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DEVELOPMENT AND VALIDITY OF THE TEACHERS' ATTITUDE, COMFORT AND TRAINING SCALE (TACTS) ON SEXUALITY EDUCATION

THESIS

Presented to the Graduate Council of the
University of North Texas in Partial
Fulfillment of the Requirements

For the Degree of

MASTER OF SCIENCE

By

Laura S. D'Entremont, B.S.

Denton, Texas

May, 1999

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The purpose of the study was to design and validate an instrument designed to investigate teachers' attitudes in regard to adolescent sexuality education. Test development adhered to the guidelines of Aligna and Crocker. Cronbach alpha was performed on the entire instrument and determined the reliability to be .8003, thus the instrument was consistent in measuring the domain areas. A panel of experts assessed content validity of items. A principal component factor analysis and a Pearson's product moment correlation were used for construct validity. Teacher concerns about curriculum implementation, teacher comfort with the subject matter, course-specific teacher attitudes, teacher interest about curriculum content, and teacher attitudes toward sexuality were found to be the constructs of the TACTS.

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CHAPTER 1

INTRODUCTION TO THE STUDY

Sexuality and Adolescents

Sexual development is an on-going process started in early childhood and continued into adolescence (Greydanus, Pratt, & Dannison, 1995). The way in which adolescents encounter and adjust to their sexuality has major implications for the quality and success of future adult relationships. Therefore, the topic of sexuality education, or what society teaches about sexual behavior is of paramount importance. Some parents are afraid to discuss this topic. Contrary to popular belief, the professional literature suggests that providing children with sexuality education will not cause them psychological or moral harm; in fact, according to Greydanus, Pratt, and Dannison (1995), children are harmed only by lack of information.

This debate is disputed by a society that has been unable to determine who is primarily responsible for sexuality education. Parents are often afraid of harming their children by teaching sexuality education too soon or by providing misinformation (Wilson, 1994). Educators also feel that they do not possess the ability to teach sexuality education due to their lack of knowledge and skills in the field (Rodriguez, Young, Renfro, Asencio, & Haffner, 1998). Thus, adolescents turn to the media as their major source of sexuality education (Greydanus et al., 1995; Kunkel, Cope, & Colvin, 1996).

However, the media does not portray actual societal values and adolescents are left to their own devices to interpret such information.

Because of adolescent beliefs that they are invincible, many play sexual roulette, engaging in sexual behaviors without the use of a condom. Many still have not come to the basic realization that Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) and Sexually Transmitted Diseases (STDs) do not discriminate; for instance "in a single act of unprotected sex with an infected partner, a teenage girl has a 1% risk of acquiring HIV, a 30% risk of getting genital herpes, and a 50% chance of contracting gonorrhea" (Facts in Brief, n.d., p. 2). HIV is currently the sixth leading cause of death for individuals aged 15 -24 years of age (Miller, 1998). In fact, 32% of all AIDS cases diagnosed between the ages of 20-29 years were resulted from HIV exposure during adolescence (Petosa & Jackson, 1991).

Statistics show that 40% of all girls who engage in intercourse become pregnant before age 20 (Stout & Kirby, 1993). One quarter of these mothers will have their second child within two years after the birth of their first (Facts in Brief, n.d.). Babies born to adolescent mothers suffer from low birth weights, increased health problems and learning disabilities (Facts in Brief, n.d.). Teen mothers are usually unable to complete high school due to the constraints of being a single parent. Few complete their degrees, thus leading them to rely on the welfare system and making it unlikely for them to rise above low social economic status (Facts in Brief, n.d.; Valois, Kammermann, & Drane, 1997).

Parents and Sexuality

Parents ultimately are the primary educators of their children. However, a vast majority of parents surveyed wanted assistance from the schools in providing education on such a critical topic (Mayer, 1997). Unfortunately, the activism of a few parents can jeopardize an entire school's sexuality program (Mayer, 1997).

Parents generally are willing to share the responsibility of educating their children on the topic of sexuality with the school system (Meeuwsen, 1989). Research indicates that many parents believe that the schools are more qualified to teach aspects of human sexuality that are technical in nature. Parents feel that it is an important topic and that it should be included as regular coursework (Meeuwsen, 1989), however during the critical learning periods of the sixth and seventh grades, parents are hesitant to allow sexuality education. They seem unaware that even in late elementary school, extensive sexual activity is taking place (Meeuwsen, 1989). Despite all the confusion, the majority of parents support sexuality education in the school system (Wilson, 1994).

Sexuality and the Schools

In August 1996 the abstinence-only-until-marriage education plan, a federal entitlement program, was passed dispersing half a billion dollars over the next five years to abstinence-only programs (Mayer, 1997). These programs in turn cannot provide any information pertaining to pregnancy and STD prevention.

Every state is now developing and implementing its own abstinence-only-until-marriage program. Champions of abstinence-only education often argue that comprehensive sexuality education programs encourage sexual activity. Research shows,

however, that students who completed the comprehensive programs had a solid understanding of human sexuality, leading them to delay first sexual intercourse or to use contraceptives properly (Haffner & Goldfarb, 1997; Kirby, 1997; Kirby, Short, Collins, Rugg, Kolbe, Howard, Miller, Sonenstein, & Zabin, 1994; Lagana & Hayes, 1993; Mayer, 1997). Yet the same cannot be said of abstinence-only programs. In a review of the literature, Kirby (1997) found that "to date, six studies have been published and none have found consistent and significant effects on delaying the onset of intercourse, and at least one study provided strong evidence that the program did not delay the onset of intercourse" (p. 5). These studies are as follows: Postponing Sexual Involvement, Project Taking Charge, Success Express (two evaluations), Sex Respect, and Teen Aid (Kirby et al., 1994; Klein, Goodson, Serrins, Edmundson, & Evans, 1994). For a description see appendix D. Because of the overwhelming inconsistency of many school sexuality education programs, many young people report inappropriate or nonexistent education in sex, sexuality, and STDs (Few, Hicken, & Butterworth, 1996).

Few, Hicken, and Butterworth (1996) found that in the U.S., there is no established training for teachers on sexuality education. In fact, the vast majorities of those teaching are not sexuality educators, but are rather physical education teachers. These teachers generally acquired their knowledge and skills pertaining to the sexuality education through short workshops and seminars (Forrest & Silverman, 1989). Therefore, it is not surprising that they report concern about their knowledge of STDs and HIV/AIDS and their ability to teach personal skills to adolescents (Remafedi, 1993; Rodriguez, Young, Renfro, Asencio, & Haffner, 1998).

Texas Sexuality Education

Texas is one of 23 states, along with the District of Columbia, that support sexuality and HIV education (see appendix A for more information as to how Texas ranks nationally); it is also one of 37 states that support STD, HIV/AIDS education (Kenney, Guardo, & Brown, 1989; Sexuality Education, n.d.). Even though the state Board of Education adopted a health curriculum that includes sexuality education, it is up to the local school boards to decide what is taught in the classroom (Kemper, 1998).

According to the Texas State Educational Code 28, sec.002. (see appendix B), health education is a required enrichment program for Grades K-12. Human sexuality is covered under section 28.0004. of the education code, which states that all materials and specific content will be determined by the board of trustees of the school district along with the advice of the local health education advisory council. All human sexuality curriculum materials must be made accessible to public inspection under 28.0004. and parents must be notified of the basic content of the course so that they can decide whether or not their child receives this instruction. Under the education code no school districts may distribute condoms in connection with classroom instruction. However, they may separate students according to gender for instructional purposes (Texas Education Code, 1995).

Statement of the Problem

The United States, in general, requires age-appropriate sexuality education (Kenney, Guardado, & Brown, 1989), but not all of the country's teachers are qualified and able to teach human sexuality. Some are not even comfortable talking about specific

topics; therefore, restricting adolescents' knowledge of sexuality and putting them at-risk. Due to this dilemma quality sexuality education in U.S. school systems is in jeopardy.

Purpose of the Study

The purpose of the study was to design and validate an instrument designed to investigate teachers' attitudes in regard to adolescent sexuality education. This was accomplished by conducting an exploratory principal component factor analysis, Pearson product moment correlation and a Cronbach alpha correlation. Alpha coefficients were determined for the domains derived from the principal component analysis and set at .7 (A. Jackson, personnel communication, 1998).

Scale development guidelines suggested by Aligna and Crocker (1986) were followed for the design and validation of the TACTS. Table 1 shows the aforementioned guidelines and the person responsible for completing each task. According to these guidelines, step 9 remains to be accomplished.

Table 1
Aligna and Crocker Scale Development Guidelines

Guideline	Person responsible
1. Identify the primary purpose for which the test scores were used.	Dr. Miguel Perez
2. Identify behaviors that represent the construct or domain.	Dr. Miguel Perez
3. Prepare a set of test specifications, including the proportion of items related to each of the behaviors identified in step two above.	Dr. Miguel Perez
4. Construct an initial pool of items.	Dr. Miguel Perez
5. Review items and revise as necessary.	Dr. Miguel Perez
6. Test a convenience sample representative of the population studied.	Laura D'Entremont
7. Determine the instrument's reliability and stability.	Laura D'Entremont
8. Determine statistical properties of item scores	Laura D'Entremont
9. Develop guidelines for administration, scores, and interpretation of test scores.	Future Researcher

Significance of the Study

A study by the Sexuality Information and Education Council of the United States (SIECUS) revealed that the nation's preservice-level teachers are not prepared to teach comprehensive sexuality education and HIV/AIDS prevention (Rodriguez et al., 1998). To meet the needs of children, future generations of teachers must possess the skills and knowledge to enable children to live a healthy lifestyle (Forrest & Silverman, 1989; Levenson-Gingiss & Hamilton, 1989; National health, n.d.; Rodriguez et al., 1998). Clearly there is a need in the United States to improve the preparation of teachers in comprehensive sexuality education as well as in HIV/AIDS prevention (Levenson-Gingiss & Hamilton, 1989; National health, n.d.; Rodriguez et al., 1998). Schools seem to be the logical place to provide adolescents with human sexuality education in the hopes of teaching them how to make informed decision making on the topics of sexual behavior, HIV/AIDS, STDs, and pregnancy (Levenson-Gingiss & Hamilton, 1989). Sexuality education programs are beneficial to our students only when teachers feel adequate regarding the knowledge required to teach the curricula. Otherwise the programs become useless (Remafedi, 1993). For sexuality programs to be beneficial, universities and colleges must acquire a national standard for training preservice teachers (Few et al., 1996; National health, n.d.; Rodriguez et al., 1998). Through the use of the TACTS school systems and universities will be able to identify deficiencies in the skills that teachers need before they address sexuality-related issues in the classroom.

The health implication discussed above, along with requests from parents for assistance from schools (Mayer, 1997), make it imperative that school systems have well-

trained teachers to deal with these critical issues. The TACTS is designed to provide this information.

Definition of Terms

Abstinence: " The only truly 'safe sex' for adolescents is avoiding vaginal intercourse, anal intercourse, oral sex, mutual masturbation, and genital contact ('outercourse') before marriage" ("How MISH", 1997, p. 17).

Adolescent: any individual between the ages of twelve and eighteen.

AIDS: "Acquired Immune Deficiency Syndrome, a disease caused by the human immunodeficency virus (HIV) in which the immune system is weakened and unable to fight opportunistic infections" (Strong & DeVault, 1997, p. G-1).

Attitude: a feeling or position with regard to a person or a thing (Costello, R.B., 1991).

Comfort: a state of ease and satisfaction (Costello, R.B., 1991).

Contraceptives: any form of protection to prevent pregnancy or sexually transmitted disease (condom, birth control pill, and foam).

Correlation: "a quantitative value of the relationship between two or more variables that can range from 0.00 to 1.00 in either positive or negative directions" (Thomas & Nelson, 1996, p. 116).

Factor Loading: "indicates how much weight is assigned to each factor" (Norusis, 1994, p.55).

HIV: "Human immunodeficency virus, the virus that causes AIDS" (Strong & DeVault, 1997, p. G-7).

Internal Consistency: "an estimate of the reliability that represents the consistency of the scores within a test"(Thomas & Nelson, 1996, p. 225).

Media: a source of information that reaches a wide audience, such as television, movies, newspapers, and magazines.

Parent: "an individual responsible for the welfare of a child, which may be independent of biological parentage"(Meeuwsen, 1989,p. 19).

Primary Education: encompasses grades prekindergarten through five.

Preservice Teacher: an individual in undergraduate school fulfilling degree requirements to become a licensed teacher.

Reliability: "pertains to the consistency, or repeatability of a measure" (Thomas & Nelson, 1996, p. 220).

Secondary Education: encompasses Grades 6 through 12.

Secondary School Student: any individual enrolled in Grades 6 through 12.

Sexuality: possession of the structural and functional traits of sex (Costello, R.B., 1991).

Sex Education: "Life long process of acquiring information and forming attitudes, beliefs, and values about identity, relationships, and intimacy. It encompasses sexual development, reproductive health, interpersonal relationships, affection, intimacy, body image, and gender roles"(The National Coalition to Support Sexuality Education, 1998, p. 4).

STD: an abbreviation for sexually transmitted disease, such as herpes.

CHAPTER II

REVIEW 0F LITERATURE

In the following sections research will be analyze to enable the reader to clearly understand the roll of the media, adolescents, sexuality education in the home, sexuality educators in the classroom, sexuality education programs, and the roll of the government.

Adolescents

Research indicates that the norm for adolescence is to live for the moment without any concern for long-range consequences (Attico & Hartner, 1992). Research also shows that almost half (48%) of U.S. teens engage in premarital sex rather than to practice abstinence (Meeuwsen, 1989; Morbidity and Mortality Weekly Report, 1998). Unfortunately, adolescents tend to lack emotional maturity and a developed value system, while at the same time they perceive themselves as sensual beings with developing sexual identities and sexuality (Attico & Hartner, 1992). It is therefore imperative that adolescents be supplied with sexuality education to help them make informed decisions.

Adolescent Sexuality

Today's adolescents are becoming sexually experienced at a younger age, leading to an increase in multiple sex partners (Tsang, 1993; Morbidity and Mortality Weekly Report, 1998). Adolescents tend to focus on the short-term consequences of their actions rather than on the long-term repercussions (Attico & Hartner, 1992; Richter et al., 1993)

which is why it is important for parents to take an active role in their child's sexuality education.

Current data shows that the greatest increase in sexual activity is among adolescents younger than 14 years of age (Richter, Valois, McKeown, & Vincent, 1993). "Miller and Olson found that there is a 91% chance of being sexually active before the end of school (graduation) if an adolescent dates beginning at age 12, and a 56% chance of sexual involvement if they begin dating at age 13" (Tsang, 1993, pg. 134).

The Centers for Disease Control and Prevention reported that 19% of teens had four or more sexual partners in 1995 (Valois et al., 1997). Adolescents who have had multiple sex partners find this risky behavior harder to modify later in life (Durbin, Diclemente, Siegel, Krasnovsky, Lazarus, & Camacho, 1993), especially if they have never encountered negative health consequences because of their personal beliefs of invulnerability (Petosa & Jackson, 1991).

Many adolescents see their sexual encounters as a rite of passage into adulthood (Petosa & Jackson, 1991) without understanding the grave consequences of STDs and HIV/AIDS. Petosa and Jackson (1991) found that 20% to 40% of adolescents have misconceptions regarding HIV/AIDS and students lacked knowledge on HIV transmission. Others believed there was currently a vaccine for AIDS, and 21% of youths had the mistaken notion that oral contraceptives would decrease their risk of HIV infection (Langer, Zimmerman, & Katz, 1994).

Eighty-six percent of the 2.5 million STDs cases occur in the 15 to 29-year age group (Valois et al., 1997). Similarly, adolescents have the highest rates of gonorrhea

and 15% of all sexually active female teens are infected with the human papilloma virus, which is linked to cervical cancer (Facts in Brief, n.d.).

Surveys have shown that adolescents begin to use contraceptive methods only after being sexually active for at least 6 months (Attico & Hartner, 1992). This could explain why 90% of teens who do not practice safer sex become pregnant within a year (Facts in Brief, n.d.). Of the females who do become pregnant each year, eight percent are among 14-year-olds, 18% are 15 to17, and 22% are 18 to19 years of age (Facts in Brief, n.d.).

The Media

Adolescents are bombarded daily with sexually explicit material, whether it is in the form of TV, movies, music, billboards, or magazines. Today's adolescents are exposed in large amounts to these elements. In fact 23% of adolescents say the learned a great deal about sexuality from TV and the movies (Kunkel et al., 1996). Unfortunately, more than half of adolescents believe that TV and movies have influenced them to have sex before they were ready. It is not surprising that adolescents who find it impossible to escape these unrealistic portrayals of human sexuality have a confused idea about their own personal sexual identity. While the media portrays an image of noncommittal sexual encounters among single individuals, society tries to impose another; sexual relations among married or committed adults.

Since 1976, sexual messages occurring on TV have increased 270% (Kunkel et al., 1996). The average amount of sexual interactions each hour of programming is up from 2.3 interactions an hour to 8.5 interactions an hour (Kunkel et al., 1996). Sit-coms

and TV dramas account for 95% of all sexual behaviors. According to Kunkel et al., in these programs unmarried individuals engage in 71% of the sexual behaviors.

Parents naturally worry about the content of TV programs and the movies their children are viewing. Thirty-one percent of parents agreed that the media did not present sexual content in an informative or socially responsible way (i.e., unmarried sex). This is due in part to the high content of sexuality displayed and the inability of parents to constantly monitor their child's viewing ("The Henry J.," 1996).

In fact, only two-thirds of parents are able to watch television with their children. This in turn allows them to monitor the programs that their children are watching. Parents' reactions to these TV programs are as follows: 54% changed channels; 38% took the moment to discuss the issue at hand; and 17% simply turned off the TV ("The Henry J.," 1996).

Beginning in January of 1997 the U.S. Federal Communications Commission required all television programs to implement the television rating system in order to help parents weed out what their children were watching (Federal action alert, n.d.). This new ratings system is based on age-appropriateness, similar to the cinema ratings. TV-Y means that the program is designed for young children from the ages of 2-6. TV-Y7 signifies that themes or settings may include mild physical or comedic violence. TV-G presently states that it is acceptable for all audiences for it contains little or no violence, strong language, or sex. TV-PG means the parental guidance is suggested, while TV-14 signifies that parents are strongly cautioned about the material contained in the program, such as sexual content, violence, and language. TV-M states that the material contained

in the program is for a mature audience only and that it may contain profane language, explicit sexual content, and graphic violence (Federal action alert, n.d.).

In addition to the age-appropriate rating scale, in the fall of 1997 the content rating scale was launched (Federal action alert, n.d.). This scale conveniently rates the content of shows based on violence (V), sex (S), offensive language (L), dialogue (D), and fantasy or cartoon violence (FV). In effect, alone or in combination with one another these scales are to help parents make informed decisions as to what is appropriate for their children to watch (Federal action alert, n.d.).

Sexuality Education in the Home

Many parents claim to be, or want to be, their child's primary sexuality educators (Baldwin & Baranoski, 1990; Caron, Knox, Rhoades, Aho, Tulman, & Volock, 1993; Meeuwsen, 1989; Welshimer & Harris, 1994). Yet barriers exist to parents educating their children about human sexuality. These barriers consist of the parents' own lack of information and/or comfort level with the material (Baldwin & Baranoski, 1990; Caron et al., 1993; Jones, 1994; Kyman, 1995; Meeuwsen, 1989; Nolin & Peterson, 1992; Welshimer & Harris, 1994; Wilson, 1994). This partly is due to the fact that most parents did not receive formal school training on human sexuality. Furthermore, the topic may not have been openly discussed in their homes (King & Lorusso, 1997; Wilson, 1994).

Research shows that communication of human sexuality between parent and child in the home is minimal at best (Meeuwsen, 1989). King and Lorusso (1997) found that only 10% to 25% of students report ever having a meaningful conversation about sex

with their parents. This is often due to the climate surrounding sexuality discussions. Most are repeatedly seen as lectures, therefore, turning adolescents off to sexuality issues.

It has been advised that parents learn to initiate conversation on the topic of human sexuality and to listen nonjudgmentally without overreacting (Wilson, 1994). This skill can open the gates of communication between adolescents and parents, and it allows teens to understand their parents' beliefs and wishes (Wilson, 1994). Research shows that when adolescents communicate with their parents on the topic of sexuality and they understand their parents' viewpoints, they in turn delay sexual intercourse, compared to their counterparts who lack such communication (Caron et al., 1993; Haffner & Goldfarb, 1997; Meeuwsen, 1989; Nolin & Peterson, 1992;).

The position of the sexuality educator in the home has been given mainly to the mother, for she is seen as the essential communicator (Baldwin & Baranoski, 1990; Meeuwsen, 1989; Welshimer & Harris, 1994; Wilson, 1994). This is in part due to the generalization that mothers are "viewed more emotionally expressive, more likely to answer questions about intimacy, and as a result, more approachable" (King & Lorusso, 1997, p. 53). Fathers are less likely to discuss sexuality in the home because of their belief that it is the mother's responsibility and also because they find sex an unacceptable and embarrassing topic to discuss (King & Lorusso, 1997).

Sexuality Educators

National health education standards are imperative for teachers of sexuality education (National Health, n.d.) to ensure their knowledge and comprehension of human sexuality. In a SIECUS study on Training and Preparation for HIV/AIDS Prevention and

Sexuality Education, it was found that, of the 169 surveyed, no colleges required sexuality education for preservice teachers. Only those who were seeking certification in health education were required (61%) to take a sexuality education course (Rodriguez et al., 1998). Thus students (K- 12) will retain more knowledge on sexuality because it was taught by a knowledgeable and capable human sexuality educator (Greenberg, 1989).

Too often teachers are selected to instruct a sexuality course because it is believed that they will do a good job. However, the teachers feel as though they are being stuck with the course, forcing them to reeducate themselves in the field of human sexuality. Other qualifications are important to keep in mind in any discussion of sexuality educators and that is a distinct set of characteristics necessary for the position. These individuals must possess "acceptance of sexual thoughts and desires, acceptance of self and body image, tolerance of ambiguity, a sense of humor, and an expressed desire to teach sexuality" (Greenberg. 1989, p. 228). It is important that the teachers chosen for these select positions have an interest in the material and commitment to those whom they serve (Greenberg, 1989).

Because the instructor's audience consists of adolescents, it is helpful that the teacher has a well-developed sense of humor (Greenberg, 1989). This will help the class flow. If an instructor finds it difficult to be humorous in the classroom, he or she will make the students feel ill at ease, perhaps leading them to be uncomfortable about their own sexuality. To keep the latter from happening, it is important that all sexuality educators possess certain criteria, as stated by The American Association of Sex Educators, Counselors, and Therapists (see appendix C). Most, if not all of this

information can be found in professional journals and through regular attendance at conferences and workshops (Greenberg, 1989). This will also aid the teacher in keeping abreast of the latest information in the field of human sexuality.

Instructors of human sexuality courses must be comfortable with their bodies and all their physical flaws. Any hint of discomfort can hinder their effectiveness (i.e., a male teacher who feels his testicles are inadequate may avoid covering testicular examinations, while a female teacher with small breasts may avoid discussing breast self examinations due to her feelings of inadequacy). It is essential that teachers attempt to teach our adolescents to accept what cannot be changed and to improve upon that which can be changed (i.e., a student with a small body frame can workout to increase muscle mass, therefore altering their appearance naturally) (Greenberg, 1989).

Those who teach human sexuality must be neutral and look at all angles and sides of the issues. It is the teacher's responsibility to explore the many different intellectual and moral viewpoints of the issues discussed in the context of the class. Teachers must express open-mindedness and deference for others' sexual values (Greenberg, 1989). For many, being nonmoralistic and nonjudgmental is difficult. It is here that teachers refer their students to the guidance of their parents or clergy for further definitions as to what is moral in their culture and religion (Forrest & Silverman, 1989; Greenberg, 1989). Teachers aid in bringing about these conversations so that adolescents may develop integrity, morals, and a conscience.

In the Classroom

While school is considered to be the place for sexuality education, it is now time to look at the programs offered to adolescents (Kantor, 1994). The amount of time devoted to education about human sexuality in the average U.S. classroom during a year is minimal. Grades 7 through 12 receive, on an average, 38.7 hours a year. In 1989 this translated to 11.7 hours for 7th grade, 13.2 hours for 8th, 16.2 hours for 9th , 16.8 hours for 10th, 17.7 hours for 11th, and 18.3 hours a year for 12th grade (Forrest & Silverman, 1989).

In a survey by Forrest and Silverman (1989), teachers were asked what was the latest age at which certain sexuality topics should be covered, and the findings were as follows: by seventh grade, abstinence, HIV transmission, sexual decision making, and STDs. By the eighth grade, sources of birth control, along with methods should be addresses to; finally, by ninth grade, 79% of teachers agreed that all the previous material should have been discussed in a classroom setting. Teachers as a whole widely agree that STD and pregnancy prevention should be covered beginning in Grades 7 and 8 at the very latest, because it is during this time that adolescents become sexually aware (Forrest & Silverman, 1989; Frost & Forrest, 1995).

In covering these topics 86% of teachers generally encourage abstinence as the fail-proof birth control method, whereas 87% teach the negative consequences of sexual intercourse, and 83% discuss innovative ways to resist peer pressure. Birth control methods are discussed. However, only topics in the curriculum prescription are covered. Educators usually approach birth control based on low effectiveness ratings, especially

among adolescents. In teaching these topics to adolescents the premiere message that educators want to convey is one of "responsibility regarding sexual relationships and parenthood, the importance of abstinence and ways of resisting pressure to become sexually active, and information about AIDS and other STDs" (Forrest & Silverman, 1989, p. 65).

Teachers find that their predominant perceived barrier to educating adolescents is the lack of support from both the school administration and the parents (Forrest & Silverman, 1989; Haignere et al., 1996; Meeuwsen, 1989; Remafedi, 1993), even though parents have mentioned that they need help from the schools. Due to the controversial nature of the curriculum, (Levenson-Gingiss & Hamilton, 1989) interest from adolescents, materials, and lack of public support may be troublesome for teachers (Forrest & Silverman, 1989; Haignere, Culhane, Balsley, & Legos, 1996). Teachers perceive that the school administration is apprehensive about possible conflict with the parents and the community due to the nature of the course, and they feel that the administration does not support them (Forrest & Silverman, 1989; Haignere et al., 1996; Remafedi, 1993).

Insufficient materials are also a problem. Materials used in the classroom may be outdated or are developed by the teachers themselves (Forrest & Silverman, 1989; Haignere et al., 1996; Remafedi, 1993). Teachers are not experts in all the topics they cover in human sexuality and yet they are asked to develop their own resource materials covering STDs, AIDS, birth control, and abstinence. Unfortunately, these materials are usually outdated and lead to inaccurate information being passed on to students (Forrest

& Silverman, 1989). Lastly, 16% of teachers perceive students themselves as barriers; they allude to their know-it-all attitudes or their embarrassment in discussing the topic of the hour (Forrest & Silverman, 1989).

The Programs

With fewer than 10% of school systems having adequate sexuality programs, it is important for educators and parents alike to look more closely at the curricula (Welshimer & Harris, 1994). The two most heated topics of debate are abstinence education and comprehensive education. As stated below the topic is up to the local community and school board.

Abstinence education is defined as one that encourages adolescents to avoid all "vaginal intercourse, anal intercourse, oral sex, mutual masturbation, and genital contact ('outercourse') before marriage" ("How MISH," 1997, p. 17). Thus it is the most effective way to prevent conception, STDs, and HIV/AIDS (Attico & Hartner, 1992). It is also the most moral, legal, and healthful lifestyle for teens. These programs, however, do not discuss contraceptive methods, because this is compared to giving a gambler money at a casino (Spalt, 1996).

Through literature review it was found that six school-based abstinence programs have been published in the professional literature (Kirby, 1997). They are as follows: Postponing Sexual Involvement (P.S.I), Project Taking Charge, Success Express (two evaluations), Sex Respect, and Teen-Aid ("Adolescence and abstinence," 1997; Kirby, 1997; Kirby et al., 1994; Klein et al., 1994). (Please see appendix D for more information on these programs).

Comprehensive sexuality education is designed to inform adolescents of "human sexuality, including growth and development, human reproduction, anatomy, physiology, masturbation, family life, pregnancy, childbirth, parenthood, sexual response, sexual orientation, conception, abortion, sexual abuse, HIV/AIDS, and STDs" (Guidelines for Comprehensive, n.d., p. 1). Comprehensive education has always included in its programs the importance of abstinence, because educators agree that intercourse should be postponed until one is ready for a mature relationship ("Adolescence and Abstinence," 1997; Kirby et al., 1994).

The National Guidelines Task Force, a selected assembly of 20 professionals in various fields of health and education, developed the guidelines for comprehensive sexuality education in 1990. These guidelines were then organized into six concepts that generalize the topics of comprehensive education. They are: personal skills, sexual behavior, sexual health, human development, relationships, and society and culture (Guidelines for Comprehensive, n.d.). The National Guidelines Task Force has four primary goals: (a) to provide accurate information; (b) to allow for questions and exploration of sexual attitudes; (c) to develop interpersonal skills; and finally (d) to exercise responsibility regarding relationships (Guidelines for Comprehensive, n.d.; Haffner & Goldfarb, 1997; The National Coalition, n.d.).

Kirby et al. (1994) found four comprehensive sexuality programs which have been proven to have a positive effect upon adolescents sexual behavior; they are as follows: Reducing the Risk, P.S.I., Schinke-Blythe Gilchrest untitled curriculum, and

AIDS Prevention for Adolescents in School. (For more information on these programs please appendix E).

These effective programs had a number of common characteristics that may have led to their success. Effective programs (a) include a narrow focus; (b) are based upon theoretical models; (c) provide accurate information; (d) combine activities within the curriculum that address social or media influences upon sexual behavior; (e) reinforce appropriate values in a clear format; (f) reinforce the message of communication, negotiation, and refusal skills; and (g) select teachers who believe in the program and allot enough time for the program to work (Haffner & Goldfarb, 1997; Kirby, 1997; Kirby et al., 1994).

Comprehensive sexuality education seems to increase knowledge in the arena of human sexuality among students. It was also noted that the adolescents had increased parent-child communication and that they were more able to clarify their values (Haffner & Goldfarb, 1997). Adolescent intercourse did not increase in any frequency, nor was initiation of intercourse hastened; in fact, comprehensive sexuality education (see chapter 1 definition of terms) helped to delay sexual intercourse among adolescents and increase contraceptive usage (Haffner & Goldfarb, 1997; Kirby, 1997; Kirby et al., 1994; Lagana & Hayes, 1993).

The World Health Organization and the National Health Institutes have agreed that in order for a comprehensive sexuality program to be effective, it must contain three prime ingredients: information concerning abstinence, contraception, and STD prevention (Haffner, n.d.). Without these ingredients adolescents and the programs both fail in their

understanding of human sexuality. It is up to the American school system to provide this caliber of sexuality education (Welshimer & Harris, 1994). Parents and schools (i.e., teachers and administration) need to work together and not generate negative feelings about school-based sexuality programs. They must enrich these programs and strengthen the prevention efforts (Kyman, 1995).

Government Impact

There is no federal law or policy mandating sexuality education. However, there are federal statutes that prohibit the federal government from prescribing state and local curriculum standards; they are U.S. Code 20.1232a, U.S. Code 20.8901b and Goals 2000, section 319(b) (Goals 2000, 1994; The Personal Responsibility and Work Opportunity Reconciliation Act, 1996). U.S. Code 20.8901b and 20.1232a prohibit federal control of education, and Goals 2000, section 319(b) reaffirms the states and local school systems' control of education.

With the approval of President Bill Clinton, the 104th Congress established abstinence-only education as the sexuality education of the United States (Daley, 1997). This was done by Congress mandating that $50 million per year be designated to abstinence-only education through the Maternal and Child Health Bureau (Public Law 104-193), starting in the year 1998 and continuing through the year 2002 (Daley, 1997; Sexuality Education, n.d.). Congress has inserted into the authorization of monies that for every four federal dollars contributed, individual states must donate three, bringing this abstinence-only entitlement program to a potential $88 million per year (Daley, 1997; Edwards, 1998).

Any state that chooses to implement the abstinence-only entitlement program under Title V of the Social Security Act (1939) as amended must comply with its guidelines. These programs must promote abstinence as the expected standard for all school age children (Haffner, n.d.; The Personal Responsibility and Work Opportunity Reconciliation Act, 1996). The new abstinence-only programs must also instruct that a relationship within the context of marriage is the standard of human sexual activity.

Finally, the last federal requirement that the abstinence-only program advocates is that sex outside of marriage is prone to have harmful psychological and physical effects (Haffner, n.d.; The Personal Responsibility and Work Opportunity Reconciliation Act, 1996). Therefore, all abstinence-only programs backed by federal funds must have as their purpose the health gains, both social and psychological, of practicing abstinence until marriage. These programs cannot mention STD prevention or contraception (Sexuality Education, n.d.; The Personal Responsibility and Work Opportunity Reconciliation Act, 1996).

Texas has decided to implement the abstinence-only entitlement program, and it will gain $4,922,091.00 a year in federal funds; it has the second largest federal allocation, with California as the top receiver and New York as third (Daley, 1997). Despite the amount of money the federal government is willing to give the states to implement these programs, New Hampshire has rejected the funding, and California and Virginia are likely to follow suit ("Keeping an Eye on Abstinence," 1998).

Conclusion

In closing, barriers do exist to parents educating their children about human sexuality, whether it be the comfort level, the lack of information or the inability to discuss human sexuality openly. Parents do feel that human sexuality is an important topic that should be included as regular classroom coursework. Parents agree the school systems are more equipped to teach the technical nature of the subject. However, as stated throughout the literature, no colleges require sexuality education for preservice teachers and national standards are necessary for the field of sexuality education. It also important to note that teachers chosen to teach such material must have an interest in it and a responsibility to those they teach. School systems must also support teachers of sexuality education and make sure that the programs they provide are adequate.

CHAPTER III

RESEARCH METHODS

Haignere et al. (1996) reported that the greatest obstacles to teaching sexuality education is the lack of materials, time, and difficulty in facilitating interactive classroom lessons. Furthermore, they reported difficulty in teaching refusal and delaying skills to sexually active students (Haignere et al., 1996). Many teachers also feel that they need more training in the areas of sexual orientation and risk behaviors that include, but are not limited to, safer sex practice and drug use (Rodriguez et al., 1998). The purpose of this study was to design and validate an instrument designed to investigate teachers' attitudes in regard to adolescent sexuality education.

The Teachers' Attitude, Comfort, and Training Scale

The Teachers' Attitude, Comfort, and Training Scale (TACTS) was developed through an extensive literature search, focus group discussions, and validity testing. Institutional review board permission was obtained allowing for human subjects to participate in the study. Instrumentation development was based on the standards for instrument development established by the American Education Research Association and the American Psychological Association (1985). Furthermore, the guidelines

suggested by Aligna and Crocker were applied in the development of the Teachers Attitude, Comfort, and Training Scale (TACTS). The steps are as follows:

Table 1
Aligna and Crocker Scale Development Guidelines

Step	Responsible
1. Identify the primary purpose for which the test scores were used.	Dr. Miguel Perez
2. Identify behaviors that represent the construct or domain.	Dr. Miguel Perez
3. Prepare a set of test specifications, including the proportion of items related to each of the behaviors identified in step two above.	Dr. Miguel Perez
4. Construct an initial pool of items.	Dr. Miguel Perez
5. Review items and revise as necessary.	Dr. Miguel Perez
6. Test a convenience sample representative of the population studied.	Laura D'Entremont
7. Determine the instrument's reliability and stability.	Laura D'Entremont
8. Determine statistical properties of item scores	Laura D'Entremont
9. Develop guidelines for administration, scores, and interpretation of test scores.	Future Researcher

1. Identify the primary purpose for which the test scores were used. The resulting scale was used to investigate teachers' attitudes in regard to adolescent sexuality education.

2. Identify behaviors that represent the construct or domain. The identification of behaviors, attitudes, and other domains occurred through an extensive literature review. While no single instrument measuring these constructs was identified, the literature review revealed 10 domain areas in need of exploration. The identified domains are: teacher comfort with subject matter, teacher characteristics, course–specific teacher attitudes, course–specific teacher values, course– specific teacher training, teacher knowledge about sexuality, teacher attitudes toward sexuality, teacher interest about curriculum implementation, and teacher willingness to teaching "difficult" subjects.

3. Prepare a set of test specifications, including the proportion of items related to

each of the behaviors identified in step two above. It was determined that an initial pool of items would be pilot tested among teachers in the state of Texas. The data would be collected via a mailed survey.

4. Construct an initial pool of items. Key terms such as "teachers", "sexuality", "attitudes," and other words used singularly and combined in search engines such as Psych Lit., Social Science Index, and Medline. A list of 100 questions was developed based on the literature review. The resulting questions were worded so they fit one of the 10 areas identified in number two above.

5. Review items and revise as necessary. The initial pool of items for the TACTS was determined by an extensive research of the literature. In this research study content validity was established by the panel of experts in the field of sexuality through logical examination of the items on the survey instrument (Thomas and Nelson, 1996). Five experts in the field of human sexuality including veteran classroom teachers (see appendix F) assisted with the content validity of the instrument. Each individual received a scorecard for each of the questions on the instrument. In order for the question to remain in the study at least 60% had to agree to keep the question. If any individual wanted a question discarded, it was. If any individual suggested that a question needed to be modified, it was done. Scale revision continued through three focus groups with 11 schoolteachers in three randomly selected school districts in Texas. Originally, school districts in Dallas, Houston, and Galveston were selected to participate in the study; however, Galveston declined and San Antonio was selected to replace it. Each district's office of research was then enlisted to help the researcher identify qualified teachers to

participate in the study. Each of the three districts, Dallas, Houston, and San Antonio, identified 10 teachers who had taught in their health or physical education departments in the last two years. These individuals were invited to partake in the focus groups for the study. Of the 30 people invited, only 11 attended the focus groups (In Dallas 6 responded and 4 showed; Houston, 8 responded and 4 showed, San Antonio, 0 responded and 3 showed). These focus group participants were presented a list of 100 items developed through literature review and were asked to identify the main areas to be addressed in the field of sexuality education. Focus group participants provided their input in the deletion of duplicate items, wording, and thoughts on what was necessary. Their input yielded 56 items.

The purpose of the thesis was to complete items 6,7, and 8.

6. Test a convenience sample representative of the population studied. The literature suggests that when developing an instrument, at least five individuals must be selected per each of the questions in the instrument. Based on this principle 250 surveys (appendix G) were dispersed to members of the Texas Association of Health, Physical Education, Recreation, and Dance (TAHPERD). This was done by systematic sampling, in which every 20th name was selected and contacted. If the teacher was no longer working in the school system his or her name was thrown out and the next person was chosen. A cover letter stating the importance of the study was issued with each survey. This cover letter also stated that by completing the survey and mailing it back to the researcher the teacher agreed to participate in the study. Each individual was asked to complete the survey within 3 weeks of receiving it. Accompanying each survey was a

self-addressed stamped envelope to help facilitate the return of completed instruments. If a survey was not returned within the 3-week time frame it was discarded to ensure a time line for project completion. Of the 250 surveys mailed, 121 were returned. Of the 121, five were discarded because they were incomplete and another 9 were discarded due to arriving late, resulting in a 43% return rate. The instrument was then modified from the original 56 items to 21 items based on committee recommendations (appendix H).

7. Determine the instrument's reliability and stability. Additional 30 surveys were distributed among teachers in the Dallas/ Fort Worth metroplex in order to determine the instrument's reliability since the original 107 surveys had no follow-up performed. This resulted in a 100% return rate. A two-tailed Pearson product moment correlation was performed to establish the stability of the TACTS.

8. Determine statistical properties of item scores. An exploratory principal component factor analysis was performed to discuss the underlying structure of the 21 items.

9. Develop guidelines for administration, scores, and interpretation of test scores. This step will be completed following scale development. Perhaps the future researcher will find it appropriate to administer the instrument as a screening for possible comprehensive sexuality education teachers in all school districts.

Analysis of Data

A principle component analysis was performed to determine the underlying factors of the 21 item TACTS. A varimax rotation was performed to place the factors into an interpretable position. The structure then interpreted using 9 factors loading of .5

or greater as the criterion value. Alpha coefficients were calculated for internal consistency reliability of the total scale and derived factors. A test-retest correlation was calculated for stability. A criterion value of .7 was established for acceptable reliability.

Summary

Scale development is a lengthy process. In developing the TACTS guidelines set by Aligna and Crocker were followed. Extensive literature research was conducted and a panel of experts along with three focus groups from San Antonio, Dallas, and Houston solidified the instrument through their input. The instrument yielded 56 items (appendix G), however through thesis committee recommendations the instrument was modified to 21 items (appendix H). Underlying factor structure and reliability estimates were determined for the 21 item scale.

CHAPTER IV

RESULTS OF DATA ANALYSIS

The results of the data analysis section are presented in two parts. The first section presents the descriptive data regarding the demographics of the study. The second section examines the validity and reliability of the Teachers Attitudes, Comfort, and Training Scale (TACTS).

Demographics

Two hundred and fifty surveys were mailed to members of Texas Association of Health, Physical Education, Recreation, and Dance (AHPERD). One hundred and fifty-one surveys were returned. Of the 151, five were discarded because they were incomplete and another 9 were discarded due to arriving past the deadline, resulting in an overall return rate of 49%. In the three-week interval test-retest, 30 teachers were recruited from the Dallas/Fort Worth metroplex to participate in the study. All 30 of the distributed surveys were returned, resulting in a 100% return rate.

As seen in Table 2 the sample population was 85.4% female and 14.6% male, with a mean age of 42. Participants were more likely to be white (83.2%) than black (5.8) or Latino (10.2%). With regards to teaching level, 48.2% taught senior high school; 22.6% taught junior high school; and 22.1% taught elementary.

Table 2
Frequency and Percentage of Respondents for Demographics

Variables	Group	Frequency	Percentage
Gender	Male	20	14.6
N = 137	Female	117	85.4
Age	88	1	.7
N = 137	70	4	2.9
	60-69	9	6.6
	50-59	16	11.7
	40-49	48	35
	30-39	32	23.5
	20-29	27	19.6
Race	White	114	83.2
N = 137	Black	8	5.8
	Latino	14	10.3
	None	1	.7
Teaching Level	Kindergarten	2	1.5
N = 137	Elementary	29	21.1
	Junior High	31	22.6
	Senior High	66	48.2
	No Answer	9	6.6
Marital Status	Single	39	28.6
N = 137	Married	80	58.4
	Significant Other	8	5.8
	Divorced	8	5.8
	Other	2	1.4
Sexual Orientation	Heterosexual	124	90.5
N = 137	Homosexual	7	5.
	Bisexual	2	1.5
	None	2	1.5
	No Answer	2	1.5

(table continues)

Table 2 (continued)
Frequency and Percentage of Respondents for Demographics

Variables	Group	Frequency	Percentage
Level of Schooling	2 yr.	1	.7
N = 137	4 yr.	7	5.1
	College Graduate	81	59.2
	Graduate Courses	41	29.9
	Master Degree	7	5.1
Religion	Jewish	2	1.5
N =137	Catholic	36	26.3
	Protestant	75	54.7
	Other	14	10.2
	None	7	5.1
	No Answer	3	2.2
Church Attendance	Never	11	8.
in a Month	Once	18	13.1
N = 137	Twice	5	3.6
	Three times	17	12.4
	Four or more	56	40.9
	None	9	6.6
	No Answer	21	15.4

Content Validity

Five experts including veteran teachers in the field of human sexuality (see appendix F) assisted in establishing the content validity of the instrument. Each panel member received a draft of the instrument and was asked to comment on each question. In order for a question to remain in the study 60% of the panel had to agree to keep it. Further assessment of this instrument was performed by three focus groups of classroom teachers from Dallas, Houston, and San Antonio. Teachers' suggestions yielded 56

items. Based on thesis committee recommendation the instrument was further modified to 21 items.

Construct Validity

A principal component factor analysis with a varimax rotation was performed on the 21 items in order to identify and analyze constructs of the instrument. This generated 9 factors with eigenvalues greater than one. This accounted for 70.1% of the total variance.

TACTS items were originally designed to reflect 10 content areas: teacher comfort with the subject matter, teacher characteristics, course-specific teacher attitudes, course-specific teacher values, course-specific teacher training, teacher knowledge about sexuality, teacher attitudes toward sexuality, teacher concerns about curriculum implementation, teacher interest about curriculum content, and teacher willingness to adopt to teaching "difficult" subjects. These areas relate to teachers' attitudes in regard to adolescent sexuality education. Of the 9 factors generated through factor analysis (Table 3), four factors were dropped from the study due to less than three variables loading on the specific factor. Thus the scale presented in this thesis is said to have five factors (Table 4). These factors correspond to one half of the original 10 content areas. The domains remaining following the factor analysis: were teacher concerns about curriculum implementation, teacher comfort with the subject matter, course-specific teacher attitudes, teacher interest about curriculum content, and teacher attitudes toward sexuality. Questions 10 and 13 (see appendix H) were clustered into different factors than their originally identified content area. The decision to drop them from the other

factor was based on their significantly higher loading in the second factor. Over all, the content areas correspond well with the factors in Table 4, indicating a good measure of construct validity.

Reliability

To establish the reliability of the instrument a Cronbach alpha coefficient was calculated. This was calculated from the domains derived from the principal component analysis on the 137 subjects. The Cronbach alpha coefficient was .8003 for the entire TACTS. The reliability analyses of the 9 factors (Table 3) are as follows: Factor 1 (Teacher concerns about curriculum implementation) = .8749, Factor 2 (Teacher comfort with subject matter) = .7853, Factor 3 (Teacher interest about curriculum content) = .8434, Factor 4 (Teacher characteristics) = .9575, Factor 5 (Course-specific teacher training) = .6127, Factor 6 (Course-specific teacher attitudes) = .4759, Factor 7 (Teacher attitudes toward sexuality) = .3919, and Factors 8 (Course-specific teacher values) and 9 (Teacher knowledge about sexuality) were not interpretable due to having only one variable. Thus, the instrument established it was consistent in measuring the domain areas.

Table 3

Principle Component Loading for Nine Factors on the TACTS

Variables	Factor loading								
	1	2	3	4	5	6	7	8	9
Factor 1: Teacher concerns about curriculum implementation (% variance = 19.2)									
Parents are generally supportive (Q35)	.884	.004	-.000	-.000	.135	.006	.006	.196	-.000
Videos are effective (Q32)	.878	.234	.112	-.108	-.007	-.007	.004	-.002	.003
Lectures are effective (Q33)	.876	.211	.009	-.106	-.007	-.000	.002	.006	.007
Guest speakers are effective (Q38)	.754	.133	.006	-.009	-.005	-.111	.002	-.007	-.007
Outside groups are significant (Q37)	.702	.003	.126	-.003	.558	.009	-.003	.004	.001
School district provides training (Q36)	.700	-.004	-.159	.197	.160	-.005	-.004	.142	-.141
Refrain from touching students (Q39)	.606	.007	.110	.005	-.009	-.002	-.002	-.284	.000
Factor 2: Teacher comfort with subject matter (% variance = 14.5)									
Need additional training (Q31)	.359	.815	.111	.002	.002	-.006	.007	-.145	.005
Difficult to speak about sex (Q10)	.519	.657	.004	.002	-.000	.155	.008	-.104	-.005

(table continues)

Table 3 (continued)

Principle Component Loading for Nine Factors on the TACTS

Variables	Factor loading 1	2	3	4	5	6	7	8	9
Training on adolescent sexuality (Q34)	.297	.744	.002	-.002	-.003	-.005	.134	-.006	.130
Sexuality should not be discussed (Q12)	.001	.615	-.111	.198	-.004	.008	.003	.352	-.212
Not comfortable teaching sexuality (Q13)	.007	.555	.003	.110	.214	.461	.007	-.180	-.274
Strong feelings against teaching sex (Q27)	.004	.551	-.208	.220	.142	.273	.005	.297	.314
Factor 3: Teacher interest about curriculum (% variance = 8.9)									
Help adolescents understand (Q21)	.006	-.003	.859	.002	.111	-.007	-.007	-.003	-.005
Help adolescents develop (Q22)	.110	-.006	.834	.007	-.007	-.141	-.005	.136	-.000
Discuss the role of the family (Q20)	.000	.008	.795	.008	.003	-.222	-.007	.000	-.004
Should be taught sexuality (Q23)	.008	.000	.743	-.228	.100	.003	.002	-.004	.242

(table continues)

Table 3 (continued)
Principle Component Loading for Nine Factors on the TACTS

Variables	Factor loading								
	1	2	3	4	5	6	7	8	9
Factor 4: Teacher characteristics (% variance = 6.4)									
Traditional male role ideas (Q15)	.004	.172	.002	.924	-.003	.005	.148	-.004	.003
Traditional female role ideas (Q16)	-.118	.005	.000	.945	.002	.001	.155	-.002	.003
Factor 5: Course-specific teacher training (% variance = 5.8)									
Lack adequate training (Q28)	.009	-.003	-.005	.003	.862	.004	-.000	.156	.002
Meet certain criteria to teach (Q29)	-.007	.009	.191	-.006	.799	-.103	.150	-.010	.000
Factor 6: Course-specific teacher attitudes (% variance = 4.7)									
Learn from own experience (Q19)	.235	-.146	-.189	.009	-.008	.721	.135	.213	.120
Embarrassed to teach sexuality (Q11)	-.117	.150	-.147	-.007	.004	.708	-.003	-.009	-.189
Discourage sexuality questions (Q14)	-.167	.327	-.256	.141	-.126	.553	.230	.004	-.008

(table continues)

Table 3 (continued)
Principle Component Loading for Nine Factors on the TACTS

Variables	Factor loading 1	2	3	4	5	6	7	8	9
Factor 7: Teacher attitudes toward sexuality (% variance = 3.8)									
Talking encourages sexuality (Q18)	.105	.002	-.006	.144	.001	.002	.711	-.132	-.192
Not taught in school (Q25)	-.009	.008	-.009	.005	.113	.007	.659	.116	.009
Teach strong religious beliefs (Q17)	-.006	.307	-.002	.202	-.004	.252	.503	.370	-.000
Factor 8: Course-specific teacher values (% variance = 3.5)									
Sexual play is natural and harmless (Q24)	.000	-.005	.009	-.009	.005	-.002	.006	.742	-.009
Factor 9: Teacher knowledge about sexuality (% variance = 3.3)									
Qualified teacher most important (Q30)	-.112	-.000	.007	.004	.002	-.149	-.008	-.156	.824

Table 4
Principle Component Loading for Five Factors on the TACTS

Variables	Factor loading
Factor 1: Teacher concerns about curriculum implementation (% variance = 19.2)	
Parents are generally supportive (Q35)	.884
Videos are effective (Q32)	.878
Lectures are effective (Q33)	.876
Guest speakers are effective (Q38)	.754
Outside groups are significant (Q37)	.702
School district provides training (Q36)	.700
Refrain from touching students (Q39)	.606
Factor 2: Teacher comfort with subject matter (% variance = 14.5)	
Need additional training (Q31)	.815
Training on adolescent sexuality (Q34)	.744
Difficult to speak about sex (Q10)	.657
Sexuality should not be discussed (Q12)	.615
Not comfortable teaching sexuality (Q13)	.555
Strong feelings against teaching sex (Q27)	.551
Factor 3: Teacher interest about curriculum content (% variance = 8.9)	
Help adolescents understand (Q21)	.859
Help adolescents develop (Q22)	.834
Discuss the role of the family (Q20)	.795
Should be taught sexuality (Q23)	.743
Factor 4: Course-specific teacher attitudes (% variance = 4.7)	
Learn from own experience (Q19)	.721
Embarrassed to teach sexuality (Q11)	.708
Discourage sexuality questions (Q14)	.553

(table continues)

Table 4 (continued)
Principle Component Loading for Five Factors on the TACTS

Variables	Factor loading
Factor 5: Teacher attitudes toward sexuality (% variance = 3.8)	
Talking encourages sexuality (Q18)	.711
Not taught in school (Q25)	.659
Teach strong religious beliefs (Q17)	.503

Significance and Reliability of the Test-Retest

A Pearson product moment correlation was calculated on 30 surveys completed by teachers in the Dallas/Fort Worth metroplex to establish the reliability of the instrument over a three-week interval. A two-tailed Pearson product moment correlation was calculated for each of the five factors and the entire scale. In each of the 5 identified scales, the calculated Pearson product moment correlation was higher than the predetermined level (.7). Table 5 illustrates the results.

Table 5
Factor Correlation and Reliability Measures of the TACTS for Test/Retest

N	Factor	Pretest n	Post-test n	Pearson
30	Total	26	21	.85
30	Teacher concerns	27	24	.81
30	Teacher comfort	30	30	.95
30	Teacher interest	30	30	.83

(table continues)

Table 5 (continued)
Factor Correlation and Reliability Measures of the TACTS for Test/Retest

N	Factor	Pretest n	Post-test n	Pearson
30	Course-specific attitudes	30	28	.69
30	Teacher Attitudes	30	30	.93

Note. N = total number of subjects. Variations occur within sample subgroup (n) due to whether or not the participant answered the entire survey.

In conclusion the TACTS appeared to be stable in determining teachers' attitudes in regard to adolescent sexuality education, based upon the identified five factors.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

This chapter will give a brief overview of the study including the purpose of the study and the instrumentation. It will also discuss conclusions and provide recommendations for further research.

Overview of Study

The purpose of the study was to design and validate an instrument designed to investigate teachers' attitudes in regard to adolescent sexuality education. It is expected that through the use of the TACTS, school systems and universities will be able to identify deficiencies in the skills that teachers need before they address sexuality-related issues in the classroom.

Table 1
Aligna and Crocker Scale Development Guidelines

Step	
1. Identify the primary purpose for which the test scores were used.	Dr. Miguel Perez
2. Identify behaviors that represent the construct or domain.	Dr. Miguel Perez
3. Prepare a set of test specifications, including the proportion of items related to each of the behaviors identified in step two above.	Dr. Miguel Perez
4. Construct an initial pool of items.	Dr. Miguel Perez
5. Review items and revise as necessary.	Dr. Miguel Perez
6. Test a convenience sample representative of the population studied.	Laura D'Entremont
7. Determine the instrument's reliability and stability.	Laura D'Entremont
8. Determine statistical properties of item scores	Laura D'Entremont
9. Develop guidelines for administration, scores, and interpretation of test scores.	Future Researcher

A sample of 137 teachers from Texas Association of Health, Physical Education, Recreation and Dance (AHPERD) and teachers from the Dallas/Fort Worth metroplex completed the Teachers' Attitudes, Comfort, and Training Scale (TACTS). The total number of surveys distributed, 280, allowed for analysis of reliability and validity of the TACTS. The ratio of the TACTS items to the number of subjects was 1: 5. Data were analyzed by using descriptive statistics for demographics of the subjects, an assessment of the TACTS by means of a panel of experts and focus groups for content validity, a three-week interval test-retest for reliability, a factor analysis and a Pearson product moment correlation for construct validity.

Content Validity

Five experts in the field of human sexuality including veteran teachers evaluated the content of the TACTS for acceptability of the items used. The initial pool of items identified through literature review totaled over 100 items. Thus each individual received a scorecard for each question on the study. In order for the item to remain 60% had to agree to keep the item. If any individual wanted the item modified or discarded it was done. The panel of experts contributed greatly to the TACTS by evaluating the meaningfulness of each item by their own competence and experience. Content validity was further assessed by three focus groups of classroom teachers from Dallas, Houston, and San Antonio. Teachers provided their input, and their suggestions yielded 21 items. Thus, over 70 items were deleted from the original scale to improve content validity.

Construct Validity

A principal component factor analysis with a varimax rotation was performed on the 21 items of the TACTS in order to identify and analyze the constructs of the instrument. This generated 9 factors with eigenvalues greater than one, which accounted for 70.1% of the total variance (Table 3). Of the 9 factors generated through factor analysis, four were dropped from the study due to less than three variables loading on the specific factor. Thus producing only five factors (Table 4). These five factors correspond to half of the original 10 content areas; teacher comfort with the subject matter, teacher characteristics, course-specific teacher attitudes, course-specific teacher values, course-specific teacher training, teacher knowledge about sexuality, teacher attitudes toward sexuality, teacher concerns about curriculum implementation, teacher interest about curriculum content, and teacher willingness to adopt to teaching "difficult" subjects identified in the literature review.

Factor 1 (Teacher concerns about curriculum implementation), with 7 items, accounted for 19.2% of total variance. Example items included "I need additional training on how to teach and incorporate the emotional aspects of human sexuality," "Videos are an effective method for teaching sexuality," and "Parents are generally supportive of school based sexuality education." Item 10 of the TACTS, " I find it difficult to speak about sex," which is included under the content area of "Teacher comfort with subject matter," was clustered with items in Factor 1, indicating the association between teacher concern about curriculum implementation and teacher comfort with subject matter.

Factor 2 (Teacher comfort with subject matter), with 6 items, accounted for 14.5% of variance. Items included "Sexuality should not be discussed in the classroom," and "I would not be comfortable teaching a class concerning sexuality."

Factor 3 (Teacher interest about curriculum content), with 4 items, accounted for 8.9% of variance. Items included "Teachers need to help adolescents develop skills in getting along with members of the opposite sex," and "Teachers need to help adolescents understand their responsibilities to self, family, and friends."

Factor 4 (Course-specific teacher attitudes), with three items, accounted for 4.7% of variance. Items included "I would be embarrassed to teach about sexuality to my students," "Students should be discouraged from asking sexuality related questions," and "Young people should learn about sexuality through their own experiences." Item 13 of the TACTS, "I would not be comfortable teaching a class concerning sexuality" which is listed under the content area "Teacher comfort with subject matter," was clustered with items in Factor 4, indicating the association between course-specific teacher attitudes and teacher comfort with subject matter.

Factor 5 (Teacher attitudes toward sexuality) accounted for 3.8% of variance, with three items. Items included "Teachers who have strong religious beliefs about sexuality should teach those to their students," "Talking about sexuality encourages people to become sexual," and "Sexuality education should not be taught in the school."

Reliability

The TACTS was distributed to teachers in the Dallas/Fort Worth metroplex in a three-week interval test-retest. The three-week time span was deemed appropriate for the measurement of reliability.

The output of the reliability analysis (.8003) demonstrated that all 21 items of the TACTS were reliable in terms of Cronbach's alpha coefficient. The five factors generated through factor analysis were also found to be reliable in terms of Cronbach's alpha coefficient they are as follows: Teacher concerns about curriculum implementation = .8749, Teacher comfort with subject matter = .7853, Teacher interest about curriculum = .8434, Course-specific teacher attitudes = .4759, and Teacher attitudes toward sexuality = .3919.

Conclusion

Based on the results obtained from the experts assessment on content validity, factor analysis, Cronbach's alpha coefficient, and Pearson's product moment correlation, the following conclusion pertaining to the findings of this study are presented:

1. The initial pool of 100 items was reduced to 21, as suggested by the panel of experts. The 21 items of the TACTS were deemed to be valid in content.

2. The 21 items of the TACTS produced high alpha reliability in three of the five factors based on the 137 subjects (Teacher concerns = .87, Teacher comfort = .79, Teacher interest = .84, Course-specific attitudes = .48, and Teacher attitudes = .40). The TACTS has been shown to have internal consistency.

3. Nine factors were generated through factor analysis, accounting for 70.1% of

the total variance (Table 3). Four of these factors were dropped from the study due to less than three variables loading on a specific factor. When these five factors were compared with the predetermined 10 content areas only five were extracted for the study:

1. Teacher concerns about curriculum implementation
2. Teacher comfort with the subject matter
3. Course-specific teacher attitudes
4. Teacher interest about curriculum content
5. Teacher attitudes toward sexuality.

This suggests that the 21 item TACTS has acceptable construct validity and internal consistency.

4. The Pearson product moment correlation proved the following constructs of the TACTS: teacher concerns about curriculum implementation, teacher comfort with the subject matter, course-specific teacher attitudes, teacher interest about curriculum content, and teacher attitudes toward sexuality.

Limitations

1. This study was limited to the state of Texas.
2. The study was subject to possible response bias because the subjects may have felt that they had to respond in a manner that was socially acceptable.
3. The subjects may or may not have reported honestly and accurately.
4. The time frame of the survey was three weeks from the initial mailing.

Recommendations

1. This thesis is a component of the total scale development process and additional work is required to complete the guidelines suggested by Aligna and Crocker.

2. Additional questions should be added to the following factors: Teacher characteristics, Course-specific teacher training, Course-specific teacher values, and Teacher knowledge about sexuality so that these factors can be tested for reliability and added to the final scale of the TACTS.

3. Additional questions should be added to Course-specific teacher attitudes and Teacher attitudes toward sexuality to increase the reliability of these factors.

4. A confirmatory factor analysis should be performed on the modified scale with a new set of subjects.

5. The TACTS could be used by school districts as a screening instrument for possible comprehensive sexuality education teachers.

6. The TACTS could be utilized in a university setting as a evaluation instrument at the beginning and end of a human sexuality class to determine growth of each individual in their attitudes, comfort, and training.

7. Finally, a parallel study could be run by examining the differences in attitudes and positions with regard to sexuality education among the different school levels.

Appendix A

Texas Sexuality Education Position within the United States

SEXUALITY AND THE LAW: A STATE-BY-STATE ANALYSIS

TABLE 8: OVERVIEW*

	AL	AK	AZ	AR	CA	CO	CT	DE	DC	FL	GA	HI	ID	IL	IN	IA	KS	KY	LA	ME	MD	MA	MI	MN	MS	MO
Sexuality Education	S	U	U	S	S	U	N	S	S	S	S	S	N	S	U	S	S	U	U	U	S	U	N	S	N	N
Contraceptive Services	N	S	U	S	S	S	N	S	N	S	N	S	U	S	U	U	N	S	N	S	S	N	N	N	S	N
Abortion Services	U	S	U	U	S	S	S	U	S	N	U	S	U	S	U	U	U	U	U	N	N	S	U	S	U	U
HIV/AIDS	U	S	N	N	S	N	N	S	S	N	S	S	N	S	N	S	S	S	N	S	N	S	N	N	U	N
Sexual Orientation	U	U	U	U	N	U	S	U	N	U	U	N	U	U	U	U	U	U	U	U	U	N	U	S	U	U
Sexual Behaviors	U	S	U	U	S	S	S	S	S	U	U	S	U	S	S	S	U	S	U	S	U	U	U	U	U	U
Sexual Exploitation	S	S	S	S	S	S	S	S	U	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	U
Total Composite Score	U	S	U	N	S	S	S	S	S	S	N	S	U	S	U	S	N	S	U	S	S	S	U	S	U	U

	MT	NE	NV	NH	NJ	NM	NY	NC	ND	OH	OK	OR	PA	RI	SC	SD	TN	TX	UT	VT	VA	WA	WV	WI	WY
Sexuality Education	U	U	S	N	S	S	S	S	U	N	N	S	S	S	S	U	S	U	S	S	N	S	S	N	U
Contraceptive Services	S	U	U	N	N	S	S	S	U	N	S	S	U	N	N	U	S	U	U	U	S	N	S	N	U
Abortion Services	S	U	S	S	S	S	S	U	U	U	N	S	U	U	U	U	S	S	U	S	U	S	S	U	U
HIV/AIDS	S	N	U	S	N	N	S	U	U	N	N	N	S	S	U	U	U	N	N	S	N	N	N	N	U
Sexual Orientation	U	U	U	N	N	U	U	U	U	U	U	U	U	N	U	U	U	U	U	N	U	U	U	S	U
Sexual Behaviors	S	S	S	S	S	S	S	U	S	S	U	S	S	U	U	S	S	U	U	S	U	S	S	S	S
Sexual Exploitation	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	U
Total Composite Score	S	U	S	S	S	S	S	U	U	N	N	S	S	S	U	U	S	U	U	S	U	S	S	S	U

TOTAL

Sexuality Education: 27=S; 14=U; 10=N

Contraceptive Services: 21=S; 13=U; 17=N

Abortion Services: 21=S; 26=U; 4=N

HIV/AIDS: 18=S; 10=U; 23=N

Sexual Orientation: 3=S; 40=U; 8=N

Sexual Behaviors: 30=S; 21=U

Sexual Exploitation: 48=S; 3=U

Total Composite Score: 29=S; 17=U; 5=N

* Based on information from sources in other charts as well as from Status of U.S. Sodomy Laws (American Civil Liberties Union, New York, 1998).

KEY

S = Supportive

U = Unsupportive

NL = No Law

N = Neutral

Appendix B

Texas State Education Code

Sec. 28.004. Human Sexuality Instruction.

(a) Any course materials and instruction relating to human sexuality, sexually transmitted diseases, or human immunodeficiency virus or acquired immune deficiency syndrome shall be selected by the board of trustees of a school district with the advice of the local health education advisory council established under Subsection (e) and must:

(1) present abstinence from sexual activity as the preferred choice of behavior in relationship to all sexual activity for unmarried persons of school age;

(2) devote more attention to abstinence from sexual activity than to any other behavior;

(3) emphasize that abstinence from sexual activity, if used consistently and correctly, is the only method that is 100 percent effective in preventing pregnancy, sexually transmitted diseases, infection with human immunodeficiency virus or acquired immune deficiency syndrome, and the emotional trauma associated with adolescent sexual activity;

(4) direct adolescents to a standard of behavior in which abstinence from sexual activity before marriage is the most effective way to prevent pregnancy, sexually transmitted diseases, and infection with human immunodeficiency virus or acquired immune deficiency syndrome; and

(5) teach contraception and condom use in terms of human use

reality rates instead of theoretical laboratory rates, if instruction on contraception and condoms is included in curriculum content.

(b) A school district may not distribute condoms in connection with instruction relating to human sexuality.

(c) A school district that provides human sexuality instruction may separate students according to sex for instructional purposes.

(d) The board of trustees of a school district shall determine the specific content of the district's instruction in human sexuality, in accordance with Subsections (a), (b), and (c). A change in health curriculum content or instruction may not be made before considering the recommendations of the local health education advisory council.

(e) A school district shall establish a local health education advisory council to assist the district in ensuring that local community values and health issues are reflected in the district's human sexuality instruction.

(f) The council's duties include:

(1) recommending appropriate grade levels for human sexuality instruction;

(2) recommending the methods of instruction to be used by a teacher in human sexuality instruction education; and

(3) recommending the number of hours of instruction to be provided in health education.

(g) The council:

(1) must include persons who represent diverse views in the community about human sexuality instruction;

(2) must include parents of students enrolled in the district as a majority of the council; and

(3) may include teachers, school administrators, students, health care professionals, members of the business community, law enforcement representatives, senior citizens, clergy, or other interested persons.

(h) A school district shall notify a parent of each student enrolled in the district of:

(1) the basic content of the district's human sexuality instruction to be provided to the student; and

(2) the parent's right to remove the student from any part of the district's human sexuality instruction.

(i) A school district shall make all curriculum materials used in the district's human sexuality instruction available for reasonable public inspection.

Added by Acts 1995, 74th Leg., ch. 260, Sec. 1, eff. May 30,1995.

Appendix C

The American Association of

Sex Educators, Counselors, and Therapists

The American Association of Sex Educators, Counselors, and Therapists (Greenberg, 1989, p. 229-230):

1. Sexual and reproductive anatomy and physiology
2. Developmental sexuality (from conception to old age)
3. Dynamics of interpersonal relationships
4. Sociocultural factors in sexual values
5. Medical factors that may influence sexual function, including illness, disability, drugs, pregnancy, contraception, and fertility
6. Techniques and theory of sex therapy
7. Marital and family dynamics
8. Psychopathology
9. Principles of evaluation methods
10. Ethical issues in sex education
11. Educational program evaluation methods
12. Sex and the law
13. Sexology (the study of sex)

Appendix D

Abstinence Education Programs

Abstinence Programs

Project Taking Charge was implemented in Wilmington, Delaware and West Point, Mississippi in a home economics class and consisted of 91 participants (Kirby et al., 1994). Thirty sessions covered self-development, anatomy and physiology, STDs, pregnancy, importance of abstinence prior to marriage, and family values and communication. Project Taking Charge was found to have no significant impact on the initiation of intercourse based in a six-month follow-up (Kirby et al., 1994).

Success Express was a program implemented in health education classes in 5 schools, with a combined total of 848 participants. Its subject coverage consisted of abstinence attitudes, skills, family values, self-esteem, peer and media pressure, and the consequences of sex (Kirby et al., 1994). In its two evaluations Success Express was found to be too short a program (6 sessions) to have any reasonable effect on postponement of intercourse (Kirby et al., 1994).

Teen Aid consisted of material covering human development, relationships, personal skills, sexual behavior, and sexual health. However, it failed SIECUS guidelines for it only covered 17 of the 36 key concepts, or a 47% on the aforementioned guidelines (Klein et al., 1994). Teen Aid also failed because it gave out inaccurate information, misleading statistics, and gender bias (males not presented as parenting figures), therefore proving to be problematic for school use (Klein et al., 1994).

Sex Respect, a widely used curriculum, is based on religious assumption and it also substitutes biased information for fact. Sex Respect disrespects economic and cultural differences (i.e., some communities will not be able to afford materials for in class projects) among its audience, and finally it reinforces male and female stereotypes (i.e., males not seen as care givers) (Goodson & Edmundson, 1994; Klein et al., 1994; Trudell & Whatley, 1991). The Pan American Health Organization failed Sex Respect and advised that it undergoes further evaluations and revisions (Goodson & Edmundson, 1994).

The Postponing Sexual Involvement (P.S.I.) program encouraged abstinence and applied resistance skills. However, due to the fact a human sexuality unit was taught earlier in the program the P.S.I. was categorized with comprehensive sexuality education programs (Kirby et al., 1994).

Appendix E

Comprehensive Education Programs

Comprehensive Education

The Postponing Sexual Involvement (P.S.I) program consisted of a 5-hour program that enrolled 536 students in a regular classroom in Atlanta, Georgia. The P.S.I. was based on the social influence theory. Postponing Sexual Involvement did not discuss contraception; however, a human sexuality unit was taught earlier along with it. Consequently, Postponing Sexual Involvement was found to increase contraceptive use in first-time intercourse (Kirby et al., 1994). The Schinke-Blythe Gilchrest untitled curriculum consisted of 36 participants from Seattle, Washington in special high school classes. The program implemented 14 sessions, covering contraceptive information, skills modeling, problem solving, and communication skills. The Schinke-Blythe Gilchrest was based on the cognitive-behavioral theory and was found to increase contraceptive use among all sexually experienced adolescents. The AIDS Prevention for Adolescents in School consisted of 867 participants from New York City in general health education classes. The program included 6 sessions that covered AIDS risk-taking behaviors, and condom usage skills.

AIDS Prevention for Adolescents in School was based upon the social cognitive theory, social influence theory, and the health belief model. It was found to be successful in increasing condom usage among sexually experienced youth. Therefore it was not truly a comprehensive program. Finally, Reducing the Risk was incorporated into health education classes, reaching 758 students. It consisted of 15 sessions and included discussions of smart sexual behaviors. Reducing the Risk was found to increase

contraceptive usage among sexually experienced females and lower risk youth (Kirby et al., 1994)..

Appendix F

Panel of Experts

Panel of Experts

1. Dr. Raffy Luquis, formerly of Planned Parenthood of Southeastern Pennsylvania, and currently of Connecticut State University - over 10 years teaching and researching sexuality.
2. Dr. Patricia Koch of Pennsylvania State University, and former President of the Society for the Scientific Study of Sexuality - over 20 years of teaching and researching sexuality.
3. Ms. Beatrice Spelker, teacher, Paramount School District – 5 years teaching experience.
4. Dr. Michael Perry, Psychotherapist in private practice – over 20 years teaching experience.
5. Ms. Lara Berry, teacher in New Jersey – over 7 years teaching experinece.

Appendix G

Cover Letter and Questionnaire

Dear Educator:

We are conducting a study titled Teacher attitudes toward sexuality and HIV classroom education which is designed to investigate educators attitudes, comfort levels and professional training in regard to sexuality among secondary school students.

We hope you will take a few minutes to complete the enclosed survey and return it to us in the self-addressed stamped envelope within TWO WEEKS after receiving this letter. You are under no obligation to participate, however, your assistance will be invaluable to the successful completion of this project.

Please do not include any identifying information in the survey form. Results will only be reported in summary form and no one other than the researcher and his advisor will have access to the raw data. **You indicate your consent to participate in this study by completing the survey.**

Thank you in advance for your assistance and cooperation. Do not hesitate to contact the Principal Investigator, Dr. Miguel Perez, at 817-565-2651 or at the address above if you have any questions.

Respectfully,

Miguel A. Perez. Ph.D.
Assistant Professor KHPR

This project has been approved by the University of North Texas committee for the protection of human subjects (817) 565-3940.

Teachers' Attitude, Comfort and Training Scale on Sexuality Education (TACTS)

1. Gender
   1. Male
   2. Female

2. When were you born? 19 _____

3. Mark your race/ethnicity.
   1. White, Not Hispanic
   2. Black/African American
   3. Latino/Hispanic
   4. Asian (Specify) _____________
   5. Pacific Islander (Specify)________
   6. Native American (Specify)______
   7. Other (Specify)__________
   8. None

4. Teaching level
   1. Kindergarten
   2. Elementary
   3. Junior high
   4. Senior high

5. What is your marital status?
   1. Single
   2. Married living with spouse
   3. Married but away from spouse
   4. Live with significant other
   5. Divorced
   6. Widowed
   7. Unsure
   8. Other

6. What is your sexual orientation?
   1. Heterosexual
   2. Homosexual
   3. Bisexual
   4. None

7. What is the highest grade you completed in school?
   1. High school graduate
   2. 1 - 2 years of college
   3. 2-4 years of college
   4. College graduate
   4. Some graduate courses
   5. Master degree
   6. Doctorate
   7. None

8. What is your religious preference?
   1. Muslim
   2. Jewish
   3. Roman Catholic
   4. Protestant
   5. Other_______________
   6. None

9. In the average month, how many times do you attend a church or synagogue?
   1. Never
   2. Once
   3. Twice
   4. Three times
   5. Four or more times
   6. None

10. In your opinion, where do adolescents get most of their sexuality information. (Circle as many as apply).
    1. No source
    2. Female friends
    3. Male friends
    4. Father
    5. Mother
    6. Family member
    7. Physician/nurse
    8. Minister or religious leader
    9. Media
    10. Teachers
    11. Books
    12. Movies
    13. Other (specify) ________________

11. Circle the number identifying the one person or institution that, in your opinion, should have primary responsibility for teaching young people about sexual matters. (Circle only one).
    1. No one special
    2. Friends
    3. Teachers
    4. Physicians
    5. Nurses
    6. Parents
    7. Professional sex educators
    8. Ministers or religious leader
    9. Other (specify) ______________

12. Do you believe that public schools have a responsibility to teach about human sexuality?
    1. Agree
    2. Neutral
    3. Disagree

13. Do you or would you approve of such an educational program in your school system?
    1. Approve
    2. Disapprove

14. Please circle the number one reason for schools systems not to teach about human sexuality. (Circle only one).
    1. Concern about parental reaction
    2. Concern about church reaction
    3. Concern about community reactions.
    4. Concern about encouraging youth to be sexually active.
    5. Concern about political implications

15. Do you teach sexuality education (i.e. family life)?
    1. Yes
    2. No

16. Circle the number next to the primary factor, which has discouraged you from discussing sex-related topics in the classroom. (Circle only one).
    1. Embarrassment
    2. Don't have enough knowledge
    3. School district polices
    4. Afraid to give out wrong information
    5. Afraid of reaction
    6. Religious beliefs

17. In your opinion, what is the primary outcome of school-based sexuality education?
    1. To provide accurate information about sexuality.
    2. To facilitate insights into personal sexual behavior.
    3. To reduce fears and anxieties about personal sexual development and feelings.
    4. To help people make more informed choices.

18. How satisfied are you with your current knowledge of sexual issues?
    1. Satisfied
    2. Not satisfied
    3. Could use more
    4. None

19. How many classes about sexuality have you taken?
    1. One
    2. Two
    3. Three
    4. Four
    5. Five
    6. Six
    7. Seven or more
    8. None

20. Did you take a human sexuality course in high school?
    1. Yes
    2. No

21. Did you take a human sexuality course in college?
    1. Yes
    2. No

22. Have you taken a human sexuality course/training at your current employment?
    1. Yes
    2. No

23. How did you learn about sexuality?
    1. Classes
    2. Discussions with family
    3. Discussions with clergy
    4. Discussions with friends
    5. No formal education
    6. Experiential learning

24. How satisfied are you with the way(s) in which you found out most of what you know about sexuality.
    1. Satisfied
    2. Not satisfied

25. Please rank the top three topics to be discussed with school students. (Circle as many as apply)
    1. Personal hygiene
    2. Menstruation during puberty
    3. Pregnancy and delivery
    4. Intercourse
    5. Types of contraceptives
    6. Sexually transmissible diseases
    7. Abortion
    8. Orgasm
    9. Masturbation
    10. Homosexuality
    11. What to look for in a mate
    12. How far to go on a date
    13. Understanding adolescent male sexuality
    14. Understanding adolescent female sexuality
    15. Physical changes in males during adolescence
    16. Physical changes in females during adolescence
    17. Community dating standards
    18. Pre-marital sexual behavior

19. Sexual codes in dating
20. Peer pressure affecting sexual activity
21. Emotions involved in sexual intercourse
22. Psychological issues regarding pregnancy and unmarried parenthood.
23. Genetics and sex determinants
24. Father's role during pregnancy
25. Types of natural childbirth
26. Reasons for Caesarian birth
27. Emotional concerns related to miscarriage
28. Discuss abstinence

26. If you teach human sexuality, please circle the number corresponding to the topics your discuss in your classes.

1. Personal hygiene
2. Menstruation during puberty
3. Pregnancy and delivery
4. Intercourse
5. Types of contraceptives
6. Sexually transmissible diseases
7. Abortion
8. Orgasm
9. Masturbation
10. Homosexuality
11. What to look for in a mate
12. How far to go on a date
13. Understanding adolescent male sexuality
14. Understanding adolescent female sexuality
15. Physical changes in males during adolescence
16. Physical changes in females during adolescence
17. Community dating standards
18. Pre-marital sexual behavior
19. Sexual codes in dating
20. Peer pressure affecting sexual activity
21. Emotions involved in sexual intercourse
22. Psychological issues regarding pregnancy and unmarried parenthood.
23. Genetics and sex determinants
24. Father's role during pregnancy
25. Types of natural childbirth
26. Reasons for Caesarian birth
27. Emotional concerns related to miscarriage
28. Discuss abstinence

Please respond to each of the following statements by circling the number of the choice which best represents your feelings or beliefs. Use the following scale:

5 = Strongly agree
4 = Agree
3 = Mixed feelings
2 = Disagree
1 = Strongly disagree

27.	I find it difficult to speak about sex.	1	2	3	4	5
28.	I would be embarrassed to teach about sexuality to my students.	1	2	3	4	5
29.	Sexuality should not be discussed in the classroom.	1	2	3	4	5
30.	I would not be comfortable teaching a class concerning sexuality.	1	2	3	4	5

5 = Strongly agree 4 = Agree
3 = Mixed feeling 2 = Disagree
1 = Strongly disagree

31.	Students should be discouraged from asking sexuality-related questions.	1	2	3	4	5
32.	I have very traditional ideas about a man's role in life.	1	2	3	4	5
33.	I have very traditional ideas about a woman's role in life.	1	2	3	4	5
34.	Teachers who have strong religious beliefs about sexuality should teach those to their students.	1	2	3	4	5
35.	Talking about sexuality encourages people to become sexual.	1	2	3	4	5
36.	Young people should learn about sexuality from their own experiences.	1	2	3	4	5
37.	Teachers need to discuss the role of the family in personal growth and development.	1	2	3	4	5
38.	Teachers need to help adolescents understand their responsibilities to self, family, and friends.	1	2	3	4	5
39.	Teachers need to help adolescents develop skills in getting along with members of the opposite sex.	1	2	3	4	5
40.	Adolescents should be taught about sexuality.	1	2	3	4	5
41.	Sexual play among adolescents is natural and harmless.	1	2	3	4	5
42.	Sexuality education should not be taught in the school.	1	2	3	4	5
43.	Experts such as doctors, nurses, psychologists rather than classroom teachers should be called upon to teach sexuality in the schools.	1	2	3	4	5
44.	I have strong feelings against teaching sexuality in the schools.	1	2	3	4	5
45.	Persons involved in school sexuality education lack adequate training.	1	2	3	4	5

5 = Strongly agree 4 = Agree
3 = Mixed feeling 2 = Disagree
1 = Strongly disagree

46.	Before a person should be allowed to teach sexuality education, they should meet certain criteria (i.e. certification).	1	2	3	4	5
47.	A well-qualified teacher is the most important ingredient in an effective school sexuality education program.	1	2	3	4	5
48.	I need additional training on how to teach and incorporate the emotional aspects of human sexuality.	1	2	3	4	5
49.	Videos are an effective method for teaching sexuality.	1	2	3	4	5
50.	Lectures are an effective method for teaching sexuality	1	2	3	4	5
51.	I need additional training on the sexuality of adolescents.	1	2	3	4	5
52.	Parents are generally supportive of school based sexuality education	1	2	3	4	5
53.	My school district provides adequate training and helps teachers to secure necessary resources.	1	2	3	4	5
54.	Outside groups (i.e. parents, religious groups) pose a significant influence to implementing sexuality education in the classroom.	1	2	3	4	5
55.	Guest speakers are effective methods for teaching sexuality.	1	2	3	4	5
56.	Teachers should refrain from physically touching their students.	1	2	3	4	5

Appendix H

Revised Questionnaire

Teachers' Attitude, Comfort and Training Scale on Sexuality Education (TACTS)

1. Gender
   1. Male
   2. Female

2. When were you born? 19 _____

3. Mark your race/ethnicity.
   1. White, Not Hispanic
   2. Black/African American
   3. Latino/Hispanic
   4. Asian (Specify) ____________
   5. Pacific Islander (Specify)________
   6. Native American (Specify)______
   7. Other (Specify)__________
   8. None

4. Teaching level
   1. Kindergarten
   2. Elementary
   3. Junior high
   4. Senior high

5. What is your marital status?
   1. Single
   2. Married living with spouse
   3. Married but away from spouse
   4. Live with significant other
   5. Divorced
   6. Widowed
   7. Unsure
   8. Other

6. What is your sexual orientation?
   1. Heterosexual
   2. Homosexual
   3. Bisexual
   4. None

7. What is the highest grade you completed in school?
   1. High school graduate
   2. 1 - 2 years of college
   3. 2-4 years of college
   4. College graduate
   4. Some graduate courses
   5. Master degree
   6. Doctorate
   7. None

8. What is your religious preference?
   1. Muslim
   2. Jewish
   3. Roman Catholic
   4. Protestant
   5. Other______________
   6. None

9. In the average month, how many times do you attend a church or synagogue?
   1. Never
   2. Once
   3. Twice
   4. Three times
   5. Four or more times
   6. None

Please respond to each of the following statements by circling the number of the choice which best represents your feelings or beliefs. Use the following scale:

5 = Strongly agree
4 = Agree
3 = Mixed feelings
2 = Disagree
1 = Strongly disagree

Statement					
10. I find it difficult to speak about sex.	1	2	3	4	5
11. I would be embarrassed to teach about sexuality to my students.	1	2	3	4	5
12. Sexuality should not be discussed in the classroom.	1	2	3	4	5
13. I would not be comfortable teaching a class concerning sexuality.	1	2	3	4	5
14. Students should be discouraged from asking sexuality related questions.	1	2	3	4	5
15. I have very traditional ideas about a man's role in life.	1	2	3	4	5
16. I have very traditional ideas about a woman's role in life.	1	2	3	4	5
17. Teachers who have strong religious beliefs about sexuality should teach those to their students.	1	2	3	4	5
18. Talking about sexuality encourages people to become sexual.	1	2	3	4	5
19. Young people should learn about sexuality from their own experiences.	1	2	3	4	5
20. Teachers need to discuss the role of the family in personal growth and development.	1	2	3	4	5
21. Teachers need to help adolescents understand their responsibilities to self, family, and friends.	1	2	3	4	5
22. Teachers need to help adolescents develop skills in getting along with members of the opposite sex.	1	2	3	4	5
23. Adolescents should be taught about sexuality.	1	2	3	4	5

5 = Strongly agree	3 = Mixed feelings	1 = Strongly disagree
4 = Agree	2 = Disagree	

24. Sexual play among adolescents is natural and harmless.	1	2	3	4	5
25. Sexuality education should not be taught in the school.	1	2	3	4	5
26. Experts such as doctors, nurses, psychologists rather than classroom teachers should be called upon to teach sexuality in the school.	1	2	3	4	5
27. I have strong feelings against teaching sexuality in the schools.	1	2	3	4	5
28. Persons involved in school sexuality education lack adequate training.	1	2	3	4	5
29. Before a person should be allowed to teach sexuality education, they should meet certain criteria (i.e. certification).	1	2	3	4	5
30. A well-qualified teacher is the most important ingredient in an effective school sexuality education program.	1	2	3	4	5
31. I need additional training on how to teach and incorporate the emotional aspects of human sexuality.	1	2	3	4	5
32. Videos are an effective method for teaching sexuality.	1	2	3	4	5
33. Lectures are an effective method for teaching sexuality	1	2	3	4	5
34. I need additional training on the sexuality of adolescents.	1	2	3	4	5
35. Parents are generally supportive of school based sexuality education.	1	2	3	4	5
36. My school district provides adequate training and helps teachers to secure necessary resources.	1	2	3	4	5
37. Outside groups (i.e. parents, religious groups) pose a significant influence to implementing sexuality education in the classroom.	1	2	3	4	5

5 = Strongly agree	3 = Mixed feelings	1 = Strongly disagree
4 = Agree	2 = Disagree	

Item					
38. Guest speakers are effective methods for teaching sexuality.	1	2	3	4	5
39. Teachers should refrain from physically touching their students.	1	2	3	4	5

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