

ABSTRACT

Title of Dissertation: SEXUALITY EDUCATION, SEXUAL
COMMUNICATION, RAPE MYTH ACCEPTANCE,
AND SEXUAL ASSAULT EXPERIENCE AMONG
DEAF AND HARD OF HEARING COLLEGE
STUDENTS

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Deaf and Hard of Hearing college students are at an increased risk of sexual assault in comparison to their hearing peers. Previous studies demonstrate that although sexual assault rates among college students are high, among the Deaf community, these rates are nearly double. Data suggest that between 50% and 83% of Deaf and Hard of Hearing individuals will experience sexual assault in their lifetime, with Deaf and Hard of Hearing women more likely to experience sexual assault than Deaf and Hard of Hearing men. There exists only a small amount of published research regarding Deaf and Hard of Hearing individuals and sexuality, and an even smaller amount of research has been conducted with Deaf and Hard of Hearing individuals on the subject of sexual assault. The high sexual assault rates among Deaf and Hard of Hearing students may be partially

attributed to their limited sexuality education and knowledge, most often as a result of communication, language, and cultural barriers.

The purpose of this study was to 1) examine a possible relationship between levels of sexuality education, sexual communication, rape myth acceptance, and sexual assault experience, along with demographic variables, among Deaf and Hard of Hearing college students; and 2) examine differences between students previously educated in schools for the Deaf versus mainstream schools, with regard to their levels of sexuality education, sexual communication, rape myth acceptance, and sexual assault experience. The instrument was developed incorporating the Sexual Communication Survey (SCS), Rape Myth Acceptance Scale (RMAS), Sexual Experiences Survey (SES), sexuality education and sexual activity components.

Two sets of hypotheses were examined via linear regression to ascertain significant relationships among the variables, with Social Cognitive Theory (SCT) constructs being used as the theoretical foundation of the study. Seven analyses were found to be statistically significant, with sexual communication, gender, and consensual sexual activity predictor variables explaining the outcome variable, sexual assault experience, at high percentages. The findings from this research have provided a greater baseline of data for future studies to investigate the factors influencing sexual assault among Deaf and Hard of Hearing college students.

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ACCEPTANCE, AND SEXUAL ASSAULT EXPERIENCE AMONG DEAF AND
HARD OF HEARING COLLEGE STUDENTS

by

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CHAPTER I

INTRODUCTION

Problem Statement

Sexual assault is an on-going concern at colleges and universities (Breitenbecher & Scarce, 2001; Foubert & Marriott, 1997; Gidycz, Layman, Rich, Crothers, Gyls, Matorin, & Jacobs, 2001; Gidycz, Loh, Lobo, Rich, Lynn, & Pashdag, 2007), with the college years representing higher risk for experiencing sexual violence (Sorenson, Stein, Siegel, Golding, & Burnam, 1987). A review of the literature confirms that unwanted sexual activity is a common and insidious problem for college women. Forbes and Adams-Curtis (2001) suggest that a considerable amount of research regarding date rape has attributed the increased rates of sexual assault among college students to the higher likelihood of sexual aggression in this age group.

Research estimates that 25% to 50% of college women have reported experiencing sexual assault (Benson, Charlton, & Goodhart, 1992; Brener, McMahon, Warren, & Douglas, 1999; Feltey, Ainslie, & Geib, 1991; Fisher, Cullen, & Turner, 2000; Koss, 1988; Koss, Gidycz, & Wisniewski, 1987; Tjaden & Thoennes, 2006), with the majority of sexual assault survivors being female (Centers for Disease Control and Prevention, 2007; National Victim Center, 1992; Tjaden & Thoennes, 2000b). Up to 90% of sexual assaults on college campuses are considered date rape—committed by someone the survivor knew (Aizenman and Kelley, 1988; Benson et al., 1992; CDC, 2007; Fisher et al., 2000; Home Office, 1999; Koss, 1985; Koss, Dinero, Seibel, & Cox, 1988; O'Shaughnessey & Palmer, 1989; Tjaden & Thoennes, 2000b; U.S. Department of

Justice, 1994; Warshaw, 1988). Contrary to popular opinion, the majority of date rape situations do not involve violence, threats, or physical coercion, but do include psychological, non-violent pressure from sexual partners (Lewin, 1985; Muehlenhard & Cook, 1988).

Previous studies demonstrate that although sexual assault rates among college students are high, among the Deaf community, these rates are much higher. Data suggest that between 50% and 83% of Deaf and Hard of Hearing individuals will experience sexual assault in their lifetime (Roehrer Institute, 1994; Stimpson & Best, 1991; Sullivan, Vernon, & Scanlan, 1987), with Deaf and Hard of Hearing women more likely to experience sexual assault than Deaf and Hard of Hearing men (Dobosh, 1999; Skinner, 1991; Sullivan et al., 1987; Westcott & Jones, 1999).

There exists only a small amount of published research regarding Deaf and Hard of Hearing individuals and sexuality, and an even smaller amount of research has been conducted with Deaf and Hard of Hearing individuals on the subject of sexual assault. Deaf and Hard of Hearing students have disproportionate and insufficient access to health-related information, which can be attributed to lower reading skills, difficulty communicating, and insufficient sexuality education in schools for the Deaf (Moores, Anderson, Ayers, Krantz, Lafferty, Locke, Smith, & Weide, 2008).

As Luckner and Gonzales (1993) argue, Deaf adolescents have “important gaps” in their knowledge of sexual health. Multiple researchers have studied the sexuality knowledge gap of Deaf individuals, with deficits being demonstrated for all age groups including adolescents (Baker-Duncan, Dancer, Highly, & Gibson, 1997; Kleinig &

Monhay, 1990; Luckner & Gonzales 1993), college students (Doyle 1995; Joseph, Sawyer, & Desmond 1995; Svenson, Carmel, & Varnhagen, 1997; Swartz 1993) and adults (Determan, Kordus, & DeCarlo, 1999; Gaskins 1999; Kennedy & Buchholz, 1995). Work by Gannon (1998) and Getch and colleagues (Getch, Young, & Denny, 1998; Getch, Branca, Fitz-Gerald, & Fitz-Gerald, 2001) examine more directly the weaknesses of sexuality education being offered to Deaf adolescents.

The high sexual assault rates among Deaf and Hard of Hearing students can be partially attributed to their lack of accurate sexual knowledge and awareness of sexuality issues (Job, 2004). Parents, peers, friends, magazines, and television play influential roles in educating all students about sexuality (Heuttel & Rothstein, 2001; Joseph et al., 1995; Sawyer, Desmond, & Joseph, 1996). Getch, Branca, Fitz-Gerald, and Fitz-Gerald (2001) attribute conflicting messages from peers, media, and their family to Deaf students' confusion about sexuality information. Deaf and Hard of Hearing students need to become independent thinkers and reduce their vulnerability to sexual assault by increasing their education about important sexuality topics (Sebald, 2008).

The sources of sexuality education and age the information was learned in Deaf and Hard of Hearing students' lives are important factors in determining sexual communication skills and rape myth acceptance attitudes. Miscommunication about sex was found to be a risk factor for sexual assault and aggression (Breitenbecher & Gidycz, 1998; Gidycz, Rich, Orchowski, King, & Miller, 2006; Muehlenhard & Linton, 1987), and communication about sexual assault in the Deaf and Hard of Hearing community is lacking (Bat-Chava, Martin, & Kosciw, 2005). Linguistic and cultural barriers

compromise Deaf and Hard of Hearing individuals' ability to learn the skills necessary to communicate about sexuality with their partners.

Brief Justification or Rationale for the Research

The amount of research about sexuality in general in the Deaf and Hard of Hearing community is deficient, but the lack of research specific to sexual violence among Deaf and Hard of Hearing individuals is even more inadequate. Deaf and Hard of Hearing people have not been a priority of interest in health research (Harmer, 1999), and there is an urgent need for more comprehensive studies in the Deaf community regarding sexual assault issues. Deaf individuals have limited sexuality education and knowledge, communication and language barriers, and experience higher rates of sexual assault than their hearing peers (Obinna, Krueger, Osterbaan, Sadusky, & DeVore, 2005).

A significant gap in the literature is the total lack of empirical research about schools for the Deaf versus mainstream schools in regards to sexuality. As of yet, researchers have not compared and contrasted how the binary variable of type of schools Deaf and Hard of Hearing students attend—schools for the Deaf or mainstream schools—impacts sexuality education and knowledge, and as a result, affects sexual communication, sexual assault experience, and rape myth acceptance. Regarding education in general, researchers have found that there are numerous outcome differences within Deaf and Hard of Hearing students when comparing schools for the Deaf and mainstream schools (Angelides & Aravi, 2006/2007; Harrison, 1988; Musselman, Mootilal, & MacKay, 1996; Van Gurp, 2001). Inconsistencies between schools for the

Deaf and mainstream schools have been found in the schools' curricula (Angelides & Aravi, 2006/2007; Harrison, 1988), students' knowledge (Musselman et al., 1996), and students' academic success (Allen, 1986; Foster, 1989; Garay, 2003; Harrison, 1988; Leigh, 1999; Lynas, 1999; Moores & Kluwin, 1986; Powers, 2001; Reich, Hambleton & Houlding, 1977; Van Gorp, 2001). Understanding the differences between students' skills based on the type of school they attended for secondary school is crucial in order to develop college-level sexuality programming that targets Deaf and Hard of Hearing students' specific needs.

This study contributes to the existing literature by examining a population that represents one of the most vulnerable communities regarding sexual assault: the Deaf and Hard of Hearing college population. The study sample takes into consideration gender and age among Deaf and Hard of Hearing individuals, both of which have been shown to increase risk of sexual assault, and incorporates sexuality education, sexual communication, and rape myth acceptance, which have also been shown to be associated with higher rates of sexual assault. The innovative examination of the type of secondary schools the Deaf and Hard of Hearing students attended (schools for the Deaf or mainstream schools) may allow for clearer understanding of underlying factors that could affect sexuality education, sexual communication, and rape myth acceptance and may ultimately result in sexual assault. Currently, no such distinction is made and regardless of secondary school background, all students are offered identical programming. The theoretical framework of this study includes an interpersonal theory to coincide with the strong cultural environment of the Deaf and Hard of Hearing community (Social Cognitive Theory).

This research study has the potential to provide a more precise and alternate direction for serving the needs of a college-based Deaf and Hard of Hearing population. The findings from this research address an important public health problem and contribute to an underdeveloped body of literature. The outcomes of this study may lead to refined educational and strategic goals of Gallaudet University regarding sexual assault, and could assist other Deaf and Hard of Hearing communities throughout the United States.

Definitions of Variables and Terms

Deaf and Hard of Hearing—Deaf and Hard of Hearing individuals have a range of hearing loss, from profoundly deaf, hearing no sounds, to Hard of Hearing, hearing sounds, but not able to distinguish sounds (Barnett & Franks, 1994).

Schools for the Deaf—Schools for the Deaf are a segregated school setting with classes including only Deaf students (Musselman et al., 1996; Van Gorp, 2001).

Mainstream schools—Mainstream school settings include five or more classes each day integrating Deaf and hearing students (Musselman et al., 1996), and may or may not involve American Sign Language (ASL) interpreters (Van Gorp, 2001).

Sexuality education—Sexuality information learned formally and informally through the students' lives in elementary school, middle school, high school, and college from sources, such as sex education classes, friends, magazines, television, and doctors (Joseph et al., 1995; Sawyer et al., 1996).

Sexual activity—The acts that constitute sexual activity are consensual sexual behaviors, including private areas (lips, breast/chest, penis, vagina, or anus/butt) fondled, kissed, touched, or rubbed, but not intercourse, oral sex (mouth to genitals), sexual intercourse (penetration of a woman's vagina with a penis), and anal sex (penetration of an anus with a penis) (Koss, Abbey, Campbell, Cook, Norris, Testa, Ullman, West, & White, 2007).

Sexual communication—Sexual communication assesses the ability of an individual to state her/his accurate sexual behavioral intentions openly with a dating partner (Breitenbecher & Gidycz, 1998; Hanson & Gidycz, 1993)—wanted and/or unwanted sexual activity. Sexual assertiveness is associated with sexual communication regarding sexual initiation, sexual refusal, and prevention of sexually transmitted infections (STIs) and pregnancy (Loiselle & Fuqua, 2007).

Consent—Sexual consent is when both partners want to and agree to the sexual activity that is occurring—saying “yes” to a sexual partner (Author, 2009).

Without consent—Non-consent can be expressed verbally, physically, or by frozen fright (Seidman & Vickers, 2005). Non-consensual sex occurs when someone does any of the following actions to try to convince someone to participate in sexual activity: telling lies, threatening to end the relationship, threatening to spread rumors, making untrue promises, continually pressuring someone to have sex after s/he said s/he did not want to, showing displeasure, criticizing someone's sexuality or attractiveness, getting angry but not using physical force, after someone said s/he didn't want to, taking advantage of someone when s/he was too drunk or out of it to stop what was happening, threatening to physically harm someone, using force, for example holding someone down with their body weight, pinning their arms, or having a weapon (Koss et al., 2007).

Survivor—Survivor is a positive term associated with strength and recovery (Thompson, 2000) used to empower victims of sexual assault or rape (McCarthy & McCarthy, 1989), showing them that they continue to live despite the incident(s) (Boston's Women's Health Collective, 1992) and can overcome the sexual assault. Victim defines someone who was injured, killed, or harmed by another individual or act (Young & Maguire, 2003), and implies powerlessness (Muehlenhard, Powch, Phelps, & Giusti, 1992) and helplessness (McCarthy & McCarthy, 1989). Simon (1993) states that an individual moves from being a victim to becoming a survivor of sexual assault. Survivor focuses on what occurs after the sexual assault, and assists the person in seeing past the incident and moving toward recovery (Young & Maguire, 2003).

Offender—A person who forced or coerced another to participate in sexual behaviors against their will (Covell, 1999; Feltey et al., 1991). An individual who committed a sexual assault, attack, or rape against someone else (Wiehe & Richards, 1995)—rapist (Peterson & Muehlenhard, 2004). “Perpetrator” will be used interchangeably with “offender” throughout this study (Author, 2009).

Rape—Rape is legally defined as force or incapacitation, non-consent, and attempted or completed penetration (Koss et al., 2007). The specific act of sexual intercourse, vaginal penetration with a penis (Koss, 1993) without the person’s consent, involving some form of force or threat or inability to consent due to intoxication (Bechhofer & Parrot, 1991). Defining sexual violence as only vaginal intercourse may inhibit survivors from identifying their situation as an assault (Gavey, 1999). Using only the term rape may be limiting in determining accurate numbers of sexual violence, considering that a large number of individuals that have experienced rape do not label their experience as rape (Bondurant, 2001; Kahn, Mathie, & Torgler, 1994; Koss, 1985; Koss, Dinero, Seibel, & Cox, 1988; Layman, Gidycz, & Lynn, 1996; Peterson & Muehlenhard, 2004; Quackenbush, 1989; Truman, Tokar, & Fischer, 1996; Young & Maguire, 2003) and/or may not have experienced a heterosexual sexual assault.

Date rape—A rape that was committed by a person the survivor knew (Parrot, 1991) where sexual intercourse occurred and the survivor was an unwilling, non-consenting participant (Shuker-Haines, 1990). As many as 80% to 90% of individuals who have experienced rape knew their offender (Basile, Chen, Lynberg, & Saltzman, 2007; Fisher et al., 2000; Home Office, 1999; Koss, 1985; Koss, Dinero, Seibel, & Cox, 1988; Koss, Koss, & Woodruff, 1990; O'Shaughnessey & Palmer, 1989; Nurius, Norris, Dimeff, & Graham, 1996; Tjaden & Thoennes, 2000b; USDOJ, 1994; Warshaw, 1988).

“Acquaintance rape” will also be used interchangeably with date rape in this study (Author, 2009).

Sexual assault—The term sexual assault is often used to encompass a wide range of sexual acts within sexual violence, including rape (Kelly, Burton, & Regan, 1996). Rape and sexual assault are not synonymous and should not be used interchangeably (Hall & Flannery, 1984). George, Winfield, and Blazer (1992) have defined sexual assault as any pressured or forced sexual contact. Muehlenhard, Powch, Phelps, and Giusti (1992) state that sexual assault is a broader, more gender-neutral term to explain any unwanted sexual contact. The Centers for Disease Control and Prevention (2007) define sexual assault as “sexual activity where consent is not obtained or freely given” (p. 1). Sexual assault is any sexual activity or contact with or without penetration forced on someone (without consent) (Black, Weisz, Coats, & Patterson, 2000), including oral, vaginal, or anal sex. Basile and Saltzman (2002) define sexual assault as a forced sexual act against the will of a person—involving a survivor that did not consent or was unable to consent or refuse the

sexual act. There are three categories of sexual assault: a completed sex act, an attempted (but not completed) sex act, and abusive sexual contact. A completed sex act involves contact between a penis and vulva or anus with penetration, however slight; contact between the mouth and a penis, vulva, or anus; or penetration of the anal or genital opening by another person's hand, finger, or other object. Abusive sex act is intentional touching of genitalia, anus, groin, breast, inner thigh, or buttocks directly or through clothing (Basile & Saltzman, 2002).

Rape myth acceptance—Rape myths are defined as “prejudicial, stereotyped, or false beliefs about rape, rape victims, and rapists...creating a climate hostile to rape victims” (Burt, 1980, p. 217). Lonsway and Fitzgerald (1994) extended the definition of rape myths as “attitudes and beliefs that are generally false yet widely and persistently held and that serve to deny and justify male sexual aggression against women” (p. 134). Buhi (2005) explains that rape myths include the attitude that the survivor wanted or deserved to be assaulted and is to blame if raped.

Research Questions and Hypotheses

Research Question 1: Is there a relationship between sexuality education, sexual communication, rape myth acceptance, sexual assault experience, gender, and years in college among Deaf and Hard of Hearing college students?

The hypotheses studied under Research Question One were as follows:

Hypothesis 1a: Deaf and Hard of Hearing students with less formalized sexuality education will demonstrate lower levels of sexual communication than those with more formalized sexuality education.

Hypothesis 1b: Deaf and Hard of Hearing students with less formalized sexuality education will demonstrate higher levels of rape myth acceptance than those with more formalized sexuality education.

Hypothesis 1c: Deaf and Hard of Hearing students with lower levels of sexual communication will report having experienced higher rates of sexual assault than those with higher levels of sexual communication.

Hypothesis 1d: Deaf and Hard of Hearing female students will report having experienced higher rates of sexual assault than Deaf and Hard of Hearing male students.

Hypothesis 1e: Deaf and Hard of Hearing male students will demonstrate higher levels of rape myth acceptance than Deaf and Hard of Hearing female students.

Hypothesis 1f: Deaf and Hard of Hearing college juniors and seniors will demonstrate lower rape myth acceptance than Deaf and Hard of Hearing college freshmen and sophomores.

Hypothesis 1g: Deaf and Hard of Hearing students with lower levels of sexual communication will demonstrate higher levels of rape myth acceptance than those with higher levels of sexual communication.

Hypothesis 1h: Deaf and Hard of Hearing students who reported having experienced sexual assault will demonstrate higher levels of rape myth acceptance than those who have not experienced sexual assault.

Research Question 2: Are there differences between students previously educated in secondary schools for the Deaf versus mainstream schools, with regard to sexuality education, sexual communication, rape myth acceptance, and sexual assault experience?

The hypotheses studied under Research Question Two were as follows:

Hypothesis 2a: Students who attended a school for the Deaf will report having received a less formalized sexuality education than mainstream school Deaf and Hard of Hearing students.

Hypothesis 2b: Students who attended a school for the Deaf will demonstrate lower levels of sexual communication than mainstream school Deaf and Hard of Hearing students.

Hypothesis 2c: Students who attended a school for the Deaf will demonstrate higher levels of rape myth acceptance than mainstream school Deaf and Hard of Hearing students.

Hypothesis 2d: Students who attended a school for the Deaf will report having experienced higher rates of sexual assault than mainstream school Deaf and Hard of Hearing students.

CHAPTER II

LITERATURE REVIEW

Deaf and Hard of Hearing Community

The National Center for Health Statistics (NCHS) classifies deafness and hearing trouble by various levels and types of hearing loss, capacity to hear and understand speech, early or later age at onset of hearing loss, the use of hearing aids, causes of hearing loss, and frequency of ringing in the ears (Ries, 1994). Deaf and hard of hearing individuals have a range of hearing loss, from profoundly deaf—hearing no sounds—to hard of hearing—hearing sounds, but not able to distinguish sounds (Barnett & Franks, 1994).

Williams and Abeles (2004) estimate that there are approximately 22 million deaf and hard of hearing people in the United States. The United States Department of Health and Human Services conducted the National Health Interview Survey in 2006 and reported that 17% of Americans over the age of 18 had some level of hearing difficulty, mild to profoundly deaf (Pleis & Lethbridge-Cejku, 2007). There are an estimated 24,026 deaf and hard of hearing individuals living in Washington, DC (U.S. Census Bureau, 2001).

Lane, Hoffmeister, and Bahan (1996) define Deaf in the United States as a group of individuals with their own culture and language—communicating in signed language, most often American Sign Language (ASL). Individuals who identify themselves with the Deaf community often do not see deafness as a disability, but as a culture with its own

language. Sadusky and Obinna (2002) also found in their research that Deaf people do not see themselves as disabled, but just having a different way of communicating.

The capital D in Deaf emphasizes individuals who view themselves as culturally Deaf (“Big-D” Deaf), rather than someone who simply has a hearing loss (Lane et al., 1996; Sadusky & Obinna, 2002). Williams and Abeles (2004) estimate that there are between 200,000 and 500,000 Deaf Americans who identify themselves as culturally Deaf—“Big-D” Deaf. Most culturally Deaf individuals are profoundly Deaf from birth or a young age.

The Deaf community has an interconnected network throughout the U.S. with their own social organizations and cultural institutions (Ries, 1994). Deaf individuals actively choose to be a member of the Deaf community, not necessarily based on their degree of hearing loss or geographic location, but more for the sense of identity.

Although it is estimated that 10% to 17% of Americans are Deaf or Hard of Hearing (Harmer, 1999; Pleis & Lethbridge-Cejku, 2007; Stimpson & Best, 1991), this population has not been a priority of interest by health care professionals or preventive research (Harmer, 1999).

Types of Secondary Schools (Schools for the Deaf and Mainstream Schools)

Though Deaf and Hard of Hearing students can be considered a specific population of students, they are not a homogenous community. Deaf and Hard of Hearing students can be categorized into at least a dual group of individuals coming from two types of educational systems—schools for the Deaf and mainstream schools.

Musselman, Mootilal, and MacKay (1996) conducted a study involving three types of educational settings that Deaf students attend: segregated (schools for the Deaf), partially integrated, and mainstream. In the segregated settings, Deaf students had no classes with hearing students, compared to Deaf students who took 1-4 classes each day with hearing students in partially integrated settings. The mainstream settings included five or more classes each day with Deaf and hearing students. The Deaf students in segregated settings had lower scores on English language skills measures, while in the mainstream settings, Deaf students had higher scores on English language ability (similar to partially integrated settings), and also had higher communication, higher verbal scores, and better spoken language. In segregated settings, Deaf students participated less in class, which is consistent with the finding that their English language skills are poorer (Musselman et al., 1996).

Van Gorp (2001) studied Deaf secondary students attending three different types of schools: segregated (schools for the Deaf), resource and congregated programs (academic and social integration of Deaf and hearing students), and mainstream schools (with or without interpreters). The degree of integration was significant in predicting reading abilities. This study found similar results to many other researchers over the past few decades—that Deaf students who spent more time in classes with hearing students demonstrated higher academic achievement. The integrated Deaf students had English reading abilities and linguistic competence that were superior to Deaf students who attended schools for the Deaf. Students attending mainstream schools are likely to be more advanced in academics due to the more rigorous program with a curriculum of increased difficulty in comparison to schools for the Deaf (Allen & Osborn, 1984; Allen,

1986; Foster, 1989; Garay, 2003; Harrison, 1988; Holt, 1994; Holt & Allen, 1989; Jensema, 1975; Kluwin & Moores, 1985; Leigh, 1999; Lynas, 1999; Moores & Kluwin, 1986; Powers, 2001; Reich et al., 1977; Stinson & Antia, 1999; Van Gorp, 2001; Wood, Wood, Kingsmill, French, & Howarth, 1984).

An earlier study by Harrison (1988) also found that mainstream schools set higher goals, have more requirements, and have a more comprehensive curriculum for students than schools for the Deaf. These conditions found in mainstream schools give Deaf and Hard of Hearing students more opportunities for learning and developing better communication skills and increased knowledge levels.

Angelides and Aravi (2006/2007) confirmed the findings indicating that mainstream schools provide more opportunities for a higher academic level of learning for Deaf and Hard of Hearing students. These researchers conducted interviews in sign language with Deaf students at schools for the Deaf and mainstream schools to study similarities and differences in the two types of school settings. Students reported that the level of lessons in mainstream schools were much higher and progressed at a faster pace, resulting in students having the opportunity to learn more subjects in greater depth. In the interviews, the students' likelihood of continuing on to higher education was attributed to attending mainstream schools. Those students who had attended schools for the Deaf, felt that attending mainstream schools would have offered them more and complained about the quality of education they received. Students who had attended both schools for the Deaf and mainstream schools reinforced that mainstream schools were taught at a higher academic level and provided more opportunities for learning. The researchers

concluded that attending mainstream schools provides greater academic advantages to Deaf and Hard of Hearing students than schools for the Deaf (Angelides & Aravi, 2006).

Perhaps not surprisingly, there seems to be an increase of Deaf students integrating into mainstream schools (Stinson & Antia, 1999; Powers, 2001). Holden-Pitt and Diaz (1998) found that over 40% of Deaf and Hard of Hearing children attended mainstream schools, and these findings may account in part for a decrease in the total number of enrolled students at Gallaudet University from 1,318 enrolled students in 1999 (Joseph, 2000) to 980 students in 2008 (GUOIR, 2008), as students seek to continue a more mainstream experience at the college level.

The findings of lower academic achievement among Deaf students who attend schools for the Deaf can be generalized to learning of all subject areas. “Literacy drives success or failure in all academic areas for deaf students and if fluency is not achieved, sets limits on academic achievement” (Moore et al., 2008, p. 119). Anecdotal evidence at Gallaudet University with groups of students has shown that the type of high school attended prior to college often determines the knowledge a student has about many academic and personal subject areas, including human sexuality (Author, 2009).

Sexuality Education in Secondary Schools

The Centers for Disease Control and Prevention (CDC; 2002) stated “school-based programs are critical for reaching youth before behaviors are established” (p. 2). Comprehensive school health education programs are increasingly necessary (Clark, 1995), so schools can assist in teaching healthy decision-making skills to students

involving important lifestyle behaviors (Seffrin, 1990). Improvements in knowledge of healthy behaviors and positive attitudes regarding health stem from health education opportunities (Clark, 1995).

Under the previous Bush administration, abstinence-only-until-marriage education became widespread in the United States, replacing comprehensive sexuality education curricula, despite the fact that health professionals strongly supported comprehensive sexuality education (Santelli, Ott, Lyon, Rogers, Summers, & Schleifer, 2006). In addition, Eisenberg, Bernat, Bearinger, and Resnick (2008) found that 89.3% of parents supported formal comprehensive sexuality education for teenagers, with the majority of parents believing instruction should begin in middle school or earlier for most topics. Constantine, Jerman, and Huang (2007) also found that 89% of the parents in their study sample supported comprehensive sexuality education, with 40.5% of parents believing the programs aimed at decreasing sexual abuse and assault should be taught in elementary school, 79.1% in middle school, and 99.1% in high school.

In spite of the health professional and parental support for comprehensive sexuality education, Lindberg, Santelli, and Singh (2006) reported that formal comprehensive sexuality education taught in secondary schools declined over the years 1995 to 2002, from 81% to 66% for males and from 87% to 70% for females, respectively, and abstinence-only education increased from 2% in 1988 to 23% in 1999. Kohler, Manhart, and Lafferty (2008) reported similar findings among teenagers aged 15-19; 23.8% reported receiving abstinence-only education, 66.8% of students had received comprehensive sexuality education, and 9.4% had not received any sexuality education.

What little sexuality education that existed before the Bush administration took office has been compromised by the abstinence-only approach, therefore decreasing the quantity and quality of sexuality education in secondary schools. Much of the abstinence-only curricula taught to millions of students in schools across the United States contains misleading or false information (U.S. House of Representatives, 2004). Despite research showing that 93% to 98% of students who attend American public (hearing) schools receive some form of sexuality education by the age of 18 (Haffner, 1998; Lindberg, Ku, & Sonenstein, 2000; Ward & Taylor, 1992), school-based sexuality curricula frequently do not address acquaintance rape as educationally relevant, and therefore limited time and resources are contributed to teaching about sexual assault issues (Fay & Medway, 2006). School-based sex education programs need to discuss sexual assault issues prior to children's development of expectations about dating behaviors and preferences (Ackard & Neumark-Sztainer, 2001; Mandelblatt, 1999). The few schools that do provide sexual assault prevention programs are not consistent in their approach (Darroch, Landry, & Singh, 2000), therefore the overall effectiveness cannot be determined (Frazier, Valtinson, & Candell, 1995; Fennell, 1993; Lavoie, Vezina, Piche, & Boivin, 1995), and there is little likelihood that sexual assault rates and attitudes regarding rape myth acceptance will be positively influenced (Frazier et al., 1995; Lonsway, 1996).

An additional factor contributing to the lack of comprehensive sexuality education is inadequate teacher preparedness. Rodriguez, Young, Renfro, Asencio, and Haffner (1996) surveyed 169 colleges and universities that provide undergraduate teacher education. The results showed that only 8% of colleges with a teacher's certification program required at least one sexuality education methods class and only six states

required teacher training in sexuality education. Therefore, the majority of teachers who teach sexuality education have not been trained appropriately. Sexuality education instructors are often physical education teachers, and when surveyed, these teachers reported feeling inadequately prepared to teach sexuality topics and were in need of assistance in teaching these subject areas (Rodriquez et al., 1996).

Sexuality Education in Secondary Schools among Deaf and Hard of Hearing Students

Deaf students have been shown in a multitude of studies to possess less sexuality knowledge than their hearing peers (Bounds, 1987; Grossman, 1972; Jones & Badger, 1991; Luckner & Gonzales, 1993; Sawyer et al., 1996; Shaul, 1981; Swartz, 1993; Tripp & Khan, 1986), and information gaps about sexuality among Deaf adolescents have been found in previous research (Gaskins, 1999). Deaf youth are not receiving the necessary sexuality education to make informed sexual decisions (Gabriel & Getch, 2001), and Minter (1983) suggests that Deaf students have difficulty learning health education material due to naïveté, resulting in confused health knowledge and attitudes.

Baker-Duncan, Dancer, Gentry, Highly, and Gibson (1997) surveyed adolescents at five state schools for the Deaf in the United States to determine their knowledge of sexuality topics. A total of 129 high school students participated in the study, with the questionnaire dividing the knowledge items into three levels following the results of the survey: Obtained Knowledge, Emerging Knowledge, and No Knowledge. The majority of the students fell into the Emerging Knowledge category. The results found that only eight of 35 basic sexuality questions were answered correctly by most of the Deaf

students, suggesting a substantial deficit of fundamental sexuality knowledge (Baker-Duncan et al., 1997). Kleinig and Mohay (1990) compared the health knowledge of hearing and Deaf high school students. These researchers reported that the hearing high schools students had a much higher level of health knowledge than the Deaf high school students, suggesting that the findings were thought to be the result of unequal access to health information.

Because families have limited contact with and influence on their students who attend schools for the Deaf, these schools need to take on a greater responsibility to reinforce healthy behaviors and attitudes (Clark, 1995; Davila, 1985). In schools for the Deaf, data demonstrate that school staff think parents should be responsible for educating their children about sexuality, while parents of Deaf students want the schools to educate their children about this topic (Gabriel & Getch, 2001). However, teachers are often ill prepared to educate Deaf students about sexuality (Fitz-Gerald & Fitz-Gerald, 1978; Getch & Gabriel, 1998; Rodriguez et al., 1996). Mainstreamed Deaf students also have problems as interpreters used in mainstream schools may not know the specific ASL sexuality signs or be able to clearly explain the full details that are being taught to the class about sexuality (Determan et al., 1999; Friess, 1998; Gannon, 1998; Swartz, 1993).

Few public or private institutions for Deaf and Hard of Hearing youth provide sexuality education in the curricula for their students (Deyo, 1994; Doyle, 1995; Gaskins, 1999), including sexual assault (Getch & Gabriel, 1998; Getch, Young, & Denny, 1998). For those schools for the Deaf that do teach sexuality education, the quality is questionable, the focus short-term, and education primarily occurs as a result of a crisis

situation (Fitz-Gerald & Fitz-Gerald, 1985). Clark (1995) surveyed schools for the Deaf throughout the United States to determine if they were providing any form of health education to their students. The results showed that most (88%) schools for the Deaf required health education to some degree, with one semester of health throughout high school being the mean requirement in the schools. Though most schools taught health information, the topics most often taught were hygiene, safety, science, home economics, and daily living skills. The results suggest that comprehensive health education programs are not being taught in most schools for the Deaf and many important health education topics, such as human sexuality, are not being included in the curriculum (Clark, 1995).

Getch, Young, and Denny (1998) conducted a mail survey of sexuality education curricula, materials and programs at 96 Deaf schools that use sign language in the United States (76% were returned). Administrators and teachers were questioned about the types and quality of the sexuality curricula, the amount of time the teachers spent modifying the material to be useful for Deaf youth, and the demographics of the sexuality teachers. The results showed that 13% of schools did not have any form of sexuality curricula. Many of the sexuality teachers were female, which does not provide many role-models for male youth to discuss their emotional and physical changes. The students communicated mainly in ASL, and most of the teachers signed for themselves without interpreters. The sexuality education classes were small, with an average of about eight students. Often, the sexuality curricula was taught within another class, so may have been covered in only one class period, which is not enough time to have full discussions on all the essential subjects within sexuality that may arise for Deaf youth (Getch et al., 1998).

Gabriel and Getch (2001) did a follow-up study of 51 schools for the Deaf in the United States via the Sexuality Questionnaire for Educators of students who are Deaf (Getch, Young, & Denny, 1998). The majority of the teachers were found to be female (74%) and hearing (76%), and more than half (64%) of the teachers had some formal training in sex education. Most of the time (74%), sexuality education was taught as part of an existing class, with only 19% of the schools for the Deaf taught human sexuality as a separate class. The teaching format was most often small group discussion (70%) using various communication methods, including signing, writing, and speaking, but many schools in the study failed to teach about unwanted or forced sex, sexual assault, or rape (Gabriel & Getch, 2001).

Getch, Young, and Denny (1998) state that schools need to provide a comprehensive sexuality education program to “lay the foundation for the acquisition of sexuality information as well as the prevention of sexual abuse and sexual assault” (p. 270). Getch, Branca, Fitz-Gerald, and Fitz-Gerald (2001) reinforce that sexuality education for Deaf and Hard of Hearing students needs to be current and comprehensive to include topics pertinent to the students.

Sexual Assault Education in College

All colleges and universities that receive federal funding in the United States require the implementation of some type of sexual assault programming (National Association of Student Personnel Administrators, 1994), and so the majority of college campuses have developed a variety of educational and awareness prevention interventions

in an attempt to reduce the high rates of sexual assault (Bachar & Koss, 2000; Gidycz, Rich, & Marioni, 2002; Jackson, 1996). Though college campuses are offering education about sexual assault awareness, students may not always utilize the resources provided and the effectiveness of the programs is not often measured. In research conducted by Gidycz, Rich, Orchowski, King, and Miller (2006) and Orchowski, Gidycz, and Raffle (2008), only 8% of college students reported previously participating in a sexual assault risk reduction program; in addition, most sexual assault and rape awareness programs lack quantitative and longitudinal evaluation (Gidycz et al., 2002; McCall, 1993; Yeater & O'Donohue, 1999). If follow-up studies are indeed conducted, they tend to be very brief time periods, ranging from two weeks to three months (Breitenbecher & Scarce, 2001).

A few studies have found positive results from college-based sexual assault prevention programming. White and Nichols (1981) found in their study of college students that after a rape awareness program, the college students felt safer on campus and more informed regarding sexual assault prevention and counseling services, while Gray, Lesser, Quinn, and Bounds (1990) found that an acquaintance rape prevention program increased the intent of college students to avoid dating behaviors that may lead to acquaintance rape. Hanson and Gidycz (1993) extended these findings by assessing participants' self-reported dating experiences. These researchers found that a sexual assault prevention program was effective in reducing the incidence of acquaintance rape and sexual assault among college women. Orchowski and colleagues (2008) surveyed college women with the Sexual Experiences Survey (SES) and found that 39.3% reported experiencing some form of sexual assault at the pretest. A sexual assault risk reduction

program was implemented with half of the participants, and over the course of their four-month study, the control group reported experiencing three times as many rapes as the experimental program participants.

Breitenbecher and Gidycz (1998) conducted a follow-up study of Hanson and Gidycz's (1993) research, but found that their sexual assault prevention program was not effective in reducing the rate of sexual assault or altering sexual communication among college students at the same university. Breitenbecher and Scarce (1999; 2001) also conducted studies of the effects of sexual assault awareness programs and had similar findings that sexual assault rates among college students did not decrease due to the intervention, even over the course of a seven-month follow-up. These findings support Schinke, Forgey, and Orlandi's (1996) research that one-shot interventions are not effective for long-term behavior change. Breitenbecher and Scarce (2001) state "it is perhaps unrealistic to expect that participation in brief, 60- to 90- minute programs will alter women's risk-related behaviors or responses to unwanted sexual advances" (p. 402). Longer rape awareness programs, on-going sexual assault programming, and sexuality education prior to college are important factors in reducing sexual risk (Breitenbecher, 2000).

Informal education is also a means of learning about sex. Guthrie and Bates (2003) researched previous formal and informal sexuality education among hearing college students. The researchers inquired about the following sources of sexuality education: peers, parents, high school courses, magazines, religious institutions, other family members, books (self-study), college courses, and the Internet. The sources of sex

education that were most common included: peers, parents, and high school courses, with the Internet being the least common source of sex education. Peers were rated as the most common and most important source of sex education, but studies have also shown that this source of sex education tends to result in the leading negative influence on sexual decision-making (Moore & Davidson, 1999). Specifically for females, Moore and Davidson (1999) also found parents to be one of the most common sources of sexuality education, while Sutton, Brown, Wilson, and Klein (2002) also found high school courses to be a principal source of sex education.

Sexuality Education and Rape Myth Acceptance

Greater levels of sexuality education have been shown to have a significant positive effect on lowering rape myth acceptance (RMA) (Black, Weisz, Coats, & Patterson, 2000; Breitenbecher, 2000; Burt, 1980; Fischer, 1986a; Heppner, Good, Hillenbrand-Gunn, Hawkins, Hacquard, Nichols, DeBord, & Brock, 1995; O'Donohue, Yeater, & Fanetti, 2003; Pinzone-Glover, Gidycz, & Jacobs, 1998; Shultz, Scherman, & Marshall, 2000). "The majority of rape education programs are successful in generating positive change in rape-supportive attitudes and behaviors" (Lonsway, 1996, p. 242). Proto-Campise, Belknap, and Wooldredge (1998) studied high school students in three schools and found that education about rape significantly decreased students' acceptance of rape myths. Other researchers have also reported similar findings among students who were educated about rape and sexual assault (Feltey et al., 1991; Fonow, Richardson, & Wemmerus, 1992; Holcomb, Sarvela, Sondag, & Holcomb, 1993).

Studies conducted among college students support these findings. Hinck and Thomas (1999) and Szymanski, Devlin, Chrisler, and Vyse (1993) conducted studies comparing students who attended or did not attend a rape awareness program. Both studies found that those students who did not attend the rape awareness program reported higher levels of RMA than those who attended the program. Gidycz and colleagues (2001) studied 1,136 college students and found that students who had attended an acquaintance rape prevention program reported lower levels of RMA than those that had not attended the program. Kress, Shepherd, Anderson, Petuch, Nolan, and Thiemeke (2006) conducted a study with 234 incoming college freshmen and found that sexual assault prevention programming on college campuses was effective in decreasing RMA attitudes. Sexual assault awareness interventions have been shown to lower college men's RMA to a level similar to women's unsupportive attitudes toward rape (Harrison, Downes, & Williams, 1991; Heppner et al., 1995; Holcomb et al., 1993; Pinzone-Glover et al., 1998).

Sexuality Education in College among Deaf and Hard of Hearing Students

Deaf and Hard of Hearing college students demonstrate deficits in sexuality education and knowledge. A comparative study of sexual health knowledge conducted by Swartz (1993) showed that Deaf college freshmen were considerably less knowledgeable than hearing college freshmen, with Deaf students scoring lowest on items related to reproductive anatomy and physiology. Swartz (1993) concluded that the disparity of sexuality knowledge among Deaf college students resulted from inadequate instruction,

lower levels of English language comprehension, inexperienced interpreters knowing specific signs, instead of finger-spelling words, and lack of everyday information gathering skills.

Joseph, Sawyer, and Desmond (1995) administered a survey to 134 Deaf and Hard of Hearing college students to determine sexual knowledge, behavior, and sources of sexuality information. The Deaf and Hard of Hearing college students surveyed were not well informed about sexuality health issues; students answered only 47% of the sexual knowledge questions correctly. The irony is that 79% of the Deaf and Hard of Hearing students believed they knew the equivalent or more sexuality information than other college students. Joseph and colleagues (1995) examined the following sources of health information in their study of Deaf college students: newspapers, friends, books, workshops, teachers, magazines, televisions, posters, parents, doctor, nurse, health educator, and vax computer. Results showed friends (81%), magazines (71%), television (59%), and doctors (59%) were the most common sources of health information (Joseph et al., 1995).

Sawyer, Desmond, and Joseph (1996) continued Joseph and colleagues' (1995) research to compare Deaf and hearing college students. Hearing college students answered slightly more of the sexual knowledge questions correctly in comparison to the Deaf college students, while sources of health information differed a great deal for the Deaf and hearing college students. Deaf students received their sexuality information more often than hearing students from friends (85% versus 67%), workshops (40% versus 9%), and posters (30% versus 18%). Hearing students (79%) received their sexuality

information more often than Deaf students (61%) from their doctors. Friends of Deaf college students who use sign language, workshops designed for Deaf students in ASL or with interpreters, and visual posters were found to be important sources of information for Deaf students (Sawyer et al., 1996).

Heuttel and Rothstein (2001) conducted a study with 34 Deaf college students and 46 hearing college students. Sexuality information learned from specific sources was measured (school/teachers, television, friends, family, and reading materials). The Deaf students had a greater reliance on friends (88%) and family (68%) than the hearing students (51% and 44%, respectively). Due to the informal nature of the majority of the Deaf students' sexuality education, they most likely received less accurate sexuality information from their friends and family than if they had received more formal sex education. If Deaf students do receive incorrect factual information, formal sources of education may not be able to correct the errors learned previously from informal sources because of the lower literacy levels in the Deaf community and ASL as their primary language (Heuttel & Rothstein, 2001).

Barriers to Sexuality Education among Deaf and Hard of Hearing Students

There are far fewer opportunities for Deaf students to receive sexuality and sexual assault information in comparison to hearing students. Deaf and Hard of Hearing individuals may feel disconnected from the general society, contributing to a sense of social isolation (Sadusky & Obinna, 2002), resulting in limited awareness of topics that are common information to hearing populations (Gannon, 1998; Joseph et al., 1995). Job

(2004) stated that limited opportunities to acquire sexuality information, inability of parents to provide sexuality education, unsatisfactory school-based instruction, and misinformation from peers are all factors influencing Deaf students' lack of knowledge regarding sexuality and sexual assault. The Centers for Disease Control and Prevention (CDC) state Deaf individuals are estimated to be aware of only approximately 25% of the sexuality information that hearing individuals know (Friess, 1998).

Linguistic factors contribute to the lower levels of knowledge about sexual assault. Deaf individuals do not have equal access to sexuality information in comparison to hearing individuals (Doyle, 1995), and therefore Deaf and Hard of Hearing individuals are less likely than hearing people to learn from conversation, books, and television (Joseph, 1993; Kleinig & Monhay, 1990). Most hearing individuals also receive information from the car radio, telephone, television news, and even eavesdropping on others' conversations, which are not options for the Deaf population (Joseph, 1993; Kleinig & Monhay, 1990). Deaf adolescents only receive the visual images of television, possibly missing the complete meaning of the message (Job, 2004). Some informative television programs and media messages are not captioned (Doyle, 1995; Fitz-Gerald & Fitz-Gerald, 1985), and therefore are often misinterpreted by Deaf individuals who use visual communication. Thus, the intended message, especially if concerning human sexuality issues, may be misconstrued (Fitz-Gerald & Fitz-Gerald, 1985).

Language differences may limit Deaf adolescents' understanding of sexuality education. For example, certain idiomatic expressions may not be appropriate approaches to teaching sexuality and health information as Deaf adolescents may not be able to

understand them (Job, 2004). English slang terms such as ‘messing around, fooling around, or getting it on’ cannot be translated word for word from English to ASL, therefore Deaf individuals may not fully understand the meaning of the phrases.

Limitations that Deaf students face in mainstream classrooms involve many misunderstandings due to inadequate interpreter skills or no interpreter for a teacher with poor signing skills, including not knowing the signs related to sexual behaviors and over-relying on fingerspelling (Determan et al., 1999; Friess, 1998; Gannon, 1998; Swartz, 1993). Values or embarrassment about the topic by the interpreter may also influence or alter the translation of these sensitive topics (Gannon, 1998).

Written English is often a challenge for Deaf adolescents due to the fact that English is not their first language; ASL is their natural language (Gannon, 1998; Joseph et al., 1995). The National Coalition of the Deaf Community and HIV reports that 70% of Deaf people consider ASL their first language and English as their second language (Friess, 1998).

In general, Deaf and Hard of Hearing students achieve academically at a lower level than hearing students. The greatest deficiency among Deaf youth was demonstrated to be in English reading skills and comprehension (Allen, 1986). On average, Deaf students who use American Sign Language (ASL) have a lower level of literacy in the English language (Silvestri & Lukasiewicz, 1989) and graduate from secondary school with the ability to read well below their grade level (Allen, 1994; Bowe, 1991; Erting, 1992; Gannon, 1998; Schildroth & Hotto, 1994).

This finding shows that reading ability can limit skills throughout life, not only in the formative years. “Ability to read affects success in all academic areas [including sexuality]...and, therefore, is of major concern to educators, parents, and students” (Van Gorp, 2001, p. 66). Bat-Chava, Rosen, Sausa, Meza, Shockett, and Deignan (1999) determined that Deaf students need to improve their English language skills more than any other academic area to be able to perform other tasks that use the English language. These researchers recommended incorporating educational interventions for Deaf and Hard of Hearing students at all stages of their educational experience in order to be adequately prepared for entering college.

The low English literacy levels of Deaf people often decreases the sexuality information they receive as a result of limited comprehensible written health materials, including captions on videos (Peinkofer, 1994). Most of the printed materials about sexuality are written at the eight-grade English level, but do not show many visual aids (Campbell, 1999; Gannon, 1998). Getch, Young, and Denny (1998) found that educational materials used to teach sexuality to Deaf youth were most often texts and workbooks with a large number of words versus pictures and visuals. This method of education is not in the students’ primary language and, as a result, many sexuality issues may be misunderstood. Most of the teachers (94%) spent a great deal of time modifying the sexuality curricula prior to teaching Deaf youth (Getch, Young, & Denny, 1998).

Using written materials about sexuality as the sole source of information is not enough to adequately educate Deaf and Hard of Hearing populations. Sexuality education materials and programs need to be visual for Deaf and Hard of Hearing students to fully

comprehend the information, including pictures, signed videos, role-plays, and peer educators (Joseph, 1993; Razzano, Cook, & Keany, 1994). For instance, pamphlets emphasizing pictures instead of text (Baker-Duncan et al., 1997), written at an appropriate literacy level (Gannon, 1998), are more appropriate for Deaf and Hard of Hearing adolescents.

The Internet has become the fastest-growing method of educating individuals about health-related topics. Unfortunately, a great deal of the sexuality information found on the Internet is written without visual aids, and therefore requires English literacy at higher levels (Winningham, Gore-Felton, Galletly, Seal, & Thornton, 2008), again disadvantaging the Deaf and Hard of Hearing community.

Informal Sexuality Education among Deaf and Hard of Hearing Students

The Deaf community is tight knit with a high degree of physical and emotional intimacy (Determan et al., 1999). Important information is often relayed quickly among the Deaf and Hard of Hearing community across the United States through the “Deaf Grapevine,” a highly efficient network of communication (Gaskins, 1999). Woodroffe, Gorenflo, Meador, and Zazove (1998) found that Deaf individuals were seven times more likely to learn sexuality information from one another, rather than formal educational sources (Kennedy & Buchholz, 1995). Because many Deaf individuals primarily communicate with other Deaf people (Gaskins, 1999), misinformation can easily spread throughout the Deaf community due to limited interaction with outside accurate sources (Heuttel & Rothstein, 2001). Relying on the “Deaf Grapevine” may result in

misinformation and knowledge gaps about necessary sexuality information (Bat-Chava et al., 2005; Peinkofer, 1994).

Deaf youth are also more likely to learn sexuality information from their peers (Fitz-Gerald & Fitz-Gerald, 1987; Joseph et al., 1995; Minter, 1983; Sawyer et al., 1996), which can perpetuate sexual myths within the Deaf community. Fitz-Gerald and Fitz-Gerald (1980; 1985) developed a framework to examine how Deafness influences the process of obtaining sexual health information finding that Deaf adolescents tend not to receive their sexuality education at home or in school. Peers were the most common method to learn about sexuality issues, although the information received from peers was found to be highly inaccurate (Fitz-Gerald & Fitz-Gerald, 1980; 1985; Gannon, 1998; Swartz, 1993). Tapping into the “Deaf Grapevine” to circulate accurate sexuality information in an efficient manner may be an effective method for health educators (Bat-Chava et al., 2005; Peinkofer, 1994; Winningham et al., 2008). Also, utilizing credible Deaf leaders to disseminate accurate sexuality information in the Deaf community can be crucial (Winningham et al., 2008). Perlman and Leon’s (2006) work with 81 Deaf adults in the Chicago area demonstrates that participants benefited from a Deaf-focused sexuality educational intervention. Components of the intervention included a visual slide show expanding definitions of sexuality terminology, illustrations, graphics, participatory activities, and demonstrations. The leaders of the workshop were well-respected native signers of ASL in the Deaf community who were also trained sexuality educators. Following the intervention, the post-test scores for sexuality knowledge were greatly increased due to the Deaf-friendly intervention (Perlman & Leon, 2006).

One reason for the importance of informal peer education is that little time has been spent on formal sexuality health education in schools for the Deaf because it has been viewed as less academic than other courses by the educators in these schools (Kleinig & Mohay, 1990). Including peers in the teaching process of other youth is one of the most effective methods of disseminating accurate information to Deaf and Hard of Hearing adolescents. Peer health education programs train students to become informed leaders in the student population to teach health knowledge and skills, and enhance the learning of sexuality information by improving the communication channels of education (Joseph, 1993; Joseph et al., 1995). Peer education is a key component in sexuality education; educating the student leaders in the Deaf community spreads accurate information and promotes safer sexual behaviors (Gannon, 1998; Joseph, 1993). Trained peer health educators are effective in empowering Deaf adolescents and young adults about sexuality (Baker-Duncan et al., 1997).

Roberts (2006) explains that Gallaudet University (the only liberal arts university in the world intended for Deaf and Hard of Hearing college students) provides a unique model for combating sexual assault among Deaf and Hard of Hearing students. Unlike other universities, American Sign Language (ASL) is the method of communication among faculty, staff, and students, inside and outside of the classroom; therefore, Deaf and Hard of Hearing students are able to fully experience college life in their own language and culture. Gallaudet's Health and Wellness Programs (HWP) coordinate sexual assault prevention by utilizing students as Peer Health Advocates (PHAs), allowing Gallaudet students to have access to sexual assault information similar to hearing students at other universities. Since the majority of Deaf and Hard of Hearing

college students obtain their sexuality and sexual assault information from their peers, formal peer health education is an effective method to spread accurate information. Trained PHAs serve as representatives of HWP as active role-models and educators on campus for their peers in formal and informal settings. PHAs use the strengths of the Deaf culture, such as the ability to discuss sexuality topics directly and frankly, the tight-knit nature of the community, and the norm of turning to peers for information to help bridge the gap in a range of innovative approaches (Roberts, 2006).

Sexuality Education and Sexual Communication

Every sexuality education curriculum is different, but the primary goal has historically focused on disseminating knowledge, with less emphasis on developing communication skills (Freudenberg & Radosh, 1998; Haignere, Culhane, Balsley, & Legos, 1996; Kaiser Family Foundation, 2000). Even in schools that have established sexuality education programs, limitations exist, and an absence of sufficient teaching about communication between dating partners is common (Weiss, 2002). Most general (hearing) sex education programs are successful at teaching important health information, such as preventing pregnancy and sexually transmitted infections (STIs), but tend to rarely discuss social interactions and sexual communication (Brunner, 1992; Fine, 1992; Lamb, 1997; McLaren, 1992).

Troth and Peterson (2000) found that adolescents are seldom formally educated about sexual communication or taught skills to negotiate sexual activity. Cleary, Barhman, MacCormack, and Herold (2002) reported that college women felt that their

formal sexuality education was inadequate, not teaching skills and attitudes to communicate effectively with a sexual partner. None of their study participants reported receiving any formal sexual communication skills education. Even among female students who wanted to have open sexual discussions with their partners, most were reluctant to do so because they were afraid, anxious, and felt that they do not know how to bring up sexuality topics or have the skills necessary to initiate a discussion with their partner about sex (Cleary et al., 2002).

In addition, informal sexuality education does not seem to facilitate sexual communication. Cleary and colleagues (2002) found peers, family members, and the media are not modeling open communication with sexual partners for adolescents and young adults. College women were found to be highly dependent on what they had or had not learned by observing others regarding sexual communication, since they reported having little experience with communicating about sex with their partners (Cleary et al., 2002). College women who were able to openly communicate in their own family about sexuality were more likely to initiate sexual communication with a sexual partner (Cleary et al., 2002; Dilorio, Dudley, Lehr, & Soet, 2000; Moore & Davidson, 2000). Therefore, informal education about sexuality from parents and family members can be a positive influence on sexual communication among sexual partners.

Sexual assault risk reduction programs have shown to be effective in increasing levels of sexual communication among college women over time (giving them a chance to utilize the new information and skills) by being able to speak directly and assertively to a sexual partner (Gidycz, Rich, Orchowski, King, and Miller, 2006). Orchowski and

colleagues (2008) found that a sexual assault risk reduction program increased college women's level of sexual communication in dating situations using the Sexual Communication Survey (SCS) at the four-month follow-up posttest. Breitenbecher and Scarce (2001) reported in their study using the SCS that sexual communication improved among college women at seven-month follow-up.

In a study among college women, Cleary and colleagues (2002) explained that respondents became more aware of the risks associated with lower sexual communication and used the skills learned in the intervention to discuss sex with their sexual partners. Although a variety of tools were taught to improve sexual communication, following the intervention, the college women most often used direct sexual communication strategies with their sexual partners. Edgar, Freimuth, Hammond, McDonald, and Fink (1992) also found that their study participants preferred to use direct methods of sexual communication with their partners.

Sexual Communication between Dating Partners

“Sexual communication has been identified as one of the key components in understanding the interpersonal interactions that facilitate or impede sexual health protective behaviours” (Cleary et al., 2002, p. 118). Sexual communication has been found to correlate with many self-protective sexual behaviors (Catania, Binson, Dolcini, Moskowitz, and van der Straten, 2001; deVisser & Smith, 2001; Quina, Harlow, Morokoff, Burkholder, & Dieter, 2000). Loisel and Fuqua (2007) stated that respondents who scored higher on the Sexual Communication Survey (SCS) were more

likely to respond successfully in a sexual situation. Researchers have found that if an individual's partner is willing and comfortable to discuss sexuality issues, the individual feels more comfortable and confident to participate in sexual communication (Cleary et al., 2002; Dilorio, et al., 2002; Herold & Way, 1988); however, very few participants reported having a sexual partner who encouraged open communication about sex (Cleary et al., 2002).

“Despite the importance of communicating with one's sexual partner, researchers have found that the initiation of sexual health related discussions is difficult for most people” (Cleary et al., 2002, p. 118). Lack of effective communication skills (Buysse & Ickes, 1999; Polit-O'Hara & Kahn, 1985), feelings of awkwardness with sexuality-related topics (Welch Cline, Johnson, & Freeman, 1992), and expected negative outcomes of initiating sexuality-related discussions (Buysse & Ickes, 1999; Cleary et al., 2002; Dilorio et al., 2002; Fay & Yanoff, 2000; Galligan & Terry, 1993) are all perceived barriers that cause reluctance among people to talk about these issues. Many people avoid sexual communication because of their perception of the negative outcomes that could arise and affect a person's relationship. The most commonly documented reasons for avoiding sexual communication include: threatening the relationship (Cleary et al., 2002; Welch Cline, Freeman, & Johnson, 1990), ruining the intimacy in their relationship (Galligan & Terry, 1993; Hocking, Turk, & Ellinger, 1999), anticipating a partner's reaction (Cleary et al., 2002; Dilorio et al., 2002), and insinuating a lack of trust in a partner (Hocking et al., 1999).

Edgar and colleagues (1992) conducted a study among college students to determine how sexual partners communicate with one another during a sexual encounter. Results showed that the college students did not communicate with their sexual partners to avoid “ruining the moment” or because of embarrassment or discomfort. Cleary and colleagues (2002) confirmed these findings with results showing that college women did not communicate with their sexual partners because they were more concerned about immediate, possibly negative outcomes of sexual communication, such as embarrassment, fear of ruining the relationship, and their partner’s negative perception of them initiating a discussion about sex. Regarding refusal of unwanted sexual activity, Lewin (1985) found that college women were more concerned about hurting their partners’ feelings than with their own feelings of shame or anger.

If students do communicate with their sexual partners, most reported using non-verbal strategies to avoid direct communication (Edgar et al., 1992). Women tended to indicate interest in sexual activity indirectly, such as smiling, touching, or gazing into a partner’s eyes (Perper & Weis, 1987), while men tended to take a more direct approach when expressing sexual interest. Metts and Fitzpatrick (1992) and Pliskin (1997) reported that indirect sexual communication was also typical of the students in their studies.

Sexual Communication between Dating Partners in the Deaf Community

Sexual communication among sexual partners in the Deaf community may be limited due to inadequate access to sexuality education, in addition to cultural and linguistic characteristics of sharing information within the Deaf community (Harmer, 1999; Joseph, 2000; Kennedy & Buchholz, 1995). Martin and Bat-Chava (2003) stated that communication issues are the main reason that Deaf individuals encounter difficulties in relationships.

A great deal about sexuality is learned through the “hidden curriculum” among Deaf and Hard of Hearing youth while growing up, and Deaf students have reported engaging in higher rates of sexual activity than their hearing peers (Minter, 1983; Sawyer et al., 1996). Sexual experience and experimentation are often ignored by the staff of Deaf residential schools (Lytle, 1985); therefore, sexual feelings and interactions with sexual partners are not fully understood. As a result, adolescents’ immaturity and impulsiveness in regards to sexuality may lead to detrimental consequences (Shaul, 1981), such as sexual assault.

Previous research demonstrates that communication issues, and lack of social skills appropriate for interaction with peers (Marschark, 2000) are barriers to successful relationships. Misunderstandings when communicating are also a frequent occurrence in Deaf adolescent social interactions, while assertiveness was found to be a strategy that assisted Deaf individuals to communicate more clearly in social situations (Martin & Bat-Chava, 2003), and therefore with sexual partners.

Barriers to Sexual Communication in the Deaf and Hard of Hearing Community

Cultural variables contribute to the lower levels of sexual communication about sexual assault in the Deaf and Hard of Hearing community. Communication barriers limit the opportunities for Deaf individuals to learn important sexuality information compared with hearing individuals (Bat-Chava et al., 2005; Davila, 1977; Fitz-Gerald & Fitz-Gerald, 1977, 1978; Gannon, 1998; Getch & Gabriel, 1998; Getch, Young, & Denny, 1998; Scheetz, 1993; Winningham et al., 2008). Effective communication is a necessary requirement to assist Deaf individuals in fully understanding crucial information about sexuality and sexual assault (Mallinson, 2004). Modes of communication among Deaf and Hard of Hearing people were found to be sign language, finger spelling, gestures, interpreters, written notes, lip-reading, computers, and text telephones (Ries, 1994). The majority of Gallaudet University students reported that their preferred mode of communication was American Sign Language (ASL) (Joseph, 2000).

Fewer than five percent of Deaf children are born to Deaf parents (Gallaudet Research Institute, 2001; Mitchell, 2004; Mitchell & Karchmer, 2004; Schein & Delk, 1974), and almost half of Gallaudet University students (48%) reported not having any other Deaf individuals in their family (Joseph, 2000). Deaf adolescents with hearing parents have a disadvantage in terms of communication, as hearing parents with Deaf youth do not always fully understand Deafness, Deaf culture, and ASL. More than 90% of Deaf adolescents are born to hearing parents, and most of these parents do not learn ASL. Communication between parents and Deaf children, therefore, is limited and life lessons taught within the family unit related to sexuality are infrequent (Friess, 1998;

Meyers & Bartee, 1992). Even if parents do become proficient in ASL, sexuality signs are often not learned, creating another barrier to discussions about sexual health (Friess, 1998; Shaul, 1981).

If Deaf adolescents have Deaf parents, the parents also tend to be uninformed about sexuality issues and are, therefore, unable to educate their children about the correct facts and protective behaviors to avoid sexual assault (Friess, 1998). Deaf youth are not relying on parents for sexuality information, and communication does not appear to be improving among Deaf adolescents and their families. Phoenix (1988) found that 81% of parents of Deaf children are unable to effectively communicate important concepts to their children, such as how to communicate about sex. Parents rarely talk to their Deaf children about sexuality because of communication issues (Bundy & White, 1990; Fitz-Gerald & Fitz-Gerald, 1987), inadequate accurate sexuality information (Bundy & White, 1990; Fitz-Gerald & Fitz-Gerald, 1987; Welshimer & Harris, 1994), and discomfort or embarrassment (Allensworth, 1992; Fitz-Gerald & Fitz-Gerald, 1987).

Sexual Communication and Sexual Assault Experience

Abbey (1991) and Muehlenhard and Linton (1987) reported that sexual miscommunication was a risk factor associated with sexual assault and aggression. Breitenbecher and Gidycz (1998) and Gidycz, Rich, Orchowski, King, and Miller (2006) confirmed that college women who had experienced sexual assault had lower scores on the Sexual Communication Survey (SCS) than women who had not experienced sexual assault, and were therefore less assertive in their sexual communication.

Sexual assertiveness is a component of sexual communication, which can assist in self-protection against unwanted sexual activity (Morokoff, Quina, Harlow, Whitmire, Grimley, Gibson, & Burkholder, 1997). Sexual assertiveness allows an individual to have sexual autonomy (Morokoff & Harlow, 1993) and not be under a cultural or social obligation to allow someone to touch her/his body or to touch another person sexually without consent (Morokoff et al., 1997); however, sexual assault is not always preventable. Sexual miscommunication and lower levels of sexual assertiveness have been shown to be associated with sexual assault experience (Greene & Navarro, 1998; Muehlenhard & Linton, 1987). Morokoff and colleagues (1997) studied college women and found that previous sexual assault experience was associated with the anticipated potential negative effects of sexual assertiveness. Therefore, women who have experienced sexual assault are less likely to communicate about sexual activity with their partner as a result of anticipating their partner's negative reaction to their sexual assertiveness. Open communication and assertiveness with sexual partners can contribute positively to reducing sexual miscommunication that could lead to sexual assault, although not eliminate the risk completely.

On the other hand, Koss (1988) discussed that women who have experienced sexual assault may have actually communicated clearly with their sexual partners about unwanted sexual activity, but their partners may have just chosen to ignore them and continued to commit sexual assault. Rapaport and Burkhart (1984) also found that perpetrators of sexual assault, often in date rape situations, may have been aware that their partners were not consenting to the sexual activity, but just ignored their unwilling protests.

Sexual Communication and Sexual Assault Experience in the Deaf Community

Because the Deaf community is so tightly knit, information spreads rapidly.

Confidentiality is often an issue because of the close relationships and the common “Deaf Grapevine” in the community; therefore, discussing sensitive issues, such as sexual assault, is a serious concern for many Deaf individuals (Doyle, 1995; Kennedy & Buchholz, 1995). Anonymity and mistrust of health educators, service providers, and the use of interpreters makes Deaf individuals reluctant to seek assistance from health professionals (Determan et al., 1999; Friess, 1998; Joseph, 1993; Steinberg, Loew, & Sullivan, 1999). Communication issues affect how Deaf and Hard of Hearing individuals interact with health care professionals, resulting in a disparity of health information comprehension and services received (Hindley, 1997; Sadusky & Obinna, 2005). Deaf individuals are sometimes reluctant to trust interpreters when discussing sexuality issues due to confidentiality issues in the small Deaf community (Obinna et al., 2005; Sadusky & Obinna, 2002; Steinberg et al., 1999) and concern about the interpreters’ ability to accurately convey their sexual assault experience (Sadusky & Obinna, 2002).

Ridgeway (1993) conducted interviews with Deaf women about their experiences with sexual assault and abuse. Results showed that each woman had been unable to communicate with her family about the incident due to communication barriers. Because of communication barriers and increased vulnerability, many Deaf survivors of sexual assault and abuse have never discussed their experience with anyone.

Sexual Assault Experience

The following description of research studies clearly demonstrates the wide range of reported sexual assault rates. To a great extent, this disparity can be explained by the lack of consensus of a workable definition for sexual assault by researchers (i.e., Basile & Saltzman, 2002; Black et al., 2000; CDC, 2007; George et al., 1992; Muehlenhard et al., 1992; Saltzman, Fanslow, McMahon, & Shelley, 2002).

Koss (1988) estimates that sexual assault rates for women in the general population are 13% to 25% at some time in their lives. Feltey and colleagues (1991) estimate that 24% to 50% of women will be sexually assaulted at some time in their lives, while Rickert, Wiemann, Vaughan, and White (2004) who studied urban youth, stated that 30% of the young women in their sample reported experiencing unwanted sexual experiences within the past year. Gibbs (1991) estimates that as many as 1 in 10 men is a survivor of sexual assault.

The Centers for Disease Control and Prevention (CDC, 2008) Youth Risk Behavior Surveillance Survey (YRBSS) found that 7.8% of high school students had been physically forced to have sexual intercourse when they did not want to at some time in their lives (10.3% of females and 5.1% of males), which is similar to the rates in 2001, but there was a spike in 2003 with 9% of students who were physically forced to have sexual intercourse when they did not want to (11.9% of females and 6.1% of males).

In the college population, there is also variation in the reported rates of sexual assault and rape. The majority of data suggest that approximately 25% of college women report experiencing sexual assault (Benson et al., 1992; Fisher et al., 2000). Brener and

colleagues (1999) conducted the National College Health Risk Behavior Survey with a nationally representative sample of college women and reported that 20% of college women had experienced rape at some time in their lives. Tjaden and Thoennes (2006) found that 22% of the women and 3.5% of the men between the ages of 18-29 reported having experienced rape at some time in their lives, while Bohner, Weisbrod, Raymond, Barzvi, and Schwarz (1993) reported among a college student study sample that 22.6% of subjects were survivors of an attempted sexual assault and 19% were survivors of a completed sexual assault. Loisel and Fuqua (2007) surveyed college women with the Sexual Experiences Survey (SES) and found that 31% reported experiencing sexual assault, compared to 37% reported in a study by Hanson and Gidycz (1993).

Several studies have reported extremely high rates of sexual assault on college campuses. Over half (50% to 54%) of college women studied by Koss and colleagues were found to be survivors of sexual assault (Koss, 1988; Koss & Dinero, 1989; Koss et al., 1987). Breitenbecher and Scarce (2001) used the SES to determine sexual assault experience and found that 71% of the college women studied were survivors. Muehlenhard and Linton (1987) found even higher rates of sexual assault among their college student sample: 77.6% of the college women and 57.3% of the college men in their study reported experiencing some form of sexual assault. Fay and Medway (2006) also gave a high estimate that 50-95% of women ages 16-24 experience sexual assault to some degree, including verbal threats and intimidation, persistent coercive behaviors, and physical aggression to force unwanted sexual behaviors (Feltey et al., 1991; Schwartz, O'Leary, & Kendziora, 1997).

The American College Health Association (ACHA, 2007) conducts a national study through the dissemination of the National College Health Assessment (NCHA) that provides sexual assault data reflecting a much lower incidence than those studies described earlier. Initiated in 1998, this national survey now provides the largest known comprehensive data set on the health of college students, providing the college health and higher education fields with a vast spectrum of research on student health. The most recent statistics from the fall 2006 distribution included responses from 23,863 college students from 34 institutions. Within the past 12 months, college students reported the following unwanted sexual experiences against their will: 3.4% experienced verbal threats for sex (4% of females and 2.3% of males), 7.8% experienced sexual touching (9.8% of females and 3.9% of males), 2.8% experienced attempted sexual penetration (3.8% of females and 0.8% of males), and 1.6% experienced sexual penetration (2.1% of females and 0.6% of males). Also, 1.5% of college students experienced a sexually abusive relationship (1.8% of females and 0.9% of males).

The Core Institute (2006) conducts the Core Alcohol and Drug Survey that assesses the behaviors and consequences related to alcohol and other drug use on college campuses. The results are from a sample of 33,379 undergraduate students from 53 colleges in the United States in 2005. The students reported the following unwanted sexual acts: 5.2% experienced forced sexual touching, 2.9% experienced unwanted sexual intercourse, 10.3% had been taken advantage of sexually, and 3% had taken advantage of another sexually.

Multiple researchers have conducted longitudinal studies with college students to determine initial rates of sexual assault and additional assaults over a period of time. Over the course of only one academic quarter, 18% to 25% of college women reported experiencing sexual assault during that short period of time (Breitenbecher & Gidycz, 1998; Gidycz, Cobel, Latham, & Layman, 1993; Gidycz, Hanson, & Layman, 1995; Gidycz et al., 2001; Hanson & Gidycz, 1993). Breitenbecher and Scarce (2001) used the SES to determine sexual assault experience over the course of an academic year, and found that during the course of those seven months, 33% of the college students had experienced sexual assault from baseline to follow-up. This rate of sexual assault is similar to other prospective sexual assault studies among college populations (Breitenbecher & Scarce, 1999; Gidycz et al., 1993; Greene & Navarro, 1998). Gidycz, Rich, Orchowski, King, and Miller (2006) surveyed college women with the SES and conducted two follow-up tests. These researchers found consistent sexual assault rates over the two three-month periods: 34.4% of college women had experienced some form of sexual assault from initial screening to the three-month follow-up, and 33% had experienced sexual assault between the three- and six-month follow-up periods.

Sexual assault does not only occur among women, but statistics show that the majority of survivors are female (CDC, 2007; NVC, 1992; Tjaden & Thoennes, 2000b; 2006). College women (ages 16 to 24) experience sexual assault at higher levels than women of other age groups (Acierno, Resnick, Kilpatrick, Saunders, & Best, 1999; AAP, 2001; Brener et al., 1999; Nurius et al., 1996; Patton & Mannison, 1995; Ward, Chapman, Cohn, White, & Williams, 1991), and some researchers have found the risk of sexual assault and date rape to be three to four times higher among female college

students than among other women (Aizenman & Kelley, 1988; Fritner & Robinson, 1994; Koss et al., 1987; Warshaw, 1988). In acquaintance rape situations, Benson and colleagues (1992) found that 10% of survivors are male. Men may be more reluctant to report rape or sexual assault and, thus, these percentages of reported sexual violence toward males may not reflect an accurate number of incidents.

Most states now have rape laws that are gender-neutral stating that either the survivor or offender can either be female or male (Koss et al., 2007). Including gender-specific language to assume survivors are female and perpetrators are male excludes men from reporting their sexual assault and limits experiences to heterosexual activity (Koss et al., 2007). Gender-neutral language is more objective, ethical to respect all people, legally grounded, and does not discriminate against either gender or transgender individuals (Koss et al., 2007). Struckman-Johnson (1988) modified pronouns, but no other text, in their study of sexual assault to present a more gender-neutral instrument to respondents, which enabled men to also report their unwanted sexual experiences.

Sexual Assault Experience in the Deaf and Hard of Hearing Community

Limited research has been done in the field of sexual assault with Deaf and Hard of Hearing individuals, as researchers are just beginning to investigate sexual assault prevalence and outcomes within the Deaf community (Obinna et al., 2005). The few studies that have been conducted tend to focus on childhood sexual abuse, not sexual assault as an adult or over the course of a person's lifetime.

Research shows that people with disabilities, especially Deaf children, have a higher incidence of experiencing sexual assault than the general population (Dobosh, 1999; Kelly, 1992; Kennedy, 1991; National Center on Child Abuse and Neglect, 1994; Skinner, 1991; Sullivan et al., 1987; Westcott & Jones, 1999). Sullivan and colleagues (1987) and the Roeher Institute (1994) found that as many as 50% of Deaf individuals have experienced sexual assault to some degree, compared to 25% of hearing females and 10% of hearing males. Stimpson and Best (1991) estimate that 83% of females with disabilities will experience sexual assault at some time in their lives. Deaf females experience sexual assault at higher rates than Deaf males (Dobosh, 1999; Skinner, 1991; Sullivan et al., 1987; Westcott & Jones, 1999).

Deaf children tend to experience sexual abuse most often where they spend most of their time—schools for the Deaf or at home for mainstream school students (Sullivan et al., 1987). Many sexual abuse and assault incidents of students with disabilities occur because of their increased vulnerability due to lack of awareness, education, and knowledge of sexuality (Getch, 1998; Miller, 1990; Shuster, 1986; Walcott, 1997). Researchers suggest that Deaf and Hard of Hearing students need to learn the skills necessary to avoid sexual abuse and assault (Getch, 1998; Luckner & Gonzales, 1993; May & Kundert, 1996; Mertens, 1996; Sullivan et al., 1987).

Joseph (2000) conducted a study of 256 Gallaudet University Deaf and Hard of Hearing college students regarding sexual assault, in addition to other variables. The results showed that almost half (43%) of sexually active Gallaudet University students reported experiencing sexual assault and 36% of non-sexually active students reported

experiencing sexual assault. This high rate of sexual assault was more than three times the percentage reported in general college populations, with female Gallaudet University students reporting higher rates of experiencing sexual assault than their male counterparts. The majority of sexually active Gallaudet University students who reported experiencing childhood sexual abuse knew their offenders (88%): fellow schoolmate (29%), other—neighbors, babysitters, friends, step-parents, co-workers, and teachers (21%), immediate family (17%), extended family (13%), and school personnel (8%) (Joseph, 2000).

The Core Survey has been conducted multiple times over a decade at Gallaudet University to inquire about students' sexual behaviors, as well as alcohol and drug use behaviors, allowing for comparison over the years. Educational health programming is then targeted to the specific needs of the Gallaudet University students. The Core Survey was conducted in 1997, 2004, and 2007 at Gallaudet University (Core Institute). Of the Gallaudet University students who were surveyed, 7.7% (1997), 6.5% (2004), and 8.3% (2007) reported having experienced forced sexual touching or fondling within the past year, and 6.1% (1997), 7.3% (2004), and 7.4% (2007) reported having experienced unwanted sexual intercourse within the past year. While under the influence of alcohol or drugs, Gallaudet students reported having been taken advantage of sexually: 10.4% (10.3 females and 10.9 males; 1997), 13.8% (17.6 females and 6.7 males; 2004), and 9.6% (9.4 females and 10.1 males; 2007). The extent to which Gallaudet University students were concerned about sexual assault was 64.7% (1997), 73.7% (2004), and 67.4% (2007). Moreover, in the last few years, there has been a great deal of unrest at Gallaudet

University regarding sexual assault, with anecdotal evidence showing that sexual assault among Deaf and Hard of Hearing students is a growing concern (Author, 2009).

Acquaintance Rape / Date Rape

It is important to make the distinction between acquaintance rape/date rape and stranger rape, since people usually know each other in the majority of sexual assault cases, especially among college student populations. Acquaintance rape, marital rape, and stranger rape are very different types of rape (Koss, Goodman, Browne, Fitzgerald, Keita, & Russo, 1994). Acquaintances and intimate partners are more likely to commit sexual assault and rape than strangers (Koss et al., 1990; Nurius et al., 1996).

A great deal of the research regarding date rape has occurred among college students, which is not unexpected due to the high risk of sexual aggression in the college-aged population (Forbes & Adams-Curtis, 2001). The majority of sexual assaults on college campuses are committed by someone the survivor knew (Aizenman & Kelley, 1988; CDC, 2007; Home Office, 1999; Koss, 1985; Koss, Dinero, Seibel, & Cox, 1988; O'Shaughnessey & Palmer, 1989; USDOJ, 1994; Warshaw, 1988). Koss (1985), Warshaw (1988), Tjaden and Thoennes (2000b), and Fisher and colleagues (2000) reported that 79% to 90% of sexual assault survivors on college campuses had known the offender, and the majority of the assaults occurred on dates. Benson and colleagues (1992) found that 84% of sexual assault survivors knew their offenders, and 57% of the assaults occurred on a date. Basile, Chen, Lynberg, and Saltzman (2007) found that 74.1% of females knew the perpetrators in their first rape experience: 30.4% were

intimate partners, 23.7% were family members, and 20% were acquaintances. Similarly, 83.5% of males knew the perpetrators in their first rape experience: 32.3% were acquaintances, 17.7% were family members, 17.6% were friends, and 15.9% were intimate partners.

Unwanted sexual activity that occurs when a reluctant partner is coerced to acquiesce against her/his will by psychological, non-violent pressure by a partner, but without the use of threat or force, is more common than violent sexual coercion (Lewin, 1985; Muehlenhard & Cook, 1988). In the context of college date rape, brutal rape is a very rare type of sexual assault, as offenders usually just ignore an unwilling woman's protests, rather than using violent behavior (Rapaport & Burkhart, 1984). Ogletree (1993) conducted a study of three universities and found that of those women who had experienced sexual coercion by dates while in college, 70% of these women had experienced unwanted sexual intercourse because their date expressed "overwhelming arguments and pressure" (p. 149).

Unreported Sexual Assaults

Acquaintance rapes are not often reported by college women (Benson et al., 1992; Miller & Marshall, 1987), partly because most sexual assaults are committed by someone the survivor knew, and so many women do not label themselves as a sexual assault survivor (Young & Maguire, 2003). Sexual assault incidents are more widespread than official reports show, and the majority of rapists are not charged (Carr & Van Deusen, 2004). Reported cases of sexual violence underestimate the problem because many

incidences go unreported due to fear, shame, and embarrassment of telling the police, friends, or family. Survivors are afraid they will not be believed and the police will not be able to help them. Others may have been threatened with further harm if the survivor tells anyone of the sexual assault (Tjaden & Thoennes, 2000a).

There is some discrepancy as to how many people report sexual assault and rape. Because the actual number of incidents is unknown, percentages can only be estimated, through various studies, as to how many sexual assaults and rapes actually occur. Koss, Gidycz, and Wisniewski (1987) and Fisher and colleagues (2000) estimated that only approximately 5% of rapes involving college students are reported to the police. Tjaden and Thoennes (2006) suggested that one in five women who experienced rape, reported it to the police.

An unacknowledged rape survivor is defined by Koss (1985) as “a woman who experienced a sexual assault that would legally qualify as rape but who does not conceptualize herself as a rape [survivor]” (p. 195). Koss’s (1985) study sample consisted of 2,106 college women of whom 13% had experienced what is defined as rape; however, Koss estimated that 43% of the sample were unacknowledged rape survivors. Subsequent studies have shown even higher percentages of unacknowledged rape survivors: 73% (Koss, Dinero, Seibel, & Cox, 1988; Layman et al., 1996), 64% (Bondurant, 2001), and 48% (Kahn, Mathie, & Torgler, 1994). Young and Maguire (2003) conducted a study involving individual interviews with women who had experienced sexual assault. “Most of the women did not use either rape or sexual assault to describe their experiences. Instead, they isolated the act and referred to their

experience as ‘having sex,’ ‘it,’ ‘what happened to me,’ ‘the incident,’ or some other term” (p. 47).

Quackenbush (1989) and Truman, Tokar, and Fischer (1996) found that frequently college women do not view coercive sex that occurred on a date as rape, and Miller and Marshall (1987) suggested that self-blame is also a contributing factor of failure to report sexual assaults. Peterson and Muehlenhard (2004) explained that survivors may not want to view their intimate partner as a rapist, they may be influenced by rape myths, or they don’t want to stigmatize themselves as a rape survivor (Lamb, 1999).

Rape Myth Acceptance

Rape myth acceptance (RMA) assists in understanding sexual violence and the cultural environment that perpetuates sexual assault (Cowan, 2000). Brownmiller (1975) labeled “rape myths” as beliefs about sexual aggression and aggressors that support male dominance regarding sexual activity, while Burt (1980) explained that rape myths blame the survivor for the rape and excuse the offender. Rape myths are also defined as “prejudicial, stereotyped, or false beliefs about rape, rape victims, and rapists...creating a climate hostile to rape [survivors]” (Burt, 1980, p. 217).

Burt (1980) was the first researcher to report empirical evidence of rape myths in a causal model of rape myth acceptance, and the Rape Myth Acceptance Scale (RMAS) continues to be the most widely used measure for rape myth acceptance (Anderson, Cooper, & Okamura, 1997; Lonsway & Fitzgerald, 1995; Payne, Lonsway, & Fitzgerald,

1999). Burt (1980) conducted a psychometric study of 598 adults to determine people's beliefs regarding rape, rapists, and survivors not realizing the seriousness of rape and blaming survivors for rape situations. Education, age, sexual experiences, and rape myth attitudes were factors included in this study.

Burt's (1980) Rape Myth Acceptance Scale (RMAS) measures attitudes toward rape myths, such as the only "real" type of rape occurs when a stranger jumps out of the bushes with a weapon and threatens a woman's life (Muehlenhard et al., 1992); only men with pathological illness commit rape (Donat & D'Emilio, 1992; White & Sorenson, 1992); women really enjoy sexual assault and provide token resistance to avoid having a bad reputation (Donat & D'Emilio, 1992); women deserve to be raped because of their behaviors, such as drinking alcohol or dressing seductively (Ehrlich, 1999; Layman et al., 1996); women are meant to be conquered by men (Thompson, 2000).

RMA positively correlates with sexual conservatism (Burt, 1980), adversarial sexual beliefs (Burt, 1980), acceptance of interpersonal violence (Burt, 1980), self-reported likelihood of committing sexual assault (Hamilton & Yee, 1990), and self-reported sexually aggressive behavior among males (Koss, Leonard, Beezley, & Oros, 1985; Malamuth, 1989). Briere, Malamuth, and Check (1985) found four distinct factors within the RMAS: disbelief of rape reports, blaming the survivor, reports of rape as manipulation, and the attitude that only certain types of women are raped. Hall, Howard, and Boezio (1986) suggested that rape myths could be divided into three categories: most rape reports are false (denial of rape's existence), blaming the survivor for the rape (excusal), and denial of rape's seriousness.

Research has demonstrated that people who have attitudes supportive of rape myths are more tolerant of rape, tend to blame the survivors of rape, and would rape if no one would find out—self-report of intent to rape (Acock & Ireland, 1983; Burt, 1980; Burt & Albin, 1981; Check & Malamuth, 1983; Feild, 1978a; Greendlinger & Byrne, 1987; Krulewitz & Payne, 1978; Malamuth, 1981; Muehlenhard, 1988; Muehlenhard & Andrews, 1985; Muehlenhard & MacNaughton, 1988; Shotland & Goodstein, 1983; Skelton & Burkhart, 1980; Thornton, Ryckman, & Robbins, 1982).

Rape myths normalize date rape and shift the blame to the survivor, instead of the offender, for the sexual assault (Koss et al., 1994; Lonsway & Fitzgerald, 1994; Payne et al., 1999), and include the beliefs that the survivor wanted sex or enjoyed sex, the survivor asked for it or deserved it, survivors lie that they have been raped, rape only happens to certain kinds of women (Koss et al., 1994), “normal” men do not rape, and a woman who is raped must have led the man on, been in the wrong place, or acted inappropriately (Burt, 1991). Higher RMA has been found to be significantly correlated with more blame placed on the survivor in date rape situations among students (Check & Malamuth, 1985; Fischer, 1986b; Gray, 2006; Linz, Donnerstein, & Adams, 1989; Muehlenhard & MacNaughton, 1988; Quackenbush, 1989) and among non-students (Burt, 1983; Krahe, 1988), while men have reported showing less empathy toward rape survivors than women (Chng & Burke, 1999; Deitz, Blackwell, Daley, & Bentley, 1982). Gray (2006) studied male and female college students regarding rape myth acceptance (RMA) and found that those with high RMA were significantly more likely to be confident that the man was innocent of rape in comparison to those with low RMA;

females were consistently more certain that the man in the given scenario was guilty of rape.

Rape myths do not allow society to confront sexual assault for what it really is—a crime (Lonsway & Fitzgerald, 1994). Burt (1991) states that “rape myths are the mechanism that people use to justify dismissing an incident of sexual assault from the category of ‘real’ rape...such beliefs deny the reality of many actual rapes” (p. 27). Lerner (1980) found that people look for evidence to show that the survivor deserved to be raped because s/he instigated the sexual activity or “asked for it” because of her/his dress or behavior.

In date rape situations, those who have high acceptance of rape myths would most likely see the rape as ambiguous (Gray, 2006) or have a lower perceived severity of sexual assault (Hamilton & Yee, 1990; Muehlenhard & MacNaughton, 1988; Norris & Cubbins, 1992; Quackenbush, 1989). Students with higher RMA often do not label a given scenario “rape” even if the scenario depicts a situation that is legally defined as sexual assault (Fischer, 1986a; 1986b; Muehlenhard & MacNaughton, 1988; Norris & Cubbins, 1992). Non-students also agree with this concept (Burt & Albin, 1981). Jenkins and Dambrot (1987) conducted a study with the RMA and found that men were less likely to label a given situation as rape and had attitudes that accepted rape myths more than women. Bohner and Lampridis (2004) reported that women who did support rape myths most likely perceived rape occurring among a sub-group of women—unlike them—by a particular sub-group of men—“crazy rapists”—or a situation that occurred due to a woman’s behaviors. Despite the high rates of sexual assault among college

females, these women saw themselves at low risk for experiencing sexual assault in comparison to their peers (Gidycz, McNamara, & Edwards, 2006). Individuals often have a false sense of security that they are immune to rape (Lonsway & Fitzgerald, 1994), that they are invincible and rape will not happen to them.

Rape Myth Acceptance among Deaf and Hard of Hearing Students

Deaf and Hard of Hearing youth in the United States have been found to possess the same sense of invincibility regarding sexual assault (Friess, 1998), are more likely to accept sexual myths (Fitz-Gerald and Fitz-Gerald, 1980, 1985; Lytle, 1985; Shaul, 1981), and are more naïve about sexuality values and norms (Sullivan et al., 1987) in comparison to their hearing peers. Roberts (2006) reported findings of the Health and Wellness Programs (HWP) at Gallaudet University for Deaf and Hard of Hearing students in Washington, DC, showing that Gallaudet's students share many of these feelings of invincibility and how they often lack solid information about sexuality and sexual assault. During many health presentations on campus, HWP personnel were shocked about the myths that were believed to be true and by how little accurate sexuality information Gallaudet University students had in general. Some females seemed unaware or lacked the self-confidence to be able to say "no" to sexual intercourse with their boyfriends because many felt that sexual intercourse was expected in a relationship (Roberts, 2006).

Demographics and Rape Myth Acceptance

Brownmiller (1975), one of the pioneers in rape myth research, stated that sexual aggression and coercion are a result of sexist stereotypes and using sexual violence as a means for social control. Sanday (1981) attributes the incidence of sexual aggression in society to cultural factors influenced by socialization.

Traditional roles among males and females follow the script that women are not supposed to admit that they want sex, even if they do want sex (token resistance), and it is men's role to convince women to have sex (Check & Malamuth, 1983; Muehlenhard & Felts, 1986). Good, Hepper, Hillenbrand-Gunn, and Wang (1995) found in their study of college men that those who were more accepting of rape myths had greater traditional masculinity ideologies. Bohner and colleagues (1993) reported that men and those subjects who had higher RMA had more conservative attitudes toward women in social roles. Russell (1984) stated that men may rape due to the traditional need to conquer and control.

The literature demonstrates that rape myths function to oppress and gain social control over women (Brownmiller, 1975; Burt, 1980; 1983; 1991). More recent researchers have reported finding on college campuses attitudes and behaviors that objectify and exploit women and encourage them to be acquiescent to men (Koss & Cleveland, 1997; Sanday, 1990; 1996; Warshaw, 1988), while greater acceptance of rape myths is correlated with both negative and stereotypical attitudes toward female students (Bunting & Reeves, 1983; Check & Malamuth, 1983; 1985; Fischer, 1986a; Fonow et al., 1992; Larsen & Long, 1988; Mayerson & Taylor, 1987; Muehlenhard & MacNaughton,

1988; Quackenbush, 1989; Spanos, Dubreuil, & Gwynn, 1991-1992; Weidner, 1988) and among non-students (Burt, 1980; Costin & Schwarz, 1987; Hall et al., 1986; Murphy, Coleman, and Haynes, 1986; Ward, 1988).

Over the course of four decades, numerous researchers have found that men are more accepting of rape myths than women among college student populations: in the 1970s (Barnett & Feild, 1977); in the 1980s (Burt, 1980; Deitz et al., 1982; Goodchilds & Zellman, 1984; Jenkins & Dambrot, 1987; Muehlenhard & Linton, 1987); in the 1990s (Blumberg & Lester, 1991; Bohner et al., 1993; Feltey et al., 1991; Fonow et al., 1992; Harrison et al., 1991; Muir, Lonsway, & Payne, 1996); and in this decade (Anderson & Swainson, 2001; Fay & Medway, 2006; Gidycz et al., 2001; Kress et al., 2006; Lacasse & Mendelson, 2007; Sawyer, Thompson, & Chicorelli, 2002). Males in non-student populations also have shown to have higher rape myth acceptance than women (Dye & Roth, 1990; Feild, 1978a; 1978b; Ward, 1988).

Sawyer and colleagues (2002) studied 704 college students at five universities regarding rape myth acceptance. Among the college men, freshmen and sophomores scored significantly higher on the Rape Myth Acceptance Scale (RMAS) than juniors and seniors. Feltey and colleagues (1991) and Blumberg and Lester (1991) also previously found that younger male students had higher RMA than their older peers.

Studies involving rape-prone versus rape-free college campus environments have demonstrated that rape myths, all-male student groups (fraternities and sports teams), lack of sanctions for female sexual assault cases, and sex role socialization are factors that encourage sexual violence (Berkowitz, 1992; Carr & Van Deusen, 2004; Quackenbush,

1989; Sanday, 1996; Schwartz & DeKeserdy, 1997; Warshaw & Parrot, 1991). Research has also shown that scores on the RMAS are higher among sexually aggressive college men in comparison to college men in general (Koss, Leonard, Beezley, & Oros, 1985) and convicted rapists when compared with the general population (Malamuth, 1981). College men who play or played aggressive sports have shown to be more accepting of rape myths than other men (Boeringer, 1999; Forbes, Adams-Curtis, Pakalka, & White, 2006; Sawyer et al., 2002).

Loiselle and Fuqua (2007) found that college students with higher scores on Burt's (1980) Rape Myth Acceptance Scale (RMAS) were more accepting of sexual violence, supporting Burt's (1980) initial findings. The RMAS is positively associated with self-report likelihood of raping and negatively correlated to judgments that men who force sex have committed rape and should be convicted of rape (Burt & Albin, 1981; Greendlinger & Byrne, 1987; Malamuth, 1981). Lanier (2001) found that high school males who self-reported that they engaged in sexual assault activities supported rape myths at a higher level than the other males. High RMA among high school males was also found to be predictive of subsequent sexually aggressive behaviors.

Sexual aggression and sexual coercion against women have been predicted by rape myth attitudes (Malamuth, Sockloskie, Koss, & Tanaka, 1991; Nagayama Hall & Hirschman, 1991). Numerous researchers have found a significant relationship between RMA and sexually aggressive behavior among students (Koss et al., 1985; Lonsway & Fitzgerald, 1994; Muehlenhard & Linton, 1987; Reilly et al., 1992) and

among non-students (Feild, 1978a; Murphy, Coleman, & Haynes, 1986), which can lead to rape.

Sexual Communication and Rape Myth Acceptance

When women adopt a sexually passive role, they do not have the opportunity to assert themselves to initiate sexual activity and are sometimes more hesitant to refuse unwanted sexual activity (Morokoff et al., 1997). Women often submit to their male partner when the man initiates sexual activity (Morokoff et al., 1997), a concept reinforced by Blumstein and Schwartz (1983) who studied couples and reported that 51% of men and 48% of women indicated that the man in the relationship initiated sexual activity the majority of the time.

Gender roles include expectations of how males and females interact with one another. Traditionally, males initiate sexual activity and females respond to the attempts of sexual activity (Morokoff, 1990; Muehlenhard & McCoy, 1991), which reinforces the misperception that sometimes “no” really means “yes” (Morokoff et al., 1997). Men may assume that women really want to engage in sexual behaviors, but are resisting sexual advances as token resistance to not appear promiscuous (Check & Malamuth, 1983; Weis & Borges, 1973). Miscommunication between women and men sometimes occurs because men mistakenly interpret women’s behavior as being more sexual than women had intended (Abbey, 1982; Goodchilds & Zellman, 1984; Muehlenhard, 1988). Russell (1975) found that men often mistake cuddling or foreplay as preliminary behaviors to intercourse, not actions independent of intercourse. Men’s misinterpretations of a

woman's intentions have the possibility of leading to sexual assault (Muehlenhard & Linton, 1987).

Sexual Assault Experience and Rape Myth Acceptance

Muehlenhard and Linton (1987) found that men's acceptance of rape myths were a risk factor for sexual assault and aggression. The researchers presented male and female college students with different sexual scenarios of men and women on dates. Both women and men stated that they thought the man in the given scenario had felt "led on" more often when a date resulted in sexual assault or aggression. Half of the men believed it had been intentional on the woman's part that they felt "led on," while almost all the women stated that any manipulation had been unintentional and their male partner had misinterpreted their behavior. Women and men agreed that on dates that had resulted in sexual assault or aggression both people had been dressed more suggestively (Muehlenhard & Linton, 1987).

It is clear that a man may feel "led on" by a woman's "suggestive" behavior, but even if he believes the woman when she says she doesn't want to have sex, he may still have sex with her because he feels "leading someone on" may justify rape (Goodchilds & Zellman, 1984; Kanin, 1967, 1969; Muehlenhard & Felts, 1986; Muehlenhard & MacNaughton, 1988). Muehlenhard and Linton (1987) found higher rates of sexual assault were associated with the man initiating and paying for the expenses on a date.

Researchers have found a relationship between experiencing sexual assault and attitudes of rape myth acceptance (Bart & O'Brien, 1985; Koss et al., 1985; Malamuth,

1981; Rapaport & Burkhart, 1984). People who reported having experienced sexual assault were found to accept rape myths at a higher rate than other respondents (Lacasse & Mendelson, 2007; Muehlenhard & Linton, 1987). Muehlenhard and MacNaughton (1988) found that women with greater acceptance of rape myths were “more than three times as likely as women in the low-belief group to have experienced verbally coerced sex” (p. 75).

A positive recent finding by Gidycz, Rich, Orchowski, King, and Miller (2006) was that women who had experienced sexual assault and then participated in a sexual assault risk reduction program were less likely to feel responsible for their assault and more likely to blame the offender for the assault.

Theoretical Framework

The theoretical foundation of this study is the Social Cognitive Theory (SCT). Bandura developed the SCT to address how psychosocial interactions affect health behaviors and to assist in explaining the manner in which individuals act and develop behavioral patterns (Baranowski, Perry, & Parcel, 1997). Interpersonal-level behavioral theories account for the cultural environment influencing an individual (National Cancer Institute, 2005). One of the greatest contributions of the SCT is its facility to understand how individuals are socialized to accept the norms, values, and standards of their environment and society (Johnson, O'Malley, & Bachman, 1994).

The SCT assumes that people and their environments interact continuously to affect behaviors, and that people and their behaviors also affect the surrounding

environment (Baranowski et al., 1997). Family members, friends, health professionals, and others with whom the person comes in contact all have an impact on the individual. Thoughts, behaviors, advice, opinions, and support of the social network surrounding the individual affect her/him and her/his attitudes and behaviors, and the individual has a reciprocal effect on her/his social network (NCI, 2005).

Bandura's SCT assists in predicting and understanding individual and group behavior (NCI, 2005). An individual's behavior is the result of an interaction involving cognition, behavior, and environment (Bandura, 1986). Individuals learn by observing and imitating others' behaviors and from experience with their own behaviors (Bandura, 1977). Bandura's (1989) SCT focuses on how individuals operate cognitively within social situations and, in turn, how these cognitions influence behavior. The SCT also accounts for personal variables that influence behavior, such as age, gender, ethnicity, personality, and sexual orientation. The environment contributes to what specific behaviors are developed and practiced.

"SCT is one of the most frequently used and robust health behavior theories" (NCI, 2005, p. 19), and has been used to study a broad range of health issues (Baranowski et al., 1997). Sexuality development among children and adolescents has been shown to be influenced by the SCT (Hagenhoff, Lowe, Hovell, & Rugg, 1987; Hogben & Byrne, 1998). Smith (1982) stated "we acquire most of our basic values and personal habits by initially observing our parents' behavior and later the behavior of admired friends and reference groups" (p. 201). The SCT "predicts that as people have greater opportunities to observe and participate in discussions about sexuality with family and friends, they

should become less inhibited from engaging in this same type of discourse with their dating partners. Conversely, those with a minimal history of observing this type of communication would be expected to feel inhibited from discussing sexual issues with their dating partners. Open communication with sexual partners is facilitated by a behavioral history of similarly frank and open communication that is socially learned in the context of relationships with family members and peers” (Powell & Segrin, 2004, p. 430). Powell and Segrin’s (2004) study confirmed predictions from the SCT showing associations between communicating with family and friends and impact on sexual communication with dating partners. Among college students, peer communication had a strong correlation with sexual communication with dating partners.

Ellis (1989) states that rape is a learned behavior through various processes through an individual’s environment, culture/society, and the media: modeling, sex-violence linkage, rape myths, and desensitization. Disinhibitory effects occur “when observers increase their performance of formerly inhibited behavior after having seen others engage in threatening or prohibited activities without experiencing adverse effects” (Bandura, 1986, p. 49). Dating aggression, similar to all forms of aggression, often serves as a model for additional aggression (Bandura, 1977). Gray and Foshee (1997) explain that continuing aggression in this manner increases date rape rates overall. This factor may also contribute to other personality and social variables that promote higher rates of sexual assault, especially in college environments where the culture tends to promote sexual violence more than in other environments (Forbes & Adams-Curtis, 2001). In recent research, Gidycz, Rich, Orchowski, King, and Miller (2006) and Orchowski and

colleagues (2008) utilized the SCT to increase college women's identification of high-risk dating scenarios.

The *reciprocal determinism* construct is the continuous interaction between the characteristics of the person, behaviors, and the environment within which those behaviors are performed. *Modeling* is learning and acquiring behaviors by observing others' actions and outcomes of those behaviors. *Expectations* are beliefs about the likely results of an action. *Behavioral capacity* is the knowledge and skills to perform a behavior (NCI, 2005).

Reciprocal determinism states that environmental characteristics are most often the result of personal and behavioral interactions among people. In the family environment, parents, partners, and siblings have an influence through the socialization practices and interpersonal relationships. In the school environment, teachers, staff, and students have an influence through the climate, health programs, teacher-student interpersonal interactions, and peer interpersonal interactions (Baranowski et al., 1997). These environmental attitudinal influences were researched by applying the Rape Myth Acceptance Scale (RMAS) in this study in the Deaf and Hard of Hearing community. Cultural attitudes regarding rape myth acceptance often involve gender role expectations and blaming the survivor, instead of the offender for sexual assault. Behaviors studied included sexual assault experience and sexual activity. The *reciprocal determinism* interaction incorporates the individual, her/his personal sexual behaviors and experience, Deaf and Hard of Hearing cultural RMA attitudes, sexual communication skills, and sexuality education in schools for the Deaf and mainstream schools.

Modeling occurs in the environment that surrounds the individual. Children observe their parents' and peers' behaviors and notice the rewards or penalties they receive for practicing specific activities (Baranowski et al., 1997). In this study, sexuality education and sexual communication are both contributing variables to *modeling*. An individual learns from observing others' successes and mistakes (positive and negative outcomes) in the Deaf and Hard of Hearing culture in schools for the Deaf or mainstream schools.

“*Expectations* are learned in four ways: 1) from previous experience in similar situations (performance attainment), 2) from observing others in similar situations (vicarious experience), 3) from hearing about similar situations from other people or social persuasion (verbal persuasion), and 4) from emotional or physical responses to behaviors (physiological arousal)” (Baranowski et al., 1997, p. 163). *Expectations* are anticipated outcomes of practicing a behavior or doing an action. An individual learns that certain events are likely to occur in response to her/his behavior in a particular situation and, as a result, the individual expects the same outcomes to occur when the situation arises again (precedes the behavior). Sexuality education, sexual communication, and sexual assault experience are variables in this study that apply the *expectations* construct in the SCT.

“*Behavioral capacity* is the result of the individual's training, intellectual capacity, and learning style” (Baranowski et al., 1997, p. 161). Knowledge, education, and skills provide learning and information about a behavior and the outcomes of the behavior. In this study, sexuality education and sexual communication were examined to

apply the *behavioral capacity* construct. This study determined if there are differences in the formal and informal educational approaches and communication skills of Deaf and Hard of Hearing students regarding sexuality, and if *behavioral capacity* affects sexual assault experience.

This research contributes a great deal to the current understanding of sexual assault with a theoretical foundation in regards to an understudied population, Deaf and Hard of Hearing college students. The SCT enhanced this study by integrating constructs of an interpersonal theory within the context of the surrounding cultural environment. This study determined which variables had a positive or negative effect on sexual assault among Deaf and Hard of Hearing college students, including demographic variables, sexuality education, sexual communication, and rape myth acceptance.

CHAPTER III

METHODS

Description of the Population to be Studied

The study was conducted with undergraduate Deaf and Hard of Hearing college students. The majority of the study population was selected from Gallaudet University, “a bilingual, diverse, multicultural institution of higher education that ensures the intellect and professional advancement of Deaf and Hard of Hearing individuals” (Gallaudet University Board of Trustees, 2007). According to Gallaudet University’s Enrollment Office (Gallaudet University Office of Institutional Research, 2008), overall enrollment for fall 2008 was 980 undergraduate students. Over half of the undergraduate students attending Gallaudet University in 2008 were female (55%) and 33% of the students were among traditionally underrepresented groups (African-American, Hispanic/Latino, Asian/Pacific Islander, or Native American). In 2007, about two-thirds of Gallaudet University’s new first-year students had previously attended a school for the Deaf and approximately one-third of the new students had attended a mainstream high school (GUOIR, 2008). Though statistics are not available for students’ ages, often they are not “traditional”—beginning college directly after secondary school and graduating within four years. Students tend to have a wide range of ages because of various reasons (i.e., students often stay longer at Gallaudet University due to the ability to communicate with other Deaf people via American Sign Language (ASL), students may transfer from other universities because of communication issues, students sometimes take a few years off after high school before attending Gallaudet University, or students may take a leave of

absence from college and return at a later time to continue their college education due to personal, academic, judicial, or financial reasons).

Description of the Sampling Procedures

Only current Deaf and Hard of Hearing undergraduate students were recruited to complete the online cross-sectional survey via a nonprobability convenience sampling method. Since the total number of Deaf and Hard of Hearing undergraduate students at Gallaudet University was only 980, all undergraduate Deaf and Hard of Hearing students were targeted during data collection. Convenience samples are often used when resources or potential participants are limited (Kish, 1995). Using multiple avenues to contact students in a variety of places and times has shown to be successful in increasing response rates in previous experience disseminating online surveys (i.e., Core Survey, Core Institute, 2004, 2007).

All undergraduate Deaf and Hard of Hearing students were notified about the online survey via numerous commonly used marketing methods. The primary means of contacting Deaf and Hard of Hearing students was through Facebook announcements. In addition, Gallaudet University students were also contacted via Blackboard announcements, flyers posted in academic and residential buildings, and booths set up with laptops in academic and residential settings by Peer Health Advocates to encourage participation in the study.

Power Analysis

Power is the ability to detect a significant difference in the major outcome variable if the difference actually exists among the study sample. The power and sample size calculation was conducted on Java Applets (Lenth, 2006) with a power level of .80 and an alpha level of .05. A moderate effect size was used in this study, a common practice according to Cohen (1988). The population size was 980 undergraduate Deaf and Hard of Hearing students, and the estimated required sample size for this study was 200. Because the required sample size was not reached with the initial advertisement, the students were contacted repeated times via the multiple sampling procedure methods.

Demographic Information

Demographic information in the study included: gender (1 “Female” and 2 “Male”), age (eight categories: 18 to 25+), hearing status (0 “Hearing,” 1 “Hard of Hearing,” and 2 “Deaf”), parents’ hearing status (three categories: Hearing, Hard of Hearing, and Deaf with 1 “No” and 2 “Yes” for each category), type of secondary school attended (1 “Mainstream school” and 2 “School for the Deaf”), how many years in college (four categories: 1 “Freshman,” 2 “Sophomore,” 3 “Junior,” and 4+ “Senior”), ethnicity (1 “White/Caucasian (non-Hispanic),” 2 “Black/African-American (non-Hispanic),” 3 “Asian/Pacific Islander,” 4 “Latino/Hispanic,” 5 “Native American/Alaskan Native,” and 6 “Other”), and sexual orientation (5-point Likert scale ranging from 1 “Exclusively heterosexual” to 5 “Exclusively homosexual”).

Designation of the Validity and Reliability of Testing Devices

The survey instrument was comprised of three quantitative scales with sound psychometrics: Sexual Communication Scale (SCS), Rape Myth Acceptance Scale (RMAS), and Sexual Experiences Survey (SES), in addition to two brief scales designed to record levels of sexuality education and sexual activity.

Sexuality Education

Sexuality education measured formal and informal sources of sexuality education throughout the students' lives—when and where sexuality information was learned. Six items were used to determine how Deaf and Hard of Hearing students learned about sex and inquired as to if they felt their needs were met by their sexuality education over the years.

Five items measured sexuality education with a 5-point Likert scale concerning the respondent's perceptions of how in-depth or complete her/his sex education was in elementary school, middle school, high school, college, and overall experience from "Incomplete" to "Complete." The responses to these five items were combined into a mean composite score, with higher scores indicating greater perceived sexuality education over the student's lifetime.

A qualitative item provided blanks for the student to list what or who affected how s/he thinks and feels about sexuality. This item measured the most common formal and informal sources of sexuality education among the Deaf and Hard of Hearing college students (i.e., sex education classes, friends, parents, television, doctors, and programs).

A similar item was used previously by Joseph and colleagues (1995) in their study involving Deaf and Hard of Hearing college students, and Sawyer and colleagues (1996) when comparing Deaf and hearing college students. Guthrie and Bates (2003), Moore and Davidson (1999), and Sutton, Brown, Wilson, and Klein (2002) used a similar multi-item measure for sources of sexuality education in their studies of students. Results were recoded into categories during data analyses.

Sexual Communication Survey (SCS)

Hanson and Gidycz (1993) first developed the Sexual Communication Survey (SCS), and the original scale consisted of ten 7-point Likert scale items ranging from 1 “Never” to 7 “Always.” The SCS measured respondents’ perceptions of the accuracy of their own communication regarding sexual intentions with a dating partner—likelihood of open sexual communication with a sexual partner. Items were developed based on a literature review regarding the relationship between sexual communication and acquaintance rape (Hanson & Gidycz, 1993).

Breitenbecher and Gidycz (1998) modified the SCS by rewording original items for better clarity and understanding and added new items. Items in the modified SCS include topics such as saying “yes” to sexual activity when really meaning “no” or saying “no” to sexual activity when really meaning “yes.” The modified SCS includes 21 7-point Likert scale items (1 “Never”, 2 “Almost never”, 3 “Some of the time”, 4 “About half the time”, 5 “Most of the time”, 6 “Almost all of the time”, 7 “Always”). To avoid confusion during data analysis as to whether the respondent answered “Never” to the item

due to the activity not occurring or the activity not being communicated with a sexual partner, 0 “Doesn’t apply” was also a response, therefore resulting in an 8-point Likert scale.

The internal consistency reliability of the modified SCS is very high with a Cronbach’s alpha of .99. Orchowski and colleagues (2008) found reliability of the SCS to be high among college women with a Cronbach’s alpha of .90, and Breitenbecher and Scarce (2001) reported a Cronbach’s alpha of .85 for the SCS in their study sample of college women. Multiple researchers have demonstrated the validity of this scale by reporting similar psychometrics in their studies (Breitenbecher, 2000; Breitenbecher & Gidycz, 1998; Breitenbecher & Scarce, 2001; Gidycz, Rich, Orchowski, King, & Miller, 2006; Hanson & Gidycz, 1993; Loiselle & Fuqua, 2007; Orchowski et al., 2008).

The SCS items were combined into a mean composite score, with higher scores on the SCS indicating compromised levels of communication. The first two items on the SCS were reverse-scored.

Rape Myth Acceptance Scale (RMAS)

The Rape Myth Acceptance Scale (RMAS) was developed by Burt (1980) to measure attitudes regarding rape myths (Jenkins & Dambrot, 1987; Lanis & Covell, 1995; Marshall & Hambley, 1996). Burt (1980) found the RMAS to be reliable with a Cronbach’s alpha of .875, while a number of other researchers have also confirmed the reliability and validity of the RMAS. Gray (2006) found the reliability of the RMAS to be high with a Cronbach’s alpha of .85, and Sawyer and colleagues (2002) reported an

overall Cronbach's alpha of .84 for the RMAS among college students, with a .80 reliability coefficient for men and .73 for women. Bryant, Mealey, Herzog, and Rychwalski (2001) conducted a factor analysis that yielded a single factor for the RMAS with a Cronbach's alpha of .745. Muir and colleagues (1996) reported a Cronbach's alpha of .93 for the RMAS in their study among college students.

The RMAS consisted of thirteen items addressing situations that may/may not be viewed as the survivor's fault in a sexual assault situation (justifying rape): going home with someone on the first date, falsely reporting rape, wearing revealing clothing, gang rape, intoxication, and people enjoying rape.

Although females have reported experiencing sexual assault at higher rates than males (CDC, 2007; NVC, 1992; Tjaden & Thoennes, 2006), this study modified the RMAS to include gender-neutral terms to encompass all survivors of sexual assault, regardless of their gender. The concepts of each attitude statement remained consistent with the original items, but pronouns were modified to be inclusive. Gender-neutral language is more objective, respectful to all people, legally grounded, and does not discriminate against either gender or transgender individuals (Koss et al., 2007).

Respondents indicated their level of agreement with the rape myth statements. Responses were recorded on a 7-point Likert scale for the first eleven statements, ranging from 1 "Strongly disagree" to 7 "Strongly agree," and the last two items regarding false rape reports had five responses: 1 "None," 2 "Very few," 3 "About half," 4 "Most," and 5 "All." The RMAS items were combined into a mean composite score, with higher scores on the RMAS indicating greater acceptance of rape myths.

Sexual Experiences Survey (SES)

Many researchers have used the Sexual Experiences Survey (SES) since its development by Koss and Oros (1982) to assess victimization through unwanted sexual behaviors (without consent). The reliability of the SES was found to be acceptable with a Cronbach's alpha of .74 (Cecil & Matson, 2006; Koss & Oros, 1982). The scale has been revised a few times since its development, with the most recent revision occurring in 2007 to include more behavioral specificity, conversion to gender neutrality, and updated terminology (Koss et al., 2007).

The SES introduced aspects in measurement that have become standard in sexual assault research (Abbey, Parkhill, Beshears, Clinton-Sherrod, & Zawacki, 2006; Fisher & Cullen, 2000; Gyls & McNamara, 1996; Koss & Gidycz, 1985). The SES uses non-judgmental and non-legal terms to encourage respondents to identify experiences that constitute unwanted sexual experiences. By avoiding the term rape, which can be defined in different ways by respondents, and by specifically defining unwanted sexual acts, researchers can more accurately determine who experienced sexual assault and which acts were involved in the incident (Koss & Oros, 1982). Also, through an additional item directly inquiring whether the respondent "has ever been raped" assists researchers in distinguishing between acknowledged or unacknowledged survivors (Koss, 1985). The SES is a valid, reliable, and versatile scale having been used as a selection tool, predictor variable, outcome measure, and prevalence measure (Gyls & McNamara, 1996; Koss et al., 2007; Koss & Gidycz, 1985; Orchowski et al., 2008). Koss and Gidycz (1985) reported a correlation of .73 between women's responses on the SES and those given

during interviews. “Peer review has continued to accept the SES as a standardized measure” (Koss et al., 2007, p. 358).

The SES included ten items addressing sexual behaviors *without* consent (sexual assault experience): private areas (lips, breast/chest, penis, vagina, anus/butt) fondled, kissed, touched, or rubbed, clothing removed, oral sex, sexual intercourse, anal sex, rape, and age of behaviors (Koss et al., 2007). The SES was scored by the frequency of respondents who answered “Yes” to each type of unwanted sexual activity. To avoid confusion during data analysis as to whether the respondent answered “No” to the item due to the activity not occurring or occurring consensually, “Doesn’t apply” was also a response, in addition to “Yes” and “No.” The SES items were combined into a mean composite score, with a 2 for each “Yes,” 1 for each “No,” and 0 for each “Doesn’t apply.” Higher scores on the SES indicated more severe experiences of sexual assault.

Some items from Koss’ SES measure were adapted to be used as a measure for sexual activity to determine consensual sexual experiences of respondents in addition to unwanted sexual experiences. The four consensual sexual experience items included: private areas fondled, kissed, touched, or rubbed; oral sex; sexual intercourse; and anal sex. These items were scored by the frequency that respondents answered “Yes” to each sexual activity item. To avoid confusion during data analysis as to whether the respondent answered “No” to the question due to the activity not occurring or occurring non-consensually, “Doesn’t apply” was also a response, in addition to “Yes” and “No.” All four items were combined into a mean composite score, with a 2 for each “Yes,” 1 for

each “No,” and 0 for each “Doesn’t apply.” Higher scores on this scale indicated more consensual sexual experiences.

Procedural Outline of Steps to be Followed in Completing the Study

This study was administered through an online survey. Participation and disclosure rates are two areas that are impacted by the use of new technology for survey administration (Koss et al., 2007). Response rates from regularly distributed surveys at Gallaudet University have been shown to remain consistent with the transition from paper-based to online surveys with the Core Survey from 1997 (paper-based) to 2004 and 2007 (online) (Core Institute, 1997; 2004; 2007) and other regularly distributed surveys. The typical response rate has ranged from 220 to 300 students, approximately a 22-30% response rate. Nationally, an increasing number of surveys regarding sexual assault are being conducted with computers or online (Abbey, Parkhill, & Koss, 2005; Testa, Livingston, & VanZile-Tamsen, 2005; Turner, Ku, Rogers, Lindberg, Pleck, & Sonnerstein, 1998; Fields & Chassin, 2006), instead of over the telephone, mail, or in-person. Testa and colleagues (2005) reported similar disclosure rates of sexual assault experience when comparing a paper-and-pencil version of a survey mailed to respondents’ homes and a computer-based version of the survey at a research site.

The online survey was developed with GoogleDocs (included in the Gallaudet University e-mail system), which automatically organized the participants’ survey responses into a spreadsheet format. GoogleDocs’ surveys are clear and easy to read, can be sent in an e-mail, or taken online through a specific web address. Gallaudet University

faculty and staff have begun to use GoogleDocs' surveys frequently for research and customer service satisfaction purposes on campus.

Sexual assault is a very intimate and personal subject area. Someone who discloses that s/he is a survivor of sexual assault may be stigmatized and, therefore, attention to privacy and anonymity of responses is crucial (Koss et al., 2007).

GoogleDocs' survey format is completely anonymous, therefore no identifying information about participants could be linked to their responses. The online survey website began with an informed consent form to let the participant know the purpose of the survey, the time commitment of completing the survey, the anonymity of the survey, and that s/he had the choice to stop the survey at any time. The consent form did not require a signature to maintain anonymity of the respondent; the participant consented to taking the survey by answering "Yes" to the statement below the consent form stating "I have read and understand the information stated above about the research study, and I agree to take this survey," then continuing to answer the survey items and clicking the submit button. A statement that the survey had been reviewed by the University of Maryland, College Park and Gallaudet University Institutional Review Boards (IRBs) was included in the informed consent form. Consensual and non-consensual sexual activity was defined to give respondents a more clear understanding of wanted and unwanted sexual experiences for more accurate responses to the survey. Contact information for sexual assault resources on Gallaudet University's campus, in the Washington DC area, and nationally were included in the survey for those respondents who felt the need to discuss personal issues regarding information in the survey. A comments text box was

also included at the end of the survey for respondents to state remarks related to the survey or their own personal experiences that contributed additional data to the study.

Peer Health Advocates (PHAs) are trained undergraduate Deaf and Hard of Hearing student paraprofessional health educators at Gallaudet University. The PHAs have developed a great deal of knowledge about health topics, including sexuality, and also have a students' perspective to determine if their peers will understand information presented in a specific manner. Six PHAs assisted in the development and readability of the instrument to ensure comprehension of the survey at an appropriate reading level for the Deaf and Hard of Hearing college students. The PHAs read through the survey item-by-item with the researcher in individual meetings, so the students would not be influenced by the feedback from their peers in a group setting. The readability test of the instrument assisted in determining if all the components of the survey were understood and could be answered according to the original meaning of each question. Revisions were made to the survey based on feedback given from the Deaf and Hard of Hearing PHAs, including vocabulary and more visual descriptions of some items. A group of students reviewed the revised version of the instrument to discuss the modifications and confirmed that the final version of the survey was easily comprehended. The survey was then placed online and other students reviewed and field-tested the online version of the survey.

In addition to the readability feedback from the PHAs, the literacy level of the instrument was analyzed using the Flesch Reading Ease formula (Flesch, 1948) to test the survey's reading difficulty and the Flesch-Kincaid Grade Level formula (Kincaid, 1975)

to determine the grade level score. The instrument was found to be at the Standard level of Reading Ease and at the 8th Grade Reading Level.

Proposed Data Analysis Specific to Research Questions and Hypotheses

All data analyses were conducted using SPSS. Descriptive statistics were computed to determine means and standard deviations of demographic and scale variables. Univariate analyses were conducted to obtain frequencies of the survey responses for each individual variable. Reliability of each scale was determined to check for internal consistency among this study sample using Cronbach's alpha. Correlations revealed the strength of associations between variables to determine if certain variables predicted another. Bivariate linear regression analyses were conducted with the variables stated in the hypotheses analyses below to determine the extent to which the variables are related—percent of explained variance of the outcome variables by independent variables. Some variables needed to be recoded prior to data analysis to ensure accuracy during analysis. Scale items were computed as mean composite scores prior to the correlation and bivariate linear regression analyses. All significance tests were two-tailed and set at .05. The distribution of the scores was reviewed, and the data met all of the required assumptions.

Bivariate linear regression analyses were conducted with the variables in each of the hypotheses due to the fact that the variables in the study were continuous or recoded as such. The first research question included eight hypotheses examining the relationship between sexuality education, sexual communication, rape myth acceptance, sexual assault

experience, gender, and years in college among Deaf and Hard of Hearing college students. The second research question included four hypotheses examining the differences between types of secondary schools attended (schools for the Deaf or mainstream schools) and sexuality education, sexual communication, rape myth acceptance, and sexual assault experience.

Research Question 1: Is there a relationship between sexuality education, sexual communication, rape myth acceptance, sexual assault experience, gender, and years in college among Deaf and Hard of Hearing college students?

Hypothesis 1a: Deaf and Hard of Hearing students with less formalized sexuality education will demonstrate lower levels of sexual communication than those with more formalized sexuality education. Bivariate linear regression was used to analyze sexual communication (SCS) as the dependent variable and sexuality education as the independent variable.

Hypothesis 1b: Deaf and Hard of Hearing students with less formalized sexuality education will demonstrate higher levels of rape myth acceptance than those with more formalized sexuality education. Bivariate linear regression was used to analyze rape myth acceptance (RMAS) as the dependent variable and sexuality education as the independent variable.

Hypothesis 1c: Deaf and Hard of Hearing students with lower levels of sexual communication will report having experienced higher rates of sexual assault than those with higher levels of sexual communication. Bivariate linear regression was used to analyze sexual assault experience (SES) as the dependent variable and sexual communication (SCS) as the independent variable.

Hypothesis 1d: Deaf and Hard of Hearing female students will report having experienced higher rates of sexual assault than Deaf and Hard of Hearing male students. Bivariate linear regression was used to analyze sexual assault experience (SES) as the dependent variable and gender as the independent variable.

Hypothesis 1e: Deaf and Hard of Hearing male students will demonstrate higher levels of rape myth acceptance than Deaf and Hard of Hearing female students. Bivariate linear regression was used to analyze rape myth acceptance (RMAS) as the dependent variable and gender as the independent variable.

Hypothesis 1f: Deaf and Hard of Hearing college juniors and seniors will demonstrate lower rape myth acceptance than Deaf and Hard of Hearing college freshmen and sophomores. Bivariate linear regression was used to analyze rape myth acceptance (RMAS) as the dependent variable and years in college as the independent variable.

Hypothesis 1g: Deaf and Hard of Hearing students with lower levels of sexual communication will demonstrate higher levels of rape myth acceptance than those with higher levels of sexual communication. Bivariate linear regression was used to analyze rape myth acceptance (RMAS) as the dependent variable and sexual communication (SCS) as the independent variable.

Hypothesis 1h: Deaf and Hard of Hearing students who reported having experienced sexual assault will demonstrate higher levels of rape myth acceptance than those who have not experienced sexual assault. Bivariate linear regression was used to analyze rape myth acceptance (RMAS) as the dependent variable and sexual assault experience (SES) as the independent variable.

Research Question 2: Are there differences between students previously educated in secondary schools for the Deaf versus mainstream schools, with regard to sexuality education, sexual communication, rape myth acceptance, and sexual assault experience?

Hypothesis 2a: Students who attended a school for the Deaf will report having received a less formalized sexuality education than mainstream school Deaf and Hard of Hearing students. Bivariate linear regression was used to analyze sexuality education as the dependent variable and type of secondary school previously attended as the independent variable.

Hypothesis 2b: Students who attended a school for the Deaf will demonstrate lower levels of sexual communication than mainstream school Deaf and Hard of Hearing students. Bivariate linear regression was used to analyze sexual communication (SCS) as the dependent variable and type of secondary school previously attended as the independent variable.

Hypothesis 2c: Students who attended a school for the Deaf will demonstrate higher levels of rape myth acceptance than mainstream school Deaf and Hard of Hearing students. Bivariate linear regression was used to analyze rape myth acceptance (RMAS) as the dependent variable and type of secondary school previously attended as the independent variable.

Hypothesis 2d: Students who attended a school for the Deaf will report having experienced higher rates of sexual assault than mainstream school Deaf and Hard of Hearing students. Bivariate linear regression was used to analyze sexual assault experience (SES) as the dependent variable and type of secondary school previously attended as the independent variable.

Methodological Issues and Limitations

Studying the population of research interest, Deaf and Hard of Hearing college students, presents some unique limitations that need to be addressed. Van Gurp (2001)

stated that a limitation of studies involving Deaf and Hard of Hearing students are the “linguistic demands of the measures (developed for hearing students)” (p. 56). Deaf and Hard of Hearing students often have difficulty being able to comprehend the information in surveys because their primary language is American Sign Language (ASL) (Van Gorp, 2001). Because the instrument was written in English, not shown in visual ASL, some information in the survey may have been misunderstood by the study participants.

To alleviate misunderstandings as much as possible, a readability test and discussion of the instrument with the PHAs was conducted prior to distribution as described in the procedures section. The literacy level of the survey was also checked by the Flesch Reading Ease formula (Flesch, 1948) to test the instrument’s reading difficulty and the Flesch-Kincaid Grade Level formula (Kincaid, 1975) to determine the grade level score. These tools are commonly used by academic researchers and educators (i.e., accessibility of health information) (Kincaid, 1975). Difficulty assessing how well the Deaf and Hard of Hearing students understood the online survey may still have been an issue, even though steps were taken to reduce misinterpreted information.

An additional limitation was the online method of instrument administration. Staff did not administer the survey due to its online nature and, as a result, no one was available in-person to help clarify any questions the students may have had regarding the items on the survey. Also, because the survey was anonymous, respondents would have had the opportunity to complete the survey more than once. Close to the end of data collection, Peer Health Advocates (PHAs) set up booths with laptops to encourage participation in the study, therefore students may have been deterred from taking the

survey more than one time and would have been able to receive clarification of some items, if necessary.

CHAPTER IV

RESULTS

Sample Characteristics

A total of 371 college students completed the survey; although, the final sample consisted of 360 Deaf and Hard of Hearing undergraduate students, due to the exclusion of 11 hearing respondents. The response rate for the survey can only be estimated due to the fact that advertising included all undergraduate students who were Deaf and Hard of Hearing. However, it can be assumed that the majority of the sample was indeed from Gallaudet University because the major focus of the advertising methods targeted only this university's students. If only undergraduate students at Gallaudet University had responded to the survey, the response rate would be 38% ($n = 371$). The number of Deaf and Hard of Hearing students included in the study sample ($n = 360$) was well above the required sample size for adequate power. Eighty-one percent of the respondents identified as Deaf and 19% as Hard of Hearing (see Table 1), however, all of these students were combined into one group for analyses. Seventy-one percent of the students had hearing parents, 4% had Hard of Hearing parents, and 29% had parents who are Deaf (participants could select more than one response for this item).

Table 1. Hearing Status Characteristics

<u>Hearing Status</u>		<u>n</u>	<u>%</u>
Hearing Status	Deaf	291	81
	Hard of Hearing	69	19
Parents' Hearing Status	Deaf	104	29
	Hard of Hearing	15	4
	Hearing	254	71

Just over half (58%) of the sample was female ($n = 210$) and 150 students were male (42%). The ages of the participants were distributed over the following eight categories for analyses: 18 (19%), 19 (14%), 20 (15%), 21 (8%), 22 (8%), 23 (9%), 24 (6%), 25 and over (21%), with the mean and median age being 21 years ($SD = 2.59$). A majority of the respondents (60%) had attended a school for the Deaf for high school, as opposed to a mainstream high school. The distribution of students in each class category of college was as follows: 28% freshman, 26% sophomores, 14% juniors, and 32% seniors (4 or more years in college). The ethnicity of the sample was 67% White/Caucasian (non-Hispanic), 12% Black/African-American (non-Hispanic), 6% Asian/Pacific Islander, 12% Latino/Hispanic, 1% Native American/Alaskan Native, and 2% Other. Sixty-six percent of the students identified themselves as exclusively heterosexual and 12% stated they were exclusively homosexual, with the remaining 22% of the students categorizing themselves somewhere in-between along a 5-point Likert scale of sexual orientation (see Table 2.2). Males (17%) reported higher rates of homosexuality than females (8%); however, more females (29%) than males (12%)

categorized themselves along the continuum between heterosexual and homosexual.

Table 2.1 provides the demographic characteristics of the sample, and Table 2.3 displays the descriptive statistics of the demographic variables.

The demographics of the sample were similar to the overall undergraduate population of Gallaudet University, therefore the sample is likely representative of the majority of the survey respondents. Gallaudet University's gender distribution (58% female) was very similar to the study sample (55% female), as was secondary school attended—two-thirds of the population and 60% of the sample attended a school for the Deaf for high school, and ethnicity—33% for both the population and sample from traditionally underrepresented groups (Black/African-American, Asian/Pacific Islander, Latino/Hispanic, Native American/Alaskan Native, or Other).

Table 2.1. Demographic Characteristics

<u>Demographics</u>		<u>n</u>	<u>%</u>
Gender	Female	210	58
	Male	150	42
Age	18	70	19
	19	49	14
	20	55	15
	21	29	8
	22	29	8
	23	32	9
	24	21	6
	25 +	75	21
High School Attended	Mainstream School	145	40
	School for the Deaf	215	60
Year in College	Freshman	101	28
	Sophomore	94	26
	Junior	51	14
	Senior	114	32
Race / Ethnicity	White / Caucasian	242	67
	Black / African-American	44	12
	Asian / Pacific Islander	20	6
	Latino / Hispanic	43	12
	Native American / Alaskan Native	3	1
	Other	8	2

Table 2.2. Sexual Orientation

		<u>Gender</u>					
		<u>Female</u>		<u>Male</u>		<u>Total</u>	
		<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>
<u>Sexual Orientation</u>	Exclusively Heterosexual	132	63	107	71	239	66
		25	12	6	4	31	9
		23	11	4	3	27	8
		12	6	7	5	19	5
	Exclusively Homosexual	18	8	26	17	44	12

Table 2.3. Descriptive Statistics of Demographic Variables

<u>Demographic Variable</u>	<u>Mean</u>	<u>Standard Deviation</u>
Gender	1.42	.50
Age	21.26	2.59
High School Attended	1.60	.49
Year in College	2.49	1.20
Race / Ethnicity	1.74	1.25
Sexual Orientation	1.88	1.43

Sexuality Education

Forty percent of the students felt that their sexuality education in elementary school was incomplete, while sexuality education during middle school was dispersed across the moderately complete responses by 69% of students. Forty-one percent of participants felt that their high school sexuality education was complete, and almost half (48%) of respondents felt that their college sexuality education was complete. Overall, 44% of students felt that their sexuality education was complete, with only 2% feeling that their sexuality education was incomplete. Results of sexuality education by level of education can be found in Table 3.

Table 3. Perceptions of Sexuality Education

<u>Level of Schooling</u>		<u>n</u>	<u>%</u>
Elementary School	Incomplete	144	40
		65	18
		77	21
		31	9
	Complete	43	12
Middle School	Incomplete	41	11
		61	17
		112	31
		77	21
	Complete	69	19
High School	Incomplete	32	9
		27	8
		69	19
		84	23
	Complete	148	41
College	Incomplete	56	16
		25	7
		44	12
		62	17
	Complete	173	48
Overall	Incomplete	8	2
		25	7
		59	16
		109	30
	Complete	159	44

Feelings and Thoughts about Sexuality

The item inquiring about “what or who has affected how you think and feel about sexuality” stimulated a wide range of qualitative data responses. Students were asked to “list the top three” influences on their sexuality, and the results were collapsed into the categories listed in Table 4. The most common responses stated by the students included: friends/peers (30%), media (24%), partner/significant other (23%), family members (21%), sexual experience (14%), and self (13%). Society/community (9%), physical attraction (9%), school/sexuality education (8%), and love/feelings/emotions (8%) were moderately common results among respondents. Some participants also reported gay/bi/gay culture (6%), sexual assault experience (5%), human nature (4%), God/church/religion (4%), and the Internet (3%) affected their feelings and thoughts about sexuality. Less common responses were listed by 1% of the students: open-mind, role-models, negative feelings, gender, observations, orgasm, health, and other (common sense, doctor, job, values, and alcohol).

Table 4. Feelings and Thoughts about Sexuality

<u>Influence / Affect</u>	<u>n</u>	<u>%</u>
Friends / Peers	108	30
Media	85	24
Partner / Significant Other	83	23
Family Members	75	21
Sexual Experience	49	14
Self	48	13
Society / Community	33	9
Physical Attraction	33	9
School / Sex Education	29	8
Love / Feelings / Emotions	27	8
Gay / Bi / Gay Culture	23	6
Sexual Assault Experience	17	5
Human Nature	16	4
God / Church / Religion	13	4
Internet	9	3
Open-mind	5	1
Role-models	5	1
Negative Feelings	5	1
Gender	4	1
Observations	3	1
Orgasm	2	1
Health	2	1
Other	5	1

Sexual Activity

Of the 360 respondents, the majority (84%) had experienced fondling, kissing, touching, or rubbing of their private areas (lips, breasts/chest, penis, vagina, or anus/butt) with their consent (see Table 5). Most students (73%) had consentingly participated in oral sex. Consensual vaginal sexual intercourse had been experienced by 65% of the sample, although 14% stated that this item did not apply to them. Thirty-one percent of the participants had consentingly engaged in anal intercourse. Females reported higher rates than males of experiencing fondling, kissing, touching, or rubbing of private areas (F=86%; M=83%), oral sex (F=75%; M=70%), and vaginal sexual intercourse (F=69%; M=59%); however, males (35%) reported higher rates of anal sex than females (28%).

Table 5. Sexual Activity

		<u>Gender</u>					
		<u>Female</u>		<u>Male</u>		<u>Total</u>	
		<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>
<u>Experienced Sexual Behavior with Consent</u>	Fondling, Kissing, Touching, or Rubbing of Private Areas	180	86	124	83	304	84
	Oral Sex	158	75	105	70	263	73
	Vaginal Sexual Intercourse	144	69	89	59	233	65
	Anal Sex	59	28	52	35	111	31

Sexual Communication

Only 15% of respondents talked openly with their partners about the issue of birth control, and 24% of students never communicated about this issue (see Table 6.1).

Furthermore, 14% of participants reported talking openly with their partner about the issue of sexually transmitted infections (STIs), as opposed to 21% who never discussed the issue.

Table 6.1. Sexual Communication Survey (SCS) Items 1-2

<u>Sexual Communication about Sexual Behaviors</u>		<u>n</u>	<u>%</u>
Talk openly to your partner about the issue of birth control	Never	85	24
	Almost Never	12	3
	Some of the Time	32	9
	About Half the Time	17	5
	Most of the Time	43	12
	Almost all of the Time	24	7
	Always	53	15
	Doesn't Apply	94	26
Talk openly to your partner about the issue of sexually transmitted infections (STIs)	Never	77	21
	Almost Never	27	8
	Some of the Time	33	9
	About Half the Time	27	8
	Most of the Time	55	15
	Almost all of the Time	33	9
	Always	49	14
	Doesn't Apply	59	16

A very small percentage of students (3%) always reported saying “yes” to something sexual when they really meant “no,” while 25% reported never complying in this manner (see Table 6.2). In addition, 23% of respondents reported never saying “no” to something sexual when they really meant “yes,” with only 7% always responding in this manner.

Table 6.2. Sexual Communication Survey (SCS) Items 3-4

<u>Sexual Communication about Sexual Behaviors</u>		<u>n</u>	<u>%</u>
Ever say “yes” to something sexual when you are really thinking “no”	Never	91	25
	Almost Never	64	18
	Some of the Time	112	31
	About Half the Time	34	9
	Most of the Time	10	3
	Almost all of the Time	8	2
	Always	10	3
	Doesn’t Apply	31	9
Ever say “no” to something sexual when you are really thinking “yes”	Never	83	23
	Almost Never	50	14
	Some of the Time	109	30
	About Half the Time	34	9
	Most of the Time	18	5
	Almost all of the Time	15	4
	Always	26	7
	Doesn’t Apply	25	7

The Sexual Communication Survey (SCS) items examined specific sexual behaviors in various approaches to determine how the respondent communicates with her or his sexual partner. The majority of students responded “Never” or “Almost never” to the sexual behaviors listed in items 5-21 of the SCS (see Table 6.3). Respondents “Never” or “Almost never” engaged in specific sexual acts due to them wanting their partner to like them or that they were too embarrassed to talk about it in regards to: hold your hand (62%), put his or her arms around you (62%), kiss you (63%), touch your breasts (51%), touch your genitals (62%), perform oral sex on you (66%), perform oral sex on your partner (59%), and vaginal sexual intercourse (57%). Students “Never” or “Almost never” participated in sexual behaviors also because of fear that their partner would think badly of them or that their reputation might be damaged for the following: hold your partner’s hand (56%), put your arms around your partner (57%), kiss your partner (54%), want your partner to touch your breasts (53%), want your partner to touch your genitals (93%), want to touch your partner’s genitals (55%), want your partner to perform oral sex on you (57%), perform oral sex on your partner (59%), and vaginal sexual intercourse (50%).

Table 6.3. Frequency of “Never” or “Almost Never” Responses on the SCS Items 5-21

<u>Sexual Communication about Sexual Behaviors</u>	<u>n</u>	<u>%</u>
Allow your partner to <i>hold your hand</i> when you don’t want to because you want your partner to like you or you are too embarrassed to talk about it	222	62
Allow your partner to <i>put his or her arms around you</i> when you don’t want to because you want your partner to like you or you are too embarrassed to talk about it	224	62
Allow your partner to <i>kiss you</i> when you don’t want to because you want your partner to like you or you are too embarrassed to talk about it	228	63
Allow your partner to <i>touch your breasts</i> when you don’t want to because you want your partner to like you or you are too embarrassed to talk about it	184	51
Allow your partner to <i>touch your genitals</i> when you don’t want to because you want your partner to like you or you are too embarrassed to talk about it	224	62
Allow your partner to <i>perform oral sex on you</i> when you don’t want to because you want your partner to like you or you are too embarrassed to talk about it	239	66
<i>Perform oral sex on your partner</i> when you don’t want to because you want your partner to like you or you are too embarrassed to talk about it	213	59
Having <i>vaginal sexual intercourse</i> when you don’t want to because you want your partner to like you or you are too embarrassed to talk about it	204	57
Want to <i>hold your partner’s hand</i> , but not actually do it, because of fear that your partner will think badly of you or that your reputation might be damaged	203	56
Want to <i>put your arms around your partner</i> , but not actually do it, because of fear that your partner will think badly of you or that your reputation might be damaged	206	57
Want to <i>kiss your partner</i> , but not actually do it, because of fear that your partner will think badly of you or that your reputation might be damaged	195	54
Want your partner to <i>touch your breasts</i> , but not actually do it, because of fear that your partner will think badly of you or that your reputation might be damaged	189	53
Want your partner to <i>touch your genitals</i> , but not actually do it, because of fear that your partner will think badly of you or that your reputation might be damaged	333	93
Want to <i>touch your partner’s genitals</i> , but not actually do it, because of fear that your partner will think badly of you or that your reputation might be damaged	199	55
Want your partner to <i>perform oral sex on you</i> , but not actually do it, because of fear that your partner will think badly of you or that your reputation might be damaged	204	57
Want to <i>perform oral sex on your partner</i> , but not actually do it, because of fear that your partner will think badly of you or that your reputation might be damaged	212	59
Want to have <i>vaginal sexual intercourse</i> , but not actually do it, because of fear that your partner will think badly of you or that your reputation might be damaged	181	50

Rape Myth Acceptance

The Rape Myth Acceptance Scale (RMAS) allowed participants a range of responses from “Strongly disagree” to “Strongly agree” with each of the presented statements about rape (see Tables 7.1 – 7.13). The majority of students responded that they “Disagreed” to some degree with the following rape myths: a person who goes to the home or apartment of someone on their first date implies that s/he is willing to have sex (57%; Table 7.1); any healthy person can successfully resist a rape if s/he really wants to (49%; Table 7.4); when people wear sexy or revealing clothing, they are just asking for trouble (53%; Table 7.5); in the majority of rapes, the survivor/victim is promiscuous or has a bad reputation (55%; Table 7.6); if a person engages in making-out and s/he lets things get out of hand, it is her/his own fault if her/his partner forces sex on her/him (61%; Table 7.7); people who get raped after hooking up with someone they just met get what they deserve (71%; Table 7.8); a person who is stuck-up and thinks s/he is too good to talk to someone on the street deserves to be taught a lesson (62%; Table 7.9); many people in the back of their mind wish to be raped, and may then without thinking set up a situation in which they are likely to be assaulted (53%; Table 7.10); and if a person gets drunk at a party and has sex with someone s/he just met there, s/he should be considered “fair game” to other people at the party who want to have sex with her/him too, whether s/he wants to or not (67%; Table 7.11). However, a large percentage of respondents reported “Agreeing” to some degree with four rape myths: anyone can be raped (82%; Table 7.2); one reason that people falsely report a rape is that they frequently have a need to call attention to themselves (56%; Table 7.3); any healthy person can successfully resist a rape if s/he want to (32%; Table 7.4); and when people wear sexy or revealing

clothing, they are just asking for trouble (31%; Table 7.5). The most common response for two questions about individuals fabricating a rape was “About half”: how many people who report a rape would you say are lying because they are angry and want to get back at the person they accuse? (35%; Table 7.12), and how many reported rapes would you guess were merely invented by people who wanted to protect their own reputation? (32%; Table 7.13).

Table 7.1. Rape Myth Acceptance Scale (RMAS) Item 1

<u>Rape Myth 1</u>		<u>n</u>	<u>%</u>
A person who goes to the home or apartment of someone on their first date implies that s/he is willing to have sex.	Strongly Disagree	110	31
	Disagree	45	13
	Disagree Some of the Time	47	13
	Unsure	60	17
	Agree Some of the Time	49	14
	Agree	30	8
	Strongly Agree	19	5

Table 7.2. Rape Myth Acceptance Scale (RMAS) Item 2

<u>Rape Myth 2</u>		<u>n</u>	<u>%</u>
Anyone can be raped.	Strongly Disagree	28	8
	Disagree	7	2
	Disagree Some of the Time	8	2
	Unsure	21	6
	Agree Some of the Time	40	11
	Agree	40	11
	Strongly Agree	216	60

Table 7.3. Rape Myth Acceptance Scale (RMAS) Item 3

<u>Rape Myth 3</u>		<u>n</u>	<u>%</u>
One reason that people falsely report a rape is that they frequently have a need to call attention to themselves.	Strongly Disagree	31	9
	Disagree	25	7
	Disagree Some of the Time	33	9
	Unsure	69	19
	Agree Some of the Time	87	24
	Agree	48	13
	Strongly Agree	67	19

Table 7.4. Rape Myth Acceptance Scale (RMAS) Item 4

<u>Rape Myth 4</u>		<u>n</u>	<u>%</u>
Any healthy person can successfully resist a rape if s/he really wants to.	Strongly Disagree	90	25
	Disagree	51	14
	Disagree Some of the Time	37	10
	Unsure	67	19
	Agree Some of the Time	43	12
	Agree	29	8
	Strongly Agree	43	12

Table 7.5. Rape Myth Acceptance Scale (RMAS) Item 5

<u>Rape Myth 5</u>		<u>n</u>	<u>%</u>
When people wear sexy or revealing clothing, they are just asking for trouble.	Strongly Disagree	87	24
	Disagree	49	14
	Disagree Some of the Time	55	15
	Unsure	57	16
	Agree Some of the Time	53	15
	Agree	29	8
	Strongly Agree	30	8

Table 7.6. Rape Myth Acceptance Scale (RMAS) Item 6

<u>Rape Myth 6</u>		<u>n</u>	<u>%</u>
In the majority of rapes, the survivor/victim is promiscuous or has a bad reputation.	Strongly Disagree	106	29
	Disagree	62	17
	Disagree Some of the Time	32	9
	Unsure	71	20
	Agree Some of the Time	44	12
	Agree	20	6
	Strongly Agree	25	7

Table 7.7. Rape Myth Acceptance Scale (RMAS) Item 7

<u>Rape Myth 7</u>		<u>n</u>	<u>%</u>
If a person engages in making-out and s/he lets things get out of hand, it is her/his own fault if her/his partner forces sex on her/him.	Strongly Disagree	118	33
	Disagree	53	15
	Disagree Some of the Time	47	13
	Unsure	60	17
	Agree Some of the Time	40	11
	Agree	20	6
	Strongly Agree	22	6

Table 7.8. Rape Myth Acceptance Scale (RMAS) Item 8

<u>Rape Myth 8</u>		<u>n</u>	<u>%</u>
People who get raped after hooking up with someone they just met get what they deserve.	Strongly Disagree	183	51
	Disagree	51	14
	Disagree Some of the Time	20	6
	Unsure	56	16
	Agree Some of the Time	34	9
	Agree	10	3
	Strongly Agree	6	2

Table 7.9. Rape Myth Acceptance Scale (RMAS) Item 9

<u>Rape Myth 9</u>		<u>n</u>	<u>%</u>
A person who is stuck-up and thinks s/he is too good to talk to someone on the street deserves to be taught a lesson.	Strongly Disagree	152	42
	Disagree	45	13
	Disagree Some of the Time	24	7
	Unsure	53	15
	Agree Some of the Time	41	11
	Agree	22	6
	Strongly Agree	23	6

Table 7.10. Rape Myth Acceptance Scale (RMAS) Item 10

<u>Rape Myth 10</u>		<u>n</u>	<u>%</u>
Many people in the back of their mind wish to be raped, and may then without thinking set up a situation in which they are likely to be assaulted.	Strongly Disagree	103	29
	Disagree	42	12
	Disagree Some of the Time	43	12
	Unsure	97	27
	Agree Some of the Time	38	11
	Agree	20	6
	Strongly Agree	17	5

Table 7.11. Rape Myth Acceptance Scale (RMAS) Item 11

<u>Rape Myth 11</u>		<u>n</u>	<u>%</u>
If a person gets drunk at a party and has sex with someone s/he just met there, s/he should be considered “fair game” to other people at the party who want to have sex with her/him too, whether s/he wants to or not.	Strongly Disagree	161	45
	Disagree	51	14
	Disagree Some of the Time	28	8
	Unsure	69	19
	Agree Some of the Time	29	8
	Agree	9	3
	Strongly Agree	13	4

Table 7.12. Rape Myth Acceptance Scale (RMAS) Item 12

<u>Rape Myth 12</u>		<u>n</u>	<u>%</u>
How many people who report a rape would you say are lying because they are angry and want to get back at the person they accuse?	None	48	13
	Very Few	119	33
	About Half	125	35
	Most	57	16
	All	11	3

Table 7.13. Rape Myth Acceptance Scale (RMAS) Item 13

<u>Rape Myth 13</u>		<u>n</u>	<u>%</u>
How many reported rapes would you guess were merely invented by people who wanted to protect their own reputation?	None	42	12
	Very Few	112	31
	About Half	115	32
	Most	67	19
	All	24	7

Sexual Assault Experience

The Sexual Experiences Survey (SES) items inquired about sexual assault experience regarding specific sexual behaviors (see Table 8). Almost half (48%) of respondents had experienced unwanted fondling, kissing, touching, or rubbing of their private areas (lips, breast/chest, penis, vagina, or anus/butt). Twenty-eight percent of students had had some of their clothing removed without their consent. Students reported experiencing various nonconsensual sexual acts: oral sex (22%), vaginal sexual intercourse (19%), and anal sex (13%), in addition to attempted oral sex (27%), attempted

vaginal sexual intercourse (18%), and attempted anal sex (14%). Twenty percent of respondents admitted to ever having been raped. Corresponding to all of the SES items, 33% of students who had experienced any unwanted sexual behaviors had been under the age of 18.

Table 8. Sexual Assault Experience: Sexual Experiences Survey (SES)

<u>Experienced Sexual Behavior Without Consent</u>	<u>n</u>	<u>%</u>
Fondled, Kissed, Touched, or Rubbed Private Areas	174	48
Removed Her/His Clothing	100	28
Oral Sex	79	22
Vaginal Sexual Intercourse	67	19
Anal Sex	47	13
Attempted Oral Sex	98	27
Attempted Vaginal Sexual Intercourse	66	18
Attempted Anal Sex	51	14
Rape	72	20
Under the Age of 18	119	33

Reliability of Scales

Cronbach's alpha is an internal reliability measure of the items in a scale. All of the scales applied in this study had an acceptable alpha score for this sample (see Table 9). Three scales had Cronbach's alphas consistent with scores found previously by other researchers. The Sexual Communication Survey (SCS) alpha score was .91, similar to .99 (Hanson & Gidycz, 1993), .90 (Orchowski et al., 2008), and .85 (Breitenbecher & Scarce, 2001). The Rape Myth Acceptance Scale (RMAS) Cronbach's alpha was .80, within the range of .875 (Burt, 1980), .85 (Gray, 2006), .84 (Sawyer et al., 2002), and .745 (Bryant et al., 2001). The reliability of the Sexual Experiences Survey (SES) (.87) was found to be higher than the score (.74) resulting from research conducted by Cecil and Matson (2006) and Koss and Oros (1982).

Table 9. Cronbach's Alpha Reliability of Scales

<u>Scale</u>	<u># of Items in Scale</u>	<u>α</u>
Sexuality Education	5	.72
Sexual Communication Survey (SCS)	21	.91
Rape Myth Acceptance Scale (RMAS)	13	.80
Sexual Experiences Survey (SES)	10	.87
Sexual Activity	4	.69

Descriptive Statistics of Scale Variables

Mean composite scores were calculated for each scale. The descriptive statistics of the composite scores of the scale variables can be found in Table 10.

Table 10. Descriptive Statistics of Composite Score Scale Variables

<u>Variable</u>	<u>Mean</u>	<u>Standard Deviation</u>
Sexuality Education	3.43	.89
Sexual Communication Survey (SCS)	1.96	.99
Rape Myth Acceptance Scale (RMAS)	3.30	.96
Sexual Experiences Survey (SES)	1.02	.45
Sexual Activity	1.51	.47

Correlation among Variables

Pearson correlations were computed to reveal the strength of association between the composite score variables of the scales (see Table 11). Four correlations were found to be significant at the .01 level (2-tailed), and two correlations were found to be significant at the .05 level (2-tailed). Sexual assault experience was found to be significantly correlated with sexual activity (.320), sexual communication (.306), and rape myth acceptance (-.123). Sexual activity was also found to be significantly correlated with sexual communication (.251) and rape myth acceptance (-.115).

Table 11. Pearson Correlations of Composite Score Scale Variables

	<u>Sexuality Education</u>	<u>Sexual Communication</u>	<u>Rape Myth Acceptance</u>	<u>Sexual Assault Experience</u>	<u>Sexual Activity</u>
<u>Sexuality Education</u>	1	-.042	.240**	-.092	.024
<u>Sexual Communication</u>		1	.097	.306**	.251**
<u>Rape Myth Acceptance</u>			1	-.123*	-.115*
<u>Sexual Assault Experience</u>				1	.320**
<u>Sexual Activity</u>					1

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Linear Regression Results

Bivariate linear regression was used to analyze the variables within each of the twelve hypotheses, as well as one additional regression equation (Z). Hypotheses 1b, 1c, 1d, 1e, 1f, 1h, and Z were found to be statistically significant (see Tables 12, 14.1, and 14.2). When analyzing Hypothesis 1b, sexuality education was found to explain 6% of the variance of rape myth acceptance ($R^2 = .058$), and had a significant correlation ($R = .240$) and regression slope ($B = .257$) at the .01 level (2-tailed), demonstrating that sexuality education was a significant predictor of rape myth acceptance. Sexual communication accounted for 9% of the variance of sexual assault experience ($R^2 = .094$) when reviewing the results of Hypothesis 1c, and had a significant correlation ($R = .306$) and regression slope ($B = .138$) at the .01 level (2-tailed), displaying that sexual communication was significant in predicting sexual assault experience. Hypothesis 1d found that gender was a significant predictor of sexual assault experience at the .01 level (2-tailed; $R = 3.54$; $B = -.320$), with gender explaining 13% of the variance of sexual assault experience ($R^2 = .125$). Gender was also significant in predicting rape myth acceptance at the .01 level (2-tailed) in Hypothesis 1e ($R = .182$; $B = .352$), with gender accounting for 3% of the variance of rape myth acceptance ($R^2 = .033$). Hypothesis 1f exhibited that years in college explained 1% of the variance of rape myth acceptance ($R^2 = .011$), and significantly confirmed that years in college predicted rape myth acceptance at the .05 level (2-tailed; $R = .104$; $B = -.082$). Sexual assault experience was found to be a significant predictor of rape myth acceptance at the .05 level (2-tailed; $R = .123$; $B = -.263$) accounting for 2% of the explained variance ($R^2 = .015$) in Hypothesis 1h. The additional regression analysis (Z) found that sexual activity significantly predicted sexual

assault experience at the .01 level (2-tailed; $R = .320$; $B = .303$), with sexual activity explaining 10% of the variance of sexual assault experience ($R^2 = .103$). Even though hypotheses 1e, 1f, and 1h demonstrate statistical significance, they account for only a small amount of variance and have little practical significance. Research Question One hypotheses 1a and 1g, and all Research Question Two hypotheses (2a, 2b, 2c, and 2d) were not found to be statistically significant at the .05 level.

Table 12. Linear Regression Results

<u>Hypotheses</u>	<u>R</u>	<u>R²</u>	<u>Adjusted R^{2†}</u>	<u>B</u>	<u>SE</u>
1a	.042	.002	-.001	-.046	.058
1b	.240**	.058	.055	.257**	.055
1c	.306**	.094	.091	.138**	.023
1d	.354**	.125	.123	-.320**	.045
1e	.182**	.033	.030	.352**	.101
1f	.104*	.011	.008	-.082*	.042
1g	.097	.009	.007	.093	.051
1h	.123*	.015	.012	-.263*	.112
2a	.000	.000	-.003	-6.415E-5	.096
2b	.005	.000	-.003	.010	.106
2c	.048	.002	.000	-.094	.103
2d	.025	.001	-.002	.022	.048
Z	.320**	.103	.100	.303**	.047

* Significant at the 0.05 level (2-tailed).

** Significant at the 0.01 level (2-tailed).

† Negative values for adjusted R^2 are not common, but can occur due to the fact that the adjusted R^2 will always be less than or equal to R^2 .

ANOVA Results

To further examine hypothesis 1f, an ANOVA analysis was conducted to determine each year in college's separate computation of rape myth acceptance. The ANOVA analysis confirmed that Deaf and Hard of Hearing juniors and seniors demonstrated lower levels of rape myth acceptance than Deaf and Hard of Hearing freshman and sophomores, with juniors reporting the lowest rape myth acceptance of all years in college (see Table 13).

Table 13. ANOVA Results for Rape Myth Acceptance by Year in College

<u>Year in College</u>	<u>Mean</u>	<u>n</u>
Freshman	3.46	101
Sophomore	3.31	94
Junior	3.09	51
Senior	3.23	114

Table 14.1. Research Question One Hypotheses Results

<u>Hypothesis #</u>	<u>Hypothesis</u>	<u>Significant or Not Significant</u>	<u>Proven or Not Proven</u>
1a	Deaf and Hard of Hearing students with less formalized sexuality education will demonstrate lower levels of sexual communication than those with more formalized sexuality education.	Not Significant	Not proven
1b	Deaf and Hard of Hearing students with less formalized sexuality education will demonstrate higher levels of rape myth acceptance than those with more formalized sexuality education.	Significant	Not proven
1c	Deaf and Hard of Hearing students with lower levels of sexual communication will report having experienced higher rates of sexual assault than those with higher levels of sexual communication.	Significant	Proven
1d	Deaf and Hard of Hearing female students will report having experienced higher rates of sexual assault than Deaf and Hard of Hearing male students.	Significant	Proven
1e	Deaf and Hard of Hearing male students will demonstrate higher levels of rape myth acceptance than Deaf and Hard of Hearing female students.	Significant	Proven
1f	Deaf and Hard of Hearing college juniors and seniors will demonstrate lower rape myth acceptance than Deaf and Hard of Hearing college freshmen and sophomores.	Significant	Proven
1g	Deaf and Hard of Hearing students with lower levels of sexual communication will demonstrate higher levels of rape myth acceptance than those with higher levels of sexual communication.	Not Significant	Not Proven
1h	Deaf and Hard of Hearing students who reported having experienced sexual assault will demonstrate higher levels of rape myth acceptance than those who have not experienced sexual assault.	Significant	Not proven

Table 14.2. Research Question Two Hypotheses Results

<u>Hypothesis #</u>	<u>Hypothesis</u>	<u>Significant or Not Significant</u>	<u>Proven or Not Proven</u>
2a	Students who attended a school for the Deaf will report having received a less formalized sexuality education than mainstream school Deaf and Hard of Hearing students.	Not Significant	Not proven
2b	Students who attended a school for the Deaf will demonstrate lower levels of sexual communication than mainstream school Deaf and Hard of Hearing students.	Not Significant	Not proven
2c	Students who attended a school for the Deaf will demonstrate higher levels of rape myth acceptance than mainstream school Deaf and Hard of Hearing students.	Not Significant	Not proven
2d	Students who attended a school for the Deaf will report having experienced higher rates of sexual assault than mainstream school Deaf and Hard of Hearing students.	Not Significant	Not proven

CHAPTER V

DISCUSSION, RECOMMENDATIONS, AND CONCLUSION

Discussion

This study is innovative in regards to the approach of researching topics that have not previously been studied or variables that have not been previously integrated together among Deaf and hard of hearing populations—sexuality education, sexual communication, rape myth acceptance, sexual assault experience, and type of secondary school attended. A significant gap in the literature is the limited empirical data about the Deaf and Hard of Hearing community in relation to sexual assault issues. Therefore, my goal in this current study was to address this void by further developing a foundation in the literature for many associated sexuality variables in the Deaf and Hard of Hearing community, an especially vulnerable population as demonstrated by the results of this study.

Sexuality Education

Most students reported that they did not receive a complete sexuality education until high school (41%) or college (48%). Ackard and Neumark-Sztainer (2001) and Mandelblatt (1999) report that school-based sexuality education programs need to begin teaching curricula at younger ages, enabling students to have the sexuality knowledge necessary to make decisions before they initiate dating behaviors. Sexuality education on all school levels must include sexual assault and rape information to educate students about methods to reduce their risks of assault. The few current sexuality education

programs that are offered at this time in schools for the Deaf and mainstream schools across the country need to be evaluated. Guidelines can then be developed from the findings to create more effective sexuality education programs (Swartz, 1993), including sexual assault and rape topics. Knowledge alone may not change behaviors, but it is a suggested starting point to increase awareness of sexual assault and rape. Sexuality education must be age, language, and culture-appropriate to reach Deaf and Hard of Hearing students; therefore, adapting a currently available curriculum for Deaf and Hard of Hearing students may be the best approach (Joseph et al., 1995) to developing a sexual assault and rape education program.

Orchowski and colleagues (2008) and Gidycz and colleagues (2001; 2006) have conducted extensive research regarding effectiveness of sexual assault prevention programs among hearing college students, incorporating various sexual assault and rape educational tools. These programs could be used as models to develop successful educational sessions to decrease sexual assault rates among Deaf and Hard of Hearing college students. Prevention should be the goal of college campuses to reduce the rates of sexual assault and rape. Nation, Crusto, Kumpfer, Seybolt, Morrissey-Kane, and Davino (2003) state the essential principles of health prevention programs are as follows: comprehensiveness, variety of methods, adequate dosage, theoretical basis, positive relationships, appropriate timing of interventions, cultural sensitivity, competency, trained staff members, and continuous outcome evaluations. Specific to sexual violence, primary prevention education programs often include: sexual assault attitudes, impact of gender roles, healthy relationships, consent, respect of personal boundaries, conflict resolution, and skills building (CDC, 2004).

Feelings and Thoughts about Sexuality

Examining the qualitative data, some of the most common responses about students' feelings and thoughts about sexuality were consistent with previous research findings. Friends/peers was the most frequent response by students (30%), which could also include partner/significant other (23%) resulting in 53% of respondents being primarily influenced by their peers. This finding is supported by many previous researchers among Deaf and Hard of Hearing populations (Fitz-Gerald & Fitz-Gerald, 1980; 1987; Gannon, 1998; Joseph et al., 1995; Minter, 1983; Sawyer et al., 1996; Swartz, 1993). Family members were influential for 21% of the students, including parents, siblings, and grandparents. Heuttel and Rothstein (2001) also found that friends (88%) and family (68%) were the main sources of sexuality information for Deaf college students.

Returning to the Social Cognitive Theory (SCT) behavior change strategies, applying the “modeling” and “expectations” constructs are appropriate for peer and family education: utilizing credible role-models for students to emulate; referring to others' experiences of sexual assault, including speakers who are survivors of sexual assault—someone “just like them;” how to handle pressure from others; and incorporating information about likely consequences of an action in advance. Within the Deaf and Hard of Hearing community, making use of the “Deaf Grapevine” (Bat-Chava et al., 2005; Peinkofer, 1994; Winningham et al., 2008) and credible Deaf leaders (Winningham et al., 2008) to circulate sexual assault and rape information within the community would be highly effective. Marlee Matlin, a Hollywood actress and

spokesperson for the Deaf community, recently published a book “I’ll Scream Later” (Matlin, 2009) where she talks about her sexual assault experiences, which has allowed the Deaf community to begin to more openly discuss sexual assault issues. Gallaudet University’s Peer Health Advocate (PHA) program is a comprehensive example of how college students can effectively deliver interventions to their peers to raise awareness and, therefore, assist in preventing sexual assault (Author, 2009). PHAs are, in a sense, train-the-trainer types of positions, disseminating accurate health information, including sexual assault facts, to the other students on campus, formally and informally. The successful components of this program can be replicated throughout the United States to reach all Deaf and Hard of Hearing students (Determan et al., 1999).

The media (24%) also had a high impact on students’ sexuality; however, this may not always be viewed as positive. As an example, in recent media, a line from the book “I Hope They Serve Beer in Hell” (Max, 2006) was posted on buses in Chicago, IL and Washington, DC to promote the motion picture based on the book: “Deaf girls can’t hear you coming,” referring to sexual assault of Deaf females.

Fourteen percent of students reported their sexual experience had affected their feelings and thoughts about sexuality. This percentage seems low, given that 84% of students in the study sample reported engaging in sexual activity, which is consistent with previous studies reporting that Deaf and Hard of Hearing students tended to be very sexually active. Doyle (1995) reported that 77% of Deaf college students reported being involved in any sexual activity with a partner within the last three years; Joseph and colleagues (1995) found that 81% of Deaf and Hard of Hearing college students were

sexually active; and Sawyer and colleagues (1996) reported that eighty-four percent of Deaf college students had had sexual intercourse. In previous studies, high numbers of Deaf and Hard of Hearing youth reported having engaged in sexual behaviors, which has been a method of learning about sexuality, described as the “hidden curriculum” (Doyle, 1995; Joseph et al., 1995; Lytle, 1985; Minter, 1983; Sawyer et al., 1996). This form of sexuality education may result in negative outcomes due to the uneducated decisions and risky experimenting in which Deaf and Hard of Hearing students are engaging without being entirely informed about sexuality topics. A range of sexual orientations were self-reported by participants, with 12% of students exclusively homosexual and an additional 22% ranging in-between homosexual and heterosexual. These percentages are exceptionally high considering Michael, Gagnon, Laumann, and Kolata (1994) report the prevalence of homosexuality in the general population is 2-4%. The reason for these inflated rates among Deaf and Hard of Hearing students is uncertain, but perhaps the media has had an influence in making it seem trendy to be open with sexuality, adopting phrases, such as “gender-flexible.”

School/sexuality education was only reported by 8% to be influential on their feelings and thoughts about sexuality. Formal sexuality education for Deaf and Hard of Hearing youth appears to be marginal and these students are not perceiving school sexuality education as a valuable resource for sexuality information. Ideally, the opportunities for sexuality education need to be equivalent among all Deaf and hearing students, and schools should take on the responsibility to educate Deaf and Hard of Hearing adolescents about sexuality (Swartz, 1993; Friess, 1998). Instruction of sexuality education in a manner that is understood by Deaf and Hard of Hearing students is a

necessary requirement to reach this potentially vulnerable, young population (Finkelhor, Hotelling, Lewis, & Smith, 1990; Freisthler, Merritt, & Laschala, 2006; Sebald, 2008). To improve program development and implementation, updated resources and materials are needed for Deaf and Hard of Hearing students. Visual sexuality curricula, including videos, books, brochures, training and educational materials, computer programs, and learning tools need to be developed to ensure sexual assault and rape information is accessible and understood by Deaf and Hard of Hearing students (Doyle, 1995; Sawyer et al., 1996; Getch et. al, 1998; Gannon, 1998).

Sexual Communication

One-fourth of students reported “Never” talking openly to their sexual partners about the issue of birth control, and close to one-quarter (21%) “Never” discussed the issue of sexually transmitted infections (STIs). These rates of failing to communicate with sexual partners about such important topics is disappointingly high. Cleary and colleagues (2002) explain that individuals cannot be expected to effectively communicate about sexuality if skills of how and why these discussions with sexual partners are not taught to them. Skills to overcome students’ lack of comfort and to assist them in initiating discussions about sexuality with their partners are simply not being taught, and the implications are all too obvious. Compounding the problem is that Deaf and Hard of Hearing students are unable to pick up on “unofficial” educational clues about communication that often popular media provides a hearing person, as previous researchers have found (Joseph, 1993; Kleinig & Monhay, 1990). This deficit, in

conjunction with the lack of formal education, places the Deaf and Hard of Hearing students in a particularly vulnerable position.

The majority of students (50% or greater) “Never” or “Almost never” engaged in specific sexual activities due to wanting their partner to like them, being too embarrassed to talk to their partner, fear that their partner would think badly of them, or that their reputation might be damaged. While these findings are positive, and although a considerable percentage of students reported effectively communicating with their partners about sexual behaviors, there is some reason for concern that 31% of respondents “Some of the time” say “yes” to something sexual when they are really thinking “no,” and 30% stated that they say “no” to something sexual when they are really thinking “yes” (token resistance) “Some of the time.” Token resistance relates to the script that traditionally women are not supposed to admit that they want sex, even if they do (Check & Malamuth, 1983; Muehlenhard & Felts, 1986).

Training on sexual communication is a key component in reducing sexual assault among college students. “Communication skills training...is appropriate for adolescents because of their lack of experience in handling sexual situations” (Pedlow & Carey, 2004, p. 179). The results of this study indicated that communication with partners about birth control and sexually transmitted infections (STIs) was lacking. In addition, token resistance—clearly communicating sexual wants and desires with a partner—was found to be an issue. Muehlenhard and colleagues (1988; 1991; 1998; 2005) have done extensive research with token resistance among college student populations and its effect on sexual assault. Strategies used to help students assert themselves in peer pressure

situations, thus reducing their risk of sexual assault, are necessary. Skills building to learn to directly communicate with sexual partners (Laub, Somera, Gowen, & Diaz, 1999; Singh, 2003) and assertiveness role-plays with partners (Morokoff et al., 1997) are tools that have been successful with hearing college students and can be implemented in the Deaf and Hard of Hearing community. Furthermore, Hanson and Gidycz (1993) have begun to include partners in studies involving sexual communication measurements, instead of solely a one-sided method of respondents reporting their perceptions of sexual communication in their relationships. Findings from these studies can be applied in the development of new approaches for programs and trainings for Deaf and Hard of Hearing college women and men to improve communication among sexual partners.

Rape Myth Acceptance

Most students did respond that they “Disagreed” to some degree with the majority of the rape myths, however an alarmingly high percentage of students “Agreed” to some degree with two particular rape myths: “any healthy person can successfully resist a rape if s/he really wants to” (32%) and “when people wear sexy or revealing clothing, they are just asking for trouble” (31%). Lack of access to sexuality education avenues might contribute to attitudes of skewed perceptions of sexual encounters. Lerner (1980) and Burt (1991) are two researchers who discuss the fact that individuals dismiss a rape due to many learned rationalizations and justifications. “Since sexual violence is a cultural issue, solutions must go beyond stopping sexual violence, and should promote behaviors and cultural norms that are healthy” (Lee, Guy, & Perry, 2008, p. 9). Revisiting the

Social Cognitive Theory (SCT), some behavior change strategies that can apply the constructs of “environment” and “behavioral capacity” are as follows: students learning skills regarding sexual assault; social environment changes concerning gender roles and expectations, rape myth acceptance, and perceptions of sexual violence; and changing behaviors to reduce risks of sexual assault.

There are a few other areas of concern where high proportions of students believed that rapes were being falsely reported for various reasons. Fifty-six percent of respondents believed to some degree that people falsely report a rape to call attention to themselves. In addition, 35% of students believe that “About half” of people who report a rape are lying because they are angry and want to get back at the person they accuse, and 32% of the sample believe that “About half” of reported rapes are merely invented by people who wanted to protect their own reputation. A comment by one respondent illustrates these rape myth attitudes:

“rapes are something people usually make up or invent. A rape or sexual violence is due when you are forced to have sex with someone. But when it comes to boyfriend/girlfriend, fiancée/fiance, husband/wife rapes are or sexual violence or something invent just to punish the other pa[r]tner. In that case, rapes may be fake and false.”

Such high rates of rape myth acceptance is disturbing and is a clear example that Deaf and Hard of Hearing college students need to be educated about the definition and context of rape. These findings suggest that sexual assault education is necessary for Deaf and Hard of Hearing students to increase their knowledge and awareness, and modify attitudes about rape issues. Many researchers among hearing samples have demonstrated that rape education programs can often be successful in decreasing

acceptance of rape myths and behaviors (Felty et al., 1991; Fonow et al., 1992; Gidycz et al., 2001; Hinck & Thomas, 1999; Holcomb et al., 1993; Kress et al., 2006; Lonsway, 1996; Proto-Campise et al., 1998; Szymanski et al., 1993). The Deaf and Hard of Hearing community is at a further disadvantage, however, because of its lack of exposure to quality sexuality education (Deyo, 1994; Doyle, 1995; Gabriel & Getch, 2001; Gaskins, 1999) and/or low understanding of sexuality education in school (Determan et al., 1999; Friess, 1998; Gannon, 1998; Swartz, 1993). Perhaps most serious of all, the Deaf and Hard of Hearing culture may in fact perpetuate rape myths, and therefore, some form of educational intervention is necessary to break this potentially dangerous cycle.

Sexual Assault Experience

The sample reported having experienced high percentages of sexual assault and rape, ranging from 13% to 48%, depending on the nonconsensual sexual activity. These rates are considerably higher than the rates found by previous researchers among hearing college students (Benson et al., 1992; Fisher et al., 2000; Koss, 1988). However, the rates described in this study are similar to the data reported during the previous limited research conducted among Deaf and Hard of Hearing individuals (Roehrer Institute, 1994; Sullivan et al., 1987). Students from this study commented openly about their sexual assault and rape experiences:

“I was raped when I was 14;”

“Raped thru childhood for 12 years never told anyone till c[o]llege;”

“I have been raped three times in the past, long time ago...”

“I have experience it sometime;”

“I was molested/raped by my step grandfather from the age of 7 until the age of thirteen. I was weak and didn't feel confident enough to tell my mother until I was thirteen. I was going through a teenage phase where I felt like I was trapped and felt alone. I confessed to my mother and my family and they ended up taking my step grandfather's side over me. It has been almost six years now and they still refuse to speak with me and believe it had happened frequently in the past. I still believe I'm not the only one he messed around with.”

Only 20% of respondents acknowledged their experiences as rape, which is a lower percentage than the responses corresponding to the unwanted sexual behaviors students experienced. Definitions of sexual assault and rape are not clearly delineated, which results in confusion for many who have experienced sexual assault and/or rape, and often fail to identify their experience as such. A collaborative approach of researchers and educators is required to develop clear definitions of sexual assault and rape to enable individuals to better identify when they have experienced an assault. The wide range of definitions of rape and sexual assault often hinders survivors' ability to acknowledge that they have been sexually assaulted, as shown in some comments by respondents:

“I was ‘forced’ to have a sex with my first boyfriend. I wasn’t considered it as a raped. I was afraid and unsure but I was willing to do it anyway. I didn’t make the report;”

“I lost my virginity at age 15, it wasn't a rape. It was when someone seduced me into sex;”

“I wasn’t exactly raped—I was pretty much ‘molested’ by this guy who would not listen to my ‘no’s’ but never had sex;”

“Someone did tried to have sex with me but I told him no and stop 4 or 5 times. He don’t stop at once I said no for like 4 or 5 times then I had to stand up and move myself then he finally stop. I still have my clothes on and I was not sure if it is offic[i]ally a rape even I don't consent to it;”

“I am not sure I was raped as I was blacked out that night and next morning I found out that I had sex with him the night before so we did have sex sometime before but that night I was veryyy drunk and he knew that I was not able to control myself so my friends considered it was a rape... I m strong now though;”

“I was fifteen and a man who owned greenhouse and he needed someone to help him with making flower beds so he asked me if I would like to earn some money by making flower bed at his mother's house. So I agreed. He said it would be best to start early in the morning so I stayed at his house. Next thing I knew in his bed, he was touching me, playing with me and I was there lying shaking and scared. I was not sure what to do but to let him finish it. He performed hand job and oral. I've never told this to my mother. The only person who knew about it is my very close friend;”

“I have many guys/girls who try to do stuff with me without my consent. One time I left my door opened- but that person shut the door and locked the door and got himself naked and took my clothes off without my consent. Several guys tried to put his penis in me without my consent I had to physically push them away and say NO. It never happened, but almost;”

“well, I was flattered and tricked into anal sex as my first sexual experience,, but it was kind of a mutual consent he was wayyy older than I and I was flattered by his attention and he asked me to be his girlfriend and I was like ok! like a Naive dumb ninny, but he was very gently and didn't hurt me at all for that penetration of my anus... I didn't really understand what he was doing and enjoyed it but then I got scared and told my mom and doctor about it,,, was checked and was fine,,, I am fine, not at all traumatized by the experience,,,”

Instrument

The gender-neutral modifications to the instrument allowed for more accurate data to be collected from both genders in the study. All scales were found to be reliable and have acceptable internal consistency, ranging from .69 to .91, including the consensual sexual activity scale modified from the Sexual Experiences Survey (SES) and the sexuality education scale developed by the author. Six of the ten correlations between the scales were found to be statistically significant, therefore supporting the integration of many associated variables that have not been researched together in one study in hearing or Deaf and Hard of Hearing populations. This updated approach to sexual assault research allowed for new hypotheses to be studied and analyzed.

Research Questions and Hypotheses

The hypotheses developed under Research Question One were strongly supported by the literature review, as six of the eight hypotheses were found to be statistically significant, and the findings from five analyses were consistent with previous findings.

Deaf and Hard of Hearing female students were found to experience sexual assault at higher rates than Deaf and Hard of Hearing male students, which confirms findings in earlier studies among hearing populations (CDC, 2007; NVC, 1992; Tjaden & Thoennes, 2000b; 2006) and in the Deaf and Hard of Hearing community (Dobosh, 1999; Joseph, 2000; Skinner, 1999; Sullivan et al., 1987; Westcott & Jones, 1999). Although women are clearly more likely than men to be survivors of sexual assault, male numbers may be artificially deflated as they will be more hesitant to report sexual assault. Most

states now are modifying their rape laws to become more gender-neutral (Koss et al, 2007), which may lead to more males feeling comfortable to come forward with reports of sexual assault.

Students with lower levels—more compromised levels—of sexual communication reported higher levels of sexual assault experience. This result is supported by previous researchers among hearing samples (Breitenbecher & Gidycz, 1998; Gidycz et al., 2006; Greene & Navarro, 1998; Muehlenhard & Linton, 1987). Sexual miscommunication has been found to be a risk factor associated with sexual assault (Abbey, 1991; Muehlenhard & Linton, 1987). The univariate results showed that there were definite areas of particular concern regarding sexual communication among the sample. Within the Deaf and Hard of Hearing community, communication barriers develop between sexual partners due to lack of social skills with peers (Marschark, 2000) resulting from an inability to learn from and interact with parents while growing up (Friess, 1998; Meyers & Bartee, 1992). Sexual assertiveness training has been found to assist in improving communication among hearing students (Morokoff et al., 1997) and Deaf individuals (Martin & Bat-Chava, 2003), and therefore possibly reducing the chance of sexual assault. Role-playing with sexual partners to practice and develop open communication is a tool that can be practically utilized.

Engaging in consensual sexual activity experience was associated with higher reported rates of experiencing sexual assault. Joseph (2000) also found previously that sexually active Deaf and Hard of Hearing college students had experienced sexual victimization in their lifetime at higher rates (43%) than when non-sexually active

respondents were also included in the analyses (36%). This finding may be due to the fact that sexually active students are involved in situations where they may be more vulnerable than non-sexually active students. Acquaintance rape is the most common type of sexual assault experienced on a college campus (Aizenman & Kelley, 1988; CDC, 2007; Fisher et al., 2000; Home Office, 1999; Koss, 1985; Koss et al., 1988; O'Shaughnessey & Palmer, 1989; Tjaden & Thoennes, 2000b; USDOJ, 1994; Warshaw, 1988); therefore, dates, sexual partners, and friends are the primary offenders of sexual assault among female and male college students (Basile et al., 2007).

Deaf and Hard of Hearing male students were found to be more accepting of rape myths than Deaf and Hard of Hearing female students, which is widely supported by previous literature among hearing populations over the course of many decades (Barnett & Feild, 1977; Bohner et al., 1993; Burt, 1980; Deitz et al., 1982; Feltey et al., 1991; Fonow et al., 1992; Gidycz et al., 2001; Kress et al., 2006; Muehlenhard & Linton, 1987; Muir et al., 1996; Sawyer et al., 2002). Traditional gender roles are found to be associated with higher acceptance of rape myths among hearing college students (Bohner et al., 1993; Good et al., 1995), illustrated by the convention of men following the script that it is their role to convince women to have sex (Check & Malamuth, 1983; Muehlenhard & Felts, 1986). Workshops targeted toward males to learn new cultural norms and have less stereotypical attitudes toward female students could achieve positive outcomes. All-male student groups on college campuses, including fraternities and sports teams, could be required to attend these workshops to clarify and dispel many rape myths. Among hearing samples, sexual assault programs have been found to reduce college men's rape myth attitudes to a level more similar to women's attitudes where rape is less

accepted (Harrison et al., 1991; Heppner et al., 1995; Holcomb et al., 1993; Pinzone-Glover et al., 1998).

Analyses confirmed that Deaf and Hard of Hearing juniors and seniors do demonstrate lower rape myth acceptance than Deaf and Hard of Hearing freshmen and sophomores. Research among hearing college students has also shown similar results (Blumberg & Lester, 1991; Feltey et al., 1991; Sawyer et al., 2002). These findings may be a result of older students having had a larger amount of sexuality education by the time they reached the later years of college, in addition to greater life experiences and more maturity. Close to half of students in the sample reported that they felt that their college sexuality education was complete; therefore, college rape educational programming may be another positive contributing factor to reduce acceptance of rape myths. Future programming should specifically target first- and second-year students to better educate them and decrease their acceptance of rape myths. Kress and colleagues (2006) conducted a study among hearing incoming first-year students and found that sexual assault prevention programming successfully reduced attitudes of rape myth acceptance.

Although two additional hypotheses also had statistically significant results, their findings were inconsistent with previous research. Deaf and Hard of Hearing students with higher levels of sexuality education demonstrated higher levels of rape myth acceptance. This result is contrary to the findings in previous studies among hearing populations (Black et al., 2000; Breitenbecher, 2000; Burt, 1980; Fischer, 1986a; Heppner et al., 1995; O'Donohue et al., 1998; Shultz et al., 2000). First, the fact that students received a greater amount of sexuality education does not mean that they learned

about sexual assault and date rape education. Clark (1995) found that hygiene, safety, and daily living skills were the most commonly taught topics within the sexuality curricula in schools for the Deaf, and Gabriel and Getch (2001) reported that schools for the Deaf failed to teach about sexual assault and rape. Second, a greater proportion of sexuality education does not ensure a more inclusive quality experience. Other researchers found that rape and sexual assault-specific sexuality education was necessary to decrease students' acceptance of rape myths (Feltey et al., 1991; Fonow et al., 1992; Gidycz et al., 2001; Hinck & Thomas, 1999; Holcomb et al., 1993; Kress et al., 2006; Lonsway, 1996; Proto-Campise et al., 1998; Szymanski et al., 1993).

Data indicated that Deaf and Hard of Hearing students who reported experiencing sexual assault at higher rates demonstrated lower rape myth acceptance, however, these results were not supported by the literature. Lacasse and Mendelson (2007), Muehlenhard and Linton (1987), and Muehlenhard and MacNaughton (1988) previously found that those who reported having experienced sexual assault were more accepting of rape myths. However, Breitenbecher and Gidycz (1998) found that hearing revictimized women tended to have more sexual assault knowledge, perhaps due to their seeking out resources after experiencing sexual assault, therefore leading to less acceptance of rape myths; this may also be the case among Deaf and Hard of Hearing individuals.

Two hypotheses under Research Question One were not found to be statistically significant. Sexuality education was not found to be a predictor of sexual communication among Deaf and Hard of Hearing college students. This result is not surprising, considering that communication between sexual partners is rarely integrated into

sexuality education on any school level (Cleary et al., 2002; Troth & Peterson, 2000). Social interactions and sexual communication are rarely components of sexuality education in mainstream schools (Brunner, 1992; Fine, 1992; Lamb, 1997; McLaren, 1992), let alone in schools for the Deaf. Programs focused on sexual assault risk reduction among hearing college students have been effective over time to increase levels of communication by speaking directly and assertively with sexual partners (Breitenbecher & Scarce, 2001; Gidycz et al., 2006; Orchowski et al., 2008). Deaf and Hard of Hearing students may also benefit from this approach.

In addition, sexual communication was not found to predict rape myth acceptance among the study sample. Students were found to have some issues with communicating directly with their sexual partners, especially with saying “no” when meaning “yes” and saying “yes” when meaning “no.” Research has been conducted among hearing college students regarding misperceptions of sexual advances such as these due to rape myths. For example, men often assume that women really want to engage in sexual activity when women do not because they have misinterpreted the women’s behaviors (Abbey, 1982; Check & Malamuth, 1983; Goodchilds & Zellman, 1984; Morokoff et al., 1997; Muehlenhard, 1988; Russell, 1975; Weis & Borges, 1973), possibly resulting in sexual assault (Muehlenhard & Linton, 1987). Therefore, it is not clear as to why there is no correlation or predictive relationship between these two variables.

Due to the lack of previous research in the Deaf and Hard of Hearing population, especially examining differences between schools for the Deaf and mainstream schools, Research Question Two hypotheses were based on a combination of anecdotal and

empirical evidence. It is difficult to ascertain the reason that all of the hypotheses under Research Question Two were not found to be statistically significant. Researchers have found that there are differences within Deaf and Hard of Hearing students when evaluating schools for the Deaf and mainstream schools (Angelides & Aravi, 2006/2007; Harrison, 1988; Musselman, Mootilal, & MacKay, 1996; Van Gorp, 2001); however, these previously studied differences have focused primarily on academic successes (Allen, 1986; Foster, 1989; Garay, 2003; Holt, 1994; Jensema, 1975; Leigh, 1999; Powers, 2001; Van Gorp 2001; Wood et al., 1984), and not lifestyle or health behaviors.

Other factors may be associated with differences between students at both types of high school settings regarding sexuality education, sexual communication, rape myth acceptance, and sexual assault experience. Although it was hypothesized that mainstream schools would provide a more effective experience, Deaf and Hard of Hearing students may have had problems learning in mainstream situations. Interpreter skills and signing ability of the teacher, especially regarding specific sexuality signs, are often difficult issues that students face in mainstream schools (Determan et al., 1999; Friess, 1998; Gannon, 1998; Swartz, 1993). Interpreters may not relay all taught information about sexuality to students, if they are not comfortable with the topics due to their values or possible embarrassment (Gannon, 1998). Misunderstandings may arise, which could result in students not receiving complete and accurate information. A Deaf student's inability to comprehend written materials in mainstream schools may also contribute to inadequate sexuality skills and influence beliefs (Peinkofer, 1994). Modifying curricula to include more visual tools (Baker–Duncan et al., 1997; Doyle, 1995; Gannon, 1998; Getch et al., 1998; Joseph, 1993; Razzano et al., 1994; Sawyer et al., 1996) would assist

all students, especially Deaf and Hard of Hearing, in having a more thorough understanding of sexuality information.

In many instances, mainstream sexuality education may have been poor quality or non-existent, similar to the schools for the Deaf curricula (Deyo, 1994; Doyle, 1995; Gaskins, 1999). Therefore, the sexuality education provided for both groups of students may have been inadequate. Since the early 1990s, comprehensive sexuality education in mainstream schools has been diluted (Santelli et al., 2006), and as a result, there has been a decline in the quantity and quality of sexuality information taught on all school levels from 1995 to 2002 (Lindberg et al., 2006). Although a majority of mainstream schools continue to provide some form of sexuality education, often sexual assault and rape issues are not discussed (Fay & Medway, 2006). The same has been found to be true in schools for the Deaf (Getch & Gabriel, 1998; Getch, Young, & Denny, 1998).

Influences on the students outside of the academic setting may also have had an important impact on their feelings and thoughts about sexuality. Because of a lack of sources of sexuality education while growing up, modifying previously learned behavior, knowledge, and skills may be more difficult even when Deaf and Hard of Hearing students are provided accurate information in formal educational settings (Heuttel & Rothstein, 2001). As the results indicated in the qualitative item about feelings and thoughts about sexuality, friends/peers, family members, media, and sexual experience were the most commonly listed sources. Unfortunately, information received from their peers (Fitz-Gerald & Fitz-Gerald, 1980; 1985; Gannon, 1998; Swartz, 1993) and parents (Friess, 1998) may often be inaccurate. Peer health education programs have been found

to successfully educate Deaf adolescents about sexuality (Baker-Duncan et al., 1997; Gannon, 1998; Joseph, 1993; Joseph et al., 1995). Developing a peer health education program, similar to the Gallaudet University's Peer Health Advocate (PHA) program, on the high school level may be an effective method to informally educate Deaf and Hard of Hearing youth more effectively. The author initiated a pilot program at the Model Secondary School for the Deaf (MSSD), which was modeled after Gallaudet University's Peer Health Advocate (PHA) program and has continued with success since 2006.

It is possible that Deaf and Hard of Hearing students are similar to one another, regardless of where they attended secondary school. They each deal with learning challenges, even though they are separate and unique to the type of secondary school attended. Given the findings of this study, there does not seem to be a need to divide students into two learning groups for interventions according to type of secondary school attended, which supports current programming efforts at Gallaudet University.

Limitations

One limitation was the fact that the study sample self-selected themselves to complete the survey, which may have biased the results of the research to those that volunteered to take the instrument. In addition, although all undergraduate Deaf and Hard of Hearing students were included in the study, the majority of the respondents were recruited from a very select group of students at Gallaudet University. The very "Big-D" Deaf culture at Gallaudet University, communicating in ASL, and previous experiences that students have had may differ from Deaf and Hard of Hearing students attending other

colleges and the Deaf and Hard of Hearing community overall; therefore, generalizing of results may be difficult.

The review of previous research primarily focused on the hearing population due to the limited previous research in the Deaf and Hard of Hearing population, especially for the topics of sexual communication, rape myth acceptance, and sexual assault experience. Transferring these constructs from a hearing to a Deaf and Hard of Hearing population is an obvious concern that should be considered when examining results.

Three additional items could have added some valuable data to the study, however were not included. Inquiring about which college respondents attended could have provided a more accurate response rate from Gallaudet University and other universities. Asking “if you’ve experienced any unwanted sexual behaviors, did you know the person?” could have allowed for an analysis of acquaintance rape versus stranger rape situations. “Have you ever been sexually assaulted?” in addition to “have you ever been raped?” could have assessed percent of unacknowledged sexual assault survivors, in addition to the percent of unacknowledged rape survivors.

Responses to the question “who or what has affected how you think and feel about sexuality” seemed to have some skewed responses, possibly due to the prior item asking “how would you BEST describe your sexual orientation?” Some of the respondents seemed to be justifying why they were more homosexual or heterosexual, instead of viewing the two questions independently of one another. Positioning the questions apart from one another may alleviate this issue in future research.

The linear regression analyses did not include demographic covariates, which would have provided a more precise statistical analysis. Computing these additional

analyses in the future would present supplementary baseline data to benefit the Deaf and Hard of Hearing community regarding these newly studied variables.

As previously stated in the methodological issues and limitations, because the instrument was written in English and not shown visually in American Sign Language (ASL), some of the respondents may have had to spend additional time to comprehend the items, although various strategies were used to decrease misunderstandings as much as possible. Only one comment was made by a student regarding this issue: “question English hard me want ASL!!!! ASL easy English hard!!!”

Practical Implications

In order to reach Deaf and Hard of Hearing students regarding sexual assault issues, numerous steps can be taken to improve programs and services, as stated earlier in the Discussion section. The following approaches to programming can be practically applied to Deaf and Hard of Hearing students to reduce their risk of sexual assault:

- Evaluate current sexuality education programs in schools for the Deaf and mainstream schools;
- Adapt a currently available sexuality curriculum for Deaf and Hard of Hearing students (Joseph et al., 1995);
- Model Gallaudet University’s Peer Health Advocate (PHA) program as a comprehensive example of how college students can effectively deliver interventions to their peers to raise awareness, and therefore, assist in preventing sexual assault (Author, 2009);
- Identify and replicate successful components of programs throughout the United States to reach all Deaf and Hard of Hearing students (Determan et al., 1999);
- Develop guidelines for more effective sexuality education programs (Swartz, 1993);

- Include the following in health prevention programs: comprehensiveness, variety of methods, adequate dosage, theoretical basis, positive relationships, appropriate timing of interventions, cultural sensitivity, competency, trained staff members, and continuous outcome evaluations (Nation et al., 2003);
- Specific to sexual violence primary prevention programs, include: sexual assault attitudes, impact of gender roles, healthy relationships, consent, respect of personal boundaries, conflict resolution, and skills building (CDC, 2004);
- Implement sexual assault prevention programs and rape educational tools (Gidycz et al., 2001; 2006; Orchowski et al., 2008) in all sexuality education programs on all school levels;
- Ensure sexuality education is age, language, and culture-appropriate;
- Develop clear definitions of sexual assault and rape to ensure that individuals will be able to acknowledge a sexual assault experience;
- Update visual resources, materials, and sexuality curricula to include: videos, books, brochures, training and educational materials, computer programs, and learning tools (Baker –Duncan et al., 1997; Doyle, 1995; Gannon, 1998; Getch et al., 1998; Joseph, 1993; Razzano et al., 1994; Sawyer et al., 1996);
- Promote healthy behaviors and cultural norms (Lee et al., 2008);
- Change social environments concerning gender roles and expectations, rape myth acceptance, and perceptions of sexual violence;
- Target males and younger students with rape myth acceptance education;
- Utilize credible role-models for students to emulate;
- Refer to others' experiences of sexual assault, including speakers who are survivors of sexual assault—someone “just like them;”
- Make use of the “Deaf Grapevine” (Bat-Chava et al., 2005; Peinkofer, 1994; Winningham et al., 2008) and credible Deaf leaders (Winningham et al., 2008) to circulate sexual assault and rape information within the community;
- Train about how to handle sexual pressure from others;
- Integrate assertiveness strategies and role-plays with partners to help students in peer pressure situations (Morokoff et al., 1997);
- Incorporate information about likely consequences of an action in advance;

- Teach skills building to communicate with sexual partners (Laub et al., 1999; Singh, 2003), including token resistance (Muehlenhard et al., 1988; 1991; 1998; 2005);
- Involve partners in sexual communication training, instead of only a one-sided approach (Hanson & Gidycz, 1993).

Recommendations for Future Research

A logical extension of this study that other researchers (Heuttel & Rothstein, 2001; Kleinig & Mohay, 1990; Sawyer et al., 1996; Swartz, 1993) have previously performed with sexuality studies among Deaf and Hard of Hearing students is to replicate the study with hearing college students and compare the results. Repeating the study with a larger, more representative sample of the Deaf and Hard of Hearing community at other universities would also contribute to the literature. The results of these two additional studies would then be able to take into account the opposing outcomes from the two hypotheses, involving rape myth acceptance as the outcome variable, to determine if the results can be attributed to Deaf and Hard of Hearing students, culture, socialization, or another factor altogether.

Supplementary research on rape myth acceptance in the Deaf and Hard of Hearing community in general would seem to be necessary. The lack of previous empirical evidence, conflicting results in this study regarding acceptance of rape myths, and high acceptance of the myths associated with individuals often lying about rape, in addition to the information given in a comment by a respondent, support the need for further investigation of this variable.

Investigating sexuality education specific to rape and sexual assault education in schools for the Deaf and mainstream schools should also be a priority. The quality and

content of sexuality education needs to be determined, not simply the notion that students are receiving some information. Breitenbecher and Scarce (1999) designed the Sexual Assault Knowledge Survey (SAKS) to assess respondents' knowledge about prevalence of sexual assault in college, negotiation of consensual sexual behaviors, defining rape, rape myth acceptance, and reporting of rape. The SAKS scale could be utilized to examine students' sexuality knowledge specific to sexual assault, as opposed to respondents only acknowledging as to having received some form of sexuality education.

Sexual activity was found to have statistically significant correlations with sexual assault experience, sexual communication, and rape myth acceptance. In addition, sexual activity predicted sexual assault experience in the additional regression equation (Z). Further examination of the interactions of these variables would provide a great deal of data to assist in understanding how consensual sexual activity affects these other subject areas.

Revictimization of sexual assault survivors is a common occurrence described by numerous researchers, and would provide important additional information to research in the Deaf and Hard of Hearing community. Breitenbecher and Gidycz (1998) have performed extensive research about revictimized women in the hearing college student population finding that a survivor (especially as a child or adolescent) will more likely experience sexual assault again. Deaf revictimization also happens to a majority of Deaf college students (65%)—those students that experienced childhood sexual abuse also experienced sexual assault again as an adult (Joseph, 2000).

In research conducted by Loiselle and Fuqua (2007) and Koss (1988), alcohol was found to be one of the four strongest predictors for acquaintance rape in hearing college

students; the use of alcohol in date rape occurs twice as often as does the use of force. Integrating this variable into future research would provide a wealth of information for the Deaf and Hard of Hearing community. Gallaudet University students have been surveyed (Core Institute) about having been taken advantage of sexually while under the influence of alcohol or drugs with the following results: 10.4% (10.3 females and 10.9 males; 1997), 13.8% (17.6 females and 6.7 males; 2004), and 9.6% (9.4 females and 10.1 males; 2007). A more in-depth investigation may demonstrate how alcohol is a key predictor of the high rates of sexual assault in the Deaf and Hard of Hearing community.

With new technology, the ability to have American Sign Language (ASL) replace the written English text in an entire instrument is now possible; however, all Deaf and Hard of Hearing students do not know ASL at advanced levels. Therefore, the option of having ASL displayed alongside the written English words is available to assist with reading comprehension of the survey.

Conclusion

Although this research has resulted in some important findings, this study should be regarded as only the beginning—baseline data for future research to build and expand upon. The next steps need to determine more underlying contributors to the higher rates of sexual assault, and how to prevent and reduce the incidence of sexual assault among the Deaf and Hard of Hearing college student population. This study can provide the impetus to proceed with a clearer direction for further research to learn more about the extent to which sexual assault and rape affects the Deaf and Hard of Hearing community.

APPENDICES

Informed Consent Form

Informed consent and survey website:

<http://spreadsheets.google.com/viewform?formkey=cG40a1F6dVA1T1hMQ29EaXFWOTRhWVE6MA>

Welcome Deaf and Hard of Hearing undergraduate students!

Thank you for agreeing to take this online survey! Your participation in this survey will assist with very important research regarding sexual assault issues among Deaf and Hard of Hearing students.

The survey is completely ANONYMOUS, so please be as HONEST as possible. There will be some personal questions, but we will not ask your name or other identifying information, so we hope this helps you to feel comfortable answering each question honestly.

Please answer all of the questions to the best of your ability to assist us in helping to keep all Deaf and Hard of Hearing students safer (policies, procedures, and education). The survey will take about 10-15 minutes to complete. It is your choice to take this survey, so if at any time you don't feel comfortable, you can stop taking the survey or take it at a later time.

CONSENT means: When you both want to and agree to the sexual activity that you are doing together.

WITHOUT CONSENT means: Sexual experiences that were unwanted or you did NOT agree to do. Someone doing any of the following to try to convince you to participate in sexual activity:

- Telling lies
- Threatening to end the relationship
- Threatening to spread rumors about you
- Making promises you knew were untrue
- Continually pressuring you after you said you didn't want to
- Showing displeasure
- Criticizing your sexuality or attractiveness
- Getting angry but not using physical force, after you said you didn't want to
- Taking advantage of you when you were too drunk or out of it to stop what was happening
- Threatening to physically harm you or someone close to you
- Using force, for example holding you down with their body weight, pinning your arms, or having a weapon

If you have any questions about the survey or want to talk about personal issues regarding the survey, please contact Gwendolyn Francavillo, Coordinator of Health and Wellness Programs at Gallaudet University: <http://hwp.gallaudet.edu>, gwendolyn.francavillo@gallaudet.edu, or 202.651.5432 (v). Additional Gallaudet University resources are: Mental Health Center, <http://mhc.gallaudet.edu>, mh.center@gallaudet.edu, or 202.651.6080 (v/tty/vp); Residence Life, <http://reslife.gallaudet.edu>, susan.hanrahan@gallaudet.edu, or 202.250.2233 (vp); Office of Student Conduct, <http://osc.gallaudet.edu>, student.conduct@gallaudet.edu, or 202.250.2050 (vp); Student Health Service, <http://shs.gallaudet.edu>, shs@gallaudet.edu, or 202.651.5090 (v/tty); Department of Public Safety, <http://dps.gallaudet.edu>, dps.office@gallaudet.edu, gallydps@att.blackberry.net (pager), 202.651.5444 (tty), or 202.651.5555 (v). Additional Washington, DC area resources are: Washington Hospital Center, <http://www.whcenter.org>, 110 Irving Street NW, Washington, DC 20010, 202.877.7000 (v), or 911 (v); Deaf Abused Women's Network (DAWN), <http://www.deafdawn.org>, director@deafdawn.org, hotline@deafdawn.org (24-hour hotline), 202.223.7959 (vp), or 202.861.0258 (tty); DC Rape Crisis Center, <http://www.dcrcc.org>, dcrcc@dcrcc.org, 202.328.1371 (tty), 202.333.7273 (hotline), or 202.232.0789 (v); DC Metropolitan Police Department, <http://mpdc.dc.gov/>, dhhhu2002@yahoo.com, 8886436284@archwireless.net (pager), 202.671.2864 (tty), 202.671.3350 (v), or 911 (v). National resources are: RAINN, <http://www.rainn.org>, <http://online.rainn.org> (online hotline), or 1.800.656.HOPE; United States Department of Justice Office on Violence Against Women, <http://www.ovw.usdoj.gov>, 202.307.2277 (tty), or 202.307.6026 (v).

This research has been reviewed according to the Gallaudet University and University of Maryland, College Park IRB procedures for research involving human subjects. If you have any questions about your rights as a research subject, please contact: Institutional Review Board, Gallaudet University, Kendall Hall, The Graduate School and Professional Programs, Washington, DC 20002; irb@gallaudet.edu; 202.651.5400 or Institutional Review Board Office, University of Maryland, College Park, Maryland, 20742; irb@deans.umd.edu; 301.405.0678.

I have read and understand the information stated above about the research study, and I agree to take this survey. ("Yes")

Instrument

Demographics

1. What is your gender? (Select one)

Female

Male

2. How old are you? (Select your age)

(18-85)

3. How do you identify yourself? (Select one)

Deaf

Hard of Hearing

Hearing

4. Are your parents: (Check all that apply)

Deaf

Hard of Hearing

Hearing

Doesn't apply

5. What type of high school did you attend for MOST of high school? (Select one)

School for the Deaf

Mainstream school

6. What year are you in college? (Select number of years)

(1-15)

7. What is your ethnicity or race? (Select one)

White/Caucasian (non-Hispanic)

Black/African-American (non-Hispanic)

Asian/Pacific Islander

Latino/Hispanic

Native American/Alaskan Native

Other: _____

8. How would you BEST describe your sexual orientation? (Select one)

EXCLUSIVELY HETEROSEXUAL (straight)			EXCLUSIVELY HOMOSEXUAL (gay or lesbian)		
1	2	3	4	5	

Sexuality Education

9. What or who has affected how you think and feel about sexuality? (List the top 3)

10. How in-depth or complete do you feel your sex education was in ELEMENTARY SCHOOL?

INCOMPLETE			COMPLETE		
1	2	3	4	5	

11. How in-depth or complete do you feel your sex education was in MIDDLE SCHOOL?

INCOMPLETE			COMPLETE		
1	2	3	4	5	

12. How in-depth or complete do you feel your sex education was in HIGH SCHOOL?

INCOMPLETE			COMPLETE		
1	2	3	4	5	

13. How in-depth or complete do you feel your sex education has been in COLLEGE?

INCOMPLETE			COMPLETE		
1	2	3	4	5	

14. How in-depth or complete do you feel your sex education experience has been OVERALL?

INCOMPLETE			COMPLETE		
1	2	3	4	5	

Sexual Activity

15. Have you ever had your private areas (lips, breast/chest, penis, vagina, or anus/butt) fondled, kissed, touched, or rubbed WITH your consent? Yes / No / Doesn't apply

16. Have you ever had oral sex (mouth to penis or vagina) WITH your consent? Yes / No / Doesn't apply

17. Have you ever had sexual intercourse (penis in vagina) WITH your consent? Yes / No / Doesn't apply

18. Have you ever had anal sex (penis in anus/butt) WITH your consent? Yes / No / Doesn't apply

Sexual Communication Survey (SCS)

19. Do you talk openly to your partner about the issue of birth control?

NEVER	ALMOST NEVER	SOME OF THE TIME	ABOUT HALF THE TIME	MOST OF THE TIME	ALMOST ALL OF THE TIME	ALWAYS	DOESN'T APPLY
1	2	3	4	5	6	7	0

20. Do you talk openly to your partner about the issue of sexually transmitted infections (STIs)?

NEVER	ALMOST NEVER	SOME OF THE TIME	ABOUT HALF THE TIME	MOST OF THE TIME	ALMOST ALL OF THE TIME	ALWAYS	DOESN'T APPLY
1	2	3	4	5	6	7	0

21. Do you ever say "yes" to something sexual when inside your head you are really thinking "no?"

NEVER	ALMOST NEVER	SOME OF THE TIME	ABOUT HALF THE TIME	MOST OF THE TIME	ALMOST ALL OF THE TIME	ALWAYS	DOESN'T APPLY
1	2	3	4	5	6	7	0

22. Do you ever say “no” to something sexual when inside your head you are really thinking “yes?”

NEVER	ALMOST NEVER	SOME OF THE TIME	ABOUT HALF THE TIME	MOST OF THE TIME	ALMOST ALL OF THE TIME	ALWAYS	DOESN'T APPLY
1	2	3	4	5	6	7	0

23. Do you ever end up allowing your partner to HOLD YOUR HAND when you don't really want to, not because you feel forced or coerced, but because of some other concern (such as wanting your partner to like you or being too embarrassed to talk about it)?

NEVER	ALMOST NEVER	SOME OF THE TIME	ABOUT HALF THE TIME	MOST OF THE TIME	ALMOST ALL OF THE TIME	ALWAYS	DOESN'T APPLY
1	2	3	4	5	6	7	0

24. Do you ever end up allowing your partner to PUT HIS OR HER ARMS AROUND YOU when you don't really want to, not because you feel forced or coerced, but because of some other concern (such as wanting your partner to like you or being too embarrassed to talk about it)?

NEVER	ALMOST NEVER	SOME OF THE TIME	ABOUT HALF THE TIME	MOST OF THE TIME	ALMOST ALL OF THE TIME	ALWAYS	DOESN'T APPLY
1	2	3	4	5	6	7	0

25. Do you ever end up allowing your partner to KISS YOU when you don't really want to, not because you feel forced or coerced, but because of some other concern (such as wanting your partner to like you or being too embarrassed to talk about it)?

NEVER	ALMOST NEVER	SOME OF THE TIME	ABOUT HALF THE TIME	MOST OF THE TIME	ALMOST ALL OF THE TIME	ALWAYS	DOESN'T APPLY
1	2	3	4	5	6	7	0

26. Do you ever end up allowing your partner to TOUCH YOUR BREASTS when you don't really want to, not because you feel forced or coerced, but because of some other concern (such as wanting your partner to like you or being too embarrassed to talk about it)?

NEVER	ALMOST NEVER	SOME OF THE TIME	ABOUT HALF THE TIME	MOST OF THE TIME	ALMOST ALL OF THE TIME	ALWAYS	DOESN'T APPLY
1	2	3	4	5	6	7	0

27. Do you ever end up allowing your partner to TOUCH YOUR GENITALS (VAGINA OR PENIS) when you don't really want to, not because you feel forced or coerced, but because of some other concern (such as wanting your partner to like you or being too embarrassed to talk about it)?

NEVER	ALMOST NEVER	SOME OF THE TIME	ABOUT HALF THE TIME	MOST OF THE TIME	ALMOST ALL OF THE TIME	ALWAYS	DOESN'T APPLY
1	2	3	4	5	6	7	0

28. Do you ever end up allowing your partner to PERFORM ORAL SEX ON YOU when you don't really want to, not because you feel forced or coerced, but because of some other concern (such as wanting your partner to like you or being too embarrassed to talk about it)?

NEVER	ALMOST NEVER	SOME OF THE TIME	ABOUT HALF THE TIME	MOST OF THE TIME	ALMOST ALL OF THE TIME	ALWAYS	DOESN'T APPLY
1	2	3	4	5	6	7	0

29. Do you ever end up PERFORMING ORAL SEX ON YOUR PARTNER when you don't really want to, not because you feel forced or coerced, but because of some other concern (such as wanting your partner to like you or being too embarrassed to talk about it)?

NEVER	ALMOST NEVER	SOME OF THE TIME	ABOUT HALF THE TIME	MOST OF THE TIME	ALMOST ALL OF THE TIME	ALWAYS	DOESN'T APPLY
1	2	3	4	5	6	7	0

30. Do you ever end up having SEXUAL INTERCOURSE (PENIS IN VAGINA) when you don't really want to, not because you feel forced or coerced, but because of some other concern (such as wanting your partner to like you or being too embarrassed to talk about it)?

NEVER	ALMOST NEVER	SOME OF THE TIME	ABOUT HALF THE TIME	MOST OF THE TIME	ALMOST ALL OF THE TIME	ALWAYS	DOESN'T APPLY
1	2	3	4	5	6	7	0

31. Do you ever want to HOLD YOUR PARTNER'S HAND, but not actually do it, because of some other concern (such as fear that your partner will think badly of you or that your reputation might be damaged)?

NEVER	ALMOST NEVER	SOME OF THE TIME	ABOUT HALF THE TIME	MOST OF THE TIME	ALMOST ALL OF THE TIME	ALWAYS	DOESN'T APPLY
1	2	3	4	5	6	7	0

32. Do you ever want to PUT YOUR ARMS AROUND YOUR PARTNER, but not actually do it, because of some other concern (such as fear that your partner will think badly of you or that your reputation might be damaged)?

NEVER	ALMOST NEVER	SOME OF THE TIME	ABOUT HALF THE TIME	MOST OF THE TIME	ALMOST ALL OF THE TIME	ALWAYS	DOESN'T APPLY
1	2	3	4	5	6	7	0

33. Do you ever want to KISS YOUR PARTNER, but not actually do it, because of some other concern (such as fear that your partner will think badly of you or that your reputation might be damaged)?

NEVER	ALMOST NEVER	SOME OF THE TIME	ABOUT HALF THE TIME	MOST OF THE TIME	ALMOST ALL OF THE TIME	ALWAYS	DOESN'T APPLY
1	2	3	4	5	6	7	0

34. Do you ever want your partner to TOUCH YOUR BREASTS, but not actually do it, because of some other concern (such as fear that your partner will think badly of you or that your reputation might be damaged)?

NEVER	ALMOST NEVER	SOME OF THE TIME	ABOUT HALF THE TIME	MOST OF THE TIME	ALMOST ALL OF THE TIME	ALWAYS	DOESN'T APPLY
1	2	3	4	5	6	7	0

35. Do you ever want your partner to TOUCH YOUR GENITALS (VAGINA OR PENIS), but not actually do it, because of some other concern (such as fear that your partner will think badly of you or that your reputation might be damaged)?

NEVER	ALMOST NEVER	SOME OF THE TIME	ABOUT HALF THE TIME	MOST OF THE TIME	ALMOST ALL OF THE TIME	ALWAYS	DOESN'T APPLY
1	2	3	4	5	6	7	0

36. Do you ever want to TOUCH YOUR PARTNER'S GENITALS (VAGINA OR PENIS), but not actually do it, because of some other concern (such as fear that your partner will think badly of you or that your reputation might be damaged)?

NEVER	ALMOST NEVER	SOME OF THE TIME	ABOUT HALF THE TIME	MOST OF THE TIME	ALMOST ALL OF THE TIME	ALWAYS	DOESN'T APPLY
1	2	3	4	5	6	7	0

37. Do you ever want your partner to PERFORM ORAL SEX ON YOU, but not actually do it, because of some other concern (such as fear that your partner will think badly of you or that your reputation might be damaged)?

NEVER	ALMOST NEVER	SOME OF THE TIME	ABOUT HALF THE TIME	MOST OF THE TIME	ALMOST ALL OF THE TIME	ALWAYS	DOESN'T APPLY
1	2	3	4	5	6	7	0

38. Do you ever want to PERFORM ORAL SEX ON YOUR PARTNER, but not actually do it, because of some other concern (such as fear that your partner will think badly of you or that your reputation might be damaged)?

NEVER	ALMOST NEVER	SOME OF THE TIME	ABOUT HALF THE TIME	MOST OF THE TIME	ALMOST ALL OF THE TIME	ALWAYS	DOESN'T APPLY
1	2	3	4	5	6	7	0

39. Do you ever want to have SEXUAL INTERCOURSE (PENIS IN VAGINA) but not actually do it, because of some other concern (such as fear that your partner will think badly of you or that your reputation might be damaged)?

NEVER	ALMOST NEVER	SOME OF THE TIME	ABOUT HALF THE TIME	MOST OF THE TIME	ALMOST ALL OF THE TIME	ALWAYS	DOESN'T APPLY
1	2	3	4	5	6	7	0

Rape Myth Acceptance Scale (RMAS)

40. A person who goes to the home or apartment of someone on their first date implies that s/he is willing to have sex.

STRONGLY DISAGREE	DISAGREE	DISAGREE SOME OF THE TIME	UNSURE	AGREE SOME OF THE TIME	AGREE	STRONGLY AGREE
1	2	3	4	5	6	7

41. Anyone can be raped.

STRONGLY DISAGREE	DISAGREE	DISAGREE SOME OF THE TIME	UNSURE	AGREE SOME OF THE TIME	AGREE	STRONGLY AGREE
1	2	3	4	5	6	7

42. One reason that people falsely report a rape is that they frequently have a need to call attention to themselves.

STRONGLY DISAGREE	DISAGREE	DISAGREE SOME OF THE TIME	UNSURE	AGREE SOME OF THE TIME	AGREE	STRONGLY AGREE
1	2	3	4	5	6	7

43. Any healthy person can successfully resist a rape if s/he really wants to.

STRONGLY DISAGREE	DISAGREE	DISAGREE SOME OF THE TIME	UNSURE	AGREE SOME OF THE TIME	AGREE	STRONGLY AGREE
1	2	3	4	5	6	7

44. When people wear sexy or revealing clothing, they are just asking for trouble.

STRONGLY DISAGREE	DISAGREE	DISAGREE SOME OF THE TIME	UNSURE	AGREE SOME OF THE TIME	AGREE	STRONGLY AGREE
1	2	3	4	5	6	7

45. In the majority of rapes, the survivor/victim is promiscuous or has a bad reputation.

STRONGLY DISAGREE	DISAGREE	DISAGREE SOME OF THE TIME	UNSURE	AGREE SOME OF THE TIME	AGREE	STRONGLY AGREE
1	2	3	4	5	6	7

46. If a person engages in making-out and s/he lets things get out of hand, it is her/his own fault if her/his partner forces sex on her/him.

STRONGLY DISAGREE	DISAGREE	DISAGREE SOME OF THE TIME	UNSURE	AGREE SOME OF THE TIME	AGREE	STRONGLY AGREE
1	2	3	4	5	6	7

47. People who get raped after hooking up with someone they just met get what they deserve.

STRONGLY DISAGREE	DISAGREE	DISAGREE SOME OF THE TIME	UNSURE	AGREE SOME OF THE TIME	AGREE	STRONGLY AGREE
1	2	3	4	5	6	7

48. A person who is stuck-up and thinks s/he is too good to talk to someone on the street deserves to be taught a lesson.

STRONGLY DISAGREE	DISAGREE	DISAGREE SOME OF THE TIME	UNSURE	AGREE SOME OF THE TIME	AGREE	STRONGLY AGREE
1	2	3	4	5	6	7

49. Many people in the back of their mind wish to be raped, and may then without thinking set up a situation in which they are likely to be assaulted.

STRONGLY DISAGREE	DISAGREE	DISAGREE SOME OF THE TIME	UNSURE	AGREE SOME OF THE TIME	AGREE	STRONGLY AGREE
1	2	3	4	5	6	7

50. If a person gets drunk at a party and has sex with someone s/he just met there, s/he should be considered “fair game” to other people at the party who want to have sex with her/him too, whether s/he wants to or not.

STRONGLY DISAGREE	DISAGREE	DISAGREE SOME OF THE TIME	UNSURE	AGREE SOME OF THE TIME	AGREE	STRONGLY AGREE
1	2	3	4	5	6	7

51. How many people who report a rape would you say are lying because they are angry and want to get back at the person they accuse?

NONE	VERY FEW	ABOUT HALF	MOST	ALL
1	2	3	4	5

52. How many reported rapes would you guess were merely invented by people who wanted to protect their own reputation?

NONE	VERY FEW	ABOUT HALF	MOST	ALL
1	2	3	4	5

Sexual Experiences Survey (SES)

53. Someone fondled, kissed, touched, or rubbed up against the private areas of your body (lips, breast/chest, penis, vagina, or anus/butt) WITHOUT YOUR CONSENT (but did not attempt sex). Yes / No / Doesn't apply

54. Someone removed some of your clothing WITHOUT YOUR CONSENT (but did not attempt sex). Yes / No / Doesn't apply

55. Someone had oral sex with you or made you have oral sex with them WITHOUT YOUR CONSENT. Yes / No / Doesn't apply

56. (For females) A man put his penis into your vagina, or someone inserted fingers or objects into your vagina WITHOUT YOUR CONSENT. Yes / No / Doesn't apply

57. A man put his penis into your butt, or someone inserted fingers or objects into your anus/butt WITHOUT YOUR CONSENT. Yes / No / Doesn't apply

58. Even though it did not happen, someone TRIED to have oral sex with you, or make you have oral sex with them WITHOUT YOUR CONSENT. Yes / No / Doesn't apply

59. (For females) Even though it did not happen, a man TRIED to put his penis into your vagina, or someone tried to insert fingers or objects into your vagina WITHOUT YOUR CONSENT. Yes / No / Doesn't apply

60. Even though it did not happen, a man TRIED to put his penis into your butt, or someone tried to insert objects or fingers into your anus/butt WITHOUT YOUR CONSENT. Yes / No / Doesn't apply

61. Have you ever been raped? Yes / No

62. If you've experienced any of the situations from questions 53 to 61, were you under the age of 18? Yes / No / Doesn't apply

Comments:

Confirmation Page

Thank you for completing this survey!

If you have any questions about the survey or want to talk about personal issues regarding the survey, please contact Gwendolyn Francavillo, Coordinator of Health and Wellness Programs at Gallaudet University: <http://hwp.gallaudet.edu>, gwendolyn.francavillo@gallaudet.edu, or 202.651.5432 (v). Additional Gallaudet University resources are: Mental Health Center, <http://mhc.gallaudet.edu>, mh.center@gallaudet.edu, or 202.651.6080 (v/tty/vp); Residence Life, <http://reslife.gallaudet.edu>, susan.hanrahan@gallaudet.edu, or 202.250.2233 (vp); Office of Student Conduct, <http://osc.gallaudet.edu>, student.conduct@gallaudet.edu, or 202.250.2050 (vp); Student Health Service, <http://shs.gallaudet.edu>, shs@gallaudet.edu, or 202.651.5090 (v/tty); Department of Public Safety, <http://dps.gallaudet.edu>, dps.office@gallaudet.edu, gallydps@att.blackberry.net (pager), 202.651.5444 (tty), or 202.651.5555 (v). Additional Washington, DC area resources are: Washington Hospital Center, <http://www.whcenter.org>, 110 Irving Street NW, Washington, DC 20010, 202.877.7000 (v), or 911 (v); Deaf Abused Women's Network (DAWN), <http://www.deafdawn.org>, director@deafdawn.org, hotline@deafdawn.org (24-hour hotline), 202.223.7959 (vp), or 202.861.0258 (tty); DC Rape Crisis Center, <http://www.dcrcc.org>, dcrcc@dcrcc.org, 202.328.1371 (tty), 202.333.7273 (hotline), or 202.232.0789 (v); DC Metropolitan Police Department, <http://mpdc.dc.gov/>, dhhhu2002@yahoo.com, 8886436284@archwireless.net (pager), 202.671.2864 (tty), 202.671.3350 (v), or 911 (v). National resources are: RAINN, <http://www.rainn.org>, <http://online.rainn.org> (online hotline), or 1.800.656.HOPE; United States Department of Justice Office on Violence Against Women, <http://www.ovw.usdoj.gov>, 202.307.2277 (tty), or 202.307.6026 (v).

Online Screen Shots of Instrument

Sex Survey

Welcome Deaf and hard of hearing undergraduate students!

Thank you for agreeing to take this online survey! Your participation in this survey will assist with very important research regarding sexual assault issues among Deaf and hard of hearing students.

The survey is completely ANONYMOUS, so please be as HONEST as possible. There will be some personal questions, but we will not ask your name or other identifying information, so we hope this helps you to feel comfortable answering each question honestly.

Please answer all of the questions to the best of your ability to assist us in helping to keep all Deaf and hard of hearing students safer (policies, procedures, and education). The survey will take about 10-15 minutes to complete. It is your choice to take this survey, so if at any time you don't feel comfortable, you can stop taking the survey or take it at a later time.

CONSENT means: When you both want to and agree to the sexual activity that you are doing together.

WITHOUT CONSENT means: Sexual experiences that were unwanted or you did NOT agree to do. Someone doing any of the following to try to convince you to participate in sexual activity:

- Telling lies
- Threatening to end the relationship
- Threatening to spread rumors about you
- Making promises you knew were untrue
- Continually pressuring you after you said you didn't want to
- Showing displeasure
- Criticizing your sexuality or attractiveness
- Getting angry but not using physical force, after you said you didn't want to
- Taking advantage of you when you were too drunk or out of it to stop what was happening
- Threatening to physically harm you or someone close to you
- Using force, for example holding you down with their body weight, pinning your arms, or having a weapon

If you have any questions about the survey or want to talk about personal issues regarding the survey, please contact Gwendolyn Francavillo, Coordinator of Health and Wellness Programs at Gallaudet University: <http://hwp.gallaudet.edu>, gwendolyn.francavillo@gallaudet.edu, or 202.651.5432 (v). Additional Gallaudet University resources are: Mental Health Center, <http://mhc.gallaudet.edu>, mh.center@gallaudet.edu, 202.250.2300 (vp), or 202.651.6080 (v/tty); Residence Life, <http://reslife.gallaudet.edu>, susan.hanrahan@gallaudet.edu, or 202.250.2233 (vp); Office of Student Conduct, <http://osc.gallaudet.edu>, student.conduct@gallaudet.edu, or 202.250.2050 (vp); Student Health Service, <http://shs.gallaudet.edu>, shs@gallaudet.edu, or 202.651.5090 (v/tty); Department of Public Safety, <http://dps.gallaudet.edu>, dps.office@gallaudet.edu, gallydps@att.blackberry.net (pager), 202.651.5444 (tty), or 202.651.5555 (v). Additional Washington, DC area resources are: Washington Hospital Center, <http://www.whcenter.org>, 110 Irving Street NW, Washington, DC 20010, 202.877.7000 (v), or 911 (v); Deaf Abused Women's Network (DAWN), <http://www.deafdawn.org>, director@deafdawn.org, hotline@deafdawn.org (24-hour hotline), 202.223.7959 (vp), or 202.861.0258 (tty); DC Rape Crisis Center, <http://www.dcrcc.org>, dcrcc@dcrcc.org, 202.328.1371 (tty), 202.333.7273 (hotline), or 202.232.0789 (v); DC Metropolitan Police Department, <http://mpdc.dc.gov/>, dhhu2002@yahoo.com, 8886436284@archwireless.net (pager), 202.671.2864 (tty), 202.671.3350 (v), or 911 (v). National resources are: RAINN, <http://www.rainn.org>, <http://online.rainn.org> (online hotline), or 1.800.656.HOPE; United States Department of Justice Office on Violence Against Women, <http://www.ovv.usdoj.gov>, 202.307.2277 (tty), or 202.307.6026 (v).

This research has been reviewed according to the Gallaudet University and University of Maryland, College Park IRB procedures for research involving human subjects. If you have any questions about your rights as a research subject, please contact: Institutional Review Board, Gallaudet University, Kendall Hall, The Graduate School and Professional Programs, Washington, DC 20002; irb@gallaudet.edu; 202.651.5400 or Institutional Review Board Office, University of Maryland,

College Park, Maryland, 20742; irb@deans.umd.edu; 301.405.0678.

*** Required**

I have read and understand the information stated above about the research study, and I agree to take this survey. *

☐ Yes

1. What is your gender? *

Select one

☐ Female

☐ Male

2. How old are you? *

Select your age

18

3. How do you identify yourself? *

Select one

☐ Deaf

☐ Hard of hearing

☐ Hearing

4. Are your parents: *

Check all that apply

☐ Deaf

☐ Hard of hearing

☐ Hearing

☐ Doesn't apply

5. What type of high school did you attend for MOST of high school? *

Select one

☐ School for the Deaf

☐ Mainstream school

6. What year are you in college? *

Select number of years

1

7. What is your ethnicity or race? *

Select one

- ☐ White / Caucasian (non-Hispanic)
- ☐ Black / African-American (non-Hispanic)
- ☐ Asian / Pacific Islander
- ☐ Latino / Hispanic
- ☐ Native American / Alaskan Native
- ☐ Other:

8. How would you BEST describe your sexual orientation? *

Select one

1 2 3 4 5

Heterosexual (straight) ☐ ☐ ☐ ☐ ☐ Homosexual (gay or lesbian)

9. What or who has affected how you think and feel about sexuality? *

List 3

10. How in-depth or complete do you feel your sex education was in ELEMENTARY SCHOOL? *

Select one

1 2 3 4 5

Incomplete ☐ ☐ ☐ ☐ ☐ Complete

11. How in-depth or complete do you feel your sex education was in MIDDLE SCHOOL? *

Select one

1 2 3 4 5

Incomplete ☐ ☐ ☐ ☐ ☐ Complete

12. How in-depth or complete do you feel your sex education was in HIGH SCHOOL? *

Select one

1 2 3 4 5

Incomplete ☐ ☐ ☐ ☐ ☐ Complete

13. How in-depth or complete do you feel your sex education has been in COLLEGE? *

Select one

1 2 3 4 5

Incomplete ☐ ☐ ☐ ☐ ☐ Complete

14. How in-depth or complete do you feel your sex education experience has been OVERALL? *

Select one

1 2 3 4 5

Incomplete ☐ ☐ ☐ ☐ ☐ Complete

15. Have you ever had your private areas (lips, breast/chest, penis, vagina, or anus/butt) fondled, kissed, touched, or rubbed WITH your consent? *

Select one

- ☐ Yes
☐ No
☐ Doesn't apply

16. Have you ever had oral sex (mouth to penis or vagina) WITH your consent? *

Select one

- ☐ Yes
☐ No
☐ Doesn't apply

17. Have you ever had sexual intercourse (penis in vagina) WITH your consent? *

Select one

- ☐ Yes
☐ No
☐ Doesn't apply

18. Have you ever had anal sex (penis in anus/butt) WITH your consent? *

Select one

- ☐ Yes
- ☐ No
- ☐ Doesn't apply

19. Do you talk openly to your partner about the issue of birth control? *

Select one

- ☐ Never
- ☐ Almost never
- ☐ Some of the time
- ☐ About half the time
- ☐ Most of the time
- ☐ Almost all of the time
- ☐ Always
- ☐ Doesn't apply

20. Do you talk openly to your partner about the issue of sexually transmitted infections (STIs)? *

Select one

- ☐ Never
- ☐ Almost never
- ☐ Some of the time
- ☐ About half the time
- ☐ Most of the time
- ☐ Almost all of the time
- ☐ Always
- ☐ Doesn't apply

21. Do you ever say "yes" to something sexual when inside your head you are really thinking "no?" *

Select one

- ☐ Never
- ☐ Almost never
- ☐ Some of the time
- ☐ About half the time
- ☐ Most of the time

- ☐ Almost all of the time
- ☐ Always
- ☐ Doesn't apply

22. Do you ever say "no" to something sexual when inside your head you are really thinking "yes?" *

Select one

- ☐ Never
- ☐ Almost never
- ☐ Some of the time
- ☐ About half the time
- ☐ Most of the time
- ☐ Almost all of the time
- ☐ Always
- ☐ Doesn't apply

23. Do you ever end up allowing your partner to HOLD YOUR HAND when you don't really want to, not because you feel forced or coerced, but because of some other concern (such as wanting your partner to like you or being too embarrassed to talk about it)? *

Select one

- ☐ Never
- ☐ Almost never
- ☐ Some of the time
- ☐ About half the time
- ☐ Most of the time
- ☐ Almost all of the time
- ☐ Always
- ☐ Doesn't apply

24. Do you ever end up allowing your partner to PUT HIS OR HER ARMS AROUND YOU when you don't really want to, not because you feel forced or coerced, but because of some other concern (such as wanting your partner to like you or being too embarrassed to talk about it)? *

Select one

- ☐ Never
- ☐ Almost never
- ☐ Some of the time

- ☐ About half the time
- ☐ Most of the time
- ☐ Almost all of the time
- ☐ Always
- ☐ Doesn't apply

25. Do you ever end up allowing your partner to KISS YOU when you don't really want to, not because you feel forced or coerced, but because of some other concern (such as wanting your partner to like you or being too embarrassed to talk about it)? *

Select one

- ☐ Never
- ☐ Almost never
- ☐ Some of the time
- ☐ About half the time
- ☐ Most of the time
- ☐ Almost all of the time
- ☐ Always
- ☐ Doesn't apply

26. Do you ever end up allowing your partner to TOUCH YOUR BREASTS when you don't really want to, not because you feel forced or coerced, but because of some other concern (such as wanting your partner to like you or being too embarrassed to talk about it)? *

Select one

- ☐ Never
- ☐ Almost never
- ☐ Some of the time
- ☐ About half the time
- ☐ Most of the time
- ☐ Almost all of the time
- ☐ Always
- ☐ Doesn't apply

27. Do you ever end up allowing your partner to TOUCH YOUR GENITALS (VAGINA OR PENIS) when you don't really want to, not because you feel forced or coerced, but because of some other concern (such as wanting your partner to like you or being too embarrassed to talk about it)? *

Select one

- ☐ Never
- ☐ Almost never
- ☐ Some of the time
- ☐ About half the time
- ☐ Most of the time
- ☐ Almost all of the time
- ☐ Always
- ☐ Doesn't apply

28. Do you ever end up allowing your partner to PERFORM ORAL SEX ON YOU when you don't really want to, not because you feel forced or coerced, but because of some other concern (such as wanting your partner to like you or being too embarrassed to talk about it)? *

Select one

- ☐ Never
- ☐ Almost never
- ☐ Some of the time
- ☐ About half the time
- ☐ Most of the time
- ☐ Almost all of the time
- ☐ Always
- ☐ Doesn't apply

29. Do you ever end up PERFORMING ORAL SEX ON YOUR PARTNER when you don't really want to, not because you feel forced or coerced, but because of some other concern (such as wanting your partner to like you or being too embarrassed to talk about it)? *

Select one

- ☐ Never
- ☐ Almost never
- ☐ Some of the time
- ☐ About half the time
- ☐ Most of the time
- ☐ Almost all of the time
- ☐ Always
- ☐ Doesn't apply

30. Do you ever end up having SEXUAL INTERCOURSE (PENIS IN VAGINA) when you don't really want to, not because you feel forced or coerced, but because of some other concern (such as wanting your partner to like you or being too embarrassed to talk about it)? *

Select one

- ☐ Never
- ☐ Almost never
- ☐ Some of the time
- ☐ About half the time
- ☐ Most of the time
- ☐ Almost all of the time
- ☐ Always
- ☐ Doesn't apply

31. Do you ever want to HOLD YOUR PARTNER'S HAND, but not actually do it, because of some other concern (such as fear that your partner will think badly of you or that your reputation might be damaged)? *

Select one

- ☐ Never
- ☐ Almost never
- ☐ Some of the time
- ☐ About half the time
- ☐ Most of the time
- ☐ Almost all of the time
- ☐ Always
- ☐ Doesn't apply

32. Do you ever want to PUT YOUR ARMS AROUND YOUR PARTNER, but not actually do it, because of some other concern (such as fear that your partner will think badly of you or that your reputation might be damaged)? *

Select one

- ☐ Never
- ☐ Almost never
- ☐ Some of the time
- ☐ About half the time
- ☐ Most of the time
- ☐ Almost all of the time
- ☐ Always

☐ Doesn't apply

33. Do you ever want to KISS YOUR PARTNER, but not actually do it, because of some other concern (such as fear that your partner will think badly of you or that your reputation might be damaged)? *

Select one

- ☐ Never
- ☐ Almost never
- ☐ Some of the time
- ☐ About half the time
- ☐ Most of the time
- ☐ Almost all of the time
- ☐ Always
- ☐ Doesn't apply

34. Do you ever want your partner to TOUCH YOUR BREASTS, but not actually do it, because of some other concern (such as fear that your partner will think badly of you or that your reputation might be damaged)? *

Select one

- ☐ Never
- ☐ Almost never
- ☐ Some of the time
- ☐ About half the time
- ☐ Most of the time
- ☐ Almost all of the time
- ☐ Always
- ☐ Doesn't apply

35. Do you ever want your partner to TOUCH YOUR GENITALS (VAGINA OR PENIS), but not actually do it, because of some other concern (such as fear that your partner will think badly of you or that your reputation might be damaged)? *

Select one

- ☐ Never
- ☐ Almost never
- ☐ Some of the time
- ☐ About half the time
- ☐ Most of the time

- ☐ Almost all of the time
- ☐ Always
- ☐ Doesn't apply

36. Do you ever want to TOUCH YOUR PARTNER'S GENITALS (VAGINA OR PENIS), but not actually do it, because of some other concern (such as fear that your partner will think badly of you or that your reputation might be damaged)? *

Select one

- ☐ Never
- ☐ Almost never
- ☐ Some of the time
- ☐ About half the time
- ☐ Most of the time
- ☐ Almost all of the time
- ☐ Always
- ☐ Doesn't apply

37. Do you ever want your partner to PERFORM ORAL SEX ON YOU, but not actually do it, because of some other concern (such as fear that your partner will think badly of you or that your reputation might be damaged)? *

Select one

- ☐ Never
- ☐ Almost never
- ☐ Some of the time
- ☐ About half the time
- ☐ Most of the time
- ☐ Almost all of the time
- ☐ Always
- ☐ Doesn't apply

38. Do you ever want to PERFORM ORAL SEX ON YOUR PARTNER, but not actually do it, because of some other concern (such as fear that your partner will think badly of you or that your reputation might be damaged)? *

Select one

- ☐ Never
- ☐ Almost never
- ☐ Some of the time

- ☐ About half the time
- ☐ Most of the time
- ☐ Almost all of the time
- ☐ Always
- ☐ Doesn't apply

39. Do you ever want to have SEXUAL INTERCOURSE (PENIS IN VAGINA), but not actually do it, because of some other concern (such as fear that your partner will think badly of you or that your reputation might be damaged)? *

Select one

- ☐ Never
- ☐ Almost never
- ☐ Some of the time
- ☐ About half the time
- ☐ Most of the time
- ☐ Almost all of the time
- ☐ Always
- ☐ Doesn't apply

40. A person who goes to the home or apartment of someone on their first date implies that s/he is willing to have sex. *

1-Strongly disagree, 2-Disagree, 3-Disagree some of the time, 4-Unsure, 5-Agree some of the time, 6-Agree, 7-Strongly agree

1 2 3 4 5 6 7

Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree

41. Anyone can be raped. *

1-Strongly disagree, 2-Disagree, 3-Disagree some of the time, 4-Unsure, 5-Agree some of the time, 6-Agree, 7-Strongly agree

1 2 3 4 5 6 7

Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree

42. One reason that people falsely report a rape is that they frequently have a need to call attention to themselves. *

1-Strongly disagree, 2-Disagree, 3-Disagree some of the time, 4-Unsure, 5-Agree some of the time, 6-Agree, 7-Strongly agree

1 2 3 4 5 6 7

Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree

43. Any healthy person can successfully resist a rape if s/he really wants to. *

1-Strongly disagree, 2-Disagree, 3-Disagree some of the time, 4-Unsure, 5-Agree some of the time, 6-Agree, 7-Strongly agree

1 2 3 4 5 6 7

Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree

44. When people wear sexy or revealing clothing, they are just asking for trouble. *

1-Strongly disagree, 2-Disagree, 3-Disagree some of the time, 4-Unsure, 5-Agree some of the time, 6-Agree, 7-Strongly agree

1 2 3 4 5 6 7

Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree

45. In the majority of rapes, the survivor/victim is promiscuous or has a bad reputation. *

1-Strongly disagree, 2-Disagree, 3-Disagree some of the time, 4-Unsure, 5-Agree some of the time, 6-Agree, 7-Strongly agree

1 2 3 4 5 6 7

Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree

46. If a person engages in making-out and s/he lets things get out of hand, it is her/his own fault if her/his partner forces sex on her/him. *

1-Strongly disagree, 2-Disagree, 3-Disagree some of the time, 4-Unsure, 5-Agree some of the time, 6-Agree, 7-Strongly agree

1 2 3 4 5 6 7

Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree

47. People who get raped after hooking up with someone they just met get what they deserve. *

1-Strongly disagree, 2-Disagree, 3-Disagree some of the time, 4-Unsure, 5-Agree some of the time, 6-Agree, 7-Strongly agree

1 2 3 4 5 6 7

Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree

48. A person who is stuck-up and thinks s/he is too good to talk to someone on the street deserves to be taught a lesson. *

1-Strongly disagree, 2-Disagree, 3-Disagree some of the time, 4-Unsure, 5-Agree some of the time, 6-Agree, 7-Strongly agree

1 2 3 4 5 6 7

Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree

49. Many people in the back of their mind wish to be raped, and may then without thinking set up a situation in which they are likely to be assaulted. *

1-Strongly disagree, 2-Disagree, 3-Disagree some of the time, 4-Unsure, 5-Agree some of the time, 6-Agree, 7-Strongly agree

1 2 3 4 5 6 7

Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree

50. If a person gets drunk at a party and has sex with someone s/he just met there, s/he should be considered "fair game" to other people at the party who want to have sex with her/him too, whether s/he wants to or not. *

1-Strongly disagree, 2-Disagree, 3-Disagree some of the time, 4-Unsure, 5-Agree some of the time, 6-Agree, 7-Strongly agree

1 2 3 4 5 6 7

Strongly disagree ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strongly agree

51. How many people who report a rape would you say are lying because they are angry and want to get back at the person they accuse? *

1-None, 2-Very few, 3-About half, 4-Most, 5-All

1 2 3 4 5

None ☐ ☐ ☐ ☐ ☐ All

52. How many reported rapes would you guess were merely invented by people who wanted to protect their own reputation? *

1-None, 2-Very few, 3-About half, 4-Most, 5-All

1 2 3 4 5

None ☐ ☐ ☐ ☐ ☐ All

53. Someone fondled, kissed, touched, or rubbed up against the private areas of your body (lips, breast/chest, penis, vagina, or anus/butt) WITHOUT YOUR CONSENT (but did not attempt sex). *

Select one

- ☐ Yes
- ☐ No
- ☐ Doesn't apply

54. Someone removed some of your clothing WITHOUT YOUR CONSENT (but did not attempt sex). *

Select one

- ☐ Yes
- ☐ No
- ☐ Doesn't apply

55. Someone had oral sex with you or made you have oral sex with them WITHOUT YOUR CONSENT. *

Select one

- ☐ Yes
- ☐ No
- ☐ Doesn't apply

56. (For females) A man put his penis into your vagina, or someone inserted fingers or objects into your vagina WITHOUT YOUR CONSENT. *

Select one

- ☐ Yes
- ☐ No
- ☐ Doesn't apply

57. A man put his penis into your anus/butt, or someone inserted fingers or objects into your anus/butt WITHOUT YOUR CONSENT. *

Select one

- ☐ Yes
- ☐ No
- ☐ Doesn't apply

58. Even though it did not happen, someone TRIED to have oral sex with you, or make you have oral sex with them WITHOUT YOUR CONSENT. *

Select one

- ☐ Yes
- ☐ No
- ☐ Doesn't apply

59. (For females) Even though it did not happen, a man TRIED to put his penis into your vagina, or someone TRIED to insert fingers or objects into your vagina WITHOUT YOUR CONSENT. *

Select one

- ☐ Yes
- ☐ No
- ☐ Doesn't apply

60. Even though it did not happen, a man TRIED to put his penis into your anus/butt, or someone TRIED to insert fingers or objects into your anus/butt WITHOUT YOUR CONSENT. *

Select one

- ☐ Yes
- ☐ No
- ☐ Doesn't apply

61. Have you ever been raped? *

Select one

- ☐ Yes
- ☐ No

62. If you've experienced any of the situations from questions 53 to 61, were you under the age of 18? *

Select one

- ☐ Yes
- ☐ No
- ☐ Doesn't apply

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IRB Approved.

For more information, contact
gwendolyn.francavillo@gallaudet.edu.



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University of Maryland IRB Approval Letters



UNIVERSITY OF
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INSTITUTIONAL REVIEW BOARD

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June 18, 2009

MEMORANDUM

Application Approval Notification

To: Dr. Robin Sawyer
Gwendolyn Roberts Francavillo
Public and Community Health

From: Joseph M. Smith, MA, CIM *JMS*
IRB Manager
University of Maryland, College Park

Re: **IRB Application Number:** 09-0390
Project Title: "Sexuality Education, Sexual Communication, Rape Myth Acceptance, and Sexual Assault Experience among Deaf and Hard of Hearing College Students"

Approval Date: June 18, 2009

Expiration Date: June 18, 2010

Type of Application: Initial

Type of Research: Non-Exempt

Type of Review for Application: Expedited

The University of Maryland, College Park Institutional Review Board (IRB) approved your IRB application. The research was approved in accordance with the University IRB policies and procedures and 45 CFR 46, the Federal

Policy for the Protection of Human Subjects. Please include the above-cited IRB application number in any future communications with our office regarding this research.

Recruitment/Consent: For research requiring written informed consent, the IRB-approved and stamped informed consent document is enclosed. The expiration date for IRB approval has been stamped on the informed consent document. Please keep copies of the consent forms used for this research for three years after the completion of the research.

Continuing Review: If you intend to continue to collect data from human subjects or to analyze private, identifiable data collected from human subjects, after the expiration date for this approval (indicated above), you must submit a renewal application to the IRB Office at least 45 days before the approval expiration date. If IRB approval of your project expires, all human subject research activities including the enrollment of new subjects, data collection, and analysis of identifiable private information must stop until the renewal application is approved by the IRB.

Modifications: Any changes to the approved protocol must be approved by the IRB before the change is implemented, except when a change is necessary to eliminate apparent immediate hazards to the subjects. If you would like to modify the approved protocol, please submit an addendum request to the IRB Office. The instructions for submitting a request are posted on the IRB web site at : http://www.umresearch.umd.edu/IRB/irb_Addendum%20Protocol.htm

Unanticipated Problems Involving Risks: You must promptly report any unanticipated problems involving risks to subjects or others to the IRB Manager at 301-405-0678 or jsmith@umresearch.umd.edu.

Student Researchers: Unless otherwise requested, this IRB approval document was sent to the Principal Investigator (PI). The PI should pass on the approval document or a copy to the student researchers. This IRB approval document may be a requirement for student researchers applying for graduation. The IRB may not be able to provide copies of the approval documents if several years have passed since the date of the original approval.

Additional Information: Please contact the IRB Office at 301-405-4212 if you have any IRB-related questions or concerns.



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July 06, 2009

MEMORANDUM

Application Approval Notification

To: Dr. Robin Sawyer
Gwendolyn Roberts Francavillo
Public and Community Health

From: Joseph M. Smith, MA, CIM *ms*
IRB Manager
University of Maryland, College Park

Re: **IRB Application Number:** 09-0390
Project Title: "Sexuality Education, Sexual Communication, Rape Myth Acceptance, and Sexual Assault Experience among Deaf and Hard of Hearing College Students"

Approval Date: July 06, 2009

Expiration Date: June 18, 2010

Application Type: *Addendum/Modification:*
Approval of request, submitted to the IRB office on June 25, 2009, to include all deaf and hard of hearing undergraduate students, not limited to Gallaudet University; add an additional measure of consent; to make several changes to the consent form, survey, confirmation page and flyer.

Type of Research: Non-Exempt

Type of Review of Addendum: Expedited

The University of Maryland, College Park Institutional Review Board (IRB) approved your IRB application. The research was approved in accordance with 45 CFR 46, the Federal Policy for the Protection of Human Subjects, and the University IRB policies and procedures. Please include the above-cited IRB application number in any future communications with our office regarding this research.

Recruitment/Consent: For research requiring written informed consent, the IRB-approved and stamped informed consent document is enclosed. The expiration date for IRB approval has been stamped on the informed consent document. Please keep copies of the consent forms used for this research for three years after the completion of the research.

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Additional Information: Please contact the IRB Office at 301-405-4212 if you have any IRB-related questions or concerns.

Gallaudet University IRB Approval Letter

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KENDALL GREEN
800 FLORIDA AVENUE, NE
WASHINGTON, DC 20002-3695

June 30, 2009

TO: Gwendolyn Francavillo
Gallaudet University
Health and Wellness Programs
Campus Mail
Ely 103F

FROM: Carolyn A. Corbett, Ph.D., Chairperson
Institutional Review Board (IRB)

RE: "Sexuality education, sexual communication, rape myth acceptance, and sexual assault experience among Deaf and Hard of Hearing college students"

Thank you for submitting a copy of your proposal for IRB review. This project has been determined to be exempt from further IRB review based on no apparent risk to human subjects according to federal regulations, 45 CFR 46.101 (2) (B) (2). Approval is dated **6/30/2009**.

The IRB considers only the issue of research risk to subjects: approval is solely a declaration of the absence of, or adequate control of research risk. Approval does not guarantee either the quality of the research or access to subjects.

Please notify the Board if your research project changes in any way human subjects are utilized. Subject recruitment materials, including advertisements, fliers, and e-mail messages must be approved by the IRB prior to being utilized. Once approved, please add a statement to your recruitment materials indicating that your project has been approved by the Gallaudet Institutional Review Board. After **6/29/2012**, your project will be closed.

If you have any questions regarding this project, contact the IRB Office at irb@gallaudet.edu, VP ((866) 948-3126) or Voice (202) 651-5000 ext. 4115, Dr. Carolyn A. Corbett, IRB Chairperson, at irb.chair@gallaudet.edu or Carlene Thumann-Prezioso, IRB Coordinator at (carlene.thumann-prezioso@gallaudet.edu).

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