 5.55$, $p < .01$). Consistent with the PT results, a significant simple effect was found for instruction within the rape tape ($F(1, 84) = 24.85$, $p = .000$) but also the simple effect of instruction for the consenting audiotape was significant ($F(1, 84) = 19.19$, $p = .000$).

TABLE A27

Means and Standard Deviations for Self-Reported Arousal
to Audiotapes (Log Transformed)

		Non-Coercive (n=41)	Coercive (n=45)
Rape	Arouse	0.55 (0.75)	0.49 (0.64)
	Suppress	0.32 (0.60)	0.23 (0.45)
Mutual Consent	Arouse	1.38 (0.73)	1.20 (0.89)
	Suppress	1.11 (0.74)	0.96 (0.92)
Assault	Arouse	0.12 (0.40)	0.05 (0.18)
	Suppress	0.05 (0.26)	0.11 (0.28)

END

26-05-95

FIN