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Covert Behaviors Occurring in Childhood and Adolescence: Predictors of Adult Sexual Orientation and Sexual Identity

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COVERT BEHAVIORS OCCURRING IN CHILDHOOD AND ADOLESCENCE:

PREDICTORS OF ADULT SEXUAL ORIENTATION AND SEXUAL IDENTITY

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ABSTRACT

This study examined the influence pre-adulthood overt and covert same-sex sexual behaviors had on adult sexual orientation and the influence post-adulthood overt and covert same-sex sexual behaviors had on sexual identity in both women and men. Retrospective data were gathered via a computer-assisted self interview on 1281 non-transsexual female (age range 18-78) and 804 non-transsexual male (age range 18-84) participants for the outcome of sexual orientation and 1086 non-transsexual female and 692 non-transsexual male participants for outcomes of sexual identity. Same-sex romantic emotional attachment experience before adulthood predicted adult same-sex sexual orientation in both women and men. Such experiences occurred pre-puberty in women and post-puberty in men. Several same-sex sexual behaviors demonstrated to be influenced by romantic emotional attachment experienced before adulthood predicted lesbian, bisexual, gay or questioning sexual identities in adulthood. Results suggest that psychological mechanisms of conditioning influence the construction and maintenance of same-sex sexual orientation and sexual identity. Implications for future research and clinical practice are discussed.

CHAPTER ONE

INTRODUCTION

Over the past few decades, the topic of human sexuality has been a frequent focus of media attention in Western cultures (Laumann, Gagnon, Michael, & Michaels, 2000; Rathus, Nevid, & Fichner-Rathus, 2010). Topics range from political debates concerning same-sex marriage to infidelities in committed relationships; however, the more sensational, non-normative or deviant sexual behaviors tend to present in the headlines. The media spotlight has been on actress Cynthia Nixon, of the hit HBO series *Sex and the City*, for several years (King, Melfi, Chupack, Bicks, & Parker, 1998). In June 2003, Nixon ended a 14-year romantic relationship with photographer Danny Mozes and, in 2004, became romantically involved with Christine Marinoni. Following a four-year engagement, Maroni and Nixon married in May 2012 (Grindley, 2012). Speculation concerning Nixon's sexual orientation began after she entered into a romantic relationship with Marinoni, and in a 2012 interview with the Advocate magazine Nixon proclaimed, "…the technically precise term for my orientation is bisexual. I believe bisexuality is not a choice, it is a fact. What I have 'chosen' is to be in a gay relationship" (Grindley, 2012, para. 7). Despite Nixon's proclamation, speculation persisted: Did her sexual orientation change? Was she always a lesbian? Was she going through a phase?

There is no simple answer to these questions. In fact, human sexuality is a complex phenomenon that involves various biological, psychological, and sociocultural processes in men and women. The study of human sexuality is a relatively young field compared to other areas of psychological study (Laumann et al., 2000; Rathus et al., 2010). The lack of empirical research and political influence on science has historically resulted in disagreements between researchers in terms of theory and conceptualization of the nature and cause of various aspects of human

sexuality, especially sexual orientation (Kauth, 2006). The nature vs. nurture debate pertaining to the etiology of human sexual orientation continues to be an area of heated debate in religious and political communities despite the current body of scientific literature that indicates both biological and psychological mechanisms have influence (Rathus et al., 2010). Understanding the etiology and implications of sexual orientation is especially vital to sexual minorities, such as gay, lesbian, and bisexual populations, as it informs ethical, beneficent, and non-maleficent mental health practice and applicable state and federal public policy (e.g., same-sex marriage, adoption, and eligibility for military service) (*APA Amicus Briefs*, 2012).

Psychological phenomena contributing to the construction of sexual orientation are often difficult to research. Several of these influences occur during childhood and adolescence and can include covert sexual behaviors that are challenging to measure (Beard et al., 2009; Bickham et al., 2007). However, collecting retrospective data via survey is an ethical and convenient way to gain insight into sexual behaviors occurring during pre-adulthood (Haning et al., 2007; Haning et al., 2008). The purpose of this dissertation was to examine the influence that covert and overt sexual behaviors occurring in childhood and adolescence had on adult sexual orientation and sexual identity. Although biological influences on adult sexual orientation and sexual identity are important factors to consider, they were not examined as they were beyond the scope of this project. However, these influences should not be ignored, and, therefore, in addition to the psychological literature, relevant biological research was reviewed.

CHAPTER TWO

REVIEW OF THE LITERATURE

Defining Key Terms and Concepts

There is a great deal of inconsistency in the use of terms describing human sexuality in the scientific literature. For the purposes of this study, the literature is summarized based on the definition of the following terms:

Sexual orientation. This term refers to a consistent, enduring pattern of sexual desire for members of the same sex, opposite sex, or both sexes (Diamond, 2009) and is manifested in covert and overt sexual behavior (Beard et al., 2009; Bickham et al., 2007).

Sexual identity. This term refers to a culturally organized, self-identified concept of the self as heterosexual, bisexual, gay or lesbian (Diamond, 2009).

Sex. This term refers to the extent to which one is biologically male or female as evidenced by physical characteristics (*American Psychological Association*, 2010).

Gender. This term is culturally bound and refers to the extent to which an individual is masculine, androgynous, or feminine (*American Psychological Association*, 2010).

Sexual Orientation

There are many ways in which individuals express their sexual orientation, and expression can be reflected in behaviors including preferred sex of sexual partners, preference of sexual fantasy partner, and preferred sex of voyeuristic focus (Klein, 1990; Weinberg, Williams, & Pryor, 1994; Whalen, Geary, & Johnson, 1990). The multifarious nature of the expression of sexual orientation inspired many theoretical frameworks and subsequent measurements. Kinsey, Pomeroy and Martin (1948) defined sexual orientation explicitly as behavior, and Kinsey et al. were the first to devise a graded scale for human sexual orientation that made three implicit

assumptions: (1) orientations favoring males and favoring females are polar opposites; (2) orientation can be represented mathematically; and (3) orientation can be graphed upon a single line. These assumptions made by the Kinsey 0-6 (0-Exclusively Heterosexual, 3- Bisexual, and 6- Exclusively Homosexual) scale have been challenged because scores are rated solely on behavior and do not permit separate scoring for fantasy and romantic attachment, which have been demonstrated to vary among individuals (Weinberg et al., 1994; Whalen et al., 1990).

Whereas Kinsey proposed sexual orientation as a single, behaviorally defined concept, Storms (1981) and Whalen et al. (1990) proposed that same and opposite-sex orientations are orthogonal and are capable of simultaneously coexisting in an individual. They suggested that an individual's sexual orientation can be defined as two independent orientations in which an individual can be defined as predominately heterosexual and yet engage in behaviors that suggest a coexisting same-sex orientation. This model has been empirically supported by studies of females (Bickham et al., 2007) and males (Beard et al., 2009).

Other theorists postulate that defining sexual orientation demands more complex variables. Klein (1990) viewed sexual orientation as a multivariable dynamic process composed of seven dimensions: sexual attraction, sexual behavior, sexual fantasies, emotional preference, social preference, self-identification, and heterosexual/homosexual lifestyle. Based on this theory, Klein developed a scale called the Klein Sexual Orientation Grid (KSOG) that measured these dimensions and past, present, and ideal experiences. The combination of dimensional facets with historical, current, and desired behavior, allowed for a more holistic assessment of sexual orientation.

More modern expressions of sexual orientation have been observed to be so fluid and flexible that the term *erotic plasticity* has been coined to describe the degree to which sexual

behavior is shaped by social, cultural, and situational factors (Baumeister, 2000; Baumeister, 2004; Baumeister, Catanese, & Vohs, 2001; Diamond, 2005; Diamond, 2008; Peplau, 2001; Peplau & Garnets, 2000). Differences in erotic plasticity between males and females have also been identified (Baumeister, 2000; Baumeister, 2004; Baumeister et al, 2001; Diamond, 2003; Diamond, 2005; Diamond, 2008).

Women presented with a greater degree of erotic plasticity (Baumeister, 2000; Diamond, 2005) and experienced more variation over time (Diamond, 2005; Diamond, 2008), demonstrated larger effects in response to sociocultural variables (Baumeister, 2004), had lower consistency in sexual attitude-behaviors (Diamond, 2008), and desired sex less frequently and less intensely (Baumeister et al., 2001) than men. Other relational influences such as romantic love and sexual desire have been evidenced as well (Diamond, 2003; Diamond, 2008).

Additionally, laboratory evidence demonstrated sexual orientation in women having little or no effect on gender specific audio-visual material producing sexual response (Chivers, Rieger, Latty, & Bailey, 2004; Chivers, 2005) whereas sexual orientation in men predicted sexual arousal patterns (Rieger, Chivers, & Bailey, 2005). The aforementioned studies provide insight into how various social, cultural, and contextual influences shaped manifestations of sexual orientation in men and women at various stages of the maturation process, but all lacked explanation for the potential influence of variables occurring early in life on adult sexual arousal response and sexual orientation.

Origins of Sexuality

Biological influences. Biological theorists believe physiological influences are partially responsible for the development of sexual orientation. LeVay (1991) conducted the first study comparing the biological uniqueness of the gay male brain to brains of heterosexual men and

women. This research discovered that the inner nuclei of the anterior hypothalamus (INAH 3) area of the hypothalamus, a region of the brain responsible for primal urges such as sex drive, was more than two times smaller in gay men in comparison to heterosexual men. Furthermore, the INAH 3 region of the hypothalamus in heterosexual women was equivalent in size to that of gay men. Unfortunately, the gay men were HIV positive, and many had died of HIV whereas none of the heterosexual men and women were HIV positive, so there was concern that the brain differences were due to the effects of HIV rather than sexual orientation. This research was subsequently replicated by Byne, Tobet and Mattiace (2001) on HIV-positive and HIV-negative gay men. Similar differences in INAH 3 size were observed though the effects were not as large.

Research has identified two human pheromones significant in affecting human sexual behavior: androstadienone (AND) and estratetraenol (EST) (Bensafi et al., 2003). Male heterosexuals evidenced great potentials in the vomeronasal organ to estratetraenol, which is secreted by females, whereas female heterosexuals demonstrated great response to androstadienone, which is secreted by males (Bensafi et al., 2003; Garcia-Velasco & Mondragon, 1991; Monti-Bloch & Grosser, 1991). Application of these pheromones to the person has been demonstrated to increase petting/affection/kissing, sleeping next to a romantic partner, and sexual intercourse in heterosexual men (Cutler, Friedman, & McCoy, 1998) and heterosexual women (McCoy & Pitino, 2001). Furthermore, positron emission tomography (PET) studies demonstrated activation of the anterior hypothalamus in lesbians and heterosexual men when exposed to EST (Berglund, Lindström, & Savic, 2006) and in gay men and heterosexual women when exposed to AND (Savic, Berglund, & Lindström, 2005).

Twin studies provide evidence for genetic influences on same-sex sexual behavior and sexual orientation. In a study that examined monozygotic and dizygotic male twins, 52 percent

of monozygotic and 22 percent of dizygotic twins reported same-sex sexual orientations, whereas nine percent of non-twin, biological brothers shared same-sex sexual orientations (Bailey & Pillard, 1991). Another study applied the same methodology to female twins and found 48 percent of monozygotic and 16 percent of dizygotic twins shared same-sex sexual orientations, whereas 14 percent of non-twin, biological sisters reported having same-sex sexual orientations (Bailey, Pillard, Neale, & Agyei, 1993). Two population-based twin studies demonstrated genetic influence having a significant effect on same-sex sexual orientation, however the statistical power of these findings was low due to small sample sizes (Bailey, Dunne, & Martin, 2000; Kendler, Thornton, Gilman, & Kessler, 2000). These findings however were replicated in a study utilizing archival data from the largest twin registry in the world (Lichtenstein et al., 2006). Långström, Rahman, Carlström, and Lichtenstein (2010) demonstrated moderate to large genetic effects on same-sex sexual behavior and orientation in male and female same-sex twin pairs.

Several studies that analyzed familial genetic factors found that gay men inherit a sexually antagonistic characteristic that promotes female fecundity (Camperio-Ciani, Corna, & Capiluppi, 2004; Iemmola & Ciani, 2009; Rahman et al., 2007) and is partially linked to the Xq28 factor of the X chromosome (Hamer, Hu S., Magnuson, Hu N., & Pattatucci, 1993; Hu et al., 1995; Mustanski et al., 2005). However, two other studies found no linkage between the X chromosome and same-sex sexual orientation in men (Rice, Anderson, Risch, & Ebers, 1999; Sanders et al., 1998). A genomewide scan of male sexual orientation demonstrated genetic markers contributing to same-sex sexual orientation in men positioned near D7S798 in 7q36 and D8S505 in 8p12 with equal maternal and paternal influence and another positioned near D10S217 in 10q26 with only maternal transmission (Mustanski et al., 2005).

Research has consistently demonstrated that gay men have more older brothers than sisters when compared to heterosexuals (Blanchard, 2004; Bogaert, 2006; Bogaert, Blanchard, & Crosthwait, 2007; Ridley, 2003). Ciani, Iemmola and Fletcher (2009) found that both bisexual and gay men were more frequently the second or third born than were their heterosexual peers. Scientists have elaborated the fraternal birth order hypothesis as a biological explanation for this phenomenon (Blanchard & Lippa, 2008; Ridley, 2003). This hypothesis postulates that some women develop antibodies that immunize them against male antigens during pregnancy and that these antibodies multiply with each male fetus (Blanchard & Lippa, 2008). According to the hypothesis, these antibodies cause the brain of the male fetus to differentiate as more female than the previous male fetus while preserving biologically male sexual characteristics (Blanchard & Lippa, 2008; Ridley, 2003). This research suggests that, the more older brothers a man has, the more likely he is to be gay. However, this phenomenon has not been observed in females (Blanchard, 2004).

Differences in physiological traits, such as facial hair and finger length, have been shown to be related to sexual orientation. One study indicated that eight percent of heterosexual males have a counter-clockwise hair pattern, while 25 percent of gay men exhibit this trait (Lippa, 2003). Multiple studies on finger length indicate that gay men display a female pattern where the index finger is equivalent in size or is longer than the ring finger, and lesbians display a male pattern, in which the ring finger is longer than the index finger (Hall & Schaeff, 2008; McFadden, 2005). In addition, gay men have finger print patterns similar to those of heterosexual women in which increased density is observed on the thumb and pinkie of the left hand (Hall & Kimura, 1994).

The aforementioned research provides a substantial amount of empirical evidence supporting a matrix of potential biological and physiological influences on human sexual orientation. These factors could account for a least a portion of the biological, or *nature,* role in human sexuality; however, social scientists have demonstrated experiential factors, or *nurture,* having concurrent influence.

Psychological influences. Classical conditioning is a well known psychological phenomenon that occurs when an involuntary physiological response is elicited by both response-appropriate and response-inappropriate stimuli (Pavlov, 1927). This effect was first observed in Pavlov's (1927) study in which canines were conditioned to salivate (involuntary physiological response) to the sound of a bell (response-inappropriate stimulus). Classical conditioning of the autonomic salivation response is considered to be analogous and parallel to classical conditioning of the autonomic sexual arousal response (Kinsey, Pomeroy, Martin, & Gebhard, 1953; Pavlov, 1927), and it has been observed in many laboratory studies (Hoffmann, Janssen, & Turner, 2004; Hollis, 1997; Kantorowitz,1978a,1978b; Lalumière & Quinsey, 1998; Plaud & Martini, 1999; Rachman,1966; Rachman & Hogson, 1968; Zamble, Mitchell, & Findlay, 1986).

The first comprehensive research conducted on human sexuality assumed that all sexual preferences (e.g., gender, age, hair color, height, etc.) resulted from classical conditioning produced by either direct or vicarious experience (Kinsey et al., 1953). Kinsey's theory was then applied to continuous linear spectrum of sexual orientation measured by the Kinsey 0-6 scale (Kinsey et al., 1953; Kinsey, Reichert, Cauldwell, & Mozes, 1955). The sexual orientation metric was assigned based on overt sociosexual experiences in adulthood (Kinsey et al., 1953). A retrospective and extensive analysis of Kinsey's data provided statistical support for mechanisms

of classical conditioning developed in childhood having an effect on overt sociosexual behavior in adulthood (Van Wyk & Geist, 1984). Later research examined the influence that mechanisms of operant conditioning (that operate concurrently to classical influences) had on sexual behavior.

Mechanisms of operant conditioning such as positive reinforcers and aversive punishers influence the likelihood that a specific sexual behavior will be elicited in the future (Kantorowitz, 1978a). A review of the animal research indicated that an array of stimuli act as reinforcers and are involved in access to potential mates and initiation and completion of the sexual response (Crawford, Holloway, & Domjan, 1993). In controlled laboratory experiments with animals, operant conditioning influenced the mediation of partner preference and location of mates, development of mating and courtship behavior, and copulation (Pfaus, Kippin, & Soraya, 2001). The construction and maintenance of sexual arousal patterns seen in animals are presumed to operate in humans as well (Akins, 2004).

In humans, execution of a positive reinforcing agent (praise from partner) increased the likelihood that the individual engaged in that sexual behavior again. On the other hand, implementing an aversive stimulus (electro-shock) after engagement in the sexual behavior decreased the likelihood of future emission (Both, Lann et al., 2008). Under laboratory conditions, humans have demonstrated the ability to use fantasy to become aroused in combination with distraction to inhibit arousal, when exhibiting voluntary control over their sexual arousal during operant conditioning (Dekker & Everaerd, 1989; O'Donahue & Plaud, 1994).

It has been theorized by researchers (Laws & Marshall, 1990; Marshall & Eccles, 1993) that mechanisms of operant conditioning are responsible for the production and maintenance of

sexual paraphilic behaviors. Specifically, conditioning was achieved by training participants to become aroused and achieve orgasm to conventional and non-deviant stimuli (adult pornography) via masturbation paired with positive reinforcement. Extinction or cessation of responding to deviant stimuli (child pornography) was achieved by pairing masturbation with an aversive stimulus; however there is no evidence to suggest these effects altered paraphilic urges or desires. Additionally, reinforcement methodologies have been used in experiential settings to condition human sexual fetishisms for footwear (Rachman, 1966; Rachman & Hodgson, 1968).

Childhood sexual experimentation. It is common for children of both genders to engage in sex play (Goldman & Goldman, 1988; Kinsey et al., 1953; Martinson, 1994). In fact, Kinsey et al. (1948) discovered that 40 percent of the male sample reported engaging in heterosexual play, and 60 percent engaged in homosexual play prior to adolescence. Similarly, 30 percent of the female sample reported engaging on heterosexual play, whereas, conversely, 33 percent engaged in homosexual play prior to adolescence (Kinsey et al., 1953). In less than half of the male sample, pre-adolescent homosexual play progressed to more mature homosexual activity in adolescence (Kinsey et al., 1948), and Kinsey et al. (1953) observed the same trend in five percent of the female sample. Similar findings have been observed by Reynolds, Herbenick and Bancroft (2003). These findings inspired researchers to identify factors that influence the likelihood of engaging in these behaviors.

Kinsey, Reichert, Cauldwell, and Mozes (1955) theorized that these early initiations of sexual play and experimentation are essentially random events. They postulated that these behaviors are likely to be elicited based on a combination of internal and external factors such as curiosity about sex, sufficient privacy, adequate temporal conditions, partner willingness, and partner availability. These factors are more likely to be present in children with siblings, and

sexual experimentation has been observed in both same-sex and opposite-sex siblings (Finkelhor, 1980). In fact, Finkelhor (1980) reported that 15 percent of females and 20 percent of males engaged in sexual experiences with siblings at some point and, of those participants, 40 percent reported doing so before age eight. Similarly, Greenwald and Leitenberg (1989) found that 15 percent of females and 20 percent of males in their sample reported engaging in sexual experimentation with siblings. Furthermore, same-sex experiences with siblings during childhood and adolescence have been positively correlated with higher rates of adult same-sex orientations (Cameron & Cameron, 1995; Finkelhor, 1980).

Victims of sexual abuse and coercion. Gay and bisexual men (Balsam, Rothblum, & Beauchaine, 2005), and lesbian and bisexual women (Austin et al., 2008; Matthews, Huges, Johnson, Razzano, & Cassidy, 2002) report significantly higher rates of childhood sexual abuse then non-abused cohorts. Sexual coercion that occurred during childhood and adolescence perpetrated by non-familial (Van Wyk & Geist, 1984) and familial (Meiselman, 1979) individuals predicted sexual aversion in victims to adult members belonging to the sex of the perpetrator. In the case where the sex of the victim is opposite to the sex of the perpetrator, adult same-sex sexual behavior of the victim can be explained by the aversive nature of childhood sexual abuse having an operant conditioning effect on adult sexual behavior (Meiselman, 1979; Van Wyk & Geist, 1984). Additionally, trends observed in sexual abuse victims have been observed during psychotherapy. King (2000) identified a phenomenon known as the Imprinted Arousal Pattern (IAP) that is observed when the sex of the victim is the same as the sex of the perpetrator. IAP occurs when victims become aroused and respond to stimuli and situations that mirror the context and circumstances of the abuse. IAP is common among adult gay male sexual abuse and incest victims (King, 2000). Classical conditioning becomes the most plausible

explanation for this phenomenon because of the unconscious and involuntary nature of the arousal and response to contexts and circumstances similar to those presented during the initial conditioning abuse (King, 2000).

Adolescent sexual experimentation. It is common for many males and females to engage in masturbation either as adolescents, as adults, or both (Arafat & Cotton, 1974; Kinsey et al., 1953; Leitenberg, Detzer, & Srebnik, 1993). Studies have identified differences based on gender and have indicated that a greater proportion of males than females engage in masturbation during adolescence, and males achieve their first orgasm earlier than females (Kinsey et al., 1953; Leitenberg et al., 1993).

Females who inserted objects into their vaginas or urethras during masturbation before age 18 were three to seven times more likely to use objects similarly during adulthood (O'Keefe et al., 2009). Males who inserted objects into their urethras or rectums during masturbation before age 18 were eleven to fifteen times more likely to use objects similarly during adulthood (Stroebel et al., 2010). Object insertion during masturbation increased the likelihood of experiencing urges to insert objects into the individual's own and partner's genitals and anus for females (O'Keefe et al., 2009) and males (Stroebel et al., 2010). Conditioning that results from experiences within the nuclear family also appears to explain the emergence of exhibitionism in adult males (Swindell et al., 2011).

It has been theorized that conditioning produced by sexual arousal and orgasm that occurs while engaging in sexual fantasy has long-term effects on the human sexual response (Cautela & Kearney, 1986; McGuire, Carlisle & Young, 1965). Fantasizing was shown to initiate and intensify arousal to real life examples of the fantasized material (Cautela & Kearney, 1986). Cautela and Kearney (1986) termed this specific form of conditioning "non-directed

covert conditioning," which encompasses behaviors such as masturbating to memories of real life events and/or fictional content, including engaging in sex with a partner or multiple partners. McGuire et al. (1965) used case studies of men to postulate the development of adult same-gender orientations and paraphilias were the result of repeated pairings of masturbation and fantasy during adolescence.

According to Bickham et al., (2007), non-paraphillic conditioning has been observed as well. In women considered *predominantly* heterosexual (Kinsey-2) based on their history of sexual behaviors, sexual experimentation with same-gender partners and masturbation using same-gender images before age 18 were shown to be powerful predictors of four behaviors after age 18. These behaviors included engaging in sexual contact with females, using images of females during masturbation, fantasizing about a female partner during sex with a favorite male partner, and directing voyeuristic behavior toward females. The same effect, excluding fantasizing about a male partner during sex, was observed in *predominately* heterosexual (Kinsey-2) men, and the authors concluded that classical conditioning best explained their observations (Beard et al., 2009).

Many of the aforementioned studies provide strong evidence that experiences and engagement in sexual behaviors in early childhood and adolescence have a predictive effect on adult sexual behavior; individuals who engaged in sexual behaviors during childhood and adolescence are significantly more likely to continue to engage in those behaviors through adulthood (Beard et al., 2009; Bickham et al., 2009; O'Keefe et al., 2009; Stroebel et al., 2010; Swindell et al., 2011), and individuals are likely to engage in covert and overt sexual behaviors as adults with the gender or genders they were conditioned to prefer during childhood and adolescence (Beard et al., 2009; Bickham et al., 2009). These findings support the idea that, in

addition to biological influences, mechanisms of classical and operant conditioning play a role in the construction of human sexual orientation. Furthermore they support the idea that the development of human sexual orientation begins early in childhood and persists throughout adulthood (Beard et al., 2009; Bickham et al., 2009; O'Keefe et al., 2009; Stroebel et al., 2010; Swindell et al., 2011).

Genital fascination. Several laboratory studies have demonstrated the conditioning of sexual arousal following reviewing of sexual images in women (Both, Spiering et al., 2008; Hoffmann, Janssen, & Turner, 2004) and men (Hoffmann et al., 2004). These studies provide further evidence of mechanisms of Pavlovian and operant conditioning playing a role in conditioning sexual arousal post-adulthood; however, research on conditioning sexual arousal during adolescence is unable to be conducted due to ethical considerations. Therefore, retrospective data are the only source of measurement on covert behaviors such as reviewing images of genitalia during childhood and adolescence, or genital fascination. An analysis of case studies revealed that the likelihood of being exposed to same and opposite sex genitalia of other children during childhood is not significantly different, and opportunity is the determining factor of whether this exposure is same or opposite sex (Goldman & Goldman, 1988). In other words, access to same or opposite sex peers determines the likelihood of being exposed to same or opposite sex genitalia.

A union of psychological and biological influences occurs in early adolescence. At puberty, females and males experience a surge of sex hormones (testosterone and other androgens) that initiate and regulate a biological drive for sex. Levels of these hormones predict sexual interest and masturbation rates in boys (Udry, 1985) and girls (Udry, Talbert, & Morris, 1986), and the likelihood of engaging in sexual intercourse in boys (Udry, 1985). Thus, the

presence of a biologically driven sexual urge combined with material prompting sexual arousal (i.e., images of genitalia) provides the foundation for sexual experimentation which is reinforced when sexual arousal with or without orgasm is achieved.

Romantic Love, Infatuation, Crush and Affectional Bonding

Romantic love, defined as powerful feelings of emotional infatuation, has been conceptualized as an attachment process present in adult romantic relationships (Hazan & Shaver, 1987). This phenomenon involves a process of affectional bonding that occurs when an individual experiences passionate infatuations directed at a member of the opposite or same-sex (Diamond, 2000a; Diamond, 2003; Fraley, & Shaver, 2000; Hazan & Shaver, 1987). Although affectional bonding and sexual desire often occur in concert, they have been demonstrated to be two independently distinct, covert experiences (Diamond, 2000a; Diamond, 2002; Diamond, 2003; Diamond, 2004) making it possible for an individual to experience romantic love toward a member of the same-sex while simultaneously experiencing sexual desire only toward members of the opposite-sex.

Hurlock and Klein (1941) were the first to demonstrate the presence of affectional bonding, or "crush," in adolescent boys. They found that adolescent boys reported having experienced a crush on members of the same and opposite-sex. These findings have been replicated in studies measuring targets of infatuation in adolescent boys (Billingham & Hockenberry, 1990). Retrospective data on affectional bonding have been collected on self-reported heterosexual and gay men as well. Johnston and Bell (1995) found that nearly 37 percent of gay men reported experiencing a romantic emotional attachment toward males by age six, and 81.6 percent reported this by age 17, whereas only six percent of their heterosexual counterparts reported having ever had this experience. However, none of the heterosexual men

surveyed rated these feelings as somewhat or very intense toward boys or men, in comparison to 73.5 percent of gay men during high school and 40.8 percent during grade school. When the target was female, 63 percent of heterosexual men recalled experiencing a romantic emotional attachment during grade school and 98 percent during high school, in comparison with 36.7 percent of gay men reporting the same experience during grade school and 30.6 percent during high school.

A qualitative analysis of the intimate friendships of 80 adolescent bisexual and lesbian women indicated the presence of passionate feelings as intense as a romantic relationship for both identities during adolescence (Diamond, 2002). A quantitative analysis of the same type of sample indicated that same-sex passionate relationships occurred at earlier ages than heterosexual relationships (Diamond, 2000a). Furthermore, friendships involving affectional bonding were more likely to be absent of sexual desire toward that partner if the girl had no previous incidences of same-sex sexual encounters (Diamond, 2000a). The data cited in this literature review suggest that same-sex romantic emotional attachment (i.e., romantic love, infatuation, crush, affectional bonding) may have an effect on adult human sexuality. However, these findings are limited to experiences during adolescence and provide no evidence for potential predictive power of romantic emotional attachment on sexuality during adulthood.

Hypotheses

The purpose of this study was to establish, if applicable, the prevalence of same-sex romantic emotional attachment occurring during childhood and adolescence, and examine the predictive effect, if any, that same-sex romantic emotional attachment occurring during childhood and adolescence had on adult sexual orientation and sexual identity in men and women. The current study proposed the following hypotheses:

1. Covert and overt sexual behaviors occurring in childhood and adolescence will predict covert and overt sexual behaviors occurring in adulthood.
2. Covert and overt sexual behaviors occurring in adulthood will predict adult sexual identity.

CHAPTER THREE

METHODS

Participants

All 2085 participants (1281 non-transsexual women, [median age = 21, age range: 18 – 78 years] and 804 non-transsexual men [median age = 21, age range: 18 -84 years]) provided informed consent and were 18 years of age or older. Participants were recruited from three mid-sized, mid-Atlantic college campuses using flyers, e-mail communication, and in-class announcements. Much of the recruitment took place within a population of graduate and undergraduate students who received extra credit compensation in return for partial or full completion of the survey; however, no one received monetary gain in return for participation. To obtain a broader demographic and increase diversity in age, education and life experience, recruitment efforts were made targeting faculty, staff, and members of the general population using announcements in public meetings and recruitment tables set up at public events. Data were recorded on participant demographics to enable statistical adjustment for confounding effects. Demographic data for all participants are presented in Table 1.

There were no significant differences in marital status for male and female participants. Twenty percent of female participants had been married at least once, with 15 percent currently married and 8.3 percent having been divorced at least once. Nearly 19 percent of male participants had been married at least once with 14.2 percent currently married and 8.7 percent having been divorced at least once. Significant differences in education and living arrangements were observed in both male and females participants. Of the female participants, 68.9 percent had some college, 20.5 percent had a Bachelor's degree, 5.6 percent had a Master's degree, 3.7 percent had a High School Diploma or less, and 1.4 percent had a Doctoral degree. Over 70

percent of male participants had some college, 15.7 percent had a Bachelor's degree, 6.7 had a High School Diploma or less, 4.2 had a Master's degree, and 3.1 had a Doctoral degree. Twenty-five percent of females indicated they were currently living with a male, and 21.6 percent of males were living with a female. Additionally, 2.3 percent of females were living with another female, and 2.6 percent of males were living with another male.

Materials and Procedure

Computer-assisted self interview (CASI) techniques have been demonstrated to be superior to pencil and paper reports and face-to-face interviews in terms of eliciting truthful responses about sexual behaviors (Gribble, Miller, Rogers, & Turner, 1999). Participants completed the survey in university computer laboratories where the seating arrangement provided at least one space between participants so that others could not view what was on another's computer screen. Anonymity was protected by electronic randomized filing of encrypted data. The CASI program (S-SAPE1, ©S-SAPE, LLC, 2002, P.O. Box 11081, Charleston, WV 25339) and many of its items used for the present study have been described and validated (Haning, 2005; Haning et al., 2007; Haning et al., 2008). The measures utilized in the present study have been previously published (Bickham et al., 2007; O'Keefe et al., 2009, Stroebel et al., 2010; Stroebel et al., 2012; Swindell et al., 2011) or are the corresponding items to those published but for the opposite sex (e.g. "clitoris" changed to the word "penis"). Individual items are described below.

Voyeurism. "I have sometimes found myself going out of my way to try to view more of a man's/woman's body than she would approve of if she knew I was looking." Response options were choices 1-5.

Fantasy partner. "When I am with my favorite sex partner and I choose to have a sexual fantasy, I find that I can reach orgasm most easily when: (1) I concentrate on a sexual fantasy involving an adult female partner, (2) I concentrate on a sexual fantasy involving an adult male partner, (3) I concentrate on a sexual fantasy involving a female child, (4) I concentrate on a sexual fantasy involving a male child, (5) This question is not applicable to me because I have never had an orgasm with my favorite sex partner with a fantasy. " Response options were agree/disagree.

Masturbation. Two sample items are provided: (1) "Your age range: 1-17 years; Behavior: (Self) Masturbation of any kind. Give your best guess at numbers; don't get hung up on being precise!" (2) "Your age range: 1-17 years; Behavior: (Self) Masturbation involving stimulating yourself while looking at pictures or statues of adult women. Give your best guess at numbers; don't get hung up on being precise!" These sample items are representative of a total of six questions that allow for substitutions of age range and gender, per question.

Sexual experimentation before age 18. One sample item is provided: (3) "Your age range: 1-17 years; Behavior: Sexual experimentation of any kind with a female age no more than 4 years older or younger than yourself. Give your best guess for numbers; don't get hung up on being precise!" This item is representative of a total of eight items that allow for substitutions of age range and gender. Data for number of partners, number of times, and earliest and latest ages this behavior took place were recorded separately by gender and age of partner, per question.

Crush. "As a child I always seemed to have a crush on one female or another" and "As a child I always seemed to have a crush on one male or another" were used to measure affectional bonding. Response options were agree/disagree.

"The best way to describe the genders of the individuals outside my family that I had crushes on (or was in love with) before I hit puberty is: (1) only boys or adult men before I hit puberty, (2) only girls or adult women before I hit puberty, (3) mostly boys or adult men but some girls or adult women before I hit puberty, (4) mostly girls or adult women but some boys or adult men before I hit puberty, or (5) I never had crushes on anybody outside my family before I hit puberty." Response options were choices 1-5.

"The best way to describe the genders of the individuals outside my family that I had crushes on (or was in love with) from the time that I hit puberty to age 18 is: (1) only boys or adult men from the time that I hit puberty to age 18, (2) only girls or adult women from the time that I hit puberty to age 18, (3) mostly boys or adult men but some girls or adult women from the time that I hit puberty to age 18, (4) mostly girls or adult women but some boys or adult men from the time that I hit puberty to age 18, or (5) I never had crushes on anybody outside my family from the time that I hit puberty to age 18." Response options were choices 1-5.

"The best way to describe the frequency of my childhood crushes (or being in love with somebody outside my family) before I hit puberty is: (1) I always seemed to have a crush on someone from first grade to my puberty, (2) I seemed to have a crush on someone about 75% of the time from first grade to my puberty, (3) I seemed to have a crush on someone about 50% of the time from first grade to my puberty, (4) I seemed to have a crush on someone about 25% of the time from first grade to my puberty, or (5) I never had a crush on anybody outside my family from first grade to the time that I hit puberty." Response options were choices 1-5.

"The best way to describe the frequency of my childhood crushes (or being in love with somebody outside my family) from the time that I hit puberty until the age of 18 is: (1) I always seemed to have a crush on someone from my puberty to age 18, (2) I seemed to have a crush on

someone about 75% of the time from my puberty to age 18, (3) I seemed to have a crush on someone about 50% of the time from my puberty to age 18, (4) I seemed to have a crush on someone about 25% of the time from my puberty to age 18, or (5) I never had a crush on anybody outside my family from the time I hit puberty to the time I reached age 18." Response options were choices 1-5.

Genital fascination. "As a child I was fascinated by female genitals and frequently reviewed mental pictures of them in my mind" and "As a child I was fascinated by male genitals and frequently reviewed mental pictures of them in my mind." Response options were agree/disagree.

Sexual identity. "The best way to describe how open and honest I am about my sexual preference is: (1) All my friends and family know that I am straight, and that is what I am. (2) All my friends and family know that I am gay, lesbian, or bisexual, and that is what I am. (3) Some of my friends and/or family still think that I am straight, but actually I know that I am really gay, lesbian, or bisexual. (4) My friends and family mostly think that I am straight, but I am really mixed up about whether I am straight or gay, lesbian, or bisexual. (5) I have no sexual preference, and I have never engaged in any sort of sex with a partner." Response options were choices 1-5. It should be noted that the item measuring sexual identity was added to the survey after 195 of the 1281 female participants and 112 of the 804 male participants had entered their data. As such, the total number of male and female participants for statistical analyses including this variable is slightly reduced and is presented in Tables 5, 6, 7, 10, and 11.

CHAPTER FOUR

RESULTS

Female Same-Sex Relations

To evaluate Hypothesis 1, multiple logistic regressions were performed to assess the predictive relationship between covert and overt sexual behaviors occurring in childhood and adolescence, and covert and overt sexual behaviors in adulthood. Development of each model was based on statistical testing of 14 independent variables first occurring prior to age 18: 1) childhood crush on females, 2) childhood crush on males, 3) childhood fascination with female genitals, 4) childhood fascination with male genitals, 5) pre-pubertal crush on females, 6) pre-pubertal crush on males, 7) post-pubertal crush on females, 8) post-pubertal crush on males, 9) masturbating while viewing female images, 10) masturbating while viewing male images, 11) sex of any kind with a female, 12) sex of any kind with a male, 13) experiencing sexual coercion by a female, and 14) experiencing sexual coercion by a male. All 14 independent variables were statistically tested on each of the five total dependent variables occurring during adulthood: 1) masturbating while viewing female images, 2) sex of any kind with a female, 3) using a female fantasy partner while engaging in sex with a favorite partner, 4) using a female fantasy partner while masturbating, and 5) voyeurism directed at females. The count and percentages for total number of female participants who endorsed the 14 predictors are presented in Table 2. The score test (Hosmer & Lemeshow, 1989) results calculated prior to entering any predictors into the models, and the corresponding *p*-values for all 14 variables evaluated as predictors for adult same-sex sexual activity are presented in Table 3.

Model 1 (to predict masturbation using female images) was strongly statistically significant, x^2 (5, N=1281) = 377.173, p<.001. The model as a whole explained between 25.5 percent (Cox

and Snell R square) and 42.4 percent (Nagelkerke R squared) of the variance in adult sexual behavior. Results are included in Table 4.

Five independent variables describing behaviors occurring before age 18 made a statistically significant contribution to the outcome of using female images during masturbation as an adult. (1) Masturbating using images of adult females recorded an odds ratio of 14.403 indicating that women who viewed female images while masturbating during childhood and adolescence were over 14 times more likely to engage in the same behavior as adults. (2) Engaging in sex of any kind with a female recorded an odds ratio of 2.580 indicating that women who engaged in this behavior during childhood and adolescence were over two times more likely to use female images during masturbation as adults. (3) Women who experienced sexual coercion by a male were nearly two times as likely to masturbate using female images and recorded an odds ratio of 1.967. (4) Masturbating using images of adult males recorded an odds ratio of 1.988 indicating that women who viewed male images while masturbating during childhood and adolescence were almost two times more likely to use female images during masturbation as adults. (5) Additionally, women who experienced pre-pubertal crushes on males were less likely (0.585 times as likely) to use female images during masturbation as adults.

Model 2 (to predict engaging in sex with women) was strongly statistically significant, x^2 (6, N=1281) = 172.059, p<.001. The model as a whole explained between 12.6 percent (Cox and Snell R square) and 23.0 percent (Nagelkerke R squared) of the variance in adult sexual behavior. Results are included in Table 4.

Six independent variables describing behaviors occurring before age 18 made a statistically significant contribution to predicting the outcome of engaging in sex with a female as an adult: (1) Engaging in sex of any kind with a female before 18 years of age recorded an odds ratio of

4.098 indicating that women who engaged in this behavior during childhood or adolescence were four times more likely to engage in the same behavior as adults. (2) Women who experienced childhood crushes on females were three times more likely to engage in sex with women as adults with an odds ratio of 3.329. (3) Experiencing pre-pubertal crushes on females recorded an odds ratio of 23.900 indicating these women were almost 24 times more likely to engage sex with females as adults. (4) Women who experienced sexual coercion by a male recorded an odds ratio of 2.074, indicating they were two times as likely to engage in sex with females as adults. (5) Masturbating using images of adult females recorded and odds ratio of 1.682 making these women nearly two times more likely to engage in sex with women as adults. (6) Additionally, women who experienced pre-pubertal crushes on males were less likely (0.575 times) to engage in sex with females as adults.

Model 3 (to predict using a female fantasy partner while engaging in sex with a favorite partner during adulthood) was strongly statistically significant, x^2 (4, N=1281) = 129.641, $p<.001$. The model as a whole explained between 9.6 percent (Cox and Snell R square) and 20.1 percent (Nagelkerke R squared) of the variance in adult sexual behavior. Results are included in Table 4.

Four independent variables describing behaviors occurring before age 18 made a statistically significant contribution to predicting the outcome of using a female fantasy partner while engaging in sex with a favorite partner as an adult: (1) Engaging in sex of any kind with a female recorded an odds ratio of 3.399 indicating that women who engaged in this behavior during childhood and adolescence were nearly four times more likely to use a female fantasy partner while engaging in sex with a partner. (2) Women who experienced pre-pubertal crushes on males were .316 times less likely to use a female fantasy partner while engaging in sex with a

partner as adults. (3) Masturbating using images of females recorded an odds ratio of 2.795, making them almost three times more likely to use a female fantasy partner during sex with a partner as adults. (4) Additionally, experiencing crushes on females before puberty recorded an odds ratio of 6.408, making these women six times more likely to use a female fantasy partner while engaging in sex with a favorite partner during adulthood.

Model 4 (to predict using a female fantasy partner while masturbating during adulthood) was strongly statistically significant, x^2 (5, N=1281) = 182.354, $p<.001$. The model as a whole explained between 13.3 percent (Cox and Snell R square) and 25.4 percent (Nagelkerke R squared) of the variance in adult sexual behavior. Results are included in Table 4.

Five independent variables describing behaviors occurring before age 18 made a statistically significant contribution to the outcome of using a female fantasy partner while masturbating as an adult: (1) Women who viewed female images during masturbation before age 18 recorded an odds ratio of 3.828, making them nearly four times more likely to use a female fantasy partner while masturbating as adults. (2) Engaging in sex of any kind with a female before 18 recorded an odds ratio of 3.180, indicating that women who engaged in this behavior during childhood and adolescence were three times more likely to use a female fantasy partner during masturbation as adults. (3) Women who experienced post-pubertal crushes on males were .465 times less likely to use a female fantasy partner while masturbating during adulthood. (4) Experiencing crushes on females before puberty recorded an odds ratio of 11.279, making these women over 11 times more likely to use a female fantasy partner while masturbating during adulthood. (5) Furthermore, women who experienced childhood crushes on females were almost three times more likely to use a female partner during masturbation as adults, and recorded an odds ratio of 2.797.

Model 5 (to predict voyeuristic behavior directed at females) was strongly statistically significant, x^2 (6, N=1281) = 164.800, p<.001. The model as a whole explained between 12.1 percent (Cox and Snell R square) and 25.7 percent (Nagelkerke R squared) of the variance in adult sexual behavior. Results are included in Table 4.

Six independent variables describing behaviors occurring before age 18 made a statistically significant contribution to the outcome of voyeuristic behavior toward females as an adult. (1) Experiencing crushes on females during childhood recorded an odds ratio of 4.134, making these women over four times more likely to engage in voyeuristic behavior directed toward females during adulthood. (2) Women who viewed female images during masturbation before age 18 recorded an odds ratio of 2.938, making them nearly three times more likely to voyeuristic behavior toward females as adults. (3) Experiencing post-pubertal crushes on males indicated participants were .326 less likely to engage in voyeuristic behavior directed toward females as adults. (4) Engaging in sex of any kind with a male recorded an odds ratio of 2.152, indicating that women who engaged in this behavior during childhood and adolescence were two times more likely to engage in same-sex voyeurism as adults. (5) Additionally, women who engaged in sex with females recorded an odds ratio of 1.950, indicating these women were nearly two times more likely to engage in same-sex voyeurism during adulthood. (6) Finally, women who endorsed being fascinated with male genitals during childhood recorded and odds ratio of 1.823, indicating they were almost two times more likely to engage in same-sex voyeurism as adults.

Hypothesis 2 was evaluated using multiple logistic regressions to assess the predictive relationship between covert and overt sexual behaviors occurring in adulthood and self-identified adult sexual identity. The model contained five independent variables occurring post age 18: (1) using a female fantasy partner while engaging in sex with a favorite partner, (2) using a female

fantasy partner while masturbating, (3) voyeurism directed at females, (4) masturbating while viewing images of females, and (5) sex of any kind with adult females. All five independent variables were statistically tested on each of the three total dependent variables occurring in adulthood: (1) lesbian or bisexual identity, (2) lesbian, bisexual and questioning identity, and (3) questioning identity. The count and percentages for total number of female participants who endorsed the 5 outcomes for self-identified sexual identity are presented in Table 5. The score test (Hosmer & Lemeshow, 1989) results calculated prior to entering any predictors into the models and the corresponding *p*-values for all 5 variables evaluated as predictors for adult same-sex sexual activity are presented in Table 6.

Model 6 (to predict a lesbian or bisexual identity) was strongly statistically significant, x^2 (4, N=1086) = 175.374, $p<.001$. The model as a whole explained between 14.9 percent (Cox and Snell R square) and 44.2 percent (Nagelkerke R squared) of the variance in adult sexual identity.

Four independent variables describing behaviors occurring after age 18 made a statistically significant contribution to the outcome of self-identified lesbian or bisexual identity during adulthood. (1) Engaging in sex with an adult female recorded an odds ratio of 9.54 indicating that these women were over nine times more likely to identify as lesbian or bisexual. (2) Women who used a female fantasy partner while engaging in sex with a partner were nearly three times more likely to identify as lesbian or bisexual, recording an odds ratio of 2.70. (3) Engaging in same-sex voyeuristic behavior recorded an odds ratio of 5.21, indicating these women were over five times more likely to identify as lesbian or bisexual. (4) Additionally, women who reported using a female fantasy partner while masturbating were three times more likely to identify as lesbian or bisexual, recording an odds ratio of 3.05. Results are included in Table 7.

Model 7 (to predict a lesbian, bisexual, or questioning identity) was strongly statistically

significant, x^2 (5, N=1086) = 264.588, p<.001. The model as a whole explained between 21.6 percent (Cox and Snell R square) and 44.4 percent (Nagelkerke R squared) of the variance in adult sexual identity.

Five independent variables describing behaviors occurring after age 18 made a statistically significant contribution to the outcome of self-identified lesbian, bisexual or questioning identity during adulthood. (1) Engaging in sex with an adult female recorded an odds ratio of 8.20 indicating that these women were over eight times more likely to identify as lesbian, bisexual, or questioning. (2) Women who reported using a female fantasy partner during sex with a partner recorded an odds ratio of 3.31, indicating they were over three times more likely to report lesbian, bisexual, or questioning identities. (3) Women engaging in voyeuristic behavior directed at adult females were over five times more likely to identify as lesbian, bisexual, or questioning, recording an odds ratio of 5.12. (4) Women who reported using a female fantasy partner during masturbation recorded an odds ratio of 2.755, indicating they were nearly three times more likely to identify as lesbian, bisexual, or questioning. (5) Additionally, women who reported using female images during masturbation were nearly two times more likely to identify as lesbian, bisexual, or questioning, and recorded an odds ratio of 1.75. Results are included in Table 7.

Model 8 (to predict questioning identity) was strongly statistically significant, x^2 (4, N=1086) = 264.5105.566, p<.001. The model as a whole explained between 9.8 percent (Cox and Snell R square) and 28.3 percent (Nagelkerke R squared) of the variance in adult sexual identity.

Four independent variables describing behaviors occurring after age 18 made a statistically significant contribution to the outcome of self-identified questioning identity during adulthood. (1) Engaging in sex with an adult female recorded an odds ratio of 5.585, indicating that these

women were nearly six times more likely to identify as questioning. (2) Women who reported using female images during masturbation were over three times more likely to identify as questioning and recorded an odds ratio of 3.40. (3) Women who reported using a female fantasy partner during sex with a partner recorded an odds ratio of 4.07, indicating they were four times more likely to identify as questioning. (4) Additionally, engaging in voyeuristic behavior directed at females recorded an odds ratio of 3.35, indicating these women were over three times more likely to identify as questioning. Results are included in Table 7.

Male Same-Sex Relations

To evaluate Hypothesis 1, multiple logistic regressions were performed to assess the predictive relationship between covert and overt sexual behaviors occurring in childhood and adolescence, and covert and overt sexual behaviors in adulthood. Development of each model was based on statistical testing of 14 independent variables first occurring prior to age 18: 1) childhood crush on females, 2) childhood crush on males, 3) childhood fascination with female genitals, 4) childhood fascination with male genitals, 5) pre-pubertal crush on females, 6) pre-pubertal crush on males, 7) post-pubertal crush on females, 8) post-pubertal crush on males, 9) masturbating while viewing female images, 10) masturbating while viewing male images, 11) sex of any kind with a female, 12) sex of any kind with a male, 13) experiencing sexual coercion by a female, and 14) experiencing sexual coercion by a male. All 14 independent variables were statistically tested on each of the five total dependent variables occurring during adulthood: 1) masturbating while viewing male images, 2) sex of any kind with a male, 3) using a male fantasy partner while engaging in sex with a favorite partner, 4) using a male fantasy partner while masturbating, and 5) voyeurism directed at males. The count and percentages for total number of male participants who endorsed the 14 predictors are presented in Table 2. The score test

(Hosmer & Lemeshow, 1989) results calculated prior to entering any predictors into the models and the corresponding *p*-values for all 14 variables evaluated as predictors for adult same-sex sexual activity are presented in Table 8.

Model 9 (to predict engaging in sex with males occurring in adulthood) was strongly statistically significant, x^2 (6, N=804) = 268.726, $p < .001$. The model as a whole explained between 28.4 percent (Cox and Snell R square) and 60.7 percent (Nagelkerke R squared) of the variance in adult sexual behavior. Results are included in Table 9.

Six independent variables occurring before age 18 made a statistically significant contribution to the outcome of engaging in sex with men as an adult. (1) Men who experienced post-pubertal crushes on females were less likely (0.201 times less likely) to engage in sex with men during adulthood. (2) Men who engaged in sex of any kind with males during childhood and adolescence were over 13 times more likely to engage in the same behavior as adults, and recorded an odds ratio of 13.714. (3) Additionally, men who experienced pre-pubertal crushes on females were less likely (0.196 times less likely) to engage in sex with men as adults. (4) Experiencing crushes on males post-puberty and pre-adulthood recorded an odds ratio of 33.613 indicating that these men were over 33 times more likely to engage in sex with men as adults. (5) Men who experienced a pre-pubertal crush on males were .79 times less likely to engage in sex with men as adults. (6) Finally, experiencing sexual coercion by a male recorded an odds ratio of 3.163 indicating these men were over three times more likely to engage in sex with men as adults.

Model 10 (to predict viewing images of males during masturbation as an adult) was strongly statistically significant, x^2 (3, N=804) = 284.237, $p < .001$. The model as a whole explained between 29.8 percent (Cox and Snell R square) and 58.2 percent (Nagelkerke R

squared) of the variance in adult sexual behavior. Results are included in Table 9.

Three independent variables occurring before age 18 made a statistically significant contribution to the outcome of viewing images of males during masturbation as an adult. (1) Men who used images of males during masturbation before age 18 were over 22 times more likely to engage in the same behavior as adults, and recorded an odds ratio of 22.252. (2) Engaging in sex with males during childhood and adolescence recorded an odds ratio of 6.399, indicating these men were over six times more likely to use images of males during masturbation as adults. (3) Furthermore, men who experienced crushes on females between puberty and adulthood were .166 times less likely to use images of males during masturbation as adults.

Model 11 (to predict using a male fantasy partner while engaging in sex with a favorite partner) was strongly statistically significant, x^2 (5, N=804) = 255.424, p<.001. The model as a whole explained between 27.2 percent (Cox and Snell R square) and 69.3 percent (Nagelkerke R squared) of the variance in adult sexual behavior. Results are included in Table 9.

Five independent variables occurring before age 18 made a statistically significant contribution to the outcome of using a male fantasy partner while engaging in sex with a partner as an adult. (1) Men who experienced post-pubertal crushes on females recorded an odds ratio of .164, indicating they were .164 times less likely to use a male fantasy partner while engaging in sex with a partner. (2) Engaging in sex of any kind with a male before age 18 recorded an odds ratio of 12.110, indicating these men were over 12 times more likely to use a male fantasy partner while engaging in sex with a partner as adults. (3) Men who experienced pre-pubertal crushes on females were .078 times less likely to use male fantasy partners during sex with partners as adults, and (4) men who engaged in sex with females pre-adulthood were .177 times less likely to use a male fantasy partner while engaging in sex with partners during adulthood.

(5) Furthermore, men who experienced crushes on females as children were almost five times more likely to use a male fantasy partner during sex with a partner as adults, and recorded an odds ratio of 4.611.

Model 12 (to predict using a male fantasy partner during masturbation as adults) was strongly statistically significant, x^2 (6, N=804) = 336.200, $p < .001$. The model as a whole explained between 34.2 percent (Cox and Snell R square) and 78.9 percent (Nagelkerke R squared) of the variance in adult sexual behavior. Results are included in Table 9.

Six independent variables occurring before age 18 made a statistically significant contribution to the outcome of using a male fantasy partner while masturbating as an adult. (1) Men who experienced post-pubertal crushes on females were .032 time less likely to masturbate using male fantasy partners during adulthood. (2) Masturbating using images of males before age 18 recorded an odds ratio of 12.552, indicating that men who engaged in this behavior were over 12 times more likely to use a male fantasy partner during masturbation as adults. (3) Engaging in sex of any kind with a male before age 18 recorded an odds ratio of 9.229, indicating these men were over nine times more likely to use a male fantasy partner while masturbating as adults. (4) Additionally, men who viewed images of females during masturbation before age 18 were .284 times less likely to use male fantasy partners during masturbation as adults. (5) Men who reported being fascinated by female genitals as children were .168 times less likely to use male fantasy partners during masturbation as adults. (6) Finally, men who experienced post-pubertal crushes on males were almost nine times more likely to use a male fantasy partner while masturbating as adults, and recorded an odds ratio of 8.617.

Model 13 (to predict voyeuristic behavior toward males) was strongly statistically significant,

x^2 (4, N=804) = 267.243, $p < .001$. The model as a whole explained between 28.3 percent (Cox and Snell R square) and 61.6 percent (Nagelkerke R squared) of the variance in adult sexual behavior. Results are included in Table 9.

Four independent variables occurring before age 18 made a statistically significant contribution to the outcome of voyeurism directed toward males. (1) Masturbating while viewing images of males before age 18 recorded an odds ratio of 6.105, indicating these men were over six times more likely to engage in voyeuristic behavior toward males as adults. (2) Men who experienced crushes on females following puberty were .082 less likely to engage in voyeuristic behavior directed at males during adulthood. (3) Engaging in sex with males before age 18 recorded an odds ratio of 4.296 indicating these men were over four times more likely to engage in voyeuristic behavior toward males as adults. (4) Men who reported being fascinated with male genitals during childhood were over five times more likely to engage in voyeuristic behavior targeting males as adults, and recorded and odds ratio of 5.389.

Hypothesis 2 was evaluated using multiple logistic regressions to assess the predictive relationship between covert and overt sexual behaviors occurring in adulthood and self-identified adult sexual identity. The model contained five independent variables occurring post age 18: (1) using a male fantasy partner while engaging in sex with a partner, (2) using a male fantasy partner while masturbating, (3) voyeurism directed at males, (4) masturbating while viewing images of males, and (5) sex of any kind with males. All independent variables were statistically tested on each of the three total dependent variables occurring in adulthood: (1) gay or bisexual identity, (2) gay, bisexual and questioning identity, and (3) questioning identity. The count and percentages for total number of male participants who endorsed the 5 outcomes for self-identified sexual identity are presented in Table 5. The score test (Hosmer & Lemeshow, 1989)

results calculated prior to entering any predictors into the models and the corresponding *p*-values for all 5 variables evaluated as predictors for adult same-sex sexual activity are presented in Table 10.

Model 14 (to predict a gay or bisexual identity) was strongly statistically significant, x^2 (2, N=692) = 243.067, $p<.001$. The model as a whole explained between 29.6 percent (Cox and Snell R square) and 70.2 percent (Nagelkerke R squared) of the variance in adult sexual identity.

Two independent variables occurring post age 18 made a statistically significant contribution to the outcome of self-identified gay or bisexual identity during adulthood. (1) Men who reported using a male fantasy partner during masturbation were 28 times more likely to identify as gay or bisexual and recorded an odds ratio of 28.02. (2) Engaging in sex with an adult male recorded an odds ratio of 24.98 indicating that these men were nearly 25 times more likely to identify as gay or bisexual. Results are included in Table 11.

Model 15 (to predict a gay, bisexual, or questioning identity) was strongly statistically significant, x^2 (4, N=692) = 346.080, $p<.001$. The model as a whole explained between 39.4 percent (Cox and Snell R square) and 78.8 percent (Nagelkerke R squared) of the variance in adult sexual identity.

Four independent variables occurring post age 18 made a statistically significant contribution to the outcome of a gay, bisexual, or questioning identity during adulthood. (1) Men who used a male fantasy partner during masturbation were nearly 19 times more likely to identify as gay, bisexual, or questioning, and recorded an odds ratio of 18.97. (2) Engaging in sex with other men recorded an odds ratio of 31.00, indicating these men were 31 times more likely to identify as gay, bisexual, or questioning. (3) Engaging in voyeuristic behavior directed toward men recorded an odds ratio of 10.66, indicating that that these participants were over ten times more

likely to identify as gay, bisexual, or questioning. (4) Additionally, men who used images of adult males during masturbation were nearly seven times more likely to identify as gay, bisexual, or questioning. Results are included in Table 11.

Model 16 (to predict a questioning identity) was strongly statistically significant, x^2 (4, N=692) = 111.047, p<.001. The model as a whole explained between 16.0 percent (Cox and Snell R square) and 61.6 percent (Nagelkerke R squared) of the variance in adult sexual identity.

Four independent variables occurring post age 18 made a statistically significant contribution to the outcome of questioning identity during adulthood. (1) Men who used a male fantasy partner while masturbating were over seven times more likely to identify as questioning and recorded an odds ratio of 7.42. (2) Men who used male images during masturbation were over 13 times more likely to identify as questioning and recorded an odds ratio of 13.19. (3) Engaging in sex with other men recorded an odds ratio of 14.99, indicating these men were nearly 15 times more likely to identify as questioning. (4) Engaging in voyeuristic behavior directed toward other men recorded an odds ratio of 10.82, indicating these men were nearly 11 times more likely to identify as questioning. Results are included in Table 11.

Support for Hypotheses

Hypothesis 1 was strongly supported by each of the five total models for females, and was strongly supported by each of the five total models for males. Hypothesis 2 was strongly supported by each of the three total models for females, and was strongly supported by each of the three total models for males.

CHAPTER FIVE

DISCUSSION

The findings of this study were consistent with theories that assume classical conditioning occurring during childhood and adolescence significantly influences the construction and maintenance of same-sex sexual orientation (Kinsey et al., 1953; Van Wyk & Geist, 1984), and they were consistent with previous research that demonstrated classically conditioned overt and covert sexual behaviors perpetuate across the lifespan of both sexes (Beard et al., 2009; Bickham et al., 2007; O'Keefe et al., 2009; Stroebel et al., 2010; Swindell, 2011). Similarly, covert and overt behaviors occurring pre-adulthood that have been shown to be influenced by mechanisms of operant conditioning were also consistent with previous research, in that, masturbating using same-sex images or fantasy partner increased the likelihood of the behavior persisting during adulthood (Bickham et al., 2007; Cautela & Kearney, 1986; Kantorowitz, 1978a; McGuire, Carlisle, & Young, 1965), and experiencing same-sex sexual coercion decreased the likelihood of engaging in same-sex sexual behavior in the future (Both, Lann et al., 2008; Meiselman, 1979; Van Wyk & Geist, 1984) for both males and females.

Romantic Emotional Attachment

Sexual orientation. To date, there have been no empirical studies investigating the predictive power same-sex romantic emotional attachments, or crushes, occurring in childhood and adolescence have on adult same-sex sexual orientation. Although previous research identified the prevalence of same-sex romantic emotional attachment during childhood (Johnston & Bell, 1995) and adolescence (Billingham & Hockenberry, 1990; Johnston & Bell, 1995) in gay men and during adolescence in bisexual and lesbian women (Diamond, 2002), the data provided no insight into how pre-adulthood same-sex crushes influenced adult sexual orientation. The

results of the current study confirmed the experience of same-sex crushes in men and women during childhood and adolescence and demonstrated that these behaviors significantly increased the likelihood of engaging in several covert and overt same-sex sexual behaviors during adulthood. Specifically, same-sex crushes occurring in childhood and pre-puberty significantly increased the likelihood of engaging in masturbation using a same-sex fantasy partner, using a same-sex fantasy partner during sex with a partner, engaging in sex of any kind with a same-sex partner, and engaging in voyeuristic behavior toward individuals of the same-sex in women, and same-sex crushes occurring post-puberty increased the likelihood of engaging in sex of any kind with a same-sex partner and masturbation using a same-sex fantasy partner in men.

In women, experiencing childhood crushes on females was the strongest predictor of voyeuristic behavior directed at females, the second strongest predictor for engaging in sex with an adult female, and the fifth strongest predictor of using a female fantasy partner during masturbation. Experiencing pre-pubertal crushes on other females was the third strongest predictors for engaging in sex with females during adulthood, the fourth strongest predictor of using a female fantasy partner during masturbation, and the fourth strongest predictor of using a female fantasy partner during sex with a partner. In men, experiencing same-sex post-pubertal crushes was the fourth strongest predictor of engaging in sex with other men, and it was the sixth strongest predictor for using a male fantasy partner while masturbating during adulthood. While experiencing opposite-sex crushes during childhood and adolescence significantly decreased the likelihood of using a same-sex fantasy partner during sex with a partner, experiencing a same-sex crush pre-adulthood failed to demonstrate a predictive in men. Instead, engaging in sex with a male partner significantly increased the likelihood of using a male fantasy partner during sex with a favorite partner during adulthood.

Based on the predictive influence romantic emotional attachment to males had on engaging in sex with same-sex partners and using same-sex fantasy partners during adulthood in men and women, it is plausible that experiencing romantic emotional attachment toward other males actually had an influence on having sex with other males pre-adulthood. Although this potential influence was outside of the measurable scope of this study, given the current findings on romantic emotional attachment and sexual fantasy, it is likely that same-sex romantic emotional attachment is what motivated these males to engage in sex with other males pre-adulthood, which explains why that behavior was the second strongest predictor for using a male fantasy partner while engaging in sex with a partner during adulthood. Largely, the data indicated that, for same-sex oriented women and men, emotion does, in fact, matter.

Collectively, romantic emotional attachment most heavily influenced engaging in same-sex behaviors involving a same-sex partner and those involving fantasy in both women and men. Results regarding romantic emotional attachment can be explained by mechanisms of classical conditioning. Emotion has been consistently demonstrated to be a non-volitional response to another stimulus, such as a thought, sight, or sound (Suchy, 2011). In this case, romantic emotion (unconditioned stimulus) is experienced in response to the same-sex target of affection (neutral stimulus) in early pairings occurring during childhood and adolescence. After several pairings of the emotional experience with the same-sex target of affection, the individual experiencing romantic emotional attachment becomes conditioned to the same-sex target (conditioned stimulus), thus, making the individual more likely to experience romantic emotional attachment with individuals of the same-sex in the future, both pre and post-adulthood. This interpretation of psychological mechanisms responsible for the persistence of covert sexual behaviors across the lifespan is consistent with that of previous research examining other covert

and overt sexual behaviors (Beard et al., 2009; Bickham et al., 2007).

Additionally, the results of this study provide explanation for previous research findings. Cautela and Kearney (1986) demonstrated that engaging in sexual fantasy initiates and intensifies sexual arousal. Based on the observed influence romantic emotional attachment has on engaging in sexual fantasies, it is plausible that one reason that sexual fantasy assists in initiating and intensifying sexual arousal is because these fantasies include both emotionally and visually stimulating content, whereas viewing same-sex erotic images provides visual material absent of emotion. Incorporating romantic emotion into sexual fantasy content appears to increase the erotic potency of the fantasy and provide a greater intensity of sexual arousal, in addition to assisting in initiating sexual arousal in the first place. Overall, these results provide evidence that romantic emotional attachment which begins as early as childhood and continues through adolescence, plays a major role in the construction of same-sex sexual orientation and demonstrates strikingly similar effects on same-sex sexual behavior in adult women and men.

Sexual identity. Romantic emotional attachment was also shown to influence self-identified sexual identity. An equal proportion of men and women endorsed identifying as lesbian, gay, bisexual or questioning, however the distribution of identity in males and females differed. A higher proportion of men identified as gay or bisexual than did women, and a larger percentage of women identified as questioning. In fact, equally as many women identified as questioning as lesbian or bisexual. This finding was consistent with previous research that demonstrated women have a greater degree of erotic plasticity (Baumeister, 2000; Diamond, 2005) and experience more variation over time (Diamond, 2005; Diamond, 2008) than men. The experience of a greater degree of erotic plasticity (i.e., engaging in covert and overt same and opposite sex sexual behavior) is likely prompting these women to question which sexual identity

is most accurate and comfortable for them at any given time (Diamond, 2000b).

An analysis of adult same-sex sexual behaviors revealed differences in predictors of sexual identity for lesbian, bisexual, and questioning women. Specifically, women who identified as lesbian or bisexual endorsed all predictors influenced by romantic emotional attachment (i.e., female fantasy partner while masturbating, female fantasy partner during sex with a partner, and engaging in sex with a female), whereas women questioning their sexual identity endorsed only two (i.e., female fantasy partner during sex with a partner and sex with a female). In absence of the other variable linked to romantic emotional attachment, questioning women endorsed a variable that has not been shown to be influenced by romantic emotional attachment (i.e., masturbation using female images). Similar to the questioning women, men identifying as questioning endorsed two sexual behaviors influenced by romantic emotional attachment (i.e., male fantasy partner while masturbating and sex with males) and the same predictor that was not influenced by romantic attachment (i.e., masturbation using male images) in women or men. Men identifying as gay or bisexual endorsed one predictor demonstrated to be directly influenced by romantic emotional attachment (i.e., sex with males) and one behavior that was not shown to be significantly influenced by romantic emotional attachment in same-sex oriented men (i.e., male fantasy partner during sex with partner). However, as aforementioned, it is likely that the second strongest predictor (engaging in sex with males pre-adulthood) for the latter sexual behavior is, in fact, influenced by romantic emotional attachment occurring during childhood.

Collectively, the results of this study demonstrate romantic emotional attachment as having a strong influence on self-identified sexual identity in lesbian, gay, and bisexual women and men. Women certain in their lesbian or bisexual identity endorsed all adult sexual behaviors

that were demonstrated to be influenced by romantic emotional attachment, and gay and bisexual men endorsed two of three. Both women and men identifying as questioning endorsed two same-sex sexual behaviors influenced by romantic emotional attachment, and the same single behavior (masturbating while viewing same-sex images) that has no emotional influence. Thus, it appears that the presence of a non-emotional same-sex sexual behavior predicts ambivalence concerning sexual identity in men and women, despite the presence of two same-sex sexual behaviors involving romantic emotional attachment.

Sexual orientation vs. sexual identity. Seventy-one percent of men and 50 percent of women with same-sex sexual behavioral orientations identified with sexual identities consistent with their orientations. The remaining 29 percent of men and 50 percent of women endorsed the identity of questioning, despite having behavioral same-sex sexual orientations. This finding indicated that selection of a particular sexual identity, such as straight, gay, or bisexual is self-assigned and purely volitional and may, or may not, be reflective of an individual's sexual orientation manifest in sexual behavior. However, same-sex sexual orientations for these individuals persist, despite how they choose to identify themselves (i.e., straight, lesbian, gay, bisexual, or questioning), and sexual orientation has been consistently demonstrated to be inflexible and unchangeable in gay, lesbian, and bisexual men and women (Cramer, Golom, LoPresto, & Kirkley, 2008; Diamond, 2008). This finding was further confirmed by the results of this study, in that, men and women who engaged in same-sex sexual behaviors during childhood and adolescence were significantly more likely to demonstrate same-sex sexual orientations manifested in same-sex adult sexual behavior. Furthermore, this study demonstrated that the construction and perpetuation of same-sex sexual orientations is, in part, explained by psychological mechanisms of classical and operant conditioning that influence covert and overt

sexual arousal and response behaviors. Although the influence biological mechanisms have cannot be denied, psychological mechanisms of conditioning contribute significantly to the unchangeable nature of same-sex sexual orientation.

So how can the scenario of a woman who was in engaged in a romantic relationship with a man for several years, who then became romantically involved with another woman, be explained? The scientific literature would hypothesize that the behavior of switching from a male to a female partner was not indicative of rebelling, going through a phase, or experiencing a drastic change in her sexual orientation. The empirical evidence from this study suggests that she did not, in fact, experience a drastic change in sexual orientation, and our data support the likelihood that she was behaviorally sexually-oriented as bisexual all along. Such a person would be likely to assign a straight sexual identity to herself while in relationship with a man, despite knowing that she was engaging in covert and overt same-sex sexual behaviors throughout the relationship. Based on the results of this study, such a person is equally as likely to identify as lesbian or bisexual in terms of identity as she is to identify as questioning, despite the fact that she is living with, romantically attached to, and engaging in sexual behavior with a same-sex partner.

It is important to identify the differences in nature and meaning between sexual orientation and sexual identity as these phenomena have marked implications for several facets of modern society including scientific and clinical practice, social attitudes, and public policy. Whereas sexual identity is a classification that an individual chooses at any given time, sexual orientation is not. It should be noted that although psychological mechanisms of conditioning have been demonstrated to influence sexual orientation, conditioning does not imply choice. In fact, especially in the case of romantic emotional attachment, it implies the opposite. This study

identified a non-volitional, psychological construct (romantic emotional attachment), occurring as early as childhood, as having a strong influence on adult same-sex sexual orientation. These results provide evidence to support the contention "you don't choose who you love."

Limitations of the Study

This study presents with several methodological limitations. Volunteer bias has been demonstrated as being problematic in human sexuality research because volunteers have more diverse sexual histories, maintain more liberal attitudes toward sexuality, and present with greater potentials for interpersonal exploitation and greater capacities for self-monitoring of sexually expressive behavior (Wiederman, 1999). The entire sample consisted of volunteers and, as such, presents with the potential for bias due to self-selection. The overall sample had higher education levels than those represented in the general population, and the majority of participants were college students who received extra credit in helping profession (psychology, nursing, counseling, etc.) courses for their participation. Additionally, the sample was not national or international and was restricted to participants living in the mid-Atlantic geographic region of the United States of America; however, international students attending the universities where data were collected were permitted to participate. Although there was ample sample size for straight men and women, sample sizes for gay, lesbian, and bisexual women and men were limited. Data were collected retrospectively and relied on participant self-report, which increases the risk of erroneous endorsement of items and item content due to memory loss or creation of false memories prompted by the item stimulus. Phrasing and word choice used in items, in addition to operational definitions, could have produced a potential for erroneous responses as well. Participants who encountered words or phrases they were unfamiliar with, and did not seek assistance for clarification, likely assigned their own interpretation to the item content and likely

endorsed items in an erroneous manner. Finally, the study was correlative in nature and data interpretation was based on the principle of Occam's Razor. As such, predictive effects observed in overt and covert sexual behaviors occurring during childhood and adolescence were attributed to conditioning, whereas biological, genetic, or endocrine factors could have provided a causal link to the contribution these behaviors made on sexual behaviors occurring in adulthood.

Implications for Future Research

This is the first study, to date, to examine the influence romantic emotional attachment occurring in childhood and adolescence has on adult sexual orientation and sexual identity. As such, its replication is warranted. Methodological limitations of the study can be improved by using a nationwide sample including a larger proportion of sexual minorities and encompassing a range of age, education, ethnic, racial, cultural, and geographic backgrounds. Additionally, modification to the survey should be made so that the predictive influence overt and covert sexual behaviors occurring in childhood may have on pre-pubertal sexual behaviors, and the influence that pre-pubertal sexual behaviors have on post-pubertal behaviors, can be examined. This data would provide more detailed and precise information regarding the predictive influence romantic emotional attachment has, or does not have, at each developmental stage. This study included only participants who endorsed having crushes solely on one sex or the other. Future research could examine how including several more inclusive crush variables (i.e., including participants who responded to the "mostly males but some females" into the "only males" crush variable) might impact the predictive influence of romantic emotional attachment on adult sexual orientation and sexual identity. Post-hoc multiple logistic regression analyses including these variables for crush are listed in Tables 12, 13, 15, 16, and 17 for both males and females. Data regarding the number of male and female participants who endorsed crush predictors are

included in Table 12. Data for males and females regarding how much of the time these individuals reported experiencing crushes are included in Table 14.

Implications for Clinical Practice

Human sexuality is a central piece of the human experience and can affect nearly every aspect of functioning including physical, reproductive, interpersonal, intrapersonal, cognitive, emotional, behavioral, social, occupational, and economic functioning, either directly or indirectly (Laumann et al., 2000; Rathus et al., 2010). Scientific examination of the etiology of minority sexual orientations (i.e., lesbian, gay, and bisexual) is particularly critical to the discipline of clinical psychology as it informs ethical, beneficent, and non-maleficent clinical practice (*APA Task Force,* 2009). Not until a body of empirical data demonstrated homosexuality to be a normal variation of human sexual orientation that a decision was made by the American Psychiatric Association in 1973 to remove the diagnosis of "Homosexuality" from the *Diagnostic and Statistical Manual of Mental Disorders, Second Edition* (American Psychiatric Association, 1973). The American Psychological Association supported the American Psychiatric Association's decision to remove homosexuality from the list of mental disorders and adopted the following resolution: "Homosexuality per se implies no impairment in judgment, stability, reliability, or general social and vocational abilities; further, the American Psychological Association urges all mental health professionals to take the lead in removing the stigma of mental illness that has long been associated with homosexual orientations" (Conger, 1975, p. 633). Despite the removal of "Homosexuality" from the DSM-II some mental health professionals continue to conduct treatments, known as conversion, reparative, or reorientation therapies, that aim to alter a patient's homosexual or bisexual orientation to a heterosexual orientation using a variety of different modalities and techniques (Cramer et al., 2008). An

empirical assessment of all available studies of these "therapies" concluded that these interventions are not empirically supported, and, in fact, are lacking in empirical bases, are inefficacious, and pose a host of ethical concerns for mental health professionals (Cramer et al., 2008). The belief, and accompanying hope, that sexual orientation could be altered coupled with the failure of treatment to provide such a result were demonstrated to be significant causes of psychological distress and negative self-image among patients (Beckstead & Morrow, 2004; Shidlo & Schroeder, 2002). Not only did these efforts fail to produce an alteration in sexual orientation, they also exacerbated psychological distress and depression (Beckstead & Morrow, 2004; Shidlo & Schroeder, 2002) in a population already at greater risk for developing depression, anxiety, and substance abuse/dependence disorders and suicide (Cochran, Sullivan, & Mays, 2003; Meyer, 2003). A lack of empirical evidence and understanding of the etiology and nature of sexual orientation permitted mental health professionals to continue to inflict harm upon the lesbian, gay, and bisexual population for over 30 years after the declassification of homosexuality as a mental disorder. Research examining biological and psychological variables contributing to the construction of human sexual orientation must continue because these findings are imperative to scientifically informed and ethical clinical practice.

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Table 1

Demographic data

Variables	Female		Male		U or X^2	p-value
		n		*n*		
Age					472.168	.036
Mean ± SD	25.1 ±9	1281	26.1±11	804		
Median	21	1281	21	804		
Range	18-78	1281	18-84	804		
	%	*n*	%	*n*		
Marital Status	--------	555	---------	335		
Married at least once	20.1	257	18.8	151	.437	*ns*
Divorced at least once	8.3	106	8.7	70	.070	*ns*
Currently Married	15.0	192	14.2	114	.198	*ns*
Education		1281		804	24.521	<.001
High school graduate or less	3.7	47	6.7	54		
Some college	68.9	882	70.3	565		
Bachelor's degree	20.5	262	15.7	126		
Master's degree	5.6	72	4.2	34		
Doctoral degree	1.4	18	3.1	25		
Living Arrangements						
Living with a male	25.5	327	2.6	21	184.895	<.001
Living with a female	2.3	29	21.6	174	208.863	<.001

Table 2

Total female and male participants who endorsed predictors

Behavior	Female		Male			
	n	%	*n*	%	X^2	*p*-value
Childhood crush on females	49	3.8	563	70.0	1040.736	<.001
Childhood crush on males	869	67.8	36	4.5	804.679	<.001
Childhood fascination with female genitals	58	4.5	344	42.8	462.118	<.001
Childhood fascination with male genitals	169	13.2	51	6.3	23.834	<.001
Pre-pubertal crush on females	9	0.7	688	85.6	1594.984	<.001
Pre-pubertal crush on males	1109	86.6	28	3.5	1372.099	<.001
Post-pubertal/pre-adulthood crush on females	13	1.0	693	86.2	1596.528	<.001
Post-pubertal/pre-adulthood crush on males	1118	87.3	33	4.1	1378.403	<.001
Masturbation using female images pre-adulthood	179	14.0	658	81.8	944.053	<.001
Masturbation using male images pre-adulthood	268	20.9	83	10.3	38.873	<.001
Sex of any kind with female pre-adulthood	260	20.3	412	51.2	215.177	<.001
Sex of any kind with male pre-adulthood	698	54.5	105	13.1	356.280	<.001
Experienced sexual coercion by a female pre-adulthood	41	3.2	59	7.3	17.626	<.001
Experienced sexual coercion by a male pre-adulthood	231	18.0	41	5.1	71.703	<.001
Female fantasy partner during sex with partner as adult	129	10.1	550	68.4	762.863	<.001
Male fantasy partner during sex with partner as adult	679	53.0	55	6.8	459.486	<.001
Female fantasy partner during masturbation as adult	156	12.2	687	85.4	1098.022	<.001
Male fantasy partner during masturbation as adult	728	56.8	66	8.2	493.189	<.001
Voyeurism directed at females as an adult	124	9.7	418	52.0	457.461	<.001
Voyeurism directed at males as an adult	307	24.0	74	9.2	71.090	<.001
Masturbation using female images post-adulthood	221	17.3	602	74.9	684.107	<.001
Masturbation using male images post-adulthood	282	22.0	93	11.6	35.843	<.001
Sex of any kind with female post-adulthood	173	13.5	631	78.5	877.563	<.001
Sex of any kind with male post-adulthood	1082	84.5	77	9.6	1119.098	<.001

Table 3

Evaluations (at step 0) of 14 possible statistical predictors for participating in same-sex behaviors during adulthood in 1281 females

Behaviors	Masturbation while viewing images of adult female		Sex with adult female		Female fantasy partner while engaging in sex with partner		Female fantasy partner while masturbating		Voyeurism directed at adult females	
	Score test	*p*	Score test	*p*	Score test	*p*	Score test	*p*	Score test	*p*
Childhood crush on females	35.926	< .001	83.056	<.001	53.183	<.001	79.624	< .001	109.669	< .001
Childhood crush on males	1.256	*ns*	.880	*ns*	3.574	*ns*	1.136	*ns*	1.938	*ns*
Childhood fascination with female genitals	40.958	< .001	22.886	<.001	24.833	<.001	28.260	< .001	69.822	< .001
Childhood fascination with male genitals	24.917	< .001	8.652	.003	6.071	.014	1.245	*ns*	27.092	< .001
Pre-pubertal crush on females	4.695	.030	44.093	<.001	32.058	<.001	36.470	< .001	5.800	.016
Pre-pubertal crush on males	25.597	< .001	50.956	<.001	69.796	<.001	42.624	< .001	28.762	< .001
Post-pubertal crush on females	.312	*ns*	56.853	<.001	38.416	<.001	29.919	< .001	2.696	*ns*
Post-pubertal crush on males	56.517	< .001	111.199	<.001	121.632	<.001	100.740	< .001	105.487	< .001
Masturbated while viewing female images pre-adulthood	429.062	< .001	40.007	<.001	64.427	<.001	113.326	< .001	89.297	< .001
Masturbated while viewing male images pre-adulthood	189.729	< .001	14.287	<.001	8.821	.003	26.187	< .001	26.259	< .001
Sex of any kind with female	106.552	< .001	124.451	<.001	84.479	<.001	109.830	< .001	74.877	< .001
Sex of any kind with male	16.773	< .001	6.672	.010	.478	*ns*	1.441	*ns*	18.121	< .001
Sexual coercion by female	11.090	.001	1.308	*ns*	.005	*ns*	5.906	.015	18.589	< .001
Sexual coercion by male	25.294	< .001	32.481	<.001	3.492	*ns*	8.178	.004	5.613	.018

Table 4

Multiple logistic regression equations for predicting sexual behaviors in adult females

	B	SE	Wald	*p*	Exp(*B*)
Model # 1: Masturbation while viewing female images (Nagelkerke R^2 = .424)					
Masturbation using images of adult females before age 18	2.667	.245	118.885	<.001	14.403
Sex with female before age 18	.948	.203	21.734	<.001	2.580
Experienced sexual coercion by a male before age 18	.677	.217	9.744	.002	1.967
Masturbation using images of adult males before age 18	.687	.234	8.651	.003	1.988
Pre-pubertal crush on males	-.535	.250	4.595	.032	.585
Constant	- 2.397	.252	90.489	<.001	.091
Model # 2: Sex with adult female (Nagelkerke R^2 = .230)					
Sex with female before age 18	1.411	.191	54.484	<.001	4.098
Childhood crush on females	1.203	.376	10.226	.001	3.329
Pre-pubertal crush on females	3.174	1.141	7.731	.005	23.900
Experienced sexual coercion by a male before age 18	.729	.202	12.989	<.001	2.074
Masturbation using images of adult females before age 18	.520	.223	5.429	.020	1.682
Pre-pubertal crush on males	-.553	.248	4.954	.026	.575
Constant	-2.230	.252	78.204	<.001	.108
Model # 3: Female fantasy partner while engaging in sex with partner (Nagelkerke R^2 = .201)					
Sex with female before age 18	1.223	.212	33.405	<.001	3.399
Pre-pubertal crush on males	-1.151	.230	24.993	<.001	.316
Masturbation using images of adult females before age 18	1.028	.229	20.086	<.001	2.795
Pre-pubertal crush on females	1.858	.787	5.568	.018	6.408
Constant	-1.932	.229	71.217	<.001	.145
Model # 4: Female fantasy partner while masturbating (Nagelkerke R^2 = .254)					
Masturbation using images of adult females before age 18	1.342	.215	38.988	<.001	3.828
Sex with female before age 18	1.157	.204	32.019	<.001	3.180
Post-pubertal crush on males	-.766	.254	9.062	.003	.465
Pre-pubertal crush on females	2.423	.897	7.296	.007	11.279

Childhood crush on females	1.028	.385	7.122	.008	2.797
Constant	-2.135	.266	64.571	<.001	.118
Model # 5: Voyeurism directed at adult females (Nagelkerke R^2 = .257)					
Childhood crush on females	1.419	.379	14.013	<.001	4.134
Masturbation using images of adult females before age 18	1.078	.241	19.994	<.001	2.938
Post-pubertal crush on males	-1.121	.266	17.685	<.001	.326
Sex with male before age 18	.766	.237	10.482	.001	2.152
Sex with female before age 18	.668	.235	8.069	.005	1.950
Childhood fascination with male genitals	.600	.257	5.438	.020	1.823
Constant	-2.532	.304	69.575	<.001	.080

Table 5

Responses of 1086 females and 692 males for self-identified sexual identity in adults

Self-Identified Sexual Identity	Females		Males	
	Count	%	Count	%
Straight and out to friends and family	959	88.3	606	87.6
Lesbian, Gay or Bisexual and out to friends and family	25	2.3	35	5.1
Lesbian, Gay or Bisexual and closeted	32	2.9	19	2.7
Questioning whether or not they are Straight, Lesbian, Gay or Bisexual	56	5.2	22	3.2
Asexual	14	1.3	10	1.4

Table 6

Evaluations (at step 0) of statistical predictors for self-identified sexual identity in 1086 adult females

Behaviors	Lesbian or Bisexual Identity-Out and Closeted (N=57)		Lesbian, Bisexual, or Questioning Identity-Out and Closeted (N=113)		Questioning Sexual Identity (N=56)	
	Score test	*p*	Score test	*p*	Score test	*p*
Female fantasy partner during sex with partner	139.491	< .001	184.138	< .001	73.600	< .001
Female fantasy partner while masturbating	125.698	< .001	168.992	< .001	65.910	< .001
Sex with adult female	191.522	< .001	236.241	< .001	84.993	< .001
Masturbation using female images	29.028	< .001	90.726	< .001	69.357	< .001
Voyeurism directed at females	133.905	< .001	155.922	<.001	50.728	< .001

Table 7

Multiple logistic regression equations for predicting sexual identity in 1086 adult females

	B	SE	Wald	*p*	Exp(*B*)
Model # 6: Lesbian or Bisexual - Out and Closeted (Nagelkerke R^2 = .442)					
Sex of any kind with adult female	2.256	.347	42.151	<.001	9.540
Female fantasy partner while engaging in sex with a partner	.995	.457	4.751	.029	2.706
Voyeurism directed at adult females	1.652	.358	21.343	<.001	5.215
Female fantasy partner while masturbating	1.115	.445	6.273	.012	3.050
Constant	- 4.629	.295	246.735	<.001	.010
Model # 7: Lesbian, Bisexual or Questioning – Out and Closeted (Nagelkerke R^2 = .444)					
Sex of any kind with adult female	2.104	.265	63.054	<.001	8.201
Female fantasy partner while engaging in sex with a partner	1.197	.362	10.931	.001	3.310
Voyeurism directed at adult females	1.633	.305	28.613	<.001	5.120
Female fantasy partner while masturbating	1.013	.350	8.372	.004	2.755
Masturbation using female images	.564	.282	4.013	.045	1.758
Constant	- 3.623	.196	340.176	<.001	.027
Model # 8: Questioning (Nagelkerke R^2 = .283)					
Sex of any kind with adult female	1.720	.332	26.858	<.001	5.585
Masturbation using female images	1.225	.330	13.789	<.001	3.404
Female fantasy partner while engaging in sex with a partner	1.405	.362	15.061	<.001	4.075
Voyeurism directed at adult females	1.210	.381	10.068	.002	3.354
Constant	-3.997	.238	281.560	<.001	.018

Table 8

Evaluations (at step 0) of 14 possible statistical predictors for participating in same-sex behaviors during adulthood in 804 males

Behaviors	Masturbation while viewing male images		Sex with adult male		Male fantasy partner while engaging in sex with partner		Male fantasy partner while masturbating		Voyeurism directed at adult males	
	Score test	*p*	Score test	*p*	Score test	*p*	Score test	*p*	Score test	*p*
Childhood crush on females	25.847	< .001	45.968	<.001	55.875	<.001	62.610	< .001	36.920	< .001
Childhood crush on males	148.247	< .001	170.788	<.001	252.798	<.001	242.069	< .001	195.233	< .001
Childhood fascination with female genitals	6.906	.009	14.917	<.001	16.838	<.001	27.620	< .001	13.070	< .001
Childhood fascination with male genitals	161.617	< .001	129.179	<.001	181.597	<.001	214.937	< .001	245.529	< .001
Pre-pubertal crush on females	154.300	< .001	214.003	<.001	279.713	<.001	288.808	< .001	226.262	< .001
Pre-pubertal crush on males	78.820	< .001	100.265	<.001	211.480	<.001	190.610	< .001	134.411	< .001
Post-pubertal crush on females	208.390	< .001	227.015	<.001	281.196	<.001	359.206	< .001	273.744	< .001
Post-pubertal crush on males	138.617	< .001	190.349	<.001	279.518	<.001	312.349	< .001	166.165	< .001
Masturbated while viewing female images pre-adulthood	12.002	.001	24.794	<.001	52.595	<.001	53.830	< .001	21.237	< .001
Masturbated while viewing male images pre-adulthood	360.622	< .001	179.883	<.001	206.830	<.001	302.458	< .001	288.487	< .001
Sex of any kind with female	2.853	*ns*	3.197	*ns*	18.010	<.001	14.512	< .001	4.740	.029
Sex of any kind with male	170.100	< .001	222.544	<.001	133.010	<.001	161.991	< .001	145.670	< .001
Sexual coercion by female	1.427	*ns*	.385	*ns*	1.190	*ns*	.173	*ns*	.448	*ns*
Sexual coercion by male	44.160	< .001	76.674	<.001	27.086	<.001	38.573	< .001	45.973	< .001

Table 9

Multiple logistic regression equations for predicting sexual behaviors in adult males

	B	SE	Wald	*p*	Exp(*B*)
Model # 9: Sex with adult male (Nagelkerke R^2 = .607)					
Post-pubertal crush on females	-1.602	.503	10.145	.001	.201
Sex with male before age 18	2.618	.397	43.455	<.001	13.714
Pre-pubertal crush on females	-1.631	.493	10.962	.001	.196
Post-pubertal crush on males	3.515	1.241	8.026	.005	33.613
Pre-pubertal crush on males	-2.543	1.247	4.157	.041	.079
Experienced sexual coercion by a male before age 18	1.152	.514	5.020	.025	3.163
Constant	-1.201	.358	11.245	.001	.301
Model # 10: Masturbation while viewing adult male images (Nagelkerke R^2 = .582)					
Masturbation using images of adult males before age 18	3.102	.362	73.501	<.001	22.252
Sex with male before age 18	1.856	.354	27.519	<.001	6.399
Post-pubertal crush on females	-1.795	.350	26.260	<.001	.166
Constant	-1.955	.336	33.848	<.001	.142
Model # 11: Male fantasy partner while engaging in sex with a partner (Nagelkerke R^2 = .693)					
Post-pubertal crush on females	-1.806	.659	7.500	.006	.164
Sex with male before age 18	2.494	.522	22.838	<.001	12.110
Pre-pubertal crush on females	-2.547	.697	13.348	<.001	.078
Sex with female before age 18	-1.731	.574	9.905	.003	.177
Childhood crush on females	1.528	.551	7.685	.006	4.611
Constant	-.819	.351	5.444	.020	.441
Model # 12: Male fantasy partner while masturbating (Nagelkerke R^2 = .789)					
Post-pubertal crush on females	-3.440	.578	35.581	<.001	.032
Masturbation using images of adult males before age 18	2.530	.599	17.814	<.001	12.552
Sex with male before age 18	2.222	.572	15.070	<.001	9.229
Masturbation using images of adult females before age 18	-1.260	.630	4.001	.045	.284
Childhood fascination with female genitals	-1.781	.657	7.338	.007	.168

Post-pubertal crush on males	2.154	.847	6.462	.011	8.617
Constant	-.866	.525	2.848	.091	.412
Model # 13: Voyeurism directed at adult males (Nagelkerke R^2 = .616)					
Masturbation using images of adult males before age 18	1.809	.419	18.618	<.001	6.105
Post-pubertal crush on females	-2.501	.380	43.259	<.001	.082
Sex with male before age 18	1.458	.405	12.928	<.001	4.296
Childhood fascination with male genitals	1.684	.484	12.133	<.001	5.389
Constant	-1.844	.366	30.200	<.001	.158

Table 10

Evaluations (at step 0) of statistical predictors for self-identified sexual identity in 692 adult males

Behaviors	Gay or Bisexual Identity-Out and Closeted (N=54)		Gay, Bisexual, or Questioning Identity-Out and Closeted (N=76)		Questioning Sexual Identity (N=22)	
	Score test	*p*	Score test	*p*	Score test	*p*
Male fantasy partner during sex with partner	390.455	< .001	3.79.924	< .001	135.150	< .001
Male fantasy partner while masturbating	399.716	< .001	464.765	< .001	270.378	< .001
Masturbation using male images	237.330	< .001	336.068	< .001	176.177	< .001
Sex with male	376.247	< .001	381.392	< .001	107.073	< .001
Voyeurism directed at males	255.886	< .001	349.531	< .001	198.397	< .001

Table 11

Multiple logistic regression equations for predicting sexual identity in 692 adult males

	B	SE	Wald	*p*	Exp(*B*)
Model # 14: Gay or Bisexual - Out and Closeted (Nagelkerke R^2 = .702)					
Male fantasy partner while masturbating	3.333	.541	37.975	<.001	28.025
Sex of any kind with adult male	3.218	.537	35.966	<.001	24.981
Constant	- 4.571	.372	150.807	<.001	.010
Model # 15: Gay, Bisexual or Questioning – Out and Closeted (Nagelkerke R^2 = .788)					
Male fantasy partner while masturbating	2.943	.807	13.310	<.001	18.970
Sex of any kind with adult male	3.434	.608	31.910	<.001	31.001
Voyeurism directed at adult males	2.367	.698	11.502	.001	10.667
Masturbation using male images	1.908	.592	10.403	.001	6.742
Constant	- 4.444	.362	151.007	<.001	.012
Model # 16: Questioning (Nagelkerke R^2 = .616)					
Male fantasy partner while masturbating	2.004	.961	4.350	.037	7.420
Masturbation using male images	2.580	.699	13.603	<.001	13.192
Sex of any kind with adult male	2.707	.837	10.458	.001	14.990
Voyeurism directed at adult males	2.382	.853	7.794	.005	10.829
Constant	- 5.184	.512	102.349	<.001	.006

Table 12

Total number of females and males who endorsed crush predictors

Age and target (s) of crush	Females		Males	
	Count	%	Count	%
Always had crushes on males in childhood	869	67.8	36	4.5
Always had crushes on females in childhood	49	3.8	563	70.0
Pre-pubertal crush - only males	1109	86.6	28	3.5
Pre-pubertal crush - only females	9	0.7	688	85.6
Pre-pubertal crush - mostly males some females	61	4.8	20	2.5
Pre-pubertal crush - mostly females some males	21	1.6	30	3.7
Never had a crush pre-puberty	81	6.3	38	4.7
Post-pubertal crush - only males	1118	87.3	33	4.1
Post-pubertal crush - only females	13	1.0	693	86.2
Post-pubertal crush - mostly males some females	85	6.6	19	2.4
Post-pubertal crush - mostly females some males	25	2.0	34	4.2
Never had a crush post-puberty	40	3.1	25	3.1

Table 13

Total number of combined crush predictors for females and males

Age and target (s) of crush	Females		Males	
	Count	%	Count	%
Pre-pubertal crush - only males / mostly males some females (combined)	1170	91.3	48	6.0
Pre-pubertal crush - only females / mostly females some males (combined)	30	2.3	718	89.3
Post-pubertal crush - only males / mostly males some females (combined)	1203	93.9	52	6.5
Post-pubertal crush - only females / mostly females some males (combined)	38	3.0	727	90.4

Table 14

Responses of 1281 females and 804 males for frequency of crush during childhood and adolescence

Frequency of crush	Females		Males	
	Count	%	Count	%
Pre-pubertal crush on someone 100% of the time	368	28.7	244	30.3
Pre-pubertal crush on someone 75% of the time	216	16.9	147	18.3
Pre-pubertal crush on someone 50% of the time	287	22.4	166	20.6
Pre-pubertal crush on someone 25% of the time	331	25.8	199	24.8
Never had a crush pre-puberty	79	6.2	48	6.0
Post-pubertal crush on someone 100% of the time	446	34.8	279	34.7
Post-pubertal crush on someone 75% of the time	303	23.7	201	25.0
Post-pubertal crush on someone 50% of the time	281	21.9	185	23.0
Post-pubertal crush on someone 25% of the time	210	16.4	115	14.3
Never had a crush post-puberty	41	3.2	24	3.0

Table 15

Evaluations (at step 0) of 14 possible statistical predictors for participating in same-sex behaviors during adulthood in 1281 females

Behaviors	Masturbation while viewing images of adult female		Sex with adult female		Female fantasy partner while engaging in sex with partner		Female fantasy partner while masturbating		Voyeurism directed at adult females	
	Score test	*p*	Score test	*p*	Score test	*p*	Score test	*p*	Score test	*p*
Pre-pubertal crush on females / mostly females and some males	28.014	< .001	153.883	< .001	96.232	< .001	85.280	< .001	57.121	< .001
Post-pubertal crush on females / mostly females and some males	20.723	< .001	143.579	< .001	110.089	< .001	105.244	< .001	39.761	< .001
Pre-pubertal crush on males / mostly males and some females	2.365	*ns*	33.808	< .001	34.595	< .001	19.344	< .001	4.414	.036
Post-pubertal crush on males / mostly males and some females	2.939	*ns*	48.952	< .001	49.633	< .001	43.693	< .001	11.148	.001
Childhood crush on females	35.926	< .001	83.056	< .001	53.183	< .001	79.624	< .001	109.669	< .001
Childhood crush on males	1.256	*ns*	.880	*ns*	3.574	*ns*	1.136	*ns*	1.938	*ns*
Childhood fascination with female genitals	40.958	< .001	22.886	< .001	24.833	< .001	28.260	< .001	69.822	< .001
Childhood fascination with male genitals	24.917	< .001	8.652	*ns*	6.071	.014	1.245	*ns*	27.092	< .001
Sex of any kind with female	106.552	< .001	124.451	< .001	84.479	< .001	109.830	< .001	74.877	< .001
Sex of any kind with male	16.773	< .001	6.672	.010	.478	*ns*	1.1441	*ns*	18.121	< .001
Sexual coercion by female	11.090	.001	1.308	*ns*	.005	*ns*	5.906	.015	18.589	< .001
Sexual coercion by male	25.294	< .001	32.481	< .001	3.492	*ns*	8.178	.004	5.613	.018
Masturbated while viewing female images pre-adulthood	429.062	< .001	40.007	< .001	64.427	< .001	113.326	< .001	89.297	< .001
Masturbated while viewing male images pre-adulthood	189.729	< .001	14.287	< .001	8.821	.003	26.187	< .001	26.259	< .001

Table 16

Multiple logistic regression equations for predicting sexual behaviors in adult females

	B	SE	Wald	*p*	Exp(*B*)
Model # 1: Masturbation while viewing female images (Nagelkerke R^2 = .425)					
Masturbation using images of adult females before age 18	2.709	.243	124.088	<.001	15.013
Sex with female before age 18	.944	.203	21.591	<.001	2.571
Experienced sexual coercion by a male before age 18	.655	.217	9.083	.003	1.924
Masturbation using images of adult males before age 18	.660	.231	8.129	.004	1.935
Pre-pubertal crush on females / mostly females and some males	1.153	.495	5.424	.020	3.167
Constant	-2.880	.144	400.546	<.001	.056
Model # 2: Sex with adult female (Nagelkerke R^2 = .264)					
Pre-pubertal crush on females / mostly females and some males	2.651	.746	12.608	<.001	14.163
Sex with female before age 18	1.384	.195	50.330	< .001	3.992
Experienced sexual coercion by a male before age 18	.809	.204	15.745	< .001	2.247
Post-pubertal crush on females / mostly females and some males	1.693	.552	9.420	.002	5.436
Masturbation using images of adult females before age 18	.580	.226	6.565	.010	1.786
Constant	-2.770	.136	415.776	<.001	.063
Model # 3: Female fantasy partner while engaging in sex with partner (Nagelkerke R^2 = .199)					
Post-pubertal crush on females / mostly females and some males	2.241	.379	35.059	<.001	9.406
Sex with female before age 18	1.162	.214	20.599	<.001	3.196
Masturbation using images of adult females before age 18	1.101	.228	23.275	<.001	3.007
Constant	-2.945	.141	434.111	<.001	.053
Model # 4: Female fantasy partner while masturbating (Nagelkerke R^2 = .242)					
Masturbation using images of adult females before age 18	1.476	.210	49.512	<.001	4.376
Post-pubertal crush on females / mostly females and some males	2.260	.394	32.887	<.001	9.588
Sex with female before age 18	1.234	.199	38.427	<.001	3.434
Constant	-2.833	.134	445.854	<.001	.059
Model # 5: Voyeurism directed at adult females (Nagelkerke R^2 = .238)					
Childhood crush on females	1.704	.388	19.290	<.001	5.497

Masturbation using images of adult females before age 18	1.234	.233	28.003	<.001	3.435
Sex with female before age 18	.820	.226	13.110	<.001	2.270
Sex with male before age 18	.743	.236	9.904	.002	2.101
Childhood fascination with male genitals	.606	.254	5.680	.017	1.833
Pre-pubertal crush on females / mostly females and some males	1.047	.524	3.990	.046	2.848
Constant	-3.552	.219	262.483	<.001	.029

Table 17

Evaluations (at step 0) of 14 possible statistical predictors for participating in same-sex behaviors during adulthood in 804 males

Behaviors	Masturbation while viewing male images		Sex with adult male		Male fantasy partner while engaging in sex with partner		Male fantasy partner while masturbating		Voyeurism directed at adult males	
	Score test	*p*	Score test	*p*	Score test	*p*	Score test	*p*	Score test	*p*
Pre-pubertal crush on females / mostly females and some males	100.168	< .001	133.197	< .001	197.831	< .001	223.207	< .001	160.392	< .001
Post-pubertal crush on females / mostly females and some males	135.745	< .001	155.556	< .001	256.447	< .001	300.100	< .001	209.489	< .001
Pre-pubertal crush on males / mostly males and some females	175.287	< .001	221.189	< .001	328.021	< .001	382.339	< .001	264.443	< .001
Post-pubertal crush on males / mostly males and some females	218.690	< .001	258.865	< .001	405.283	< .001	475.194	< .001	305.085	< .001
Childhood crush on females	25.847	< .001	45.968	< .001	55.875	< .001	62.610	< .001	36.920	< .001
Childhood crush on males	148.247	< .001	170.788	< .001	252.798	< .001	242.069	< .001	195.233	< .001
Childhood fascination with female genitals	6.906	.009	14.917	< .001	16.838	< .001	27.620	< .001	13.070	< .001
Childhood fascination with male genitals	161.617	< .001	129.179	< .001	181.597	< .001	214.937	< .001	245.529	< .001
Sex of any kind with female	2.853	*ns*	3.197	*ns*	18.010	< .001	14.512	< .001	4.740	.029
Sex of any kind with male	170.100	< .001	222.544	< .001	133.010	< .001	161.991	< .001	145.760	< .001
Sexual coercion by female	1.427	*ns*	.385	*ns*	1.190	*ns*	.173	*ns*	.448	*ns*
Sexual coercion by male	44.160	< .001	76.674	< .001	27.086	< .001	38.573	< .001	45.973	< .001
Masturbated while viewing female images pre-adulthood	12.002	.001	24.794	< .001	52.595	< .001	53.830	< .001	21.237	< .001
Masturbated while viewing male images pre-adulthood	360.622	< .001	179.883	< .001	206.830	< .001	302.458	< .001	288.487	< .001

Table 18

Multiple logistic regression equations for predicting sexual behaviors in adult males

	B	SE	Wald	*p*	Exp(*B*)
Model # 9: Sex with adult male (Nagelkerke R^2 = .554)					
Post-pubertal crush on males / mostly males and some females	2.187	.547	15.958	.001	8.908
Sex with male before age 18	2.716	.358	57.712	<.001	15.125
Masturbation using images of adult males before age 18	.853	.427	3.985	.046	2.346
Childhood crush on males	1.363	.597	5.211	.022	3.910
Childhood crush on females	-.785	.362	4.694	.030	.456
Constant	-3.329	.334	99.227	<.001	.036
Model # 10: Masturbation while viewing adult male images (Nagelkerke R^2 = .570)					
Masturbation using images of adult males before age 18	3.244	.354	84.128	<.001	25.623
Sex with male before age 18	1.825	.346	27.856	<.001	6.205
Post-pubertal crush on males	1.914	.469	16.628	<.001	6.780
Constant	-3.564	.224	254.106	<.001	.028
Model # 11: Male fantasy partner while engaging in sex with a partner (Nagelkerke R^2 = .658)					
Post-pubertal crush on males / mostly males and some females	2.910	.539	29.190	<.001	18.356
Sex with male before age 18	1.673	.493	11.533	.001	5.329
Childhood crush on males	1.786	.619	8.320	.004	5.965
Masturbation using images of adult females before age 18	-1.487	.501	8.801	.003	.226
Masturbation using images of adult males before age 18	1.578	.545	8.399	.004	4.847
Constant	-3.512	.443	62.904	<.001	.030
Model # 12: Male fantasy partner while masturbating (Nagelkerke R^2 = .757)					
Post-pubertal crush on males / mostly males and some females	4.442	.646	47.238	<.001	84.933
Masturbation using images of adult males before age 18	3.139	.574	29.917	<.001	23.081
Sex with male before age 18	2.194	.537	16.661	<.001	8.967
Masturbation using images of adult females before age 18	-2.168	.600	13.062	<.001	.114
Constant	-3.482	.468	55.251	<.001	.031
Model # 13: Voyeurism directed at adult males (Nagelkerke R^2 = .603)					

Post-pubertal crush on males / mostly males and some females	1.483	.669	4.917	.027	4.404
Masturbation using images of adult males before age 18	2.106	.421	25.056	<.001	8.219
Childhood fascination with male genitals	1.793	.514	12.148	<.001	6.005
Sex with male before age 18	1.373	.401	11.707	.001	3.946
Pre-pubertal crush on males / mostly males and some females	1.559	.723	4.653	.031	4.753
Constant	-4.003	.267	225.215	<.001	.018

APPENDIXES

MARSHALL UNIVERSITY
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Institutional Review Board
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FWA 00002704

IRB1 #00002205
IRB2 #00003206

July 13, 2012

Stephen O'Keefe, Ph.D.
Psychology Department, MUGC

RE: IRBNet ID# 127810-4
At: Marshall University Institutional Review Board #2 (Social/Behavioral)

Dear Dr. O'Keefe:

Protocol Title:	[127810-4] Effects of Recalled Family Attitudes and Childhood Sexual Experiences on Adult Sexual Attitudes and Adjustment
Expiration Date:	July 20, 2013
Site Location:	MUGC - 1083
Submission Type:	Continuing Review/Progress Report APPROVED
Review Type:	Expedited Review

The above study and informed consent were approved for an additional 12 months by the Marshall University Institutional Review Board #2 (Social/Behavioral) Chair. The approval will expire July 20, 2013. Since this approval is within 30 days of the expiration date, the fixed anniversary date of 7/20 was maintained. Continuing review materials should be submitted no later than 30 days prior to the expiration date.

If you have any questions, please contact the Marshall University Institutional Review Board #2 (Social/ Behavioral) Coordinator Michelle Woomer, BS, MA, at 304-696-4308 or day50@marshall.edu. Please include your study title and reference number in all correspondence with this office.

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Curriculum Vitae

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EDUCATION:

Doctor of Psychology *(APA Accredited)* August, 2007-Present	Major: Clinical Psychology Marshall University Huntington, WV Dissertation: *Covert Sexual Behaviors Occurring in Childhood and Adolescence: Predictors of Adult Sexual, Sexual Orientation and Sexual Identity*
Master of Arts *(APA Accredited)* August, 2006-August, 2008	Major: Clinical Psychology Marshall University Huntington, WV
Bachelor of Arts August, 2002-May, 2006	Major: Psychology Major: Sociology Concord University Athens, WV Thesis: *Pheromones and Their Effect on the Socio-sexual Behavior of Lesbians*

PREDOCTORAL INTERNSHIP:

August, 2011- July, 2012
Gulf Coast Veterans Health Care System
Biloxi, MS
Director of Clinical Training: Jane S. Varner, Ph.D.

(August, 2011 – October, 2011)
Rotation: Behavioral Medicine and Health Psychology
Supervisor: Ronald Alexander, Ph. D.

Population Demographics: Age range: 20-68; Sex: male and female; Sexual Orientation: heterosexual and bisexual; Race/Ethnicity: Caucasian, African-American, Native American, Hispanic, and Multiracial; Setting: outpatient and non-psychiatric inpatient; Area: patients were from both urban and rural areas.

Responsibilities: Participate in Traumatic Brain Injury/Polytrauma Support Clinical Team (PSCT) and Chronic Pain Team (CPT) multidisciplinary treatment team meetings; provide individual therapy using evidence-based interventions for weight, disease, and chronic pain management, and sleep disorders; facilitate weight management (MOVE!), Healthy Sleep, and Behavioral Chronic Pain Management groups; conduct clinical health interviews and compose diagnostic reports (SF-36v2; PHQ-9; PCL-M; PSWQ; ESS; PQ-SF; SQ-SF; PAI; MBMD; MMPI-2; MHLC; QWEP; DAST; AUDIT-C; SLUMS); complete pre-operative (Bariatric, spinal cord stimulator, and bone marrow/organ transplant), chronic pain, and decisional capacity assessments, and neuro-cognitive screenings (COGNISTAT; Trails A and

B; COWA); and provide consultation to TBI/Polytrauma and Chronic Pain teams, and physicians working on inpatient medical units.

(November, 2011 – January, 2012) *Half -Rotation:* Women's Mental Health Clinic
Supervisor: Scott Cardin, Ph.D.

Population Demographics : Age range: 23-73; Sex: female and transgender (MtF); Sexual Orientation: heterosexual, lesbian, and bisexual; Race/Ethnicity: Caucasian, African-American, Hispanic, and Multiracial; Setting: outpatient; Area: patients were from both urban and rural areas.

Responsibilities: Participate in multidisciplinary team meetings; conduct comprehensive and brief diagnostic intake and assessments in response to consults; develop individual treatment plans, triage, and place consults; conduct suicide risk assessments and generate safety plans; provide crisis intervention to veterans presenting to the clinic as "walk-ins"; provide short-term individual therapy to female veterans presenting with a range of psychological and psychiatric disorders; and facilitate Dialectical Behavior Therapy and Cognitive Behavioral Therapy for Depression groups.

(November, 2011 – January, 2012) *Half -Rotation:* Telemental Health / VTEL
Supervisors: Benjamin Parker, Ph.D.
Jack Carney, Ph.D.

Population Demographics : Age range: 32-65; Sex: male; Sexual Orientation: heterosexual; Race/Ethnicity: Caucasian, African-American, Hispanic, and Multiracial; Setting: outpatient via VTEL equipment; Area: patients were from both urban and rural areas.

Responsibilities: Initiate telemental health services between the Biloxi, MS VAMC and the Eglin, FL CBOC; complete LMS training modules for providing telemental health services; collaborate with Information Management and Biomedical Equipment departments, and the VISN-16 Telehealth Coordinator to allocate and secure VTEL equipment at patient (CBOC) and provider (VAMC) sites; collaborate with multidisciplinary staff at patient and provider sites to create clinics, schedule appointments, complete encounters, coordinate room availability, and operate VTEL equipment; facilitate distribution of clinical materials (VA Telehealth Patient Handbook, CD's, etc.) to Veterans at the patient site; resolve administrative and technical difficulties; conduct individual tele-therapy using Hypnosis for Irritable Bowel Syndrome; recruit participants and conduct group tele-therapy for PTSD using cognitive-behavioral interventions; and design comprehensive treatment plans coordinated across telehealth and traditional services.

(February, 2012 – April, 2012) *Rotation:* Inpatient Psychiatry
Supervisor: Clinton Martin, Ph. D.

Responsibilities: Conduct intake interviews and compose interdisciplinary treatment plans for newly admitted patients; participate in interdisciplinary treatment team meetings; complete chart reviews, administer and interpret batteries of projective and objective psychological tests, and compose comprehensive, diagnostic psychological assessments; conduct neuropsychological screening assessments; provide psychoeducation to patients regarding their diagnosis(es); and conduct skills-based group and brief individual psychotherapy.

(May, 2012 – July, 2012) *Rotation:* PTSD Intensive Outpatient Program
Supervisor: Kara Vick, Ph. D.

Responsibilities: Participate in multidisciplinary treatment team and screening committee meetings; conduct PTSD diagnostic intake and suicide-risk assessments; develop PTSD IOP comprehensive treatment plans and safety plans; facilitate and co-facilitate Cognitive Processing Therapy (CPT), InVivo Therapy, relaxation, and process groups; provide individual psychotherapy using CPT and Prolonged Exposure Therapy.

(August, 2011 – July, 2012) *Long-term Project:* Providing Care to Transgender Veterans
Supervisor: Scott Cardin, Ph. D.

Responsibilities: Provide weekly, individual therapy to a male-to-female (MtF) transgender Veteran as she completes stages of the transitioning process; conduct psychological assessments as needed; produce an educational training module for providers on transgender Veterans that is supported by the professional literature and contains an extensive list of international, national, and local resources; and conduct training seminars (using an educational module) with psychology, psychiatry, and nursing services.

(August, 2011 – July, 2012) *Neuropsychological Assessment*
Supervisor: Debbie Javorsky, Ph. D.

Responsibilities: Conduct a minimum of four comprehensive Neuropsychological assessments utilizing the Neuropsychological Assessment Battery (NAB) and other measures, per presenting problem and referral question.

Simultaneous Responsibilities: coordinate and provide services to the Employee Assistance Program (EAP); as Chief Intern: respond to requests from Psychology Administration, attend Steering Committee meetings, represent and communicate feedback from the intern cohort during Supervisors' meetings; review internship applications, interview candidates, and participate in the Intern Selection Committee meetings.

PRACTICA EXPERIENCE:

August, 2010- June, 2011 **Department of Veterans Affairs:**
Primary Care Clinic
Prestonsburg, KY
Supervisor: Roslyn Feierstein, Ph.D., ABPP
Cheryl Scott, PsyD

Population Demographics : Age range: 18-85; Sex: male and female; Sexual Orientation: heterosexual; Race/Ethnicity: Caucasian and African-American; Setting: Outpatient; Area: rural and underserved.

Responsibilities: Function as a mental health consultant to primary care providers and nursing staff; conduct brief intake and diagnostic assessments; provide short-term individual therapy using evidenced-based interventions (MI, CBT for Depression/Anxiety, ACT, Seeking Safety, HRV and EMG biofeedback) for various psychological and medical conditions (chronic pain; obesity; diabetes); develop collaborative treatment plans and triage to specialized mental health services; provide same-day crisis intervention to Veterans presenting as "walk-ins"; conduct suicide-risk assessments and safety plans; and complete neuropsychological, pre-operative (Bariatric, spinal cord stimulator, and organ transplant), and chronic pain assessments.

June, 2010- August, 2010 **Federal Correctional Institution (FCI)**
Ashland, KY
Supervisor: Braddon Garner, PsyD.

Population Demographics: Age range: 18-65; Sex: male; Sexual Orientation: heterosexual; Race/Ethnicity: Caucasian, African-American, Hispanic, Native American, Arab, and Multiracial; Setting: incarcerated/outpatient; Area: the institution is located in a rural area; however the majority of inmates were from urban areas.

Responsibilities: Provide cognitive-behavioral group psychotherapy (with emphasis on criminal thinking errors) and individual therapy to inmates diagnosed with a range of psychological disorders (anxiety, depression, substance abuse, paraphilias, Anti-social personality); complete intake, personality, response bias, violence-risk, and suicide-risk assessments; provide crisis intervention with inmates in the special housing unit (SHU); participate in SHU treatment team and grand rounds; and function as a part of an multidisciplinary team with psychiatrists, physicians, nurses, rehabilitation therapists, correctional officers, and administrative staff.

March, 2010- May, 2010 **Mildred Mitchell-Bateman Hospital**
Huntington, WV
Supervisor: Keith Beard, PsyD.

Population Demographics: Age range: 21-46; Sex: male and female; Sexual Orientation: heterosexual and bisexual; Race/Ethnicity: Caucasian; Setting: inpatient; Area: patients were from both urban and rural areas.

Responsibilities: Provide group Dialectical Behavior Therapy (DBT) to patients with a diagnosis of Borderline Personality Disorder.

August, 2009- August, 2010 **Department of Veterans Affairs: Medical Center**
Huntington, WV
Supervisor: Clifton Hudson, Ph.D.
Roslyn Feierstein, Ph.D., ABPP

Population Demographics: Age range: 18-85; Sex: male and female; Sexual Orientation: heterosexual, gay, bisexual, and lesbian; Race/Ethnicity: Caucasian, African-American, Native American, and Multiracial; Type: outpatient; Area: patients were from both urban and rural areas.

Responsibilities: Provide short and long-term individual therapy using evidence-based interventions (CBT, ACT, MI, PE, and HRV and EMG biofeedback); participate and present cases in PTSD (PCT) and general mental health (GMH) clinical treatment team meetings; participate in HRV, EMG and EEG biofeedback didactics; conduct PCT and GMH diagnostic intake interviews and compose reports; complete neuropsychological, pre-operative (Bariatric, spinal cord stimulator, and organ transplant) chronic pain, response bias (malingering or feigning psychopathology and/or functional impairment), violence-risk and diagnostic clarity assessments; and provide consultation to TBI/Polytrauma and Pain Management departments.

August, 2008- July, 2009 **Marshall University Psychology Clinic**
Huntington, WV
Supervisor: Martin Amerikaner, Ph.D.

Population Demographics: Age range: 6-38; Sex: male and female; Sexual Orientation: heterosexual, gay, lesbian, and bisexual; Type: outpatient; Area: patients were from both urban and rural areas.

Responsibilities: Provide individual therapy to university students and community members; use cognitive-behavioral, gestalt, and humanistic/existential interventions; complete personality, ADHD, LD, MR/DD, and neuropsychological assessments; conduct stress management presentations on-campus; and provide consultation to Head Start Program (state funded pre-school).

RESEARCH EXPERIENCE:

08/09- 07/12	**Primary Investigator.** Dissertation: Covert Sexual Behaviors Occurring in Childhood and Adolescence: Predictors of Adult Sexual Orientation and Sexual Identity. Marshall University. Research Chair: Keith Beard, PsyD.
08/08- 07/12	**Co- Investigator.** Effects of Recalled Family Attitudes and Childhood Sexual Experiences on Adult Sexual Attitudes and Adjustment. Marshall University. Primary Investigator: Stephen O'Keefe, Ph.D.
01/05- 05/06	**Primary Investigator.** Thesis: Pheromones and Their Effect on the Socio-sexual Behavior of Lesbians. Concord University. Research Chair: Karen Griffee, Ph.D.

PUBLICATIONS:

Swindell, S., Stroebel, S. S., O'Keefe, S. L., Beard, K. W., **Robinett, S. R.,** & Kommor, M. J. (2011). Correlates of Exhibition-like Experiences in Childhood and Adolescence: A Model for Development of Exhibitionism in Heterosexual Males. *Sexual Addiction & Compulsivity, 18*(3), 135-156.

Randall, E. J., Tower, L. E., Harper-Dorton, K. V., Stroebel, S. S., **Robinett, S. R.,** & Kommor, M. J. (2011). Pre-arousal aversive clitoral sensitivity during sexual relations: exploratory research consisting of the first case report and correlates from an anonymous survey. *Sexual & Relationship Therapy*, 26(2), 156-169.

Stroebel, S. S., O'Keefe, S. L., Beard, K. W., **Robinett, S. R.,** Kommor, M. J., & Swindell, S. (2010). Correlates of Inserted Object-Assisted Sexual Behaviors in Men: A Model for Development of Paraphilic and Non-Paraphilic Urges. *Sexual Addiction & Compulsivity, 17*(2), 127-153.

O'Keefe, S. L., Beard, K. W., Stroebel, S. S., Berhie, G., Bickham, P. J., & **Robinett, S. R.** (2009). Correlates of Inserted Object-Assisted Sexual Behaviors in Women: A Model for Development of Paraphilic and Non-paraphilic Urges. *Sexual Addiction & Compulsivity, 16*(2), 101-130.

PRESENTATIONS:

Napier, O., Beard, K., **Robinett, S.,** & Mann, J., (March, 2010). Lesbian, Gay, Bisexual, and Transgendered Identity in Appalachia. Panel discussion at the thirty-third annual Appalachian Studies Conference, Dahlonega, GA.

Robinett, S. (April, 2009). A Model for Development of Paraphilic and Non-paraphilic Urges in Women. West Virginia Psychological Association (WVPA) Spring Conference, Morgantown, WV.

AWARDS AND SCHOLARSHIPS:

2010	$1,500	Feil Memorial Scholarship for Excellence in Clinical Psychology
2010	$ 750	Marshall University Graduate College Award for Academic Excellence (Fall)
2010	$ 750	Marshall University Graduate College Award for Academic Excellence (Summer)
2010	$ 500	Marshall University Research Corporation Dissertation Award
2005	$3,700	Ronald E. McNair Scholarship. Description: Post-baccalaureate Achievement program designed to prepare students for doctoral studies; provided funding and monetary awards for completion of an undergraduate thesis.

TEACHING EXPERIENCE:

01/09 – 05/09	**Graduate Teaching Associate.** Psychology 101: Introduction to Psychology. Marshall University. Supervisor: Stephen Mewaldt, Ph.D.
08/08 – 12/08	**Graduate Teaching Associate.** Psychology 101: Introduction to Psychology. Marshall University. Supervisor: Stephen Mewaldt, Ph.D.
01/08 – 05/08	**Graduate Teaching Associate.** Psychology 101: Introduction to Psychology. Marshall University. Supervisor: Stephen Mewaldt, Ph.D.
08/07 – 12/07	**Graduate Teaching Associate.** Psychology 101: Introduction to Psychology. Marshall University. Supervisor: Stephen Mewaldt, Ph.D.

VOLUNTEER SERVICE:

01/10- 01/11	**C.R.E.W. Project: Co-Director.** Primary Investigator: Keith Beard, PsyD. Target: HIV/AIDS risk-reduction. Duties: Conduct bimonthly psycho-educational and social activities; provide participants with condoms and HIV/AIDS literature; conduct HIV/AIDS testing and counseling quarterly; administer, score, and evaluate quarterly measures of HIV/AIDS knowledge and risk-reduction behaviors. Funding provided by WV DHHR : HIV/AIDS Testing and Counseling Grant ($5,000).
08/09- 08/10	**American Psychological Association of Graduate Students (APAGS): Campus Representative.** Goal: Increase APAGS membership rates; Responsibilities: inform graduate students in psychology about applicable scholarships, grants, and awards; encourage students to contact political officials concerning legislation effecting the practice of clinical psychology; disseminate APAGS weekly announcements, political Action Alerts, and scholarship/award/grant announcements; conduct formal presentations on the benefits of being an APAGS member on campus; post announcements and newsletters on the APAGS bulletin board; provide an informed response to all student inquiries via e-mail or in person; and compose monthly progress reports and forward them to the APAGS State Representative.

EMPLOYMENT:

October, 2008- July 2011 **Diversified Consulting**
Kenova, WV
Position: Supervised Clinical Psychologist
Supervisor: Sandi Kiser-Griffith, PsyD

Population Demographics: Children and adults diagnosed with Mental Retardation, Developmental Disabilities, and chronic (and often comorbid) mental illnesses.

Responsibilities: Provide psychological consultation during interdisciplinary treatment team and individual program plan meetings; compose positive behavior support plans; and administer psychological assessment instruments and compose evaluations to determine eligibility for the WV Title XIX MR/DD Waiver Program.

March, 2007- August, 2007 **ResCare, Inc.**
Huntington, WV
Position: Therapeutic Consultant
Supervisor: Joshua Caldwell

Population Demographics: Children and adults diagnosed with Mental Retardation, Developmental Disabilities, and chronic (and often comorbid) mental illnesses.

Responsibilities: Compose behavior modification and rehabilitative programs; compose positive behavior support plans; evaluate progress on programming; complete professional visits with clients in community and residential settings; attend individual program plan meetings; and present programming results to clients, guardians, and professional members of the team.

February, 2003 – February, 2007 **ResCare, Inc.**
Princeton, WV and Huntington, WV
Position: Quality Support Assistant
Supervisor: Joshua Caldwell (Huntington); Lisa Jones (Princeton)

Population Demographics: Adults diagnosed with Mental Retardation, Developmental Disabilities, and chronic (and often comorbid) mental illnesses.

Responsibilities: Implement individual training programs aimed at improving self-medication, money management, household chores, grocery shopping, communication skills, culinary skills, safety skills, social skills, occupational skills, and other adaptive behavior skills; implement positive behavior support strategies in response to undesirable behaviors (i.e., self-injury, unlawful behavior, inappropriate sexual behavior, etc.); provide continuous visual supervision of clients; and provide CPR and first aid as needed.

PROFESSIONAL AFFILIATIONS:

American Psychological Association of Graduate Students
APA Division 44: Society for the Psychological Study of Lesbian, Gay, Bisexual, and Transgender Issues
West Virginia Psychological Association

Psi Chi, National Honor Society in Psychology