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THE EFFECT TECHNICIAN GENDER HAS ON SEXUAL AROUSAL RESPONSES OF MALE SEXUAL OFFENDERS

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

James Michael Adler
May 1994

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ABSTRACT

This study was an exploration of the effect technician gender has on sexual arousal responses of male sexual offenders. The subjects were 65 adult male sexual offenders. Subjects were randomly assigned to one of three groups; two which were experimental and differed only in the presentation of the independent variable and one which was a control group. All subjects were given two plethysmograph assessments within ten days. The two experimental groups were tested by a male and a female technician. The order of technician gender was randomly chosen. The control group was tested by a male technician on both occasions. Assessments were conducted following the guidelines established by the Association for the Treatment of Sexual Abusers (A.T.S.A.). Subjects were given questionnaires which asked subjects to rate the level of anxiety they experienced during the assessments. Galvanic skin responses were measured in addition to sexual arousal. Subjects' sexual arousal and GSR responses were monitored while they were presented with slide stimuli. Mean arousal responses were obtained for each of the ten stimulus categories. A t-test was run on the means obtained from the male technician and the means obtained by the female technician to determine if there were significant differences.

Subjects demonstrated significantly higher arousal responses when assessed by a female technician to all stimulus categories. In contrast, arousal responses of subjects in the control group were not statistically different. In addition to the increased arousal responses, subjects assessed by a female technician took significantly longer to detumesce than subjects tested by a male technician.

Subjects self-reported feeling much more anxious with the female technician, however, galvanic skin responses (GSR) were compared using a t-test and were not significantly different. GSR responses decreased slightly during the subject's second assessment in two of the three groups.

The data strongly supports the hypothesis that technician gender affects arousal responses of male sexual offenders. Furthermore, data also supports the effect technician gender has on detumescence.

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CHAPTER I

INTRODUCTION

Statement of the Problem

Most researchers and clinicians advocate the use of physiological measures of sexual arousal in the assessment and treatment of sexual offenders (Abel, Barlow, Blanchard, & Guild, 1977; Barbaree, Marshall, & Lanthier, 1979; Conte, 1985; Laws & Holmen, 1978; Murphy, Haynes, Stalgaitus, & Flanagan, 1986; Quinsey & Chaplin, 1982; Salter, 1988). The typical assessment involves a male clinician assessing a male offender. However, the lack of available trained male clinicians has resulted in several programs using female clinicians to conduct physiological assessments. To date there has been no research conducted on the effects female clinicians have on physiological measures of sexual arousal in male sex offenders. Therefore, the present study was directed toward investigating the effect female technicians have on physiological measurements of sexual arousal in male sexual offenders.

Rationale for the Study

The treatment of sexual offenders has rapidly increased over the past five years. In 1986, less than 600 sexual offender treatment programs were identified across the country. Within two years, the number of identified sex offender programs jumped to approximately 1000 (Jenson & Jewell, 1988). Since 1990, the number of sexual offender treatment programs has risen to approximately 1800 (Horton, 1993). According to a recent survey of sex offender programs, the use of penile plethysmography has increased as well. It was reported that plethysmography is utilized in 52% of the sex offender programs identified in the Safer Society survey (Knopp, Freeman-Longo, & Stevenson, 1992).

The use of objective measures of sexual arousal are vital to the assessment of the sexual offender (Langevin, 1983; Salter, 1988). The sexual offender assessment is extremely important in determining the most

effective treatment necessary to minimize the risk of re-offending (Salter, 1988). The plethysmograph provides an objective measure of sexual arousal which along with other information form the basis for recommendations made regarding disposition. Recommendations regarding disposition of a sexual offender is difficult. Allowing high risk offenders to remain in the community offers the offender the chance to re-offend. On the other hand, placing treatable sexual offenders in jail presently costs Tennessee tax payers 30,000 dollars a year. Faked or biased responses on the plethysmograph could result in an inaccurate assessment which might affect recommendations. The potential consequences are too high to ignore potential factors which might bias arousal responses.

For most programs utilizing plethysmography in their assessment and treatment of sexual offenders, variables which influence arousal responses have become vitally important. Research has reinforced the concern for factors which might affect arousal responses. Several studies have addressed the ability of offenders to suppress arousal (Abel, Barlow, Blanchard, & Mavissakalian, 1975; Freund, 1963; Wydra, Marshall, Earls, & Barbaree, 1983), others have focused on manipulation of the gauge (Laws & Holmen, 1978), non-erectile responses such as tensing pelvic muscles, hyperventilating (Quinsey & Bergersen, 1976), or averting their eyes from the stimulus (Laws & Rubin, 1969). Other studies have assisted in identifying faking through cognitive strategies (Geer & Fuhr, 1976; Malcolm, Davidson, & Marshall, 1985; Wydra et. al., 1983).

Presently there are no studies which address the possible effects female clinicians have on the arousal response of male sexual offenders. Malamuth and Check (1983) using a group of non-offenders reported greater arousal with a female technician than with a male technician. However, in two previous studies found no differences in level of arousal due to gender of technician (Malamuth, 1981; Malamuth & Check, 1980). A problem exists however, when attempting to generalize conclusions from these studies. The Malamuth studies involved non-offenders. The validity of the plethysmograph is its ability to differentiate offenders from non-offenders (Langevin, 1983; Murphy & Barbaree, 1988). Any attempt to draw conclusions from a non-offender population to an offender population is questionable. Also, these studies were studying the arousal to rape

scenarios in order to identify characteristics which might influence someone to commit a rape. Furthermore, there are a number of studies which indicate that the sexual offender has difficulty with adult females (Finklehor, 1984).

A much better argument can be made concerning the effects technician gender has on male sexual arousal response from observed difficulties male offenders have with gender in other treatment environments. A number of studies have demonstrated the difficulties male sexual offenders experience with females ranging from feeling intimidated, inadequate, and fearful (Groth, Hobson, & Gary, 1982), to fear of heterosexual contact (Hammer & Glueck, 1957), to sexual anxiety (Panton, 1979).

The purpose of the present study was to address the effects technician gender has on physiological measures of sexual arousal on male sexual offenders. The importance of this study is based on the recognized need for accurate assessments of sexual offenders, appropriate recommendations concerning treatment needs, risks to re-offend, and community safety, as well as the need to further validate physiological measures of sexual arousal.

Research Questions

How does technician gender affect sexual arousal responses of male sexual offenders? If so, does technician gender affect homosexual and heterosexual male sexual offenders similarly? Do sexual offenders experience more anxiety when assessed by a female technician? Are physiological responses such as galvanic skin responses consistent with sexual offenders self-report?

Hypotheses

Hypothesis #1: Sexual arousal responses of male sexual offenders will be affected by technician gender.

Hypothesis #2: Detumescent times of male sexual offenders will be affected by technician gender

Assumption

The subjects used in this study are sexual offenders as evidenced by their own confession of guilt or through a conviction of a sexual offense by a court of law.

Limitations

1. Although the sample of sexual offenders represent a random sample of sexual offenders requesting a psychosexual evaluation, the sample can not be considered a random sample of the population of all sexual offenders due to being identified by criminal prosecution.
2. The sample of male sexual offenders is limited to upper east Tennessee, southwest Virginia, and northwest North Carolina, therefore is geographically limited.
3. The sample of sexual offenders used in this study were all identified child molesters. Although they committed several different paraphilias, they can not be considered a representative sample of all sexual paraphiliacs.

Definition of Terms

Penile Plethysmograph. For the purpose of the present study, penile plethysmograph refers to the instrument used to measure circumferential differences in blood flow to the penis.

Barlow strain gauge. Barlow strain gauge refers to the type of transducer placed around the penis consisting of a thin metal clip which is placed halfway between the head and the base of the penis. As blood flows into or out of the penis, the amount of resistance is measured by the plethysmograph.

Penile Plethysmography. Penile plethysmography refers to the assessment of sexual arousal through circumferential changes due to blood flow to the penis.

Circumferential change. This term refers to the change in penile circumference due to blood flow to the penis.

Sexual arousal response. Refers to any change in circumference as a result of blood flow to the penis which occurs during the presentation of a stimulus.

Detumesce. This term refers to the reduction of blood flow to the penis associated with decrease in arousal.

The remainder of the study will be organized as follows: (1) A review of the literature is in Chapter II. (2) The methodology of the study is in Chapter III. (3) A presentation of the data and the statistical procedures for treating the data is in Chapter IV. (4) A summary of the study, its implications, and ideas for further research are presented in Chapter V.

CHAPTER II

REVIEW OF THE LITERATURE

In order to best understand the significance of the present study, a survey of the literature on sexual offenders, current treatment, plethysmography, and effects of gender on male sexual offenders will be discussed. It is the intent of the author to organize the review of literature beginning with a broad foundation of sexual offenders and then gradually narrowing the focus of the review to the research most closely related to the question presented in this study.

The chapter will begin with an overview of the sexual offender according to the research. Following an overview of what is known about sexual offenders will be a discussion of treatment, particularly what is being done and the efficacy of treatment on recidivism rates. A discussion of physiological measures of sexual arousal will be addressed and organized as follows: (a) history and development, (b) current use with sexual offenders (c) validity, (d) threats to validity, and (e) ethical issues concerning penile plethysmography. The chapter will end with a discussion of the research which suggests male sexual offenders have difficulty with adult females, thus potentially affecting the sexual arousal response measured in an assessment administered by a female technician.

Sexual Offenders

The term "sexual offender" evokes a wide variety of responses, misconceptions, and emotions from society. Mental images of hideous, creepy, strangers, hiding in bushes waiting for the opportunity to abuse innocent children are popular stereotypical thinking. For the millions of victims who are sexually assaulted, the sexual offender means something much different. For them, the popular misconceptions of sexual offenders interfere with the realities of their abuse, often subjecting them to more abuse. In spite of the tremendous increase in research on sexual offenders, the majority of people have very little accurate information about sexual offenders.

Over the past fifteen years, considerable research using various samples of identified sexual offenders have shed new light on sexual assault and the individuals who abuse. As a result, many of the beliefs we have about offenders have been proven wrong. Unfortunately, public awareness of sexual offenders continues to support many misconceptions.

Probably the most difficult characteristic people have had to accept about sexual offenders is their relationship to the victim. Most people want to believe that the sexual offender is a stranger. Research suggests otherwise. The child molester is usually someone the child is related to or knows well. Often he or she is someone in the family, a relative, or close friend. The sexual offender is usually someone the child trusts. The sexual abuse occurs once the perpetrator has developed a relationship with the child. Typically this relationship is supported by other unsuspecting family members. As a result, the perpetrator has little difficulty establishing the relationship necessary to abuse (Abel and Harlow, 1987). Statistics vary, however, research suggests that 71% (Groth, Burgess, Birnbaum, & Gary, 1978) to as many as 90% of all sexual abuse occurs by someone the child knows well. Data currently being collected at an outpatient sexual offender clinic concerning the relationship of the offender and the victim show an overwhelming percentage (97%, n= 326) of the sexual abusers were known by the victim (Adler, unpublished). The Tennessee Department of Human Services' report on child sexual abuse indicated a high percentage of abusers (90%) were known to the victim (DHS, 1991).

As difficult it is for families to consider that the perpetrator is often times a relative or friend, an even more disturbing fact about offenders is the age when offenders begin to sexually assault. One of the more popular misconceptions of the sexual offender is that the offender is a "dirty old man". However, researchers have found that more than one half of sexual offenders started abusing in adolescence (Freeman-Longo & Walls, 1986; Abel & Rouleau, 1990). Unfortunately, very few sexual offenders are identified during adolescence. Those adolescent offenders who are identified and brought to court are usually not prosecuted for a sexual offense. Many of these cases are explained as "adolescent experimentation" or "adolescent hormones" and rather than label the teenager a "sexual

offender", they are dismissed by the judge or handled informally (Ryan & Lane, 1991).

By allowing the adolescent offender to escape accountability, intervention does not occur. The offender continues to have access to victims while maintaining the dynamics which resulted in the initial sexual assault. As a result, the number of victims and offenses increases. Many offenders report they were confronted about their sexually assaultive behavior during adolescence, however rarely experienced any meaningful response. Instead they continued to offend. It is estimated that a sexual offender will commit over 380 offenses if not effectively treated (Abel & Rouleau, 1990).

As adults, the sexual offender continues to act out. By this time, the majority of sexual offenders have developed an intense repetitive cycle of assaultive behavior which is difficult to alter. Furthermore, they are often involved in multi-paraphilias. Although the sexual offender may be legally identified by one specific paraphilia, the typical offender averages three to five different paraphilic acts (Abel, Becker, Mittleman, Cunningham-Rathner, Rouleau, & Murphy, 1987). This is quite contrary to the popular belief that sexual offenders were highly selective in their sexual offensive behavior. This was particularly true with incestuous versus non-incestuous child molesters. It was commonly thought that incestuous offenders were not likely to molest outside the home, and non-incestuous child molesters were not a risk to their own children. Researchers now suggest this belief to be false. It is estimated that as many as 44% of incestuous child molesters sexually offend outside the family (Maran, 1986). Abel and Rouleau (1990) found 23.3% of the offenders they studied molested family and non-family victims.

Despite the tremendous number of victims, offenses, and paraphilias sexual offenders commit, very few are actually identified. Presently it is estimated that less than 1% of the sexual offenders are identified, charged, prosecuted, and imprisoned (Herman, 1990). The inability of our system to identify sexual offenders has three major implications. The most serious is the inability to provide effective intervention which might decrease the incidence of abuse. It is estimated that one out of three females will be sexually abused as a child (Russell, 1984). Furthermore, the risk to male children continue to increase as well. While most studies suggest that

female children are at higher risk for abuse, Abel (1987) found in his study of 403 child molesters, when separating non-contact offenses from touching offenses, boys were much more likely to be victimized. Abel states that "63% of the children who are sexually assaulted (sexual assaults involving touching offenses) are little boys " (Abel & Harlow, 1987, p.98). Secondly, the recidivism rates of sexual offenders are extremely high. Most clinicians indicate they have never met a one time sexual offender. Of those offenders who have been identified, as many as 80% continue to re-offend (Freeman-Longo & Walls, 1986). Finally, since the majority of sexual offenders are not identified, our current knowledge of sexual offenders is limited. The inability to study a representative sample of sexual offenders greatly minimizes our ability to develop thorough theories of etiology, effective treatments, preventative safeguards, and ultimately accurate treatment evaluations.

Treatment

Recently, treatment for sexual offenders has become increasingly more popular across the country. In 1986, there were approximately 600 treatment programs available for sexual offenders (Jensen and Jewell, 1988). By 1990, the number of identified programs had grown to 1451 (Knopp, Freeman-Longo, & Stevenson, 1991). At last report, there were over 1800 programs providing treatment to sexual offenders (Horton, 1993). The current explosion of treatment programs has created a significant amount of concern regarding the efficacy of treatment and the type of techniques and strategies used. Many people, including professionals doubt that treatment is effective with sexual offenders. As a result, controversy exists. Amidst the controversy, many misconceptions and distortions have interfered with what constitutes effective treatment for sexual offenders, what type of strategies and techniques are used, how is sexual offender treatment different from traditional types of counseling, and how effective is it in decreasing recidivism.

History of Treatment

The use of treatment with sexual offenders originally began in the mid 1930's when states began passing laws concerning sexual offenders. In an attempt to protect the community from further assaults and rehabilitate the offender, legislation referred to as "sexual psychopath statutes" resulted in the institutionalizing of sexual offenders. Often times, this resulted in sexual offenders being placed in state hospitals for an indiscriminate time. Sexual Psychopath legislation was based on the assumption that sexual assault was a result of some character disorder or mental illness. Thus, treatment would create changes in the offender's "mental disorder". In turn, this would reduce their danger to others. Unfortunately, this did not occur. Outcome investigations from institutional treatment found no difference in recidivism rates between treated and untreated sexual offenders. In response to this, the field of psychiatry called for the use of incarceration rather than treatment in response to sexual offenders (Pithers, 1990).

Treatment Efficacy

The recent popularity in sex offender treatment has raised critical questions regarding the effectiveness of treatment in the rehabilitation of the sexual offender. Proponents of treatment have numerous studies which demonstrate a high rate of success (Abel & Harlow 1987; Barbaree & Marshall, 1989; Freeman-Longo & Walls, 1986; Maletzky, 1991; Pithers, 1990; Prentky, 1990). Opponents of treatment tend to utilize antiquated studies (Brechen, 1978; Furby, Weinrott, & Blackshaw, 1989), case examples where offenders who have re-offended after entering treatment, and personal opinion (Henry, 1992). However, the question of efficacy is a complex issue worthy of discussion.

The effectiveness of treatment for sexual offenders has received a significant amount of attention in the literature (Abel et. al., 1987; Bradfurd, 1985; Davidson, 1984; Furby et. al., 1989; Knapp, 1991; Marshall, 1988; Marshall & Barbaree, 1990; Pithers, 1990; Pithers & Cummings, 1989; Quinsey & Marshall, 1983). Unfortunately, whether treatment is effective with sexual offenders continues to be debated despite numerous studies

indicating success. Although general reviews of the literature on treatment efficacy are more conservative regarding the issue of efficacy (Marshall & Barbaree, 1990), research involving specific programs are much more optimistic in their claims of success (Abel et. al., 1987; Knapp, 1991; Maletzky, 1991; Pithers, 1990; Pithers & Cummings, 1989).

One problem confronting the question of treatment efficacy is the definition of success. What constitutes success of treatment appears varied among researchers (Maletzky, 1991). For some researchers, success has been defined as the number of offenders who recidivate; commit another sexual offense (Abel et. al., 1987; Pithers, 1990). Others report success as those offenders who complete treatment in the desired fashion; meeting all treatment objectives (Maletzky, 1991). Still others view success as a combination of factors such as the number of offenders who complete treatment and do not re-offend (Marshall & Barbaree, 1990). Finally, some researchers look at success of treatment by the number of sexual and non-sexual re-offenses the sexual offender commits (Berliner, Miller, Schram, & Milloy, 1991).

Further problems exist when attempting to make blanket statements concerning effects of treatment due to the limited amount of follow-up data available. Although a few studies have included long term follow-up data on sexual offenders treated (Knapp, 1991; Marshall & Barbaree, 1990; Pithers, 1990), many do not (Abel et. al., 1987; Prentky, 1990). This becomes an important consideration given that Marshall and Barbaree (1990) found that the recidivism rates of sexual offenders who had completed treatment were much higher after four years than after two years of release. Thus, it appears in order to determine effectiveness of any treatment, there needs to be extended follow-up efforts of at least two years and preferably longer than four years.

One of the most significant weaknesses of claims reporting treatment is successful in reducing recidivism rates of sexual offenders is the lack of an available comparative non-treated group. While it is common for studies addressing the effectiveness of treatment on recidivism to report rates of recidivism for untreated sexual offenders, there are methodological problems in doing so. More than likely the treated group represents a separate population than the untreated population (Barbaree, 1990).

Furthermore, estimates of recidivism rates for untreated sexual offenders vary immensely (Tracy, Donnelly, Morganbesser, & MacDonald, 1983). Depending upon the type of sexual offender, reported recidivism rates range anywhere from 10% (Gibbons, Soothill, & Way, 1981) to 80 % (Freeman-Longo and Walls, 1986). Finally, in order to provide a valid control group, the researcher would need to match treated offenders with untreated offenders based on multiple demographic, personal, and salient offense related variables and randomly assign offenders to either the treatment group or control group. Developing such a group would be impractical not to mention unethical (Marshall, Laws, & Barbaree, 1990).

One other consideration merits mentioning. Very little information is known regarding the recidivism rates of unidentified sexual offenders. Even less information is known how recidivism rates of these offenders compares to identified offenders who are untreated; and to those offenders who are identified and treated. Utilizing the data on recidivism rates of identified but untreated offenders, 25% to 80% re-offend (Freeman-Longo & Walls, 1986; Marshall et. al., 1990). Although we can only estimate on the recidivism rates of unidentified sexual offenders, evidence suggests this is extremely high. Reports from known sexual offenders indicate a highly repetitive behavior which was not stopped until legal identification (arrest and conviction) occurred (Abel et. al., 1987; Freeman-Longo & Walls, 1986; Groth, et. al., 1978; Kaplan, 1985). Furthermore, clinicians in this field uniformly report having no knowledge of the existence of a "one-time" sexual offender. These facts, in combination with recidivism rates of identified untreated sexual offenders, lead to the conclusion that unidentified sexual offenders re-offend at rates near 100%. Based upon these assumptions, it would appear that questioning whether treatment was effective would no longer be the issue. Instead we might question what type of intervention is most effective. Rather than question the effectiveness of treatment in general, we would be concerned with whether treatment was more effective than other types of responses such as identification, prosecution, probation, prison, different types of treatment, or even combinations of the above. In essence, responses would be placed on a continuum and could then be compared to determine effectiveness. Researchers would be able to focus on the comparative effectiveness of responses, rather than attempting to prove one

particular response is effective. There appears to be significant research to support this hypothesis. Recidivism rates on identified, untreated sexual offenders differs from recidivism rates of identified, treated sexual offenders. There is also support from outcome studies comparing recidivism rates of sexual offenders receiving different types of treatment intervention. In an exhaustive review of the literature on treatment effectiveness, Marshall and Barbaree (1990) concluded that cognitive-behavioral approaches to the treatment of sexual offenders was positive. He further stated, "Comprehensive cognitive-behavioral programs for the treatment of sexual offenders offers encouragement for the continued application and development of such programs" (Marshall et. al., 1990, p.382). They also concluded that not all treatment was effective in reducing recidivism rates among offenders, further supporting the hypothesis that effective responses may fall on a continuum which can be differentiated from one another. Thus, attempting to support a case that treatment in general is effective in reducing recidivism rates of sexual offenders is neither possible or warranted. Instead, it appears that specific types of treatment are effective in reducing recidivism rates of sexual offenders and should be differentiated from those types of treatment responses which are not.

Effective versus Ineffective Treatment

Several studies have addressed the different types of treatment and their effectiveness in reducing recidivism rates of sexual offenders. Marshall et. al. (1990) found non-cognitive therapies to be less conclusive in their ability to decrease recidivism. They also found that treatment which relied on self-help principles produced higher recidivism rates than untreated groups. Marshall has stated that programs using self-help philosophies are abysmal failures and should not be used. Traditional psychotherapy has also been strongly criticized for its ineffectiveness with sexual offenders (Jenson & Jewell, 1988; Salter, 1988). Furthermore, non-directive, non-specific types of treatment have also been shown to be ineffective with sexual offenders (Earls & Castonguay, 1989).

In summary, data from recent empirical studies support the ability to effectively reduce the recidivism rates of sexual offenders. Researchers

strongly suggest that specific sex offender techniques and strategies must be employed in order to be successful. Not all treatment is equal in reducing recidivism rates of sexual offenders. Poor treatment may actually be worse than no treatment (Marshall et. al., 1990). Thus, no blanket claims can be made that treatment in general works. Researchers, however, support the claims that specific types of treatment are effective in reducing the recidivism rates of sexual offenders (Coxe & Hudgins, 1992; Earls & Castonguay, 1989; Marshall et. al., 1990).

Specialized Sex Offender Treatment

Although there is strong empirical evidence supporting the effectiveness of specialized sexual offender treatment, many people continue to believe that treatment is ineffective. There are several factors which have influenced or biased people's perception of the effectiveness specialized sex offender treatment has on reducing recidivism rates. Probably the most influential factor is the report of a re-offense by a sexual offender who has received treatment. It was previously mentioned that poor or inappropriate treatment may actually increase recidivism rates of sexual offenders. Traditional psychotherapy, which is more recognizable by society, is considered ineffective with sexual offenders (Salter, 1988). Thus, examples of offenders who have received ineffective or inappropriate types of services and re-offend, are often used to support the belief treatment is not effective (Furby, Weinrott, & Blackshaw, 1989). Further complicating the picture are the lack of facts pertaining to the type of treatment received. Rarely do these reports indicate the type of treatment the offender received.

Another significant problem affecting the perceptions that specialized treatment is ineffective is the recidivism of sexual offenders who have re-offended after receiving treatment from a sex offender program. In some cases, offenders may have dropped out of the specialized sex offender treatment program prior to completion. Often times, there is the perception that offenders were treated when in many cases they were not. Specialized sexual offender treatment programs, with the exception of some pure behavioral programs, are usually long term; averaging three or four years. The number of sexual offenders who complete these programs represent the

population of successfully treated sex offenders. Sexual offenders who drop out of treatment are considered untreated. For some programs, drop out rates are as high as 50 percent. Non-traditional techniques may account for the numbers of offenders who drop out, however, it should be noted that the program with the highest reported drop out rate, incorporates rather traditional counseling techniques (Marshall et. al., 1990).

An equally distressing factor influencing perceptions of specialized sexual offender treatment is the lack of trained clinicians to operate these programs. Although many programs are listed as being specialized, the level of training and experience of their personnel are often inadequate. The tremendous amount of growth in sexual offender services over a six year period has far exceeded the available training. There have been many reports of clinicians providing "sex offender treatment" who have neither the training or the expertise to do so. As a result, these so called sex offender specialists make claims which are inaccurate or inappropriate. Unfortunately, this occurs much too frequently and undoubtedly has caused many hardships for legitimate sex offender programs and trained therapists committed to the effective treatment of sexual offenders (Jenson & Jewell, 1988).

Finally, there are some sexual offenders who are not amenable to treatment and will re-offend regardless of the type and quality of treatment received (Freeman-Longo & Walls, 1986; Marshall et. al., 1990). The majority, however, appear to be treatable given treatment is non-traditional, specialized, and sex offender specific (Earls & Castonguay, 1989; Jenson & Jewell, 1988; Maletzky, 1991; Marshall et. al., 1990; Salter, 1988).

Sex Offender Techniques and Strategies

Most researchers of successful sex offender treatment programs indicate the importance of non-traditional techniques and strategies. The importance of these techniques are based on the results of studies comparing programs which have shown success with programs which have not. Those techniques which have been associated with success require reviewing (Coxe & Hudgins, 1992; Earls & Castonguay, 1989; Jensen & Jewell, 1988; Salter, 1988).

Sex offender treatment is different from traditional therapy in many ways. Basic principles which govern traditional therapy such as confidentiality, autonomy, and locus of control are modified in sex offender treatment so they do not collude with the offender. In order to understand how sexual offender treatment works, these differences will be discussed.

Unlike most traditional therapy, sex offender treatment is coerced. Sexual offenders rarely request treatment on their own accord. Usually the offender is being investigated and facing criminal charges. Their desire for treatment is typically an attempt to avoid prosecution and incarceration. Traditional clinicians from community mental health and private practice have fought mandated or court-ordered treatment. Traditionally trained therapists using insight-oriented therapies, often require client motivation in order to achieve mutually agreed upon treatment goals. However when faced with the coerced unmotivated sexual offender, the same strategies used with motivated clients are grossly ineffective. Thus, reinforcing their initial perception that forced treatment cannot be effective. The typical result from sexual offenders receiving treatment from traditional therapists has been either the client being prematurely discharged, discharged with inappropriate solutions, or being treated for something else such as depression, anxiety, or anger. Numerous reports exist of sex offenders who had been in traditional therapy for months or years without ever talking about their offensive behavior. Interviews with sexual offenders who have received treatment in traditional settings report never discussing their sexually assaultive behavior. Furthermore, a very prominent traditional psychologist discharged an obscene phone caller with instructions to use 900 sex lines. Another prominent traditional clinician suggested a rapist join an S & M club to act out his sexual aggression (Adler, unpublished, 1987; Kaplan, 1985; Jenson & Jewell, 1988; Salter, 1988;).

Compounding the difficulties of offender denial and lack of client motivation is the reliance traditional therapists place on self-report. Unfortunately, sexual offenders are rarely truthful concerning their assaultive behavior (Kaplan, 1985). Furthermore, sexual offenders are able to look good. Their ability to hide, manipulate, and present themselves as incapable of doing whatever it is they have been accused of is best stated by Jenson

and Jewell (1988), "Sexual offenders are far better at deceit than many therapists can comprehend (p.17)."

The ability of the sexual offender to look incredibly normal is countered by sex offender treatment through several techniques which are not utilized in traditional therapy. One of the most critical differences between traditional therapeutic techniques and sexual offender therapeutic techniques is the ability to access sensitive information which the sexual offender is trying to keep hidden. One non-traditional technique which helps to do this is a waiver of confidentiality. Sex offender treatment programs waive client confidentiality so that the therapist can check out any and all information given by the offender. Furthermore, collateral contacts can be used to collect information not provided by the offender. Finally, the waiver of confidentiality allows a team to work on the offender, thus eliminating the one to one relationships sexual offenders are so capable of controlling (Jenson & Jewell, 1988).

The use of a waiver of confidentiality is very unlikely for the traditional therapist. Most traditionally trained therapists consider client confidentiality as the foundation of the therapeutic relationship only to be broken in case of injury to self or others. However, sexual offenders utilize this same sworn to secrecy principle in their abuse. For the traditional therapist, confidentiality interferes with their ability to gather objective information from collateral sources such as family, probation, child protective case workers, courts, police, extended family members, and even ex-family members. Basically, it makes the traditional therapist ineffective (Jenson & Jewell, 1988; Salter, 1988).

The use of a waiver of confidentiality has created some controversy. Many people continue to question whether it is necessary for treatment to be effective. Although about 60% of the identified offender programs employ a waiver of confidentiality, some still do not see its effect on treatment. A task force established to address the treatment of juvenile sexual offenders, reviewed the use of a waiver of confidentiality. According to the National Task Force Report (1988), "Confidentiality cannot apply in the treatment of this population because it promotes the secrecy which supports offending."

The most visible difference between traditional therapy and sex offender treatment is the use of objective measures in order to validate self-

reported information. Many traditional therapists utilize psychological testing as "objective" diagnostic measures which assist in the assessment and diagnosis of a client. For sexual offenders, psychological testing is considered ineffective for diagnostic and assessment purposes (Salter, 1988). A recent study involving the MMPI with over 300 sexual offenders failed to identify a sex offender profile. A cluster analysis identified ten different profiles including four profiles considered normal. The researchers concluded that the MMPI could not distinguish offenders on any factors associated with their offending (Rau, 1992). For most sexual offender treatment programs, standardized psychological testing is used only to rule out factors such as mental retardation, brain damage, and other pathology in need of attention (Salter, 1988).

Physiological Measures

Sexual offender treatment programs utilize physiological measures which bypass the subjective biases and distortions of the offender and provide the therapist with access to more salient information. Two specific measures, the polygraph and plethysmograph, are considered necessary if not mandatory when assessing and working with sex offenders.

Polygraph

The polygraph has become an increasingly popular technique in sex offender treatment programs. The primary role of the polygraph in sex offender treatment is to verify the information the offender gives the therapist during an assessment or while in treatment. It is extremely rare for sex offenders to verbalize the extent of their assaultive behavior beyond what was discussed in courts. In attempting to determine appropriate treatment, knowing only what the offender was charged with is insufficient. Identified sexual offenders in treatment report a long history of sexual deviancy involving multiple paraphilias never prosecuted (Abel & Harlow, 1987; Freeman-Longo & Walls, 1986). The likelihood that information regarding paraphilias not discovered by the investigation will be given freely to a therapist is extremely low. Thus, the pervasiveness of the sexual offender's

problems are unlikely to be accurately assessed through traditional methods such as self-report (Jenson & Jewell, 1988; Langevin, 1983; Salter, 1988).

The polygraph is typically used by sex offender treatment programs in two ways. During the assessment, the offender is asked to discuss many aspects of their lives; particularly their sexual history. In order to assess the chronicity of the aberrant behavior, a complete and accurate sexual history is necessary. This is done in many ways such as clinical interviews, sexual interest inventories, and sexual scenario rating scales. All of these methods rely on the offender's self-report which must be validated. The polygraph is able to validate the information already provided. Furthermore, it can assist in identifying any further sexual offenses which may have been committed during the assessment. This is extremely important in determining the safety of the community from further sexual assaults (Abrams, 1989).

The second use of the polygraph in sexual offender treatment occurs during treatment. For many of the more advanced treatment programs, the polygraph is utilized throughout the offender's treatment. These polygraph examinations, often called maintenance examinations, are usually done every six months to insure the offender is following program rules, probation guidelines, and is not sexually offending. Maintenance examinations further assist in holding the sexual offender accountable for his or her behavior. Community safety is increased by examining the sex offender's compliance with treatment and probation requirements. This is particularly important during the early stages of treatment. During this time the sexual offender is under increased pressure. The involvement of different agencies, i.e. Department of Human Services, probation, parole, further exacerbate issues of control. Although treatment may have been initiated, the offender is at risk to re-offend. It may be several months before treatment impacts this risk, thus regular polygraph examinations provide a powerful tool in preventing relapses early in treatment (Abrams, 1989).

The increased use of the polygraph has resulted in controversy. Those opposed to its use suggest it is not a valid test. However, polygraphists have insisted that the polygraph is extremely valid and within its narrow limits is considered to be, "the best test of credibility known to man (Keeler, 1984, p.xii)." Furthermore, according to F. Lee Bailey, Trial Lawyer, the United States Government is completely satisfied with the polygraph and uses it to

police their own intelligence agents. Follow-up investigations of cases in which the polygraph indicated deception demonstrate that the polygraph is reliable (Keeler, 1984).

One common argument used to discount the validity of the polygraph is that it is not admissible in court. This is a misconception. In United States vs. Riding, the high court determined that the polygraph was admissible in court as evidence provided the defendant and both attorneys agree and the test is conducted by an expert under the established guidelines (American Jurisprudence, 1975).

Plethysmograph

The second type of objective physiological measure used in specialized sexual offender treatment is the plethysmograph. The penile plethysmograph is perhaps the most essential tool in sexual offender assessment and treatment (Salter, 1988). Although this technique has been utilized with sexual offenders for over thirty years, it remains rather obscure to society and the field of psychology. Most likely due to the narrow focus and use of the plethysmograph, many professionals have little information concerning what it is, how it is used, its validity, and the necessity of it in treatment. As a result, there are many myths and misconceptions about penile plethysmography (Adler, unpublished; Horton, 1993).

A plethysmograph is a device which measures the swelling of body parts. A penile plethysmograph is a device which measures the tumescence, or swelling of the penis. The majority of penile plethysmographs are produced for urologists measuring nocturnal tumescence in their treatment of impotence. However, a much smaller number of penile plethysmographs are used to measure penile tumescence associated with sexual arousal. It is this type of plethysmograph that is become an intrical part of specialized sexual offender treatment programs and the basis for this study (Farrall, 1993).

The penile plethysmograph measures the tumescence of the penis through a strain gauge. The two types of strain gauges most frequently used are the rubber, mercury filled Indium-Gallum strain gauge, and the Barlow strain gauge. The Barlow strain gauge is a thin metal gauge which is open at

one end. Both gauges work on the same principles and are considered circumferential strain gauges because they measure changes in the circumference of the penis. The gauge is placed around the shaft of the penis midway between the base and the head. As blood flows into the penis, the tumescence, or swelling, is measured through the increased resistance on the gauge. This resistance is then plotted in a linear fashion through a plotter or printer. The importance of penile tumescence is its association with sexual arousal (Marshall et. al., 1990).

As men become sexually aroused, blood flow to the penis is increased. The increase in blood flow to the penis results in swelling or tumescence. The swelling of the penis is considered the most prominent sign of sexual arousal (Masters, Johnson, & Kolodny, 1992). Zuckerman (1972) defined male sexual arousal as any increase in volume, length, or circumference of the penis. Thus, the magnitude of a penile response could be determined by measuring increases in length, circumference, or a combination of both (Barbaree, 1990). The penile plethysmograph allows the researcher or clinician the capability to measure the magnitude of sexual arousal through changes in the circumference of the penis from a flaccid state to an erect state (Farkas, Evans, Sine, Eifert, Wittlieb, & Vogelman-Sine, 1979). The capacity to measure sexual arousal responses is essential to the assessment and treatment of sexual offenders (Abel, Becker, Cunningham-Rathner, Rouleau, Kaplan, & Reich, 1984; Maletzky, 1991; Salter, 1988).

The importance of sexual arousal in offender assessment and treatment follows the theory which believes sexual assault is motivated by sexual preference (Abel et. al., 1977; Freund & Blanchard, 1981). The sexual preference theory believes that deviant sexual behavior results in sexual arousal. The person then demonstrates a preference for these behaviors. This theory is consistent with the DSM-III-R (American Psychiatric Association, 1987) classification of sexual paraphilias which are "characterized by sexual fantasies and arousal in response to sexual objects or behaviors that are not part of normative arousal-activity patterns" (Marshall et. al., 1990, p.116).

The use of physiological measures of sexual arousal with sexual offenders was developed in the mid 1960's by Kurt Freund. Freund (1963)

and his colleagues were interested in the effect erotic stimuli had on penile responses. The procedure developed, called phallometry, utilized a volume phallometer which consisted of a glass cylinder and a rubber inflatable cuff. The phallometer was placed over the penis and by inflating the rubber cuff, an airtight seal was established. Any expansion of the penis resulted in forcing air out of the glass cylinder through a plastic tube which was then measured and recorded (Freund, 1963). The penile change, measured in volume, is extremely accurate and can detect as little as .02 milliliters of change (Langevin, 1983).

As use of volumetric measures of penile tumescence gained prominence, other researchers began to make modifications. The use of the phallometer was intrusive and complex. A technician was required to properly position the cylinder in order to insure an airtight seal. As a result of these factors, modifications designed to simplify and lessen the intrusiveness of the process occurred. One specific modification involved the use of a transducer rather than a glass cylinder. The transducer, developed by Bancroft, Jones, and Pullan (1966), consisted of a rubber mercury filled band which could be placed on the penis by the patient. The transducer was placed around the penis and measured circumferential changes. The change in circumference is usually measured in millimeters and like volumetric measures is recorded and plotted in a linear fashion. The process which utilized a transducer was termed penile plethysmography (Bancroft, 1967).

The use of the rubber mercury filled ring became much more widely used most likely because of its simplicity. However, the mercury filled rubber gauges were fragile and easily damaged. Barlow and his colleagues developed a strain gauge made out of thin metal, better known as the Barlow strain gauge. The Barlow strain gauge operated exactly as the rubber mercury filled gauge, however, was much more durable (Barlow, Becker, Leitenberg, & Agras, 1970). There is some debate about the superiority of volumetric measures over circumferential measures, however research has not supported this. McAnulty and Adams (1992) report a high correlation between volumetric and circumferential measures and concluded that they are more similar than different. Their final analysis was that both methods were valuable yet imperfect. Phallometry, like penile

plethysmography, continues to be used in measuring sexual arousal albeit in other countries outside of the United States (Langevin, 1983).

Clinical Use of the Penile Plethysmograph

The clinical use of the penile plethysmograph is considered essential in the assessment and treatment of sexual offenders (Salter, 1988). Regardless of whether it is used to assess a sexual offender or in the treatment of the sexual offender, its purpose remains the same; measure the physiological sexual arousal response in an objective manner (Abel & Blanchard, 1976; Abel, Becker, Murphy, & Flanagan, 1981; Abel et. al., 1977; Avery-Clark & Laws, 1984; Barbaree & Marshall, 1989; Barlow, 1977; Farkas, Sine, & Evans, 1979; Hall, Proctor, & Nelson, 1988: Quinsey & Laws, 1990; Zuckerman, 1971). Sex offender treatment programs utilize the plethysmograph in a number of ways to assess and treat the sexual offender.

Clinical Use of the Plethysmograph in Assessments

The plethysmograph is considered one of the most objective methods of assessing a sexual offender (Langevin, 1983). The sexual offender assessment is usually completed at the request of someone other than the sexual offender such as their attorney or the courts. Typically, the request for an assessment is to assist in disposition; either some type of treatment, jail time, or a combination of the two. Therefore, the evaluation must be able to determine risks the offender poses to the community and the type of treatment that can produce change (Holmes, 1991; Maletzky, 1991). In many cases, the offender has very little interest in being honest and open regarding his/her sexual offensive behavior. In most traditional counseling settings, the client is expected to be fairly accurate regarding the distress they are experiencing. Although there may be a tendency to make themselves look good or bad, the client usually does not have a specific plan to deceive the therapist about the severity of their problem. As stated earlier, sexual offenders are not typical. Sexual offenders do not very readily admit their problem to the therapist. In fact, they rarely admit the problem to

themselves. Usually there is great fear that they may be sent to jail, lose their family, job, become friendless, and never be cared about again. Finally, offenders often refuse to admit their problem so they can continue to believe they did not offend. For many sexual offenders, the offense didn't occur until they admitted it did. Thus, the sexual offender has many reasons to try and deceive the therapist, and often goes to counseling with the intent of talking about only what is already known (Maletzky, 1991).

The plethysmograph becomes essential in the assessment to help identify the extent of the problem. Since the plethysmograph is not based on self-report, data obtained from the plethysmograph is not subject to the same kind of bias that self-report is. Thus, it is considered the only objective assessment tool available to the therapist (Salter, 1988).

The plethysmograph is used in the assessment to measure sexual arousal patterns which can be utilized to determine sexual preference. The procedures for conducting this type of assessment are provided by Laws and Osborne (1983). The assessment consists of having the offender place the transducer on his penis while in the privacy of a room. He is then presented stimuli which consists of either slides, audio tapes, video tapes, or a combination of the three. As stimuli are presented, changes in the tumescence of the penis are measured and plotted. Numerous stimuli are presented in uniform manner depicting various ages, sexual activity (in the case of audio and video tapes), and gender. By analyzing the responses to the various categories, a pattern or preference can be identified (Abel et. al., 1977; Marshall et. al., 1990; Quinsey & Marshall, 1983) . Presently this is the most practical and objective method for determining sexual preference (Salter, 1988).

The benefits of objective measures in assessing the chronicity of a sexual offender's behavior are significant. After being given physiological assessments, sixty-two percent of the offenders admitted to further concealed sexual interests and behaviors, and nearly one half admitted to more than one type of paraphilia (Rosenfeld, 1985). In a study comparing subjective self-report responses with objective penile plethysmograph responses, researchers found penile responses differentiated child molesters from non-offenders, however, self-report responses did not (Haywood, Grossman, and Cavanaugh, 1990). Abel, Rouleau, and

Cunningham-Rathner (1985) compared self-report measures with objective sexual arousal measures and found that even with a guarantee of complete confidentiality, self-report and sexual arousal responses coincided in only 30% of the cases. When confronted with the discrepancies, 70% admitted to other deviant sexual arousal. The penile plethysmograph is extremely important in determining a more accurate picture of the individual's sexual deviancy by accessing information the sexual offender would not provide voluntarily. It can also assist in breaking down the denial sex offenders use to avoid dealing with the problem (Freeman-Longo & Walls, 1986; Jenson & Jewell, 1988).

Clinical Use of the Plethysmograph in Treatment

The use of the plethysmograph in the treatment of sexual offenders is considered by many to be necessary (Jenson & Jewell, 1988; Maletzky, 1991; Salter, 1988). There are several situations in which the plethysmograph is necessary in treating the sexual offender. For many behavioral treatment programs, the plethysmograph is the central component of their treatment. For other sex offender specialized treatment programs, the plethysmograph is used to evaluate the effectiveness of their treatment. The plethysmograph is also commonly used for monitoring risk assessment while the offender is in treatment.

The plethysmograph is required for sex offender programs which utilize behavior treatment. The majority of behavioral treatment programs view sexual deviancy as motivated by a "sexual preference" such as in the case of pedophilia (Abel et. al., 1977; Freund & Blanchard, 1981). The sexual preference hypothesis follows the theory that an individual will continue to exhibit behavior which is reinforced. Thus, an individual who experiences maximum arousal to a deviant stimulus, will receive greater satisfaction when participating in the deviant activity. As a result, the individual receives maximum reinforcement from this activity which becomes more frequent (Barbaree, 1990). Therefore, in order to successfully treat the sexual deviancy, a complete clinical assessment of sexual preference is necessary. The plethysmograph, as discussed previously, is able to measure sexual arousal associated with sexual preference. The clinician

would then utilize treatment procedures which would normalize the individual's pattern of sexual arousal. Numerous treatment techniques designed to modify sexual preference have been developed over the past two decades, however all require the monitoring of sexual arousal in order to complete or evaluate effectiveness (Marshall et. al., 1990; Quinsey & Marshall, 1983).

During the initial assessment of sexual arousal, various stimuli are presented to the offender which depict normal and deviant sexual cues. When the offender demonstrates significant arousal to deviant stimuli, the clinician may begin treatment to modify the deviant arousal response or deviant sexual preference. The modification of deviant or inappropriate sexual preference is the central focus of many treatment programs (Abel, et. al., 1984; Borzecki & Wormith, 1987; Griffiths, Quinsey, & Hingsburger, 1989; Marshall, Earls, Segal, & Darke, 1983; Quinsey, Chaplin, Maguire, & Upfold, 1987). The focus on sexual preference comes from clinical observations that sexual offenders often report obsessive fantasizing regarding the type of sexual behavior they engage and that deviant arousal responses consistently differentiates sex offenders from non-offenders (Earls & Quinsey, 1985). Using the initial assessment as a baseline, the clinician may use techniques which are designed to reduce or extinguish the offender's deviant arousal and increase the offender's sexual arousal to normal consentual sexual activity between adult partners.

One popular technique used by behavioral treatment programs is masturbatory satiation. The offender is asked to make an audio tape of a fantasy which involves consentual sexual activity with an adult. On the other side of the tape, the offender is asked to record a fantasy involving the deviant sexual activity. The offender is then asked to masturbate to the appropriate fantasy until orgasm. Immediately following orgasm, the offender masturbates to the deviant fantasy for approximately 30 minutes. The intent of masturbatory satiation is to reinforce appropriate sexual behavior by pairing orgasm to fantasies involving adult consentual sexual activity. At the same time, the deviant sexual fantasy is paired with boredom, loss of erection, and no reinforcement from orgasm. Thus, the deviant arousal is decreased or extinguished. Typically, this activity should be done daily or as often as the offender engaged in deviant fantasy and masturbation. The

offender may participate in masturbatory satiation anywhere from six to 12 weeks. The plethysmograph is necessary to monitor the effectiveness of the procedure. Depending on the situation, the offender's sexual arousal may be assessed with the plethysmograph weekly (Maletzky, 1991).

In some cases, masturbatory satiation does not reduce the deviant arousal. Another technique used to modify sexual preference is covert desensitization. In covert desensitization, sexual stimuli are presented to the offender while monitoring his penile response. When the offender experiences arousal to a deviant stimulus, he is asked to begin imagining an aversive or uncomfortable scenario. In the case of lower functioning offenders, an audio taped scenario may be used. This technique requires the use of the plethysmograph in order to pair the imagined aversive scenario immediately following an arousal response to a deviant stimulus and to evaluate the effectiveness of the technique.

In cases where masturbatory satiation and covert desensitization are unable to modify the sexual offender's deviant sexual arousal, aversive conditioning is sometimes used. Aversive conditioning involves pairing an aversive stimulus with deviant arousal. Various types of aversive stimuli are used, however the most common are noxious odors and electric shock. While the offender is being monitored by the plethysmograph, sexual stimuli are presented. When the offender demonstrates sexual arousal to a deviant stimulus, a small dose of electric shock to the forearm or calf is administered. In the case of olfactory stimuli, ammonia or rotten placentas are used. When deviant arousal occurs, the clinician delivers a small dose of the noxious fumes via a plastic tube which runs from a pump to the nostrils of the offender. By immediately pairing an aversive stimulus with deviant arousal, the offender's deviant arousal can be extinguished (Langevin, 1983).

Although the plethysmograph is a central part of behavioral programs for sexual offenders, it is also essential to cognitive based offender programs. Although there is substantial empirical support for the sexual preference hypothesis, sexual preference does not adequately explain sexual assault by itself. For many clinicians, sexual assault is a result of many variables interacting together and cannot be explained by one single variable (Barbaree, 1990; Barbaree & Marshall, 1988; Finklehor, 1986; Groth, 1979; Malamuth, 1986). For these programs, the plethysmograph is

important to identify and monitor the deviant arousal component of sexual assault. While treatment may focus on many variables unrelated to sexual arousal, the effectiveness of these interventions should be reflected in the arousal pattern. In order to determine whether the treatment has affected the deviant arousal pattern of the offender, regular physiological assessments of sexual arousal involving the plethysmograph are necessary. Furthermore, the use of the plethysmograph for monitoring arousal patterns is beneficial in identifying potential re-offenses. As the offender becomes more involved in the deviant decision making, fantasies, masturbation, and grooming behaviors, the plethysmograph can identify increases in deviant arousal which accompany these behaviors that otherwise would go undetected (Freeman-Longo & Walls, 1986; Jenson & Jewell, 1988).

Reliability and Validity of the Penile Plethysmograph

The penile plethysmograph is considered to be the most reliable and valid measure of sexual arousal available (Langevin, 1983; Laws & Holmen, 1978; Murphy & Barbaree, 1988; Salter, 1988; Zuckerman, 1972). Reliability refers to the ability of the penile plethysmograph to measure arousal responses consistently time after time. The term validity refers to whether the test measures what it purports to measure. For some time clinicians and researchers have attempted to locate some type of objective measure of human sexual arousal which could be measured to determine individual arousal patterns. Many types of physiological responses such as galvanic skin response, respiration, heart rate, blood pressure, pupilary dilation, and even some chemical blood levels were studied. Although several of these responses occurred during arousal, they were not specific to sexual arousal and were influenced by other factors such as novelty or emotions other than sexual arousal. As a result of these studies, the only measure of sexual arousal specific to sexual arousal and was not influenced by other factors was blood flow to the genitals (Zuckerman, 1971).

Numerous studies have been done to further test the reliability and the validity of penile plethysmography. A study conducted by Laws and Osborne (1983) concluded that the physiological response of blood flow to the penis repeatedly demonstrated that it is the best index of male sexual

arousal. Marshall and Barbaree (1984) reported that the laboratory assessment of sexual preference via measuring penile response while being presented various audio and visual stimuli of sexual activities, has been reliable in the sense that the arousal response is stable over time even when measured repeatedly in a short period. As early as 1979, Farkas et. al. demonstrated the basal penile circumference measurement was highly reliable over a one week period and that maximum circumference measurements of arousal were also reliable (Farkas et. al., 1979). Using a test-retest method over a 48 hour period, Davidson and Malcomb (1985) found the highest reliability occurred with subjects experiencing 30% or more of full erection.

The validity of the penile plethysmograph has also been demonstrated in numerous studies. The most comprehensive study concerning the validity of the penile plethysmograph was done by Murphy and Barbaree (1988). In this study, Murphy and Barbaree critiqued the penile plethysmograph using the criteria established for psychometric tests by the American Psychological Association (1985). The study addressed the assessment procedures comparing penile responses to nude still pictures varying in age. They concluded that these assessments had good criterion-related validity; both concurrent and predictive validity. The penile responses differentiated individuals which had different patterns of arousal, and the identified arousal patterns were related to criminal history (Murphy & Barbaree, 1988). In an earlier study comparing patterns of sexual arousal of offenders and non-offenders, changes in penile blood flow in response to deviant and non-deviant stimuli were found to be in accord with the offenders' histories (Earls & Quinsey, 1985). More recently, McGrath (1991) reviewed seven studies examining sexual arousal responses identified through physiological assessments and re-offense rates. Of the seven studies examined, six had positive correlations between deviant sexual arousal and re-offending. Although McGrath concluded there was evidence of strong predictive validity, he cautioned clinicians not to use physiological data alone to predict re-offending, but should utilize a number of assessment data.

Data involving the ability of the plethysmograph to discriminate child molesters from non-offenders is very positive. Numerous studies have been conducted involving the assessment of sexual preference through penile

plethysmography and the use of still pictures as stimuli. It appears that regardless of whether these stimuli are grouped in broad categories (Freund, 1967a; Quinsey, Steinman, Bergersen, & Holmes, 1975) or by age (Marshall, Barbaree, & Christophe, 1986; Murphy, Haynes, Stalgaitis, & Flanagan, 1986), the studies have been consistent. Over-all, non-incestuous offenders who have molested female children demonstrate greater arousal to young girls. Non-incestuous offenders who have molested male children demonstrate greater arousal to young boys, and non-offenders demonstrate greater arousal to adult females (Marshall et. al., 1990). Independent empirical support for external validity of penile plethysmography was demonstrated by Rosen and Kopel (1978) who concluded that there was a meaningful relationship between penile responses during the assessment and overt sexual behavior in the offender's natural environment. Thus, a clinician could generalize the arousal responses an offender experienced in a laboratory to what the offender acted on in the community. More recently Proulx (1989) stated that penile response is the only physiological response specific to sexual arousal in males. Furthermore, it permits differentiation between sexual arousal and other arousal states such as fear or anger.

The validity of the plethysmograph appears to be most questionable when addressing rape. There has been much controversy over the ability of the penile plethysmograph to accurately differentiate between consentual and non-consentual sexual aggression. Earls (1983) reported numerous studies which demonstrated the success of the penile plethysmograph to discriminate between consentual heterosexual behavior and rape arousal. Others have not been so convinced. Murphy, Krisak, Stalgaitus, and Anderson (1984) were unable to discriminate between these two groups using incarcerated offenders. On the other hand, Proulx (1989) reviewed eight studies comparing rapists with non-rapists and found only one study failed to find a significant difference. Earls and Proulx (1986) had earlier concluded that rapists could be discriminated from non-rapists by the penile plethysmograph. Two studies by Hall (Hall, 1989; Hall, Proctor, & Nelson, 1988) have argued against the ability of the physiological assessment of sexual arousal to discriminate either pedophiles or dangerous sex offenders, however these studies have received substantial criticism for their methodology (Quinsey & Laws, 1990). Over-all, recent studies have

overwhelmingly supported the ability of the penile plethysmograph to discriminate sexual offenders from non-offenders and has gained general acceptance in the field of assessing and treating sexual offenders (Abel, Becker, Murphy, & Flanagan, 1981; Barbaree, 1990).

Threats to the Validity of the Plethysmograph

Although the penile plethysmograph has gained general acceptance for measuring sexual arousal (Abel, Blanchard, & Becker, 1978; Abel & Blanchard, 1976; Earls & Quinsey, 1985; Freund, 1981; Langevin, 1983; Laws & Osborne, 1983; Maletzky, 1991; Marshall, et. al., 1990; Murphy & Barbaree, 1988; Quinsey, 1986; Salter, 1988; Zuckerman, 1972), there is great concern for factors which influence or affect the accurate measure of sexual arousal (Abel, Blanchard, & Barlow, 1981; Barbaree, Marshall, Yates, & Lightfoot, 1983; Farkas, Sine, & Evans, 1979; Freund, 1963; Geer & Fuhr, 1976; Hall, 1989; Hall, Proctor, & Nelson, 1988; Laws & Holmen, 1978; Laws & Rubin, 1969; Malcolm, Davidson, & Marshall, 1985; Quinsey & Bergersen, 1976; Wydra, Marshall, Earls, & Barbaree, 1983). Despite being the single best index of male sexual arousal, physiological measures of blood flow to the genitals can be affected by a number of factors which threaten the reliability and validity of the assessment. Numerous studies have been done to identify what factors affect arousal responses and to what extent these factors affect validity.

Faking

One of the biggest threats to the validity of physiological measures of arousal is faking (Marshall, et. al., 1990). Initially, penile plethysmography was considered an objective measure of sexual arousal immune to the individual's attempts to control (Zuckerman, 1972). Blood flow to the penis was an involuntary phenomenon which could not be altered consciously. Support for this belief came from the numerous embarrassing experiences males' endure which were the result of an ill timed erection. Further support came from numbers of males wanting desperately to have an erection, but suffered from impotence. Thus, it was believed that arousal responses were

not influenced by the conscious efforts of the individual. Rosen and Kopel (1978) acknowledged limitations in erection measures, however stated that these measures remained important in the treatment and assessment of sexual disorders. About the same time, Laws and Holmen (1978) reported that the penile plethysmograph was amenable to influence, however remained the single best index of sexual arousal. As researchers began to conclude that penile blood flow could be influenced, research began to address how individuals could alter arousal responses. Studies were conducted which instructed the subject to suppress erectile responses. A number of studies did find that subjects could suppress erectile responses on their own and when instructed to do so (Abel, et. al., 1975; Wydra, et. al., 1983). Researchers also addressed whether individuals could enhance erectile responses to stimuli which was not arousing. Again, researchers concluded that erectile responses could be enhanced as well as suppressed by the individual (Quinsey & Bergersen, 1976).

Methods of Faking

Numerous strategies have been used by offenders to fake arousal responses. One popular method of faking involves manipulating the strain gauge. In some cases the offender will place the strain gauge on his thumb rather than his penis. Others have attempted to replicate arousal and detumescence manually. Using their fingers, they spread the strain gauge when they want to demonstrate arousal and push the gauge together when they want to demonstrate detumescence (Laws & Holmen, 1978). Other offenders have attempted to alter or influence arousal through controlling other bodily functions such as squeezing or tensing the pelvic musculature or holding their breath. Some have attempted hyperventilating in order to influence strain gauge responses (Quinsey & Bergersen, 1976). These methods of faking are easily detected and prevented through use of video monitors, other physiological measures, or movement detectors (Marshall et. al., 1990).

A much more sophisticated method of faking involved the offender's own cognitive strategies to control the arousal response. Often times, the offender utilizing this method of faking, uses some form of cognitive

technique such as distraction, fantasizing about unpleasantries, or mentally substituting a sexual scenario for the stimulus being presented. This was supported empirically in a study which instructed subjects to suppress sexual arousal to erotic stimuli by engaging in a complex secondary task (Geer & Fuhr, 1976; Wydra, et. al., 1983). In a subsequent study, sexual arousal measured by penile erection using audio tapes of deviant and non-deviant sexual activity found 80% of the 122 sexual offenders were able to voluntarily and completely inhibit their sexual arousal (Hall, Proctor, & Nelson, 1988). Typically these strategies are used to minimize arousal rather than enhance arousal. In one of the few studies examining whether arousal could be enhanced to non-preferred stimuli, Adams, Motsinger, McAnulty, and Moore (1992) found that attempting to alter arousal through enhancement was much more difficult than inhibiting arousal. However, this researcher has observed the phenomenon of enhancing arousal.

Faking involving cognitive strategies are more difficult to detect and prevent, however, research in this area has assisted researchers in developing effective ways to detect and prevent (Malcolm, et. al., 1985; Quinsey & Chaplin, 1988). The detection of faking through cognitive strategies involves careful study of the offender's arousal response from the initial presentation of the stimuli, through the removal of the stimuli. Upon presentation of the stimulus, the initial effect is beyond the offender's conscious awareness. As arousal reaches 10 to 15%, the offender becomes aware of the arousal and begins to block arousal through some cognitive strategy. At this point, arousal which was rising, begins to decrease. As arousal is lowered, the cognitive strategies stop and arousal again occurs. This pattern represents an arousal pattern of up and down wave like responses uncharacteristic of blood flow. The second type of cognitive faking involves blocking the arousal cognitively. This strategy represents the concept that the offender is going to block any type of arousal. Once the stimulus is presented, the offender begins his cognitive strategies to block arousal. As the stimulus is removed, the offender relaxes and arousal rather than detumescence occurs (Farrall, 1990, personal communication).

Various strategies have been developed to prevent faking through laboratory research. One influential study involved asking normal students to attend to sexual stimuli under normal instructions, fake instructions, and fake

instructions with a secondary tracking task. Researchers concluded that subjects could fake sexual arousal when instructed to do so. However, when required to do a secondary tracking task, subjects were not able to fake arousal preferences. As a result, most physiological assessments are done with a secondary tracking task (Quinsey & Chaplin, 1988). Furthermore, Adams, et. al. (1992) report that although subjects were able to alter arousal responses, they were unable to invalidate their protocols to the point of being misclassified according to sexual orientation.

Stimulus Presentation

A major concern threatening the validity of physiological measures of sexual arousal is stimuli presented to the offender. Various studies have attempted to identify the effects of the modality of stimuli used, the presentation of stimuli, and the content of stimulus materials which affect arousal responses differently. For instance, video taped stimuli produce the largest arousal response and is considered too rich to effectively isolate what is being responded to by the offender. Past research indicates audio tapes elicit the lowest level of arousal response (Abel, et. al., 1975).

For the most part, sexual stimuli presented to offenders represents general categories such as consentual, non-consentual, or pedophilic sexual activity which then evokes a sexual arousal response to the category, i.e. adult consentual, rape, pedophilia, etc. This is based on the assumption that when presented with a stimulus, men label the whole stimulus by categories. Thus, the sexual response experienced by the stimulus represented arousal to that particular category (Barbaree, 1990).

It has been suggested that the "gestalt" explanation for how men perceive stimuli may be a threat to internal validity (Barbaree, 1990). According to Barbaree (1990), a better explanation is that a sexual stimulus is a combination of many bits of stimuli which elicit various responses. Hence, sexual response strengths to generic categories may vary greatly depending on their content. For instance, it is possible to write descriptions of consentual sexual activity which provoke very little response. Similarly, a description of a deviant non-consentual stimulus could be written that included sexual activity common in consentual behavior which might cause

a strong response. Numerous studies presenting what appears to be conflictual data support this view (Abel, et. al., 1977; Barbaree, Marshall, & Lanthier, 1979; Baxter, Barbaree, & Marshall, 1986; Malamuth, 1981a, Malamuth & Check, 1980; Malamuth, Hein, & Feshback, 1980).

Descriptions between arousal responses to deviant and non-deviant scenarios of sexual activity by offenders and non-offenders have resulted in questions about the ability of the penile plethysmography to differentiate offenders from non-offenders. Therefore, stimulus developed recently have placed great importance on the ability of the stimuli to make a clear distinction between deviant and non-deviant behavior. This is done by presenting at least two stimuli which are exactly the same except for one "key" element. Thus, the difference of the sexual response to these stimuli can be attributed to the "key" element. Only sexual responses which can be attributed to a key element is considered useful to clinicians and researchers (Barbaree, 1990).

Slides, like audio and video taped descriptions, have addressed the issue of confounding influences. Slides depicting individuals of various ages are presented in order to determine a target or age preference profile. Age related sexual elements such as breast development, the presence or absence of pubic, facial, and body hair are varied. Furthermore, the Tanner scale of physical development is used to maintain consistency in slides representing same age groupings (Baxter, Marshall, Barbaree, Davidson, & Malcolm, 1984; Murphy, Haynes, Stalgaitus, & Flanagan, 1986). Finally, a protocol for slide stimuli has been developed which require all slides show a standing frontal shot, all background and objects brushed out, and preferably be non-erotic (A.T.S.A. guidelines for physiological assessments, 1992).

Interpretation and Presentation of Data

Another important threat to the validity of penile plethysmography is the interpretation and presentation of data obtained by the penile plethysmograph. Presently there are significant differences in the interpretation and presentation of arousal data being used (Barbaree, 1990).

Although there is general agreement among researchers and clinicians concerning the importance of identifying the offender's strongest arousal response as an indication of sexual preference, there are currently no standards for presenting and analyzing data. There is also substantial disagreement about the method of reporting scores obtained from physiological assessments. Some researchers have presented raw data (in millimeters of circumference change) to indicate the peak arousal response (Malamuth, Check, & Briere, 1986). Others disagree with this presentation based on the fact that there are large variations in flaccid and erect penis sizes (Farkas et. al., 1979). Hence, many clinicians have taken raw data and transformed it into a percentage of full erection (Abel et. al., 1977; Barbaree, et. al., 1979) or Z scores (Freund, Scher, Racansky, Campbell, & Henson, 1986; Earls, Quinsey, & Castonguay, 1987). Earls et. al. (1987) examined these three common methods of data presentation. They reported that Z-scores had the advantage of best accounting for the variance, however gave no indication for the magnitude of a response considered vital when making decisions on risk or treatment. Other researchers have suggested Z-scores distort an individual's raw scores and increases actual random error (Barbaree & Mewhort, 1989). Finally, some researchers utilize raw data to establish a percentage of maximum arousal obtained over the whole assessment. Thus, a percentage of arousal based on the maximum arousal obtained allows for comparison of arousal responses to deviant stimuli with arousal responses to non-deviant stimuli. Based on the comparison of an individual's arousal responses to non- deviant stimuli, sexual preference can be determined without attempting to compare with unsubstantiated group norms (Farrall, personal communication, 1990).

While faking, stimulus control, and data interpretation represent the major threats to the validity of penile plethysmography, other factors have been identified as threats also. Abel, Blanchard and Barlow (1981) found instructional set had a significant effect on arousal responses. Farkas, Sine, and Evans (1979) studied the effects of several factors and concluded that distraction had a strong effect on tumescence. As a result of the research conducted on factors which affect the validity of physiological measures of sexual arousal, standards have been developed for completing a physiological assessment. These standards include interventions which

negate or control for variables which influence validity (Laws & Osborne, 1983). Recently the Association for the Treatment of Sexual Abusers (A.T.S.A.) established guidelines for conducting physiological assessments of sexual arousal which incorporated the standards established by Laws And Osborne (1983).

Ethical Use of Plethysmography

Currently the use of penile plethysmography has received a tremendous amount of attention from researchers, clinicians, and the media. While much of the attention is positive and directed towards advancement of sexual offender treatment, there are ethical concerns regarding the use and misuse of physiological measures. In some cases, the eagerness of some to use plethysmograph technology has led to applications of assessing sexual arousal clearly outside the limits of its ability.

The most serious misuse of the penile plethysmograph has been to determine innocence or guilt of an individual based on responses measured by the penile plethysmograph (Jenson & Jewell, 1988). There is absolutely no empirical basis for supporting the use of physiological measures of sexual arousal to determine the guilt or innocence of an accused. Although the plethysmograph has demonstrated a high degree of validity, an individual who experiences arousal to deviant stimuli can not be assumed to have acted in a sexual deviant manner. Likewise, an individual who demonstrates no arousal to deviant stimuli can not be assumed innocent of acting out in sexually deviant ways. Unfortunately, there are too many reports of clinicians claiming innocence or guilt based on the sexual arousal responses measured by penile plethysmography (Farrall, 1993; Marshall, Laws, & Barbaree, 1990; Jenson & Jewell, 1988).

A second misuse of the penile plethysmograph is to determine custody cases. There have been reports that the penile plethysmograph was used to determine sexual arousal responses of fathers requesting custody of their children. In these cases, the results of the physiological assessment are used to determine if custody should be granted. The use of the plethysmograph, physiological assessments of arousal, and interpretation of such data to determine custody is unethical (Adler, 1993).

A third misuse of penile plethysmography is the use of this data alone to determine whether or not an offender needs treatment. Regardless of whether an offender displays deviant arousal in an assessment, if the person has raped, molested children, exposed, or repeatedly acted out in any other deviant manner, treatment is warranted. Unfortunately, there are a number of reports of therapist testifying to the courts that an individual offender does not need treatment due to the lack of arousal responses from a physiological assessment (Jenson & Jewell, 1988).

A fourth common misuse of the penile plethysmograph is the over reliance on physiological data to make recommendations concerning the risk or treatment needs of the offender. The reliance on a single data source is inappropriate and unethical, particularly when there are legal ramifications. (McConaghy, 1989; Mussack, 1992).

A major concern for the ethical use of penile plethysmography is the lack of criteria established for therapists who administer these type evaluations. Recently, the Association for the Treatment of Sexual Abusers (A.T.S.A.), has established guidelines for conducting a physiological assessment, however no such guidelines exist for who can do these type of assessments. Certainly A.T.S.A. must address this problem if anything is to be done about the misuse of penile plethysmography (Farrall, 1993).

Probably the most substantial criticism of the penile plethysmograph is the lack of standardization. Presently there are no standards or norms regarding the type or method of presentation of stimuli (Barker & Howell, 1992). Furthermore, there are reports of significant discrepancies in the conducting of physiological assessments, training of technicians, scaling methods, and stimuli used. (Laws, 1993; Pithers & Laws, 1988; Quinsey & Laws, 1990; Shouten & Simon, 1992).

Gender Effects on Male Sexual Offenders

Clinicians have known for some time that male sexual offenders interact differently with females. Thus, the inclusion of female clinicians in the treatment of sexual offenders is an important component in the therapeutic process (Isaac, 1989; Konopasky, Cann, & Curry, 1992).

Several theories have attempted to explain sexual assaultive behavior as a result of the male sexual offender's difficulty with women (Finklehor, 1984). The feminist theory portrays all sexual assault as a means of male domination and an attitude or belief that females represent threats to male masculinity (Herman, 1990). Further support for the hypothesis that sexual assault is due to difficulties with adult women come from the rape literature. Groth and Birnbaum (1978) describe rapists as having difficult with adult sexuality which is considered threatening.

Child molestation has also been described as compensatory behavior for the offender's difficulty with adult females. Thus, the offender develops a relationship with a child and connects with this child on an emotional level. The inability to relate to the adult female coupled with the offender's emotional connection to the child result in child molestation (Finklehor, 1984). Numerous studies support clinicians belief's that adult male sexual offenders have interpersonal problems with adult females. Researchers from these studies consistently report problems such as sexual inadequacies, insecurity, anxiety, and sexual dysfunctions between male sexual offenders and adult females.

According to Groth, Hobson, and Gary (1982), child molestation is the sexual expression of non-sexual needs and unresolved life issues. The sexual involvement with a child is an attempt by the offender to fulfill psychological needs for recognition, acceptance, validation, affiliation, mastery, and control. It is not sexual release, but the interpretation of the sexual activity which is reinforcing. Sexual behavior with children becomes even more reinforcing due to the intimidation sexual offenders feel by adult sexuality. The child, unlike their adult mates, are perceived as innocent, loving, open, and absent of any expectations. Therefore, sexual activity with children allow the offender to withdraw from conflictual adult relationships.

Researchers have concluded that sexual offenders harbor unusual amounts of sexual anxiety which often contribute to the numerous difficulties they experience relating to adult females. Hammer and Glueck (1957) studied 200 sexual offenders and found a fear of heterosexual contact common among the individual offenders. In another study, Panton (1979) found child molesters anxious, inadequate and insecure. They also expected rejection and failure in adult heterosexual relationships.

The knowledge that sexual offenders have deficits in their ability to develop healthy adult relationships has drastically changed treatment. Early treatment of sexual deviancy focused on the reorientation of sexual preferences. Researchers and clinicians viewed sexual preference problems as sexually motivated, therefore focused their intervention on reducing deviant sexual arousal (Bond & Evans, 1967). In the 70's researchers began addressing sexual deviation from a more global perspective which included assessing general heterosexual skills (Barlow, 1974; Marshall, 1971). Acceptance of cognitive factors as possible determinants of behavior led to the development of more sophisticated means of heterosocial and assertiveness skills (Twentyman & McFall, 1975). The addition of these types of skill development as well as the inclusion of female clinicians have resulted in much more comprehensive treatment programs (Abel, et. al., 1984; Marshall & Barbaree, 1990).

Gender Effects on Male Sexual Arousal Responses

Although it is generally accepted that male sexual offenders react differently in treatment to female clinicians than they do to male clinicians, there are no studies which have looked at the effects female clinicians may have on the sexual arousal response of male sexual offenders. A review of the literature found three studies which addressed the effect technician gender had on sexual arousal responses, however the subjects were normal non-offenders and the studies were not designed to address the issue of gender. Although the most recent study found differences in the arousal responses of non-offenders depending on technician gender (Malamuth and Check, 1983), two previous studies revealed no differences (Malamuth, 1980; Malamuth , 1981). As a result of these two studies, Murphy and Barbaree (1988) in their critique of penile plethysmography, reported only that, "gender of technician has varied (p.15)." Their apparent conclusion that technician gender was irrelevant and based on data obtained from non-offenders.

Rather than support the hypothesis that technician gender is irrelevant, the Malamuth studies lend support to the theory that sexual offenders differ from non-sexual offenders in their ability to deal with adult

females (Finklehor, 1984; Groth, Hobson, & Gary, 1982). Some theorists have explained sexual assault as an interpersonal problem with adult females (Finklehor, 1984; Groth, Hobson, & Gary, 1982). If they are correct, we would expect that non-offenders are not affected by adult females in the same manner as sexual offenders. Hence, the studies by Malamuth (1980, 1981; Malamuth and Check, 1983) support this hypothesis. Research which addresses how male sexual offender arousal responses are affected by gender presently do not exist.

Chapter Summary

In Chapter II, a survey of the literature related to sexual offenders was presented. Beginning with an overview of sexual offenders, the chapter reviewed the current knowledge on sexual offenders. A brief overview of the sexual offender including several misconceptions were presented. Early explanations for sexual assault were based on mental illness. Many states enacted "Sexual Psychopath" legislation which committed sexual offenders for an indefinite time period to mental hospitals. Later, sexual offenders were viewed as criminals and incarcerated.

The high rate of re-offending from sexual offenders released from prison prompted the development of specialized sexual offender treatment programs. Early attempts to treat sexual offenders utilized traditional psychotherapy to "cure" the offender's mental illness. Specialized sexual offender treatment differed immensely from traditional therapy and had considerably better success. Researchers, using long term follow-up studies, report recidivism rates as low as four percent. As demand for treatment programs for sexual offenders increased, so did the number of treatment providers. Unfortunately, the growth of treatment programs far exceeded the availability of specialized training. Thus, many offenders have received treatment from poorly trained, inexperienced therapists who have used a variety of unproven techniques or made absurd inferences and unsubstantiated recommendations. These problems have contributed to a negative perception of treatment efficacy. Fortunately, treatment programs exist which are extremely effective with sexual offenders.

A significant factor in the success of treatment programs is the use of physiological measures of sexual arousal. The development of the penile plethysmograph is considered the most essential technique in sexual offender treatment. The penile plethysmograph uses a strain gauge that the offender places around his penis. As the offender is presented various stimuli, arousal is measured via blood flow to the penis. The use of the penile plethysmograph with sexual offenders begins by identifying sexual arousal patterns which can then be modified through various behavioral strategies. Although the penile plethysmograph is met with some skepticism, it was critiqued using the criteria for psychometric measures established by the American Psychological Association and found to have good criterion validity.

As with any test, there are potential threats to the validity of the penile plethysmograph. A number of threats were discussed which threaten the validity of physiological assessments of sexual arousal. The major threat to validity is the ability of the offender to fake or control arousal responses. While it appears that individuals can inhibit or alter arousal responses, these are detectable and can be controlled by requiring the offender to complete a second task. A number of other threats have been identified, however by completing physiological assessments by the guidelines established by the Association for the Treatment of Sexual Abusers, these threats are controlled.

A potential threat to the validity of penile plethysmography discussed in the chapter was the use of female technicians to administer physiological assessments. Currently there has been no research completed to test for the effects technician gender has on sexual arousal responses of male sexual offenders. However, there is ample evidence that male sexual offenders have problems with adult females. Several theories have attempted to explain sexual assault as a result of difficulties male offenders have with adult females.

Several ethical concerns involving the use of the penile plethysmograph were also discussed. There have been many reports of therapists making claims that an offender is innocent or guilty based on the results obtained by the penile plethysmograph. The use of sexual arousal responses to determine innocence or guilt is well beyond the ability of the

plethysmograph and is unethical. Some therapists are using the penile plethysmograph exclusively to determine the need for treatment. Again, this is a gross misuse of measurement technology. Finally, a few therapists have used the penile plethysmograph in custody cases. All of the above are frequent misuses of penile plethysmography.

CHAPTER III

METHODOLOGY

Introduction

The present study was an investigation of the effects technician gender has on sexual arousal responses and level of anxiety experienced by male sexual offenders. The study utilized a one factor experimental design with repeated measures. The independent variable was technician gender. Two dependent variables, sexual arousal response and level of anxiety were studied.

Subjects

The subjects were sixty-five adult men who had been charged, convicted, or pled guilty to a sexual offense. This number represents those sexual offenders who had contacted a specialized outpatient sexual offender treatment and assessment center from May to December 1993. All subjects were informed of the procedures used in the research project. The option to decline or withdraw from the study at any point was explained as part of the informed consent (see appendix) each subject signed prior to beginning the study. None of the subjects asked to participate refused, however ten subjects who originally started the study did not complete both assessments.

Groups were formed on the basis of whether they would be tested by a male technician for both assessments, a male followed by a female technician, or a female followed by a male technician. Subjects were randomly assigned to one of the three groups prior to being assessed. Each subject had an equal chance of being assigned to all three group conditions.

Materials

The present study utilized several materials. A Farrall brand CAT 400 UL penile plethysmograph was used to measure penile tumescence, biofeedback, and self-reported levels of sexual arousal. A Barlow strain

gauge was used in conjunction with the penile plethysmograph to measure changes in penile tumescence. An IBM clone personal computer was used to run, record, and analyze the data from the physiological assessments. Two technicians were used to conduct the physiological assessments. Both technicians were experienced and well trained in conducting physiological assessments of sexual arousal. Subjects were also presented two questionnaires regarding the level of anxiety they experienced during their assessment. A questionnaire was given to the subject during each assessment.

Instrumentation

The present study was interested in the effect technician gender had on sexual arousal responses and anxiety of male sexual offenders. In order to measure and record subjects' sexual arousal, a Farrall brand CAT 400 UL penile plethysmograph was used. The CAT 400 is capable of measuring and recording four separate parameters simultaneously. For the purpose of this study, three parameters were measured and recorded; penile tumescence, galvanic skin response, and self-reported level of sexual arousal.

Penile Tumescence Recording

The present study conceptualized sexual arousal as blood flow into the penis. Penile tumescence was measured circumferentially using a Barlow strain gauge. The gauge consisted of a thin piece of metal which is open at one end. The gauge is placed around the shaft of the penis halfway between the base and the glans. Changes in penile circumference as a result of blood flow is measured by the strain gauge and transduced through the plethysmograph. Data was then analyzed with a special software package which included advanced statistical computations.

Stimulus Materials

In order to assess sexual arousal responses associated with age and gender preference, slide stimuli were presented. Subjects were shown slides which depicted nude non-erotic pictures of males and females of various ages. Models were grouped according to age and physical development. Physical development was measured using the Tanner rating scale. Specific age categories used to assess age preference were 4, 8, 12, 16, and 24 years of age. Subjects viewed a total of twenty-two slides. Each category consisted of two stimuli. A control or neutral category was also included which consisted of landscape scenarios.

Biofeedback

Galvanic skin responses were also measured and recorded. An SGM-40 GSR module was utilized. Curved finger electrodes connected to the forefinger and the ring finger of the subject's right hand were used to monitor changes in the subject's skin resistance associated with anxiety.

The GSR module is an adaptive GSR. Thus, the trace only shows differences in the resistance experienced by the subject. The advantage of this design is the ability to see changes without any influence of the base resistance. Unlike most biofeedback systems, this system is designed to indicate arousal in the positive direction.

A reference line was established at twenty percent prior to placing the electrodes on the subject's fingers. As the subject experiences anxiety, skin resistance is lowered resulting in an increase in GSR levels.

Self-Report Sexual Arousal System

Subjects were asked to report the level of sexual arousal they experienced during their assessment. The self-report system utilized in this study worked in conjunction with the plethysmograph. The SER 60 UL required the subject to maneuver a lever which was connected to a light bar. The higher the sexual arousal the subject was aware of, the more lights were lit.

Technicians

A male and female technician were utilized to administer physiological assessments. Both technicians had specialized training in conducting penile plethysmograph assessments. They also had extensive experience with sexual offender treatment. In addition to their specialized training, technicians had at least a Master's degree.

Assessment Setting

Subjects were evaluated at an outpatient clinic specializing in sexual offender evaluations and treatment. All assessments were conducted in a private office specifically designed for physiological assessments of sexual arousal. Subjects were assessed in an 8 x 8 office which consisted of a reclining chair. Disposable hospital pads were used to insure a clean uncontaminated surface was available to every subject. A second hospital pad was provided to the subject to cover himself once the gauge was placed on the penis. An intercom was used to monitor subjects' descriptions of stimuli and to allow for communication between technician and subject. A light activated one way mirror was used to observe head movement of the offender.

Anxiety Questionnaires

Subjects were given two anxiety questionnaires to indicate the affect physiological assessments had on their level of anxiety or nervousness. In order to compare differences technician gender had on anxiety, two specific components of the assessment were targeted by questions on the questionnaire. The first question addressed the level of anxiety experienced when the subject was instructed how to accurately measure the circumference of their penis by the technician. The second question referred to when the subject was instructed on how to correctly place the gauge on their penis.

The anxiety questionnaires consisted of two questions regarding whether the subject's anxiety or nervousness increased or decreased during the

above mentioned situations. A third question was used on the anxiety questionnaire administered after the second assessment which asked the subject to indicate whether they were more or less anxious when assessed by the female technician. The control group was not assessed by a female technician so the third question asked the subject to indicate whether their anxiety increased or decreased during their second assessment. A five point likert type response was used ranging from lowered greatly to increased greatly (see Appendix B).

The content of the questions were developed specifically for this study. The rationale for developing an anxiety questionnaire rather than using an existing anxiety scale is the specific interest in the subjects' state of anxiety experienced to a specific circumstance. Sims (1988) states that, "anxiety state is a quality of being anxious now , at this particular time, probably as a reaction to provoking circumstances (p. 245)." This differs from anxiety disorders or conflicts which most anxiety scales attempt to measure. Thus, the need to develop specific questionnaires.

Group Formation

Three groups were established for this study. Once subjects had signed a consent form, they were randomly assigned to one of the three groups. This was done by selecting a slip of paper from a box which were labeled control, male, or female. The labels corresponded to the order which technician gender was presented to the subject.

Group I consisted of those subjects tested initially by a male technician followed by a female technician. Group II represented the those subjects who were initially tested by a female technician followed by a male technician. Group III consisted of subjects tested by a male technician during both assessments and represented a control group.

Plethysmograph Assessments

Physiological assessments of sexual arousal were conducted following the guidelines for plethysmograph assessments established by the Association for the Treatment of Sexual Abusers (A.T.S.A.) (see appendix

C). Subjects completed the assessment in one session which lasted between 90 and 180 minutes. Subjects completed the second assessment within ten days from their original assessment and not sooner than 48 hours.

Subjects were given instructions (see appendix D) on how to accurately measure the circumference of their penis and allowed to go to the bathroom. The subject was then escorted to the assessment laboratory and given instructions on how to place the strain gauge on their penis. Subjects listened to these instructions (see appendix E) through an audio tape while the technician calibrated the gauge according to the measurement taken by the subject. Instructions were taped in the voice of the technician administering the assessment.

Once the gauge had been calibrated, the technician answered any questions and presented the anxiety questionnaire to the subject. Upon completing the questionnaire, the technician attached two finger leads to the subject in order to measure GSR. At this time the technician left the room while the subject placed the gauge on his penis. The subject was given some time to get acclimated to wearing the gauge and when a smooth response line was obtained, the assessment was started.

Subjects were shown slides of nude males and females of various ages. Stimuli was presented to the subject for thirty seconds. During this time, the subject described out loud what he was looking at. Changes in blood flow to the penis were measured and recorded as were GSR responses. Once the stimulus was removed, subjects were given time to detumesce to their original baseline level. In order to maintain consistency in data collection, technicians followed a structured process to assist the subjects' detumescence.

Technicians were instructed to allow the subject one minute following the removal of the stimulus to detumesce back to baseline. If after one minute the subject had not fully detumesced, relaxation music was played. If after two minutes of relaxation music detumescence had not occurred, the technician verbally engaged the subject in reciting the alphabet, counting backwards from 100, or some other mental activity. If after five minutes the subject had not fully detumesced to his original baseline level, the assessment was continued using the new arousal level for baseline.

On some occasions, the subject's level of arousal exceeded the ceiling level established during calibration. In this case, the same process was used with one exception. If after five minutes the subject's arousal response remained over the ceiling level, additional time was given to allow for detumescence. If after fifteen minutes the subject's arousal response had failed to detumesce below the ceiling level, the assessment was terminated.

Data obtained from the assessment was analyzed by software developed for the CAT 400 UL penile plethysmograph. Sexual arousal responses, galvanic skin responses, and detumescent times associated with each sexual stimuli were measured and recorded for each stimulus category. A mean response score was determined by averaging both responses for each category.

Data Analysis

The primary hypothesis, that there will be a significant difference between sexual arousal responses of male sexual offenders obtained by female technicians compared to sexual arousal responses obtained by male technicians, will be tested using a one-tailed *t* test. The second hypothesis, that detumescent times of male sexual offenders will be significantly different when tested by a female technician, will be tested using a one-tailed *t* test. The research question regarding whether male sexual offenders will report more anxiety to female technicians, will be tested using a Chi-square test. The research question concerning whether galvanic skin responses of male sexual offenders will be significantly different when tested by a female technician, will be tested using a one-tailed *t* test.

CHAPTER IV

RESULTS

Description of the Sample

Sixty-five male sexual offenders participated in the present study. 89% of the sample subjects had committed a sexual offense against a child, 8% had exposed themselves, and the remaining 4% had committed rape. Subjects self-reported an average of fifteen offenses, however when polygraphed, admitted to an average of 36 offenses. Based on subject's self-report, they committed their first sexual offense at the age of 26 and arrested at age 34. Over-all, 77% of the subjects molested female victims, 12 % molested male victims, and 11% of the sample molested both male and female victims. The offense characteristics of the sample are given in Table 1.

The average age of the subject was 36. 71% of the sample were married, 20% were divorced, and the remaining 9% were single. On the average, subjects had a Full Scale I.Q. of 94 and had completed the tenth grade. 93% of the subjects were employed and had an average annual income of $15,600. The non-offense type characteristics of the sample are given in Table 2.

Relationship Between Sexual Arousal Response and Technician Gender

In order to assess whether technician gender affected the sexual arousal responses of male sexual offenders, 22 subjects were assessed first by a male and then by a female technician. The mean arousal response which occurred while being tested by a male technician was compared to the mean arousal response when tested a second time by a female technician using a t-test. In order to determine if technician gender affected arousal responses of male sexual offenders, the mean arousal responses should be different. Significant differences were found between the mean arousal response obtained by the male technician compared to the mean arousal response to the female technician to all stimulus categories. Table 3

Table 1. Sexual Offense Related Demographic data for Three Groups

Offense Variables	Group I N=22	Group II N = 21	Group III N = 22
Age of First Offense			
Mean	27.5	24.3	26
S.D.	14.46	10.38	11.6
Age First Arrested			
Mean	38.6	30.4	33
S.D.	3.48	7.8	10.2
Self-Reported Number of Offenses Committed			
Mean	16.4	13.0	16.5
S.D.	28.17	21.1	23.9
Number of Offenses Admitted during Polygraph			
Mean	34.6	40.8	32
S.D.	23.1	46.45	32.23
Age of Victim			
Mean	11.1	11.6	11.5
S.D.	5.92	4.79	3.71
Type of Offense			
Child Molestation	86%	90%	91%
Exhibitionism	9%	5%	9%
Rape	5%	5%	0%
Gender of Victim			
Female	73%	81%	77%
Male	14%	9%	14%
Both	14%	10%	9%
Relationship of the Victim			
Family Member	73%	67%	68%
Non-family Member	23%	29%	32%
Stranger	5%	4%	0%

Note. Group I tested first by male followed by female technician, Group II tested first by female followed by a male technician, Group III tested both times by male technician. N = 65.

Table 2. Description of the Sample

Variables	Group I N=22	Group II N = 21	Group III N = 22
Age			
Mean	38.7	36.8	33.5
S.D.	14.2	9.2	10.5
Marital Status			
Married	75%	67%	68%
Divorced	14%	24%	23%
Single	9%	9%	9%
Employed			
Yes	96%	95%	96%
No	4%	5%	4%
Income			
Mean	15,364	14,095	17,270
S.D.	8499.55	4194.1	19,666.7
Sexual Preference			
Heterosexual	91%	86%	96%
Homosexual	9%	14%	4%
Race			
Caucasian	91%	95%	96%
Black	9%	5%	4%
I.Q.			
Mean	93.4	93	94
S.D.	11.11	11.76	9.03
Education			
Mean	10.7	10.8	10.6
S.D.	2.88	7.8	1.92

Note. Group I tested first by male followed by female technician, Group II tested first by female followed by a male technician, Group III tested both times by male technician. N = 65.

Table 3. Comparison of Mean Arousal Responses for Group 1

Stimulus Categories	Male	Female	t
Female 4 yrs.			
Mean	10.3	20.8	3.11**
S.D.	6.04	13.88	
Female 8 yrs.			
Mean	11.8	24.6	3.65**
S.D.	6.52	13.84	
Female 12 yrs.			
Mean	13.3	17.8	2.29*
S.D.	6.20	6.47	
Female 16 yrs.			
Mean	11.4	24.3	3.95**
S.D.	5.81	13.77	
Female Adult			
Mean	10.3	19.5	3.85**
S.D.	5.32	9.56	
Male 4 yrs.			
Mean	9.1	18.1	2.99**
S.D.	4.59	11.08	
Male 8 yrs.			
Mean	10.5	17.9	2.46*
S.D.	5.45	10.11	
Male 12 yrs.			
Mean	12.5	19.2	2.33*
S.D.	6.96	9.0	
Male 16 yrs.			
Mean	10.8	19.6	3.81**
S.D.	6.09	10.15	
Male Adult			
Mean	10.8	18.2	2.36*
S.D.	6.81	11.02	

Note. Group I was tested first by a male followed by a female technician. N= 22.
*$p < .05$.**$p < .01$.. one-tailed test.

presents the means, standard deviations, and t values to each stimulus category for group one. As shown in Table 3, males experienced significantly higher sexual arousal responses when tested by the female examiner to all 10 stimulus categories.

In order to determine if differences found between sexual arousal responses were caused by the order which the subject was exposed to the female technician, a second group of 21 subjects were first tested by a female technician followed by a male technician. The mean arousal responses obtained by each technician were also compared for significant differences using a t-test. Significant differences were also found between the mean arousal responses obtained by the female and male technician. Table 4 presents the means, standard deviations, and t values for group two. Males experienced significantly higher arousal responses when assessed by the female technician.

A third group consisting of 22 subjects tested twice by a male technician was utilized as a control group. A t-test was used to compare mean arousal responses for significant differences. No significant differences were found between the means to any of the stimulus categories. The means, standard deviations, and t values are given in Table 5.

The results of the t-test analysis of the mean sexual arousal responses for all three groups indicate that significant differences occurred in every stimulus category when tested by a male and female technician regardless of the order which the female technician was presented. Furthermore, the mean arousal responses obtained by the female technician were significantly higher. In contrast, no significant differences were observed between mean arousal responses of subjects tested by a male technician only.

Technician Gender Effects on Detumescent Time

In order to determine whether technician gender affected the time it took male sexual offenders to detumesce, mean detumescent times were compared for each group. The mean detumescent times for all three groups are given in Table 6.

Table 4. Comparison of Mean Arousal Responses for Group 2

Stimulus Categories	Female	Male	t
Female 4 yrs.			
Mean	17	11	2.56**
S.D.	8.83	5.13	
Female 8 yrs.			
Mean	16.9	11.2	2.49**
S.D.	7.82	6.23	
Female 12 yrs.			
Mean	18.4	12.2	3.04**
S.D.	7.78	4.75	
Female 16 yrs.			
Mean	17.4	12.4	2.19**
S.D.	8.39	5.76	
Female Adult			
Mean	16.5	10.9	2.71**
S.D.	6.87	5.87	
Male 4 yrs.			
Mean	12.2	8.1	2.58**
S.D.	6.22	3.46	
Male 8 yrs.			
Mean	13.5	9.4	2.07*
S.D.	7.35	4.54	
Male 12 yrs.			
Mean	12.2	8.6	2.08**
S.D.	6.35	3.79	
Male 16 yrs.			
Mean	13.8	8.4	2.89**
S.D.	6.85	4.03	
Male Adult			
Mean	15.1	9.2	2.89**
S.D.	8.20	3.19	

Note. Group II first tested by a female followed by a male technician. N= 21. *$p < .05$.**$p < .01$. one-tailed test.

Table 5. Comparison of Mean Arousal Responses for Group 3

Stimulus Categories	Male	Male	t
Female 4 yrs.			
Mean	11.6	11.3	.09
S.D.	6.0	5.34	
Female 8 yrs.			
Mean	11.7	12.0	.14
S.D.	6.95	6.64	
Female 12 yrs.			
Mean	11.3	11.5	.14
S.D.	4.34	5.08	
Female 16 yrs.			
Mean	12.3	12.5	.09
S.D.	6.6	6.88	
Female Adult			
Mean	11.9	12.6	.72
S.D.	5.78	8.13	
Male 4 yrs.			
Mean	11.0	10.3	.37
S.D.	4.29	4.39	
Male 8 yrs.			
Mean	11.6	10.1	.89
S.D.	6.75	3.82	
Male 12 yrs.			
Mean	9.5	8.9	.66
S.D.	2.87	3.05	
Male 16 yrs.			
Mean	9.8	9.8	0
S.D.	5.7	5.13	
Male Adult			
Mean	8.8	7.8	.79
S.D.	4.66	3.52	

Note. Group 3 tested by a male technician both times. N = 22.
*$p < .05$.

Table 6. Mean Total Detumescent Times for all Groups.

Group	Mean	S.D.	t
Group 1			
Male Technician	785.2	252.53	4.86**
Female Technician	1729.2	830.72	
N = 22			
Group 2			
Female Technician	1387.5	577.59	2.32*
Male Technician	1094.6	380.20	
N = 21			
Group 3			
Male Technician	915.7	278.55	.09
Male Technician	924.6	393.33	
N = 22			

Note. Times for Means are in seconds.
*p<.025.**p<.0005. one-tailed test.

As shown in Table 6, males took significantly longer to detumesce when tested by a female technician. In contrast, detumescent time of subjects assessed by a male technician only were found to be stable (t (42) = 0.09, p < .05). Furthermore, 35% (n = 15) of the subjects tested by a female technician could not sufficiently detumesce enough to continue the assessment. In contrast, only 4.6% of the subjects (n = 3) who were tested by a male technician were unable to detumesce and complete the assessment.

Relationship Between Self-Reported Anxiety and Technician Gender

In order to assess whether technician gender affected self-reported levels of anxiety, questionnaires were given to each subject asking them to report their level of anxiety. Subjects' responses to the anxiety questionnaire when assessed by a male technician was compared to their responses when tested by a female technician. A Chi-square comparison was

calculated to determine if differences in subjects' self-report existed. Table 7 presents the chi-square value for each question by group. As shown in Table 7, subjects in group one and two self-reported a significantly higher level of anxiety when tested by a female examiner. In contrast, subjects who were assessed by a male technician only did not report significant differences in their self-reported level of anxiety. Subjects were also asked to compare the amount of anxiety they experienced with each examiner. Over-all, subjects reported feeling more anxious with a female technician. Table 8 presents the percentage of responses subjects in each group reported feeling most anxious.

Relationship Between Galvanic Skin Responses and Technician Gender

In order to assess whether technician gender affected physical indices of anxiety, galvanic skin responses (GSR) were compared. A total or assessment GSR was obtained by taking the average of all galvanic skin responses obtained in the assessment. The mean GSR score obtained by the male technician was compared to the mean GSR score obtained by the female technician using a t-test. Table 9 presents the means, standard deviations, and *t* values for each group. Since the third group was tested by a male technician only, mean GSR scores obtained in the first assessment were compared with the mean GSR scores obtained in the second assessment. As shown in Table 9, the mean GSR scores were not significantly different from one another. Although not statistically significantly, the mean GSR was slightly higher when tested by the female technician. In contrast, when tested second by a male, both groups showed slight decreases in their GSR response.

Relationship Between Sexual Preference, Sexual Arousal Response, and Technician Gender

Due to the limited number of subjects who identified themselves as homosexual (N = 6), inferences or conclusions would be inappropriate.

Table 7. Chi-Square Analysis of Self-Reported Anxiety Levels by Technician

Group	Question 1	Question 2	(df, N)
Group 1			
Chi-Square Value	23.6**	23.6**	(4, 22)
Group 2			
Chi-Square Value	13.1*	35.3**	(4, 21)
Group 3			
Chi-Square Value	3.6	3.0	(4, 22)

Note. Chi-square values refer to the subjects self-reported increase in anxiety toward female technician.

*X^2<.05.**X^2<.01.

Table 8. Percentage of Subjects' Anxiety Responses to Technician Gender

Technician Gender	Group 1	Group 2
Male Technician	14%	19%
Female Technician	68%	81%
Same	18%	0%
N	22	21

Note. Percentages are based on the number of subjects who indicated most anxious with which examiner "Male", "Female", or "Same". Group 1 first tested by a male followed by a female technician, Group 2 first tested by a female followed by a male technician.

Table 9. Comparison of Mean GSR scores for Each Group

Group	Male Technician	Female Technician	t
Group 1			
Mean	23.3	23.6	.45
S.D.	1.42	1.55	
N = 22			
Group 2			
Mean	23.8	25.1	1.76
S.D.	1.41	1.85	
N = 21			
Group 3	Male Technician	Male Technician	
Mean	24.2	23.3	1.50
S.D.	1.41	1.33	

Note. Group 1 first tested by a male followed by a female technician, Group 2 first tested by a female followed by a male technician, and Group 3 tested both times by a male technician.

However, there does appear to be some evidence that homosexual sexual offender arousal responses are not as affected as heterosexual sexual offenders by a female technician. Mean sexual arousal responses of homosexual subjects obtained by a male technician were compared to their arousal responses when assessed by a female technician using a t-test. Table 10 presents the mean arousal responses, standard deviations, and t values of homosexual subjects by technician gender. Unlike heterosexual offenders, there was no significant differences in the mean arousal responses of homosexual subjects obtained by male and female technicians. The sexual arousal responses of homosexual subjects were also compared with the sexual arousal responses of heterosexual subjects

Table 10. Comparison of Mean Arousal Responses of all Homosexual Subjects Obtained by Male and Female Technician.

Stimulus Categories	Technician Gender Male	Female	t
Female 4 yrs.			
Mean	9.7	9.8	.39
S.D.	4.22	3.91	
Female 8 yrs.			
Mean	8	11	.88
S.D.	4.54	6.14	
Female 12 yrs.			
Mean	7.7	8.7	.42
S.D.	4.22	3.27	
Female 16 yrs.			
Mean	7.9	9.2	.46
S.D.	4.35	4.64	
Female Adult			
Mean	9.7	10.4	.19
S.D.	5.33	6.49	
Male 4 yrs.			
Mean	8.7	6.9	.60
S.D.	5.46	3.83	
Male 8 yrs.			
Mean	8.2	8	.08
S.D.	3.72	4.18	
Male 12 yrs.			
Mean	8.1	11.7	.89
S.D.	4.76	7.67	
Male 16 yrs.			
Mean	9.1	12.9	.73
S.D.	5.01	12.15	
Male Adult			
Mean	8.9	10.9	.51
S.D.	6.22	6.11	

Note. N = 6.

when assessed by a male examiner using a t-test. The mean arousal responses, standard deviations, and t values are presented in Table 11. Only one significant difference was found in the arousal responses of the two groups. Heterosexual subjects responded significantly higher than homosexual subjects to the female 12 year old category, t (65) = 2.02, p < .05. In contrast, when comparing the sexual arousal responses of heterosexual subjects with sexual arousal responses of homosexual subjects when assessed by a female technician, significant differences were found in 7 of the 10 stimulus categories. Table 12 presents the mean arousal responses, standard deviations, and t values of heterosexual and homosexual subjects assessed by a female technician. Although the number of homosexual subjects in this study are few, the results support the possibility that an interaction effect between sexual preference and technician gender is present.

Relationship Between Sexual Preference, Detumescent Time, and Technician Gender

In order to determine if sexual preference affected the detumescent time obtained by male and female technicians, mean detumescent times of subjects who identified themselves as homosexual were compared for each group using a t-test. The analysis of the mean detumescent times of homosexual male sexual offenders obtained by the male and female technician are given in Table 13. A significant difference was found. As shown in Table 13, homosexual subjects took significantly longer to detumesce when assessed by a male technician, t (9) = 1.76, p < .10. Table 14 presents the means, standard deviations, and t values for heterosexual and homosexual subjects when assessed by a male and female technician. Homosexual subjects' detumescent times were compared with heterosexual subjects' detumescent time when assessed by a male technician. As shown in Table 14, homosexual subjects took significantly longer to detumesce than heterosexual subjects when assessed by a male technician, t (65) = 1.46, p < .10. In contrast, heterosexual subjects took much longer to

Table 11. Comparison of Mean Arousal Responses of Heterosexual vs Homosexual Subjects Obtained by Male Technician.

Stimulus Categories	Heterosexual	Homosexual	t
Female 4 yrs.			
Mean	11.3	9.7	.66
S.D.	5.72	4.22	
Female 8 yrs.			
Mean	11.5	8	1.17
S.D.	7.1	4.54	
Female 12 yrs.			
Mean	12.3	7.7	2.02*
S.D.	5.34	4.22	
Female 16 yrs.			
Mean	12.1	7.9	1.61
S.D.	6.15	4.35	
Female Adult			
Mean	11.3	9.7	.58
S.D.	6.44	5.33	
Male 4 yrs.			
Mean	9.1	8.7	.21
S.D.	4.15	5.46	
Male 8 yrs.			
Mean	10	8.2	.91
S.D.	4.6	3.72	
Male 12 yrs.			
Mean	10	8.1	.95
S.D.	4.6	4.76	
Male 16 yrs.			
Mean	9.7	9.1	.17
S.D.	8.41	5.01	
Male Adult			
Mean	9.3	8.9	.19
S.D.	4.66	3.52	

Note. Heterosexual subjects, N = 59. Homosexual subjects, N = 6.
*$p < .05$.

Table 12. Comparison of Mean Arousal Responses of Homosexual vs Heterosexual Subjects Obtained by Female Technician

Stimulus Categories	Heterosexual	Homosexual	t
Female 4 yrs.			
Mean	18.9	9.8	1.93*
S.D.	11.36	3.91	
Female 8 yrs.			
Mean	20.8	11	2.16*
S.D.	10.83	6.14	
Female 12 yrs.			
Mean	18.7	8.7	3.37**
S.D.	7.13	3.27	
Female 16 yrs.			
Mean	20.8	9.2	2.52**
S.D.	11.08	4.64	
Female Adult			
Mean	18	0.4	2.16*
S.D.	8.22	6.49	
Male 4 yrs.			
Mean	15.2	6.9	2.36*
S.D.	8.65	3.83	
Male 8 yrs.			
Mean	15.7	8.0	1.73*
S.D.	8.73	4.18	
Male 12 yrs.			
Mean	15.7	11.7	1.19
S.D.	8.73	4.18	
Male 16 yrs.			
Mean	16.7	12.9	.97
S.D.	8.5	12.15	
Male Adult			
Mean	16.7	10.9	1.43
S.D.	9.61	6.11	

Note. Heterosexual Group N=43. Homosexual Group N=6.
*$p < .05$.**$p < .01$.

Table 13. Mean Total Detumescent Times for Homosexual Subjects Obtained by Male and Female Technician.

Sexual Preference	Male	Female	t
Homosexual			
Mean	1028	761.6	1.76*
S.D.	359.3	144.52	
N	6	5	

Note. Times for Means are in seconds.
*p<10.**p<.0005. one-tailed test.

Table 14. Mean Total Detumescent Times for Heterosexual vs Homosexual Subjects Obtained by Male and Female Technician.

	Subjects		
Technician	Heterosexual	Homosexual	t
Male Technician			
Mean	875.2	1028	1.46*
S.D.	237	359.3	
N	59	6	
Female Technician			
Mean	1558.35	761.6	2.50**
S.D.	704.2	144.52	
N	38	5	

Note. Times for Means are in seconds.
*p<.10.**p<.01. one-tailed test.

detumesce than homosexual subjects when tested by a female technician, t (41) = 2.50, $p < .01$.

Summary of Results

Subjects' mean sexual arousal responses when assessed by a male technician were compared with their sexual arousal responses when assessed by a female technician. Subjects experienced significantly higher sexual arousal responses when assessed by a female technician. In contrast, subjects assessed by a male technician each time obtained similar sexual arousal responses.

Subjects' mean detumescent time when assessed by a male was compared with their mean detumescent time when assessed by a female technician. Subjects took significantly longer to detumesce when they were assessed by a female technician. In contrast, subjects who were assessed by a male technician each time took about the same time to detumesce.

Subjects' self-report level of anxiety when tested by a male technician was compared with their self-reported level of anxiety when assessed by a female technician. Subjects reported significantly more anxiety when assessed by a female technician.

Subjects' galvanic skin responses when assessed by a male technician were compared with their galvanic skin responses when assessed by a female technician. No significant differences were found. Galvanic skin responses decreased slightly during the second assessment regardless of technician gender.

Sexual preference was isolated to determine if any differences based on sexual preference existed. Homosexual subjects' mean sexual arousal responses when assessed by a male technician were compared to their mean sexual arousal responses when assessed by a female technician. No significant differences were found. Homosexual subjects' mean sexual arousal responses when compared to heterosexual subjects' mean sexual arousal responses assessed by a male technician found one significant difference. Heterosexual subjects when assessed by a male technician had significantly higher sexual arousal to the 12 year old female category. However, when homosexual subjects' mean sexual arousal response was

compared to heterosexual subjects' mean sexual arousal when assessed by a female technician, significant differences were found in 7 of the 10 stimulus categories.

Homosexual subjects' mean detumescent time when assessed by a male technician was compared with their mean detumescent time when assessed by a female technician. Homosexual subjects took significantly longer to detumesce when assessed by a male technician. Homosexual subjects also took significantly longer to detumesce than heterosexual subjects when assessed by a male technician. In contrast, heterosexual subjects took significantly longer to detumesce than homosexual subjects when assessed by a female technician.

CHAPTER V

CONCLUSIONS AND IMPLICATIONS

Introduction

The purpose of the present study was to determine whether technician gender affected the sexual arousal responses of male sexual offenders. The study was conducted at a specialized outpatient sexual offender treatment center in Johnson City, Tennessee. The sample included 65 male sexual offenders randomly assigned to one of three groups: a control group tested by a male technician only, an experimental group tested by a male technician followed by a female technician, and an experimental group tested by a female technician followed by a male technician. The principle research hypothesis of this study was that technician gender would affect arousal responses of male sex offenders. Initially, it was not predicted how technician gender would affect male sexual offenders' sexual arousal responses due to the lack of relevant research in this area. However, there is support in the literature for the sexual preference theory which basically states that individuals who engage in sexually deviant behavior do so because of the maximum reinforcement received. Thus, a preference is developed for these specific ways of behaving (Murphy & Barbaree, 1988). The sexual preference theory has for the most part been used to explain outcome behavior such as pedophilia or rape (Abel et. al., 1977; Freund & Blanchard, 1981). However, it would appear that specific elements such as gender may also influence arousal and that sexual arousal responses are the result of many elements (Barbaree, 1990). Thus, an offender who experiences a preference to a specific gender would demonstrate higher arousal responses if assessed by a technician of the "preferred" gender.

On the other hand, there is also support within the literature which suggests sexual assault is the outcome of emotional difficulties with women. Specifically, researchers have consistently reported that male sexual offenders experience significant problems with adult females including increased anxiety, sexual inadequacy, intimidation, and insecurity (Groth et.

al., 1978; Hammer & Glueck, 1957, Panton, 1978). Hence, it would be reasonable to expect sexual arousal responses of male sexual offenders would be inhibited somewhat by a female technician.

Discussion

The principle research hypothesis of this study was that technician gender would affect sexual arousal responses of male sexual offenders. Male sexual offenders who were assessed by both a male and female technician, experienced significantly higher sexual arousal responses when assessed by a female. Based on the results, it appears that the female technician's influence affected the entire assessment. Arousal responses were consistently higher in each of the ten stimulus categories. Although it was not the purpose of this study to determine how diagnosis was affected, it did not appear that the bias associated with gender was stable and independent of the stimulus. In any event, the results of this study appear to support the hypothesis that gender does affect sexual arousal responses of male sexual offenders.

The results of this study suggest that male sexual offenders experience significantly higher arousal when assessed by a female technician. Two Malamuth studies, using non-offenders, found no differences in level of arousal due to technician gender (Malamuth, 1981; Malamuth & Check, 1980). On the basis of these three studies it is possible that gender influence of arousal response may be a differentiating variable between offenders and non-offenders. One possible explanation for this could be that sexual offenders attribute sexual meaning to normal non-sexual behavior whereas non-offenders do not. Thus, sexual offenders' perceptions of their environment are somehow tainted by a sexualized filter in their cognitive processes which are not present in non-offenders. The idea that sexual offenders somehow distort normal non-sexual behavior into sexually implicit behavior is certainly worthy of further study.

The second research hypothesis, that technician gender would affect detumescent times of male sexual offenders was also supported by the data collected in the study. Over-all, male sexual offenders took 66% longer to detumesce when tested by a female examiner compared to when he was

tested by a male examiner. On the basis of these findings, it appears that being tested by a female increases the length of time it takes for male sex offenders to detumesce. Detumescent time is generally associated with intensity or magnitude of the arousal response since it has to do with arousal maintenance. Based on the results of this study, technician gender does prolong arousal experienced by the male sexual offender. One possible explanation for this may be that once the stimulus is removed, the offender begins thinking about what the technician is doing or about the technician. After three minutes, the technician verbally interacted with the offender. The interaction between the technician and the offender could possibly have maintained the arousal response. Unfortunately, there is very little written research concerning the detumescence component of the assessment.

A question regarding whether male sexual offenders would report more anxiety to a female technician was supported by the data collected in this investigation. The results of this study are consistent with Hammer and Glueck (1957) and Panton's (1979) findings that male sexual offenders experience increased anxiety to adult females. Male sexual offenders tested by a female technician almost unanimously reported higher anxiety to the female technician. The exception to this was homosexual offenders. As a group, homosexual offenders reported more anxiety when tested by a male examiner.

Although subjects' self-reported significantly higher levels of anxiety when assessed by a female examiner, galvanic skin responses did not reflect this phenomenon. In two of the three groups, subjects' GSR responses reflected higher anxiety during the initial assessment followed by a slight (not statistically significant) decrease in anxiety during the second assessment. It appears based on the results of this study that GSR responses were not as influenced by technician gender. It would appear that an offender experiences some anxiety which is associated with the novelty of the assessment procedures. Once the offender has experienced the assessment, their anxiety decreases slightly. It is not clear why subjects' self-reported level of anxiety and their GSR responses were not consistent. Perhaps the offenders' report of anxiety is an inaccurate reflection of what they are experiencing, thus physically they do not reflect common physical reactions associated with anxiety. Another possibility may be that offenders'

self-reported anxiety is a result of cognitive distortions and irrational thought patterns rather than physically based. Finally, it could be that the GSR index is a weak indice of anxiety or that the anxiety subjects reported feeling towards the female technician were manifested in other ways not measured by the GSR index, i.e. heart rate, respiration. The absence of available research comparing self-report anxiety and biofeedback indices limits any explanation to an educated guess. However, the implications of understanding this phenomenon in clinical practice are significant, especially in light of the theory that sexual assault is a result of significant difficulties offenders experience with adult females.

One final research question was interested in whether subjects' sexual arousal responses and detumescent times obtained by each technician was affected by sexual preference. Based on the results of this study, it appears that sexual preference affects both the sexual arousal response and the detumescent times of male sexual offenders. Perhaps the results of this study support the sexual preference theory of sexual assault. One explanation for why subjects' sexual preference affected arousal responses and detumescent times may be related to transference issues the offender may experience with the technician. Thus, when the gender of the technician matches the sexual preference of the sexual offender, higher sexual arousal and anxiety responses are experienced. Furthermore, the subject takes significantly longer to detumesce once aroused. Although the results of this study support this, the limited number of homosexual subjects significantly limits any generalizations or conclusions.

Recommendations for Further Research

The present study answered questions concerning whether sexual arousal responses are affected by technician gender. In relation to the present study, three major areas were identified as needing further research. They are:

(1) How do differences in arousal responses obtained by female technicians affect interpretation of arousal patterns?

The importance of accurate assessments of sexual offenders can not be overstated. Typically the recommendations of the assessment determine

disposition. Misdiagnosis of deviant arousal responses may be due to the bias of technician gender. Presently, it is not known how the differences in arousal responses obtained by technician gender affect diagnosis.

(2) How are other types of sexual offenders affected by technician gender? The present study addressed how child molesters are affected, however given the number of other sexual parphilias prevalent in our community, little is known about the affects technician gender has on their arousal responses. Since most sexual offender treatment programs treat a number of different sexual offenders, more information is needed on how their arousal responses may be affected by technician gender.

(3) Are sexual offenders affected differently than non-offenders by a female technician? One explanation offered by this researcher regarding why a female technician affected sexual offenders was that sexual offenders attributed sexual meaning to normal non-sexual behavior of the female. Using this research design with non-offenders may address whether this hypothesis is accurate.

Implications for Professional Practice

Presently, sexual offenders are being required to undergo physiological assessments as part of comprehensive sexual offender evaluations for their sexual offense. Clinicians are asked to make recommendations regarding disposition which are partly based on sexual arousal patterns. In some cases, offenders are being assessed by female technicians which has to this point been accepted as having no affect on arousal responses. Data collected from this study disputes this current opinion and supports the concern that offenders assessed by female technicians may be misdiagnosed. On the basis of these findings, it appears that female technicians bias the data obtained by physiological assessments of sexual arousal on male offenders. Furthermore, until more is known about how this bias affects the over-all interpretation of the offender's arousal patterns, the practice of females conducting physiological assessments of sexual arousal on male offenders should be stopped.

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APPENDICES

Appendix A
Subject Informed Consent

Subject Informed Consent Letter

To the Client:

This letter is to inform you that our clinic is involved in a study involving research for a dissertation project. The purpose of this study is to determine how anxious or nervous one gets while they are participating in a physiological assessment. As a participant in the study, you would fill out a questionnaire prior to each of your physiological assessments regarding how anxious you feel at the present time. This will only take two or three minutes to complete. Names will not be included anywhere on the questionnaire. These questionnaires, as well as raw data from your physiological assessments will be given to J. Michael Adler, a doctoral student at the University of Tennessee, who will tabulate the data. The data as well as the signed consent forms will be kept in a locked filing cabinet only accessible to J. Michael Adler. In no circumstances will yours or any other client's name be used. The student will not have access to any information which would identify you as a subject. Complete confidentiality is guaranteed. Furthermore, data from the questionnaires will be used collectively without reference to a single case. Your participation in this study is completely voluntary. You do not have to participate if you do not wish. Your decision not to participate in this study will in no way penalize or result in any consequences. Furthermore, you may discontinue participation at any time without explanation or penalty. There is absolutely no risk involved in your participating in this study. Also, there are no benefits awarded for your participation in this study. If any questions arise concerning the research, the results, or your rights as a subject, you may contact Mike Adler at 974 - 5131. Thank You for your time.

J. Michael Adler

****

I have read the informed consent letter and understand that data from my physiological assessments as well as some questionnaires will be studied as part of a research dissertation project. I understand that my participation is voluntary and that I may withdraw at any time during the study. I also understand that there is no penalty for not participating nor will there be any remuneration should I agree to participate. I understand that my confidentiality as a subject will be strictly maintained. I hereby agree to participate in this study as explained to me evidenced by my signature.

_____ _____

signature of subject date

Appendix B
Self-Report Anxiety Questionnaires

Self-Report Anxiety Questionnaire #1

Case #: _____

Session #: 1

Date: _____

Examiner: _____

Please circle your response.

1. As a result of being verbally instructed on how to measure my penis, my level of anxiety and nervousness compared to before I was instructed has:

1	2	3	4	5
Lowered greatly	Lowered some	Stayed about the same	Increased some	Increased greatly

2. As a result of hearing the instructions on how to properly place the gauge on my penis and what would happen in the assessment, my level of anxiety and nervousness compared to before has:

1	2	3	4	5
Lowered greatly	Lowered some	Stayed about the same	increased some	Increased greatly

Self-Report Anxiety Questionnaire #2

Case #: _____

Session #: 2

Date: _____

Examiner: _____

Please circle your response.

1. Compared to the first time I was verbally instructed on how to measure my penis, my level of anxiety and nervousness has:

1	2	3	4	5
Lowered greatly	Lowered some	Stayed about the same	Increased some	Increased greatly

2. Compared to the first time I heard the instructions on how to properly place the gauge on my penis and what would happen in the assessment, my level of anxiety and nervousness has:

1	2	3	4	5
Lowered greatly	Lowered some	Stayed about the same	Increased some	Increased greatly

3. I was more nervous with the:

1	2	3
Male examiner	Female examiner	About the Same

Self-Report Anxiety Questionnaire #2
(Control Group)

Case #: _____

Session #: 2

Date: _____

Examiner: _____

Please circle your response.

1. Compared to the first time I was verbally instructed on how to measure my penis, my level of anxiety and nervousness has:

1	2	3	4	5
Lowered greatly	Lowered some	Stayed about the same	Increased some	Increased greatly

2. Compared to the first time I heard the instructions on how to properly place the gauge on my penis and what would happen in the assessment, my level of anxiety and nervousness has:

1	2	3	4	5
Lowered greatly	Lowered some	Stayed about the same	Increased some	Increased greatly

3. I was more nervous during the:

1	2	3
First Test	Second Test	About the Same

Appendix C

A.T.S.A. Guidelines for Penile Plethysmograph Assessments

ATSA

The Association for the Treatment of Sexual Abusers

Guidelines for Use of the Penile Plethysmograph

As better stimulus material is acquired, methods for accurate data retrieval and interpretation are improved and general assessment methodology is advanced, technological evolution will continue to occur in the use of the penile plethysmograph. As research continues to demonstrate the efficiency of such approaches, these approaches will be incorporated into the below guidelines.

I. PRELIMINARY PROCEDURES

A. The examiner should gather supportive information, such as marital and family history, criminal history, present life situation, legal status, sexual history, mental health contacts, and the reason for the referral.

B. It is the responsibility of the examiner to screen the client for contamination factors such as drug use, medication, last sexual activity, emotional state, physical impairment, etc.

C. Previous to the examination, the examiner should take precautionary steps to ensure that the examination will not be interrupted.

D. No client with an active sexually transmittable disease or parasite should be tested. Client should sign a disclaimer as to any knowledge of a current sexually transmitted disease.

II. LEGAL CONCERNS/INFORMED CONSENT

A. Consent forms regarding the penile plethysmograph procedure should be read, signed and dated by the client.

B. When plethysmography is used with persons under the age of 15, this procedure should be reviewed by a community or institutional advisory group.

C. Release forms should be obtained for both incoming and outgoing information sources.

D. Raw data forms must provide information for retrieval of specific stimulus materials that were used in the assessment.

III. LAB EQUIPMENT

A. Plethysmograph equipment should provide either continuous chart paper readout, or with computerized equipment, a printed readout of response levels to each stimulus.

B. Equipment should be used as designed. See users documents.

C. An arm chair or lounge chair with cleanable surface must be provided. A reclining lounge chair is preferable.

D. Disposable cover on the chair seat and on arms of chair is required for each client.

E. Mercury-in-rubber, Indium-gallium, or Barlow gauges may be used and each gauge must be tested and calibrated before each use. Documentation of gauge calibration should be provided.

F. A calibration device or cone is required in 1/2 cm increments with a minimal range of 6 cm.

G. Security devices must insure client's privacy, but must also include emergency entrance and exit with the safety of the client in mind.

H. Slide projector for visual material should be capable of projecting images spanning a 35 degree visual angle.

I. An intercom system should be used to provide communication between client and examiner.

J. Clinicians must have protocol for fitting gauges, trouble shooting equipment, breakdowns and malfunctions.

IV. LAB SETTING AND CLIENT SPACE REQUIREMENTS

A. Client space must be separated from the clinician's work area by at least an opaque partition, which is minimum of seven (7) feet high, to insure client's privacy. A stationary wall is preferred to maintain maximum privacy.

B. Client space is recommended to be a size of approximately 7 feet by 8 feet in dimension. The minimal requirement for this space is 4 feet by 6 feet.

C. An intercom system must be used when client is in stationary enclosure.

D. A means of maintaining constant room temperature must be provided. Temperature range should be maintained at a comfortable level.

E. Client room should have adequate ventilation and it is desirable to have adjustable lighting.

F. Sound deadening measures should be used in order to ensure that the client's space is as sound proof as possible.

G. Security measures must be provided for the laboratory and stimulus material.

H. It is recommended that a system to determine stimulus attention is available so that the examiner can be assured the client is attending to the stimulus.

V. CALIBRATION PROCEDURE

A. The penile plethysmograph should be initially calibrated and checked. Gauges should be checked and calibrated over at least five steps using an accurate calibration device prior to each assessment.

B. Examiner must ensure that the mercury gauge must be stretched at least 10%, but not more than 30% when placed on the penis (prior to any tumescence).

C. Examiner should be cautioned to ensure sizing is within minimal and maximum strain.

VI. FITTING THE PENILE TRANSDUCER

A. Placement of the gauge should be at midshaft of the penis.

B. Client should place gauge on his own penis.

C. Examiner should assure that wiring has some slack next to the transducer or clinical error may result. Clothing should not touch penis or transducer.

D. Recording of full penile tumescence should be obtained whenever possible. The examiner should ensure that sufficient arousal has been recorded to accurately interpret data. When data is to be interpreted as a percentage of full erection, it is important to request the client to achieve full erection.

VII. STIMULUS MATERIAL

A. Clinician will have available a range of explicit sexual stimulus materials, which will include a variety of both appropriate and deviant sexual themes.

B. Visual Material:

1. Visual material will include nude or clothed poses. Depictions of scenes involving explicit sexual acts may be used.

2. Visual materials should represent all five of Tanner's stages of maturation.

3. Categories should include both sexes and be devoid of extraneous stimulus.

4. The number of stimulus presentations must be based on client's problem. Stimulus duration should be consistent with published papers that have demonstrated validity. Currently two minute presentations are common.

5. The examiner should be satisfied detumescence has occurred and at least 30 seconds have elapsed before presenting new stimulus.

C. Audio Tapes:

1. Categories of audio material should be sufficient to adequately evaluate potential problems of your client and reflect currently accepted methods as outlined in published and validated studies.

2. Audio material must include a representative group of normal sexual activity, including both sexes.

3. Typical audio tapes include fondling, consenting intercourse, coercive sex, rape, and assault with both children and adults of both sexes.

VIII. DOCUMENTING ASSESSMENT DATA

A. Physiological assessments should only be interpreted in conjunction with a comprehensive psychological examination.

B. Written Reports may include:

1. A description of the method for collecting data.
2. The range of physiological responses exhibited by client.
3. Any indication of suppression or falsification.
4. An indication of the validity of the data and validity controls used.
5. The types of stimulus materials used.
6. Summary of highest arousal in each category.
7. Client emotional state.
8. Level of client cooperation.
9. Interpretation of data.

X. DISINFECTANT PROCEDURES

A. Gauges will be disinfected prior to use, utilizing an accepted liquid immersible or other accepted laboratory disinfection procedures.

B. A disposable covering will be used for protection over the seat and arms of the chair.

C. Client will place gauge in receptacle after use of the gauge and before leaving the testing room. Client will also dispose of protective coverings before leaving testing room.

D. Clinician should use disposable gloves and anti-bacterial soap after contact with gauges. Any items or articles that have been in contact with the client should also be disinfected.

Appendix D
Instructions for Penis Measurement

Instructions for Obtaining Accurate Subject Circumferential Penis Measurement

With a strip of paper and pencil, approach the subject and say, " Mr. _____, what I need for you to do is get an accurate measurement of the circumference of your penis. See this strip of paper with a line drawn on one end. Take it to the bathroom and wrap it around the middle of your penis halfway between the head and the base. This way the paper is in the middle of the shaft of your penis (Therapist should model this by wrapping strip of paper around two fingers). Where the paper crosses the pencil mark, I want you to make another line right over the top of the first line. Do you have any questions? You may go to the bathroom now.

Appendix E
Instructions for Gauge Placement

Instructions for Physiological Assessment and Gauge Placement

The purpose of Today's assessment is to collect some more information on what you are sexually aroused to. It is a way of asking your body questions about your sexual preferences. What we are going to do is show you a series of slides with nude males and females of different ages. These slides will appear one at a time. While you watch the slides we will measure your sexual response. When you are shown a slide, you will be asked to describe what you see. During your verbal description of the picture it is important that you are thorough. That is, that you describe in detail what you see, exactly as you see it. Please indicate the approximate age of the individual as well as their physical characteristics. You are asked to use the lever on your left hand side to report how much sexual arousal you are aware of. It is important to show accurate awareness of your arousal because this demonstrates self-awareness. Your response with the self-report lever does not alter what the gauge on your penis is showing. If you have an erection at any time of the assessment do not be alarmed. Once the slide is removed, you will be given as much time as needed to return to your original level of arousal prior to seeing the slide. This may take anywhere from 30 seconds to 15 minutes. Do not worry, this is normal.

To place the gauge on your penis, you must pull down your pants and underwear to your knees. The gauge is a piece of metal that is open at one end and has a wire on the back. Please be careful as you put the gauge on. To place the gauge on your penis, gently expand the open end and slide the gauge down to the middle of your penis. Do not attempt to make yourself aroused. If you become aroused do not worry. Make sure the gauge and the wire are not caught on any clothing. Once you have the gauge on, please sit down in a comfortable position and be still. Place the blue hospital pad over your lap making sure you are completely covered. Then sit back and relax. Once you get comfortable, I will start showing you slides. You will see each slide for 30 seconds. Remember, during this time you are to describe the slide in great detail. When the slide is through, I want you to estimate how aroused you became with the lever on the left hand side of the chair. If you have any questions, ask the person working with you now.

VITA

James Michael Adler was born in Hammond, Indiana, on May 25, 1961. He graduated from McMinn Central Senior High School in Etowah, Tennessee, in May, 1979. In August , 1983, he received the Bachelor of Arts degree in psychology from the University of Tennessee. He graduated with a Master of Science degree in June, 1985 in Education with an emphasis in Community Agency Counseling. In December, 1987, he became licensed as a Psychological Examiner by the state of Tennessee. He was employed as an outpatient therapist in September, 1985 at a Mental Health Center in Johnson City, Tennessee. In May,1990, he became the Clinical Director of an outpatient sexual offender clinic in Johnson City, Tennessee.

In September, 1990, he reentered graduate school in the Department of Educational and Counseling Psychology at the University of Tennessee, Knoxville. In May, 1994, he received the Doctor of Philosophy degree with a major in education and an emphasis in counselor education.

He plans to continue his counseling and research work with sexual offenders in the private counseling center he currently directs.