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SEX EDUCATION FOR HEALTH PROFESSIONALS

by

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ABSTRACT

In this study Lief and Reed's (1972) Sex Knowledge and Attitude Text (SKAT II) was used to test the effect of a three day Sexual Attitude Reassessment (SAR) seminar. The treatment group consisted of 29 health professionals and 5 physically disabled persons who attended the SAR seminar while the non treatment group was made up of 22 health professionals and 8 disabled persons who participated in a survey of sexual attitudes and knowledge. Significant prepost test differences between groups at the .05 level were found on one of the five SKAT scales, that of sexual myths (SM). Pretest differences between the health professionals and the disabled subjects were found on two SKAT scales with the professionals rejecting more sexual myths and having a greater degree of sexual knowledge (SM and SK scales). Overall the effects of the SAR seminar, as tested by SKAT, were minimal. The use of a test more compatible with the detailed objectives and curriculum of the SAR seminar is recommended for similar studies in the future.

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CHAPTER I

INTRODUCTION

Szasz (1978) stated that the cultural and social changes of the 1970's leave little doubt that there is a need for sexual health care and that there is a great need to train competent professionals to fulfill that service. The exact role of each health profession in sexual counselling, and the most effective method of providing health professionals with sexual education are topics for much further research (Szasz, 1978). Although traditionally human sexuality has not been included in the professional education of most health professionals, many programs, such as medicine, nursing, physical and occupational therapy, social work and others, now include some curriculum components regarding sexual counselling techniques and the effects of illness and injury on human sexuality (Chipouras, Cornelius, Daniels, & Makas, 1979; Green, 1979; Lief, 1979; WHO, 1975). Despite these changes, education in sexuality remains a low priority in most health professional curriculum planning, and there is a lack of consistency in regard to the amount and type of information and the methods of teaching (Lief, 1979). This lack of consistency in professional sex education, coupled with the relatively restrictive sexual attitudes and mores held by our western society, has led to a reluctance on the part of both the health professional and the client to initiate discussion regarding possible sexual concerns of the client (Cole, 1975; Enby, 1972; Mims & Swenson, 1980; Zalar, 1975).

Professional sex education standards must be set and more programs in sexuality must be provided at both the undergraduate and continuing education levels if health professionals are to acquire adequate competencies to provide sexual health services in the future (Szasz, 1978).

Since very few hospitals or other medical facilities have a sex therapist or counsellor on staff, it falls to the other professionals, such as physicians, nurses and therapists, to fulfill the role of sex counsellor when patients have concerns in this area (Bahr, 1978; Miller, Szasz & Anderson, 1981). It should be clarified here that the term sexual counsellor implies that the professional has the ability to provide clients with information regarding human sexual behaviours and values, to recognize the possible effects of disease and injury on sexuality, and to be sufficiently aware of their own attitudes that they are able to counsel their clients in a nonjudgemental manner. This role should be differentiated from that of a sex therapist who is skilled in specific techniques aimed at restoring specific sexual behaviours or relationships. I believe that all members of the health team should be able to respond in a positive manner that reinforces a client's self esteem and sexuality. Some individual health professionals may choose to seek out further education to increase their skills so that they may provide more in depth information or specific suggestions to their patients (Annon, 1976). Due to the previously described inconsistencies in sexual education for health professionals, many individuals who are currently fulfilling the sex counsellor role have acquired their skills through continuing education programs, such as the Sexual Attitude

Reassessment seminar, which is offered at several centres in the United States and Canada.

The purpose of this study was to evaluate the effects of a three day SAR seminar on the sexual knowledge and attitudes of the health professionals and physically disabled persons who attended. The seminar was presented as a continuing education program to a multidisciplinary group. The results are discussed in relation to future objectives for sexual education of professionals and the provision of adequate sexual counselling to patients.

Alberta Institute of Human Sexuality

As has already been stated, the 1970's was a period of increased awareness of sexual health care needs (Szasz, 1978). However, in Edmonton, as in many other centres, little undergraduate or continuing professional education in human sexuality and disability was being offered at that time. In response to that lack of opportunity, the Alberta Institute of Human Sexuality was formed as a nonprofit organization in 1976, by a group of health professionals and a peer counsellor. The objectives of the institute were to offer sexuality seminars to health professionals and to disabled persons, to encourage regular sexual counselling in health care facilities, and to promote research in sexuality and health care. (See Appendix A for details of the Institute's objectives.)

Sexual Attitude Reassessment Seminar

One major undertaking of the Alberta Institute of Human Sexuality was the presentation of SAR seminars once or twice a year in collaboration with the University of Alberta Faculty of Extension. The format of the seminar is based upon the premise that the acquisition of sexual knowledge should be coupled with the opportunity to reevaluate sexual attitudes and values, in order to provide professionals with competent sexual counselling skills (Berkman, 1975; Chipouras et al., 1979; Mims & Swenson, 1980; Zalar, 1975). Information concerning many aspects of human sexual function and dysfunction is presented throughout the three days. In addition, much time is spent in small group discussions where participants are encouraged to share their own thoughts, feelings, and values related to the materials presented. This approach should facilitate the professionals in diminishing their own fears and inhibitions about sexual matters and should facilitate positive learning of sexual counselling skills. (Appendix A provides a detailed SAR description and schedule.)

Following a model of the University of Minnesota SAR programs, the Alberta programs include physically disabled persons as participants and as some of the small group leaders at the seminars. It was considered beneficial to provide an opportunity for the professionals and the disabled persons to learn together, not only about sexuality, but about each other's roles in health care. It was particularly important to provide role models of sexually viable disabled people as staff members to facilitate positive attitudes toward the sexuality of persons with illness or disability (Wallace, 1980).

Summary

Much has been written about the sexual concerns of patients with various diagnoses and the necessity of providing appropriate sexual health services. However, despite a considerable increase in undergraduate and postgraduate sex education for health professionals there remains a serious lack of sexuality curriculum in most professional training programs. Consequently, there is a corresponding lack of effective sexual counselling in health care services. There is a need for further study on the most effective way to develop and to provide such sex education to health professionals. It was with this concern in mind that this study was undertaken.

Symbolic Interaction: A Conceptual Framework

Symbolic Interaction is a conceptual framework that emphasizes positions in society and the expected roles of such positions (Stryker, 1972). Man is both an actor and a reactor in his communication with others through social acts and the use of symbols. An individual's self concept and behaviours are greatly influenced by the anticipated reactions and responses of others, especially significant others (Schvaneveldt, 1966; Stryker, 1972).

Since this study involved subjects with specific positions, namely health professionals and disabled persons or patients, and is concerned with the roles played in the professional patient dyad during sexual counselling, the symbolic interaction framework appeared to be an appropriate framework to employ. The basic framework concepts of social

act, symbols, categories, position, roles, counter roles, significant others, definition of situations, reference group, self concept, and role taking are presented, followed by a discussion of symbolic interaction as it relates to sexual counselling in health care.

Principles of symbolic interaction. The symbolic interaction framework is founded upon the concept that individuals are born asocial into a system of interacting personalities, and social interaction with others brings about the shaping and development of self concept (Schvaneveldt, 1966; Stryker, 1972).

A social act is described as purposive behaviour involving at least two individuals, each of whom takes the other into account in the process of satisfying needs. Such acts give rise to the use of gestures, verbal and nonverbal, which when their meaning is shared by the individuals involved, become significant symbols. Language is one of the most complex and important systems of significant symbols (Stryker, 1972). Categories are a type of symbol. To categorize is to designate that several objects are to be treated as the same thing. For example, people in a hospital with health problems are categorized as patients, and patients are usually treated as passive, homogeneous recipients of the expertise of the professionals. A position is a socially recognized category. Such positions bring with them certain expectations of that person's behaviour, that is, a role. Health professionals, for example, are given a certain position and their expected role may be to make day to day decisions about the care of the disabled person, who in turn holds the position of patient, and whose role may be seen as conforming to hospital regulations (Cogswell, 1967). For every role there is a counter role. It is hard to imagine for instance, the role of health

professional without the counter role of patient, or of wife without husband. This implies that roles occur only within interpersonal interaction. One individual may assume a number of roles when interacting with different people. A woman may be a wife to her husband, a mother to her child, a doctor to her patient. Some of these people with whom interaction takes place will have greater influence than others upon the individual. Those who are given high priority on the continuum are called significant others (Schvaneveldt, 1966). A significant other for those with health concerns would usually be a physician, whose advice would be ranked above that of others in matters of health.

Based on expectations of self and others, individuals imagine their appearance to others and imagine (anticipate) the other's reaction or judgement of their appearance. (Stryker, 1972).

For example, therapists in a hospital may define their role as controlling the rehabilitation and progression of their patients. Their expectations are that they, the patients, would cooperate in the treatment programs and be glad to go home as soon as possible. The patient's perceptions of their own roles and those of the therapists, may or may not be congruent with what the therapists are expecting. Some patients may agree that their prime role is to follow instructions in their health care program, others may consider the therapists as the persons to respond to their demands and directions as the consumers of the health care service. Persons entering any given situation must interpret that situation in symbolic terms that have meaning for them. That is, they define the situation, and based upon that definition they make judgements and initiate actions (Schvaneveldt, 1966). A further symbolic interaction concept relevant to the health professional and

patient dyad is that of a reference group. This concept implies that individuals behave in a way that they determine as appropriate based on their concept of a generalized other. Health professionals behave in a way that they determine as appropriate according to their colleagues and their professional organizations. Patients take their cues from other patients, staff, relatives and visitors, and behave accordingly. Finally, an elaboration of the role concept can be applied to the interaction of the patient and the professional. Role taking is the anticipation of the responses of others and the modification of one's behaviour in light of that anticipation (Schvaneveltd, 1966). The accuracy with which the other's reactions are anticipated is dependent upon past experience. For example the rehabilitation professionals may anticipate that their disabled patients are too emotionally involved in their own health problems and that they cannot be objective about their treatment goals (Dembo, 1977). The professionals therefore take the responsibility for directing the rehabilitation program. The patients on the other hand learn quickly that cooperation with staff receives approval, so they may in turn modify their behaviour and conform to staff expectations in anticipation of approval and a more pleasant existence (Stubbins, 1977). Even though this interaction may result in the completion of the treatment programs, and may be the most common professional-patient role making relationship, it does not necessarily lead to meaningful rehabilitation. The intentions of the patient for his future life may be suppressed in order to meet the immediate expectations of institutional patterns of behaviour (Ludwig & Adams, 1977).

In summary, persons are categorized primarily by position and on that basis specific behaviours (roles) are expected of them. The

reactions of others, particularly significant others, to these roles influence the way in which individuals define self concept, self concept being the way one describes one's own relationships with others in a social process (Stryker, 1972). Anticipation or imagining the responses of others influences the way one behaves (role taking).

Symbolic interaction in health care. The relationship between health professional and patient is one in which the professional is expected to play the role of the expert and to be in control of the situation. The patient, on the other hand, is expected to be a passive recipient of direction and treatment. This gives the health professional a position with status in our society, whereas the position of patient is not socially valued (Cogswell, 1967; Kerr, 1977). Professionals who are confident in their skills and are successful in their profession will have positive self concepts. Patients, who are usually confined to a dependent role, are less likely to have positive self concepts, especially when the dependency involves their entire living pattern, such as in an institutional setting like a hospital.

When the professionals feel unsure of their abilities to perform a particular task or role, such as when first attempting the role of sexual counsellor, the professional's self concept may approximate that of the patient's. Anxiety concerning their professional competencies and performance in such a role, and anticipation of others' (the patients') responses, may lead to avoidance of the role and subsequently neglect of the patients' concerns. When professionals omit sexuality from the complex list of health issues patients may assume that their role does not include sexual behaviours and concerns and may suppress or modify their sexual behaviour (role taking) (Miller, Szasz & Anderson, 1981).

Since one's sexual self concept is an integral part of total self concept, patients' negative feelings regarding their sexuality may generalize or spread to other areas of their lives such as general interpersonal relationships or vocational pursuits (Wright, 1977). Professionals who believe sexual health to be a viable concern and who develop the skills necessary for sexual counselling can facilitate positive self concepts in their patients. This should enhance positive outcomes to the patient's overall health care and help to minimize the effects of the socially devalued role of patient.

Statement of the Problem

The previously described professional-patient relationship, where the professional is the dominant director of health care and the patient is the passive follower, is still prevalent today. However, some patients are now more knowledgeable regarding health concerns, are not willing to take the follower role, and wish to be co-managers of their own health programs. Part of this changing interaction has been the patients' questions and demands in regard to sexual concerns and sexual health care services. Some professionals when confronted with such questions and concerns have taken action to implement sexual health care programs. Stimulus for change has also come from educators in the health professions who have implemented sexuality courses in the various health professional education curricula. As yet there is no conclusive evidence to show that one particular form of sex education for professionals, or one style of counselling for clients, is more effective than another. There is a need for continuing research on the effectiveness of teaching

methods and clinical progams in order to generate adequate data for comparative studies in the future.

The objective of this study was to present a SAR seminar as a continuing education program for health professionals and disabled persons. The effect of the seminar on the sexual knowledge and attitudes of the participants was examined by means of a prepost test using Lief and Reed's (1972) Sex Knowledge and Attitude Text (SKAT II). The study tested four experimental hypotheses: a. there will be significantly greater prepost test differences on the four attitude scores obtained by the group attending the seminar (treatment group) than by the group not attending (nontreatment group); b. there will be a significantly greater prepost test difference on the sexual knowledge score obtained by the seminar participants than by the nonparticipants; c. the four pretest attitude scores obtained by the health professionals in both the seminar and the nonseminar groups will be significantly higher than those obtained by the physically disabled participants in the same two groups; and d. the pretest sexual knowledge score of the health professionals will be significantly higher than that of the disabled persons.

SAR is one of several possible educational models designed to provide professionals, and others, with sexual information, greater awareness of societal sexual values, and increased comfort with the topic of sexuality (Lief, 1978). Throughout the three day seminar presentations on diverse aspects of human sexuality were alternated with small group discussions, where participants were encouraged to evaluate and discuss their attitudes and values regarding sexuality. Counselling skills were demonstrated by the seminar leaders and practised by the

participants on the third day. (See Appendix A for a detailed SAR schedule.)

CHAPTER II

REVIEW OF RELATED LITERATURE

The focus of this study was on the effects of a particular health professional sex education program, namely a SAR seminar. In order to evaluate this effectively it is necessary to examine the available literature concerning three related topics. Those topics are: societal attitudes and beliefs regarding sexuality, as they affect the professional-client interaction; the role of the health professional as a sex counsellor, with specific reference to the sexual concerns of persons with certain disabling conditions; and factors to be considered in the development of sex education programs for health professionals.

SEXUAL ATTITUDES AND BELIEFS

Historical Overview

Sexual beliefs and attitudes have varied over the centuries, but have tended for the most part to be repressive in nature. Religious leaders and medical organizations have taken the responsibility for setting sexual standards by designating certain sexual behaviours as immoral or unhealthy (Calderone, 1978; Johnson & Belzer, 1973; Mims & Swenson, 1980). Traditionally such standards have had a reproductive

bias. That is, "normal" sex constituted sexual intercourse between husband and wife for the purpose of procreation. Other behaviours, such as masturbation and oral sex were condemned. Similarly, birth control was not acceptable (Johnson & Belzer, 1973; Mims & Swenson, 1980). The influence of church and state was evident in such events as the passing of a Canadian government bill in 1892 prohibiting the dissemination of contraceptive information. That bill was not revoked until 1969 (Greenland, 1977). These generally conservative attitudes prevailed until the 1960's and 1970's, which have been described by some as a time of sexual revolution (Mims & Swenson, 1980). At that time the general public was inundated with "self help" manuals on sexual performance, interpersonal growth, and self development, and there was an apparent increase in the freedom of press and media to depict sexual materials. However, many traditional values were still evident in society (Brashear, 1978; Spencer & Thomas, 1978). According to Brashear (1978) a vast number of individuals still felt awkward when discussing personal sexual concerns, and any talk about sex was usually "defensive, gossipy, cute or funny" (p. 190).

This increased awareness of sexual issues during the 1960's and 1970's led the public to expect health professionals, particularly physicians, to be able to provide guidance and counselling concerning sexual problems (Burnap & Golden, 1967; Vincent, 1973). Unfortunately, health professional sexuality education had not been developed to a level that was adequate to meet the increasing demands of the clients (Brashear, 1978; Cole, 1975; WHO, 1975).

Any interaction between a health professional and a client is not an isolated incident, but one to which both bring their background of experiences and values. The ability of both the professional and the client to discuss sexual issues openly is greatly affected by their previous sex education, or lack of same, by their religious and ethnic traditions and values, and by their perceptions of behaviours appropriate to the roles of health professional and patient (Brashear, 1978; Greengross, 1980; Mims & Swenson, 1980; Mudd & Siegel, 1969; Zalar, 1975). Before they can benefit fully from professional sexual education programs, or offer adequate counselling to their clients, it may be necessary for students and practitioners in health professions to reassess some of the sexual values, attitudes, myths and taboos that they have learned in their earlier development (Becker, 1978; Chipouras et al., 1979; Cole, Chilgren, & Rosenberg, 1973; Hohmann, 1975). To this end, professional sex education programs should include the opportunity for discussion and reassessment of personal attitudes and values concerning sexuality.

In order that they may acquire these competencies and knowledge professional sex education must be provided. Although there has been a considerable increase in both undergraduate and postgraduate professional sex education programs, there remains a great deal of variance in the quality and quantity of the courses offered to the various health disciplines. Some programs include a few hours of general sexual information, others are extensive and integrated into all levels of a curriculum (Chilgren & Briggs, 1973; Halstad, Halstad, Salhoot, Stock, & Sparks, 1978; Szasz, 1978). Sexual Attitude Reassessment seminars are

one format of professional education that has gained considerable popularity in the United States and in a few centres in Canada and Europe (Cole, Chilgren, & Rosenberg, 1973; Dickerson & Myerscough, 1979; Ryan, 1980).

Current Sexual Standards and Values

Despite some liberalization of laws, religious dogmas, medical viewpoints and social practices, today in North America, sexual attitudes and values remain basically conservative. Sexual laws in the United States vary from state to state with some including restrictions on some marital behaviours, such as oral sex (Johnson & Belzer, 1973). In Canada, the current federal law considers any sexual behaviour between two consenting adults, in private, to be legal. However, should this activity include sex for profit (e.g. prostitution), or use of force (e.g. rape), it is no longer legal. Bestiality and paedophilia are also not legal in North America (Greenland, 1977). Some Protestant faiths have developed a few somewhat less restrictive views regarding certain sexual behaviours, such as masturbation and nonmarital sexual relationships. Even homosexual relationships may be considered acceptable when love or commitment exist between the individuals concerned (Smith, 1975). From the medical viewpoint, some sexual behaviours previously designated as pathological or deviant are now considered "normal", for example masturbation and homosexuality. It is of interest to note that change has not occurred easily. For instance, the 1973 decision of the American Medical Association to remove

homosexuality from the category of "mental disorder" was passed by only a small margin of votes and the controversy is still evident.

Although these "institutional" viewpoints are relatively conservative, a great variety of sexual behaviours and attitudes are apparent in society today. The entertainment and news media bombard the public with sexual innuendoes and often overt sexual material. Individual lifestyles other than marriage, such as common law relationships, premarital sexual activity, and single parenthood are openly accepted, or at least tolerated, as part of North American life (Reiss, 1979; Spencer & Thomas, 1978).

These current patterns of behaviour can be divided into four codes as described by Gecas and Libby (1976) in their discussion of sexual behaviour as symbolic interaction. These codes are: traditional-religious, romantic, recreational, and utilitarian-predatory. The traditional-religious viewpoint upholds the procreative purpose of sex in marriage and considers nonmarital sex to be sinful, particularly for women. Fidelity of both partners is advocated. Those who believe in the romantic philosophy give approval to premarital intercourse when affection, love, or commitment is evident, but still advocate marriage as the ideal. Shymko (1977) found that there was a trend toward the romantic philosophy among Canadian students. She also found that strong religious views held by the students contributed to considerable guilt associated with their nonmarital sexual behaviours. The recreational code advocates sex as a pleasurable activity with little restraints imposed. However, in their discussion of this code, Gecas and Libby (1976) pointed out that with the code of sexual freedom there was an

increasing attention to techniques, and for some the sexual play became a performance associated with much anxiety. The last category, utilitarian-predatory describes sexual behaviours as a means to an end. Some examples are prostitution for money, marriage for position in society, and the "macho" male who "keeps score" of his sexual conquests for the purpose of attaining peer prestige.

Although sexual codes and values are more often associated with personal, intimate relationships, they also affect professional-client relationships. For example, a professional who holds firmly to the traditional-religious viewpoint may have difficulty establishing a positive therapeutic relationship with a patient who is known to practice the recreational code, especially when the therapeutic interaction includes concerns of a direct sexual nature, as well as general health concerns.

SEXUALITY AS A HEALTH CARE ISSUE

As previously discussed, health professionals hold a valued position in society and are perceived to be the experts in their relationships with their patients and clients. When they are confident in their knowledge and skills, their self esteem is usually positive. Lack of confidence and anticipation of their clients' reactions to poor professional techniques may inhibit a professional from fulfilling certain roles, for instance that of sex counsellor. In addition to having confidence in their own abilities it is important that all professionals have a clear understanding of the role other health

disciplines may play in sexual counselling, so that effective use of the team is facilitated. Unlike many other facets of health care (e.g. nursing care, administration of drugs, surgery), sexual counselling has not been clearly defined in terms of responsibilities, ethics, techniques and limitations in the general health care setting. It should be made clear here that there are North American standards for professional sexual counselling and that it is the use of such skills by the health care team that has not yet been clearly delineated (AASECT, 1980; Miller, Szasz, & Anderson, 1981). Lack of a generally acceptable intervention model has hindered the integration of sexual counselling into health care services (Mims & Swenson, 1980). Some intervention models have been put forth and they are reviewed here following a general discussion of some basic concepts of sexual health care. Four specific disabling conditions, arbitrarily selected, are presented to illustrate possible physical, psychological and emotional effects of illness and injury on sexuality.

Concepts of Sexual Health Care

In 1974 a meeting of international experts was convened by the World Health Organization (WHO) to discuss education and treatment in human sexuality (WHO, 1975). They defined sexual health as:

> The integration of the somatic, emotional, intellectual, and social aspects of sexual being, in ways that are positively enriching and that enhance personality, communication and love. (p. 6).

They advocated that health professionals should present positive attitudes toward sexuality, objectivity in counselling, and demonstrate knowledge concerning biological and psychological aspects of human reproduction, sexual behaviours, sexual dysfunction and disease (WHO, 1975). This point is supported by Brashear (1978) who argued that:

> Every rehabilitation counsellor, every social worker, every nurse, physician, occupational therapist and other rehabilitation personnel has a responsibility to integrate the sexual dimension of their patients into their treatment considerations and methodology. (p. 191).

In spite of the fact that these concepts of sexual health have been advocated for almost a decade, health professionals are still not provided with adequate education in the sexual aspects of health, and consequently sexual counselling programs are few. Many patients, like the spinal cord injured women interviewed by Becker (1978), have received little or no sexual counselling or information in their rehabilitation, and any achievements they made in their postinjury sexual development was through their own efforts and willpower (Brashear, 1978; Greengross, 1980; Hohmann, 1973; Nordqvist, 1980; WHO, 1975). This is not to suggest that all health professionals become experts in sexual counselling or therapy, but they should have sufficient knowledge and personal comfort to acknowledge sexuality as a legitimate concern in health care and to advise clients regarding available resources for help.

Intervention Models

PLISSIT model. The PLISSIT model by Annon is the model that appears most frequently in the literature. (See Appendix B for an

outline of PLISSIT.) This model can be used by a variety of professionals and is designed to allow them to select the level of involvement appropriate to their degree of competence and comfort (Chipouras et al., 1979; Brashear, 1978). The four levels described by Annon are: Permission, Limited Information, Specific Suggestions, and Intensive Therapy. The initial level, Permission, calls for some degree of comfort with the topic of sexuality, and the ability to provide a "sounding board" for the clients' concerns. This is achieved by presenting a nonjudgemental attitude and appropriate knowledge in regard to varying societal values and sexual practices. Many sexual questions, or relatively minor concerns, can be alleviated at this level. For example, a recently injured individual who is now paraplegic has certain body appearance changes that concern him and he expresses anxiety about whether his partner will still find him sexually attractive. The professional who recognises the sexual implications of injury can respond to these concerns, or preferably initiate conversation about the client's feelings. Support and assurance that such feelings are not unusual, and encouragement for him to talk with his partner, may be all that is required to enable him to deal with his concerns. Any further counselling with this client may lead to the next stage of Annon's model, that of Limited Information. At this level the professionals can choose to refer the client to someone with more expertise or to continue the counselling themselves. An example of level two counselling with the same paraplegic client might be to provide information regarding the neurological effects of spinal cord injury on fertility and potency, and to encourage the patient to see himself as a sexual person in spite of

some physical changes that are disturbing his self concept. Level three, Specific Suggestions, may involve the professional in counselling the client regarding ways to adjust his sexual behaviour patterns. Again, the professional has the option to refer or to continue. Appropriate behavioural issues to discuss with the paraplegic person in question might be, management of urinary drainage equipment during intimacy, positions for intercourse, and arousal techniques (Mooney, Cole, & Chilgren, 1975). The last level, Intensive Therapy, implies much more than the provision of information and the ability to communicate openly about sexual matters. It requires professional skills acquired only through specialized training in order to evaluate and treat the client's emotional and psychological status. This level is not usually appropriate for health care personnel unless they change the focus of their professional competencies to become certified sex therapists (Brashear, 1978; Lief, 1978; Miller et al., 1981; WHO, 1975).

The first stage of the model can, and should, be used by all helping professionals, and is applicable to all clients. As one progresses through the various levels of the model fewer professionals may have the competencies or interest, but at the same time, fewer clients are likely to require such intervention (Chipouras et al., 1979).

Other models. Two other models related to specific professions have been developed from Annon's PLISSIT model. Mims and Swenson (1980) described the Sexual Health Model, which was designed for nurses. The four levels are Life Experience, Basic, Intermediate, and Advanced. Life Experience indicates general knowledge and attitudes acquired through day to day living. It is not considered adequate for any level of sexual

counselling. The Basic, Intermediate and Advanced levels approximate the first three levels of Annon's model. Each level is related to appropriate nursing education criteria and clinical skills. Lief (1978) also defined levels of competence in describing various roles that the physician may assume in sexual counselling. Five roles are defined, Inquirer-Educator, Counsellor, Marital Therapist, Psychotherapist, and Sex Therapist. Unless the physician has specialized training it is suggested that he use only the first two levels which are comparable to the second and third levels of the PLISSIT model (Lief, 1978).

Use of intervention models. The importance of these models is in the provision of a framework to define how the various disciplines may implement their skills in sexual health care. Recognition of the limits of one's competencies, and effective referral, are crucial to the success of a multidisciplinary application of such a model. Clearer roles and tasks must be defined. Such definition should not be aimed at singling out any one discipline to be resonsible for one task, but to facilitate cooperation and inhibit professional defensiveness (Mims & Swenson, 1980: WHO, 1975). The success of integrated sexual counselling services lies not only in the use of an effective intervention model, but also in the provision of appropriate sexual education for the various disciplines. Before addressing the educational issue in detail a brief outline of four disabling conditions and their possible effects on sexuality will be discussed, in order to illustrate some of the existing needs of clients.

SEXUAL ISSUES RELATED TO DISABLING CONDITIONS

Persons with health care concerns are categorized as patients; those with lasting physical, emotional, or intellectual limitations are expected to take on the role of disabled person (Robinson, 1972). While it is true that patients and disabled persons may have some sexual concerns in common with each other, it is important to recognize that sexual concerns, even when based on similar physiological and psychological functions or dysfunctions, are unique to every individual, disabled or not (Geiger, 1979). In order to acquaint the reader with some possible sexual issues associated with health concerns, four disabling conditions have been selected for discussion. They are spinal cord injury, heart disease, diabetes, and mastectomy.

Spinal Cord Injury

Damage to the spinal cord occurs when the spinal vertebrae are dislocated or fractured (Kolodny, Masters, & Johnson, 1979). Sensation and movement of the body and limbs are dimished or lost below the site of the injury. The remaining functions, including sexual function, vary greatly depending on the degree of neurological damage (Comarr, 1978; Geiger, 1979). The most prevalent cause of spinal cord injury is motor vehicle accidents. Other causes include industrial, sports, and war injuries (Bregman, 1978; Cole, T., 1975). Improvements in emergency care and medical treatment have prolonged the life expectancy and physical potential of such individuals, but fewer advances have been accomplished

in the fields of psychosocial or sexual rehabilitation (Bergman, 1978; Cole, T., 1979).

Sexual response. A complete lesion of the cervical or thoracic cord may result in loss of psychogenic penile erection and vaginal lubrication, even though an increase in heart rate and respiration rate may be observed, and reflex activity is still present (Becker, 1978; Cole, T., 1979; Geiger, 1979). Ejaculation is rare in complete lesions of the cord; however, there is potential for this activity with an incomplete lesion. Although physiologically orgasm is thought to be absent, both men and women with spinal cord injury report varying degrees of pleasurable sensations that they associate with orgasm (Becker, 1978; Cole, T., 1975; Comarr, 1978; Geiger, 1979). Lesions in the lumbar region may interfere with reflex sexual response due to the proximity of the injury to the pelvic nerve supply.

Fertility and potency. Women with spinal cord injury nearly always have the potential to conceive. Birth control information is therefore as important to them as to able bodied women (Becker, 1978; Szasz, Miller, & Anderson, 1979; Thornton, 1979). Unfortunately, the prevailing attitudes regarding the perceived nonsexual role of physically disabled persons has led to misinformation, as well as lack of services, in this area (Becker, 1978; Bregman, 1978; Shaul, Bogle, Hale, & Norman, 1977). Fertility in the spinal cord injured male is frequently impaired, although at this time the exact reason for this is not fully understood. Some initial successful research has been done on taking sperm from newly injured men and placing it in a sperm bank, but this approach is not yet used as a general procedure (Hohmann, 1981). Several penile prostheses

have been developed to provide penile rigidity in males who are impotent due to injury or illness. The rationale for using such a technique with spinal cord injured men may be related to their desire to be able to participate in sexual intercourse, but also it may be done to facilitate application of external urinary drainage equipment (Melman & Hammond, 1978).

Psychosocial implications. Although physical implications of spinal cord injury on the individual's sexuality should not be underestimated, the greater sexual dysfunction is often associated with the effects of the injury on self esteem and sexual identity (Cole, T., et al., 1973; Hohmann, 1973; Kentsmith & Eaton, 1979). Significant others, such as the health professional, can greatly influence the spinal cord injured individual's concept of himself or herself as a viable sexual person. In the past, due to their lack of education in sexual matters, such professionals have not recognised the sexual potential and concerns of many of their patients (Cole, T., 1979; Thornton, 1979). Only recently it was stated at a health care team conference that sexual counselling should be included in the rehabilitation plans for a particular female spinal cord injured patient. The physician in charge considered counselling to be unnecessary since the patient could still have children. It was countered that sexual counselling, not reproductive counselling, had been the intent. However, my informant did not think the physician had appreciated the differentiation. Such instances of professional insensitivity inhibit sexual adjustment in many patients.

Counselling. In their study of sexual adjustment, Berkman, Weissman and Frielich (1978) found that if spinal cord injured persons were able to learn to focus on their positive attributes rather than on their disability, their adjustment to disability, including sexual adjustment, was facilitated. They suggested that the person who realized the pleasures of nongenital as well as genital sexual activity, considered himself to be a desirable partner, and engaged in satisfying relationships, could be said to have "learned to value his assets" (p. 33). By including sexual health care as an integrated part of their services, health professionals can assist spinal cord injured individuals to achieve healthy sexual self images.

Other issues. This discussion would not be complete without mentioning the lack of research regarding partners of the disabled. Neuman's (1979) study, aptly entitled, "The Forgotten Other: Women Partners of Spinal Cord Injured Men", defined the characteristics of women who entered into marriage or significant relationships with spinal cord injured men, however, he did not address the concerns of these partners. Concerns of both existing and potential partners of disabled persons is an area for much future research (Kenan & Crist, 1981).

Myocardial Infarction

Myocardial infarction is defined as destruction of a portion of the heart muscle due to interruption of its blood supply. It may also be referred to as a coronary or heart attack (Thomas, 1981). It occurs predominantly in middle aged males, but can and does occur in both sexes

at any age (Wagner & Sivarajan, 1979). Although the incidence of death following a myocardial infarct has been reduced, it remains a life threatening incident (Cole, C., 1979). During the period of convalescence the patient may be depressed, fearful, and anxious about his immediate prognosis. The patient is often especially concerned about the effect of exercise on the status of his heart, and the possibility of another heart attack (Krop, Hall, & Mehta, 1979; Masur, 1979; Puksta, 1977) Kolodny et al. (1979) state that sexual difficulties following a coronary are seldom of an organic origin, but are the result of "a combination of misconceptions, anxiety, avoidance, depression and poor self esteem" (p. 170). Effective sexual counselling could therefore prevent many of these difficulties.

Sexual function. Although much research has been done regarding cardiac rehabilitation and the effects of exercise, diet, smoking and drugs, comparatively little attention has been paid to sexual functioning in male cardiac patients, and virtually none in females (Hellerstein & Friedman, 1970; Kentsmith & Eaton, 1979; Kolodny et al., 1979; Mackey, 1978; Masur, 1978). Krop et al., (1979) surveyed 100 married males who were being treated for their first acute myocardial infarction. The results of this study, together with a follow up study (Mehta & Krop, 1979) indicated that for many subjects the coronary had a negative effect on the marital relationship. For example, a significant reduction in the frequency of intercourse following the coronary was reported. The most common reason given for the reduction in activity was inability to maintain an erection. Chest pain, fear, and general poor physical health were also cited. Although medications taken by cardiac patients may

sometimes adversely affect sexual ability, no correlation was found between impotency and medications in these subjects. From reading Krop et al.'s study it may be assumed that the predominant cause of the impotency was psychogenic in origin, and could possibly have been alleviated by competent sexual counselling at the time of hospitalization.

Counselling. General principles of sexual counselling for cardiac patients include the taking of a sexual history, early introduction of the topic as a viable concern (giving permission), provision of specific information regarding the physiological effects of sexual activity, and the inclusion of the sexual partner in counselling (Clancy & Quinlan, 1978; Cole, C., 1979; Mackey, 1978; Masur, 1979; Mims & Swenson, 1980; Puksta, 1977; Wagner & Sivarajan, 1979). There is general consensus that sexual activity with a familiar partner in a familiar place requires approximately the same amount of energy as to briskly climb two flights of stairs. The stair climbing can be used as a test measure for heart and respiration rates when advising a heart patient concerning the resumption of sexual activities. Since anxiety and emotional excitement are known to increase the strain on the heart, patients are advised to avoid anxiety provoking sexual encounters. Although no conclusive evidence has been found regarding the heart and respiration rates associated with various positions used for sexual intercourse, patients should be advised to use the least strenuous position with which they are familiar and comfortable (Clancy & Quinlan, 1978; Kentsmith & Eaton, 1979; Mackey, 1978; Masur, 1979; Puksta, 1977). It is suggested that the patient be advised to use masturbatory activities to train himself to monitor his heart and respiration rates during sexual arousal. Such

advice should be given with due regard for the patient's sexual values and practices (Wagner & Sivarajan, 1979).

In a sexual counselling program described by C. Cole (1979), cardiac patients were offered sexual counselling by a multidisciplinary team consisting of two psychologists, a social worker, and a minister. Emphasis was placed on giving accurate information regarding sexual response, and appropriate energy saving behaviours. Patients were encouraged to participate in noncoital, pleasurable activities for the first month following their coronary, and the resume sexual intercourse only after an exercise test could be done without symtomotology. C. Cole (1979) stated that communication between partners was critical and an important part of counselling was assisting families to cope with lifestyle changes and the associated stresses on their relationships.

Diabetes Mellitus

Diabetes mellitus is a disorder of carbohydrate metabolism which is characterized by high blood sugar and sugar in the urine (Thomas, 1981), and affects approximately 5% of the population (Schiavi, 1979). It is a chronic disease that is relatively invisible in the early stages. Unlike visibly disabled persons, who may suffer from generalizations made by the public about their abnormal functioning, diabetic persons may appear normal but have hidden concerns. They are assumed to be normal in all respects. Hidden disabilities and sexual dysfunctions may present a problem in that the individual must decide when, and if, to tell others of his concern. For example, diabetic men may begin to avoid sexual

intimacy in an effort to hide a growing impotency problem, rather than tell their current or potential partner. The primary goal of sexual health care is to assist patients to adjust to their changing lifestyles.

Sexual response. The incidence of secondary impotence in male diabetics has been cited as being from 27 to 60% (Kolodny, Kahn, Goldstein, & Barnett, 1978; Kolodny et al., 1979; Schiavi, 1979). Early research suggested that hormonal disturbances were the cause of this impotency, but it is now thought to be a result of diabetic neuropathy (Kolodny et al., 1979; Mims & Swenson, 1980). It occurs usually in older men with a slow onset several years following diagnosis. In addition to impotency, males with diabetes report concerns regarding retrograde and premature ejaculation.

Medical problems related to pregnancy and childbirth in diabetic women have been recognized for some time, however, little research was done on sexual functioning of female diabetics until the 1970's, and research in this area remains limited and controversial (Kolodny et al., 1979). Kolodny (1971) found in a study of diabetic women that 35% had orgasmic dysfunction. This was not supported by a later study by Ellenberg (1977) who reported that 82% of the women in that study had no orgasmic dysfunction. It is known that there is a high incidence of vaginal infection in diabetic women which, by reason of pain as well as personal hygiene, may lead to sexual dysfunction (Kolodny et al., 1979).

Although diet management and medical care can help the person with diabetes to stabilize the disease process, sexual dysfunction associated with neurological changes cannot be reversed (Kolodny et al., 1979; Schiavi, 1979). The important issue for the male is differential

diagnosis to determine whether the impotence is actually a result of neuropathy, a result of depression, or some other psychopathology (Melman, 1978), the latter possibly being reversed by counselling. In addition, the impotence may be associated with certain drugs administered for the diabetes. In that case a review of the medical treatment would be indicated (Kolodny et al., 1979).

Counselling. Sexual counselling for diabetic persons should include their partner whenever possible. Treatment aims are to assist the individual or couple to appreciate noncoital pleasuring techniques, and to develop increased communication skills with which to express their concerns and feelings. Information about the disease process and the effects on sexual functioning are important in helping the patient and partner understand the changes as they occur. Since male sexual performance is closely associated with self esteem, and for some signifies their maleness, positive reinforcement of personal worth is a critical factor in counselling male patients. As with other illnesses patients may be inhibited in expressing their sexual concerns. It is the professional's responsibility to introduce the topic early to give the patients permission to talk about their sexuality (Kolodny et al., 1979; Mims & Swenson, 1980; Schiavi, 1979). Other important factors in counselling include genetic counselling to explore medical implications regarding the health of future offspring and of the diabetic woman during pregnancy (Woods, 1975), and the possible use of penile prostheses. Such prostheses have been used successfully, to limited degree, with diabetic men (Schiavi, 1979).

Mastectomy

Mastectomy is the surgical removal of the breast, usually following a diagnosis of cancer. Depending on the amount of tissue removed, it is termed a radical, modified radical, or simple mastectomy. The result is usually a flat chest wall, with no nipple, and a horizontal scar (Westgate, 1980). Reconstructive surgery is available if the woman wishes. Such surgery should be accompanied by thorough counselling in relation to the expectations and attitudes of the patient and her partner or family. Breast cancer accounts for one quarter of the women with cancer and the largest proportion of cancer deaths in women (Kolodny et al., 1979). Cancer is still a life threatening disease, but advances in surgical and medical treatment have enabled many to live extended periods of time following diagnosis. Now it has become necessary to address the issue of quality of life in long term planning with persons with cancer, where once it was considered to be a short term problem (Mantell & Green, 1978).

Sexual implications. In North America the female breast is highly correlated with the ideal female image (Green & Mantell, 1978; Kentsmith & Eaton, 1979; Woods, 1975). Women who have undergone a mastectomy express concerns related to loss of femininity, fear of rejection by current or future partners, and fear of loss of sexual capacity and attractiveness (Frank, Dornbush, Webster, & Kolodny, 1978; Kolodny et al., 1979; Westgate, 1980). Emotional reactions vary greatly, but depression and anger are frequent, and occasionally women become

provocative or promiscuous in an attempt to reestablish their belief in their sexuality (Comfort, 1978; Green & Mantell, 1978).

In a retrospective study of sixty women who had had a mastectomy an average of eight years prior to testing, Frank et al., (1978) found a marked decrease in intercourse, breast stimulation, and nudity in the presence of their partner for many of the subjects since the surgery. Prior to their mastectomy only three of the sixty women had discussed sexual concerns with anyone. This number increased to eight during hospitalization and to ten after discharge. Some talked to their doctor and some to their husband. When questioned by Frank et al., over 40% stated that they would have liked to discuss their sexual concerns with someone at the time of their surgery.

Counselling. Adequate preoperative counselling may be inhibited by the rapid speed with which decisions are made following a diagnosis of cancer. Nevertheless, early counselling is advocated, particularly in regard to providing an opportunity for both the patient and her partner to express concerns and fears (Comfort, 1978; Fortune, 1979; Mims & Swenson, 1980; Wabreck, Wabreck, & Burchell, 1979; Woods, 1975). The patient and her partner should be encouraged to look at and touch the scar at times such as bathing and changing of dressings. The use of mirrors, both in the hospital and at home, may help sensitize the patient and her partner to her new appearance (Kolodny et al., 1979; Wabreck et al., 1979). Ideally the whole health care team should be involved in providing support for the patient and her family. In addition, peer counselling by women, or couples, who have had similar experiences can be a useful adjunct to the professional care. Such a service is provided by

Reach to Recovery, a volunteer group in the United States (Frank et al., 1978). It was of interest to note that the area of sexuality was explicitly excluded from the volunteers' role and that for such topics the volunteers were instructed to refer the patient to a minister or doctor. This conception and presentation of sexuality as a separate and less acceptable health concern is unfortunately not uncommon.

Implications for Sex Education for Professionals

The diagnosis of a patient may bring about some specific sexual concerns, dysfunctions, and behaviour changes. However, the critical issue is the way in which the patients perceive themselves as sexual persons, and how those perceptions affect their self esteem and their relationships with others. Sometimes their anxiety can be relieved by telling them that their sexual concerns are not unusual (permission); sometimes they require specific information so that they can proceed in a manner appropriate and comfortable for them (limited information or specific suggestions); and sometimes they need extensive support services to help them reestablish their fragmented sexual self esteem (intensive therapy). All of these intervention levels and strategies can be provided if health professionals are educated in sexual matters and have been provided with an opportunity to evaluate their own sexual attitudes and values (Cole & Cole, 1976).

Several implications for sex education of health professionals can be drawn from this brief overview of four specific medical conditions. Specific knowledge of the possible effects of the injury or disease

process on the sexual response cycle and other bodily functions is paramount. Secondly, and possibly the greatest task for the professional is the ability to recognize the psychosocial implications and to develop skills to provide a positive, reinforcing environment for the disabled individuals. A third aspect concerns the importance of including the partner or family in sexual health care, since they too need assistance in reassessing their attitudes and feelings, and need to be provided with information (Trieschmann, 1975). How such professional education is being done, and might be done in the future will be discussed in the remainder of this section.

SEX EDUCATION PROGRAMS FOR HEALTH PROFESSIONALS

In the early 1960's sex education for health professionals was informal and sporadic. Few formal educational programs offered integrated curriculum materials on human sexuality or sexual counselling (Renshaw, 1975; Riffenburgh & Strassman, 1967; Walker, 1971; Woods, 1969). In the past fifteen years there has been a vast increase in the number of sexuality courses available to health personnel at the undergraduate, graduate and postgraduate levels (Barnard & Clancy, 1978; Lief, 1978; Maddock, 1976; Mims, 1975; Walker, 1971; WHO, 1975). This recent increase in available courses has led some professionals to press for the implementation of standards of practice, curriculum guidelines and minimum standards of education for sexual health care.

Standards

Much concern has been expressed regarding the lack of adequate professional standards for those involved in sex education and counselling in health care. The issue of standards is made complex by the fact that the personnel involved in health care have varied professional backgrounds. Physicians, clergy, teachers, physical and occupational therapists, psychologists, social workers, and others may all be called upon to provide sexual information or advice to patients or clients in the health care system (Lief, 1978; Maddock, 1976; Miller, Szasz, & Anderson, 1981; WHO, 1975). Clearer definition is needed of the roles of the various disciplines in sexual health care, and of the levels of competence expected for these same personnel. Educational standards, clinical competencies, and professional jurisdiction are issues that need greater exploration and collaboration by educators, clinical directors and professional organizations.

One organization that has attempted to set standards in North America is the American Association of Sex Educators, Counsellors and Therapists (AASECT), which was founded in 1967. This nonprofit organization has been certifying sex educators and therapists since 1975, and counsellors since 1977. Applications for the three categories of certification are reviewed by a committee and require varying levels of education and clinical experience (AASECT, 1980). Organizations like AASECT still have little real professional control, with only one state, California, having any legislation regarding standards of education and

practice for sex counsellors, and no such legislation or licensure existing in Canada (Vasconcellos & Wallace, 1978).

Levels of Training

Basic professional training. In 1960 only three medical schools in the United States offered any formal training in human sexuality. By 1974, 106 schools offered some type of coursework in sexuality, however the quantity and quality was extremely varied, and remains so today (Cade & Jessee, 1971; Lief, 1978; Maddock, 1976). Shortage of instructors, varying opinions of curriculum planners regarding the necessity of compulsory versus optional courses, and a lack of clinical training facilities, have all hampered the development of widely accepted educational standards, with each program seemingly setting its own priorities and standards (Lief, 1978). Information regarding sex education in professional programs other than medicine is less readily available. There are only a few articles in the journals representing the various disciplines (e.g. nursing and physical therapy), (Megenity, 1975; Mims, 1975; Payne, 1976; Renshaw, 1975; Sidman, 1977; Stewart, 1978; Woods & Mandetta, 1975; Zalar, 1975).

Continuing education. In contrast to basic education, continuing education in sexuality and health care has developed quite extensively on an interdisciplinary basis, with seminars and workshops being offered in many centres. One of the most frequently used formats is that of the SAR seminar (Chilgren & Briggs, 1973; Halstad et al., 1978). Most of these courses last only a few days which is not adequate time to provide

integrated skills. In addition to such seminars, Lief (1978) proposed that a method of supervising clinical practice is needed to facilitate upgrading for those practicing in the field.

Issues in Program Design

Program content. The debate as to whether sexuality should be included in the basic training of health professionals is no longer an issue. Now the issue is which format and content can best prepare professionals to provide adequate sex education and counselling to their clients who have a complex variety of health related sexual concerns (Lief, 1979). There seems to be little doubt that didactic information alone is not sufficient in professional education regarding sexual matters. The program must include an affective component that allows for evaluation and discussion of sexual attitudes and values, as well as comprehensive information about sexual function and dysfunction (Carrera & Calderone, 1976; Greengross, 1980; Lief, 1978; Maddock, 1976). The SAR seminar used in this study is an example of such a program.

Schedule. The concentrated, intensive two or three day SAR process has been used by many, and, for some, has provided significant results in increasing sexual knowledge and liberalizing sexual attitudes of the subjects (Carmichael, Tanner, & Carmichael, 1977; Garrard, Vaitkus, Held, & Chilgren, 1976; Hadorn & Grant, 1976; Halstad et al., 1978; Hawton, 1979; Stanley, 1978; Wollert, 1978). Others have had success with schedules that continue on a weekly or twice weekly basis for a number of weeks (Marcotte, Geyer, & Kilpatrick, 1976; Woods & Mandetta, 1975). A

few programs, such as the medical school program at University of Minnesota, include both components, spaced out lecture presentations, and a two or three day participatory attitudinal seminar (Kent, 1975). Another issue associated with scheduling is whether the sexuality curriculum should be presented as a separate course or integrated into several other courses. It is often scheduled within courses such as anatomy, physiology, and various specialty courses such as cardiology and rheumatology. Again, no conclusive evidence is available to support one concept as being more effective than another (WHO, 1975).

Clinical internships. Lief (1978) pointed out that in many medical schools the lack of clinical specialty areas in sexual health, such as a sex clinic, inhibited the practical component of sexual education for medical students. Few supervised internships could be provided to augment the classroom experiences. It is suggested that even fewer opportunities would be available for other professionals such as social workers or nurses. Introduction of a new role, that of sex counsellor, into the professional competencies of any discipline is inhibited by a lack of senior staff with adequate skills to act as supervisors and role models for the students (Szasz, 1978). Personal experience would suggest that close collaboration between the educational facility and the clinical units would be essential. Continuing education must be provided to enable practising professionals to acquire information and skills for the new role.

Required vs. elective. Several factors influence the method of implementation of a course in human sexuality into a professional program. They include: the views of the administrators of the program

with regard to the credibility of sexual education and counselling as a role for their graduates; the availability of ongoing qualified teaching staff; time available in the core curriculum, and interest of the students (Alouf, 1978; Cade & Jessee, 1971; Dickerson & Myerscough, 1979; Marcotte & Kilpatrick, 1974; Megenity, 1975). Several authors reported that elective "trial" programs were initiated and demonstrated positive outcomes. These programs had later become required core curricula (Dickerson & Myerscough, 1979; Rosenburg & Chilgren, 1973). In other settings sexuality courses remained as electives, some individuals suggesting that not all health professionals were interested or suitable candidates to be sex educators or counsellors (Maddock, 1976). However, those who advocated compulsory course work contended that students who attended elective courses probably already had some natural skills and awarenesses, whereas those who really needed to be there were those who did not attend, and who were liable to be negligent in their clinical practice (Maddock, 1976). A compromise suggested by some was that basic coursework in human sexuality should be compulsory, with more senior level courses being offered as electives (Mims & Swenson, 1980).

Methodology. One of the most contentious issue in sex eduction was related to the appropriateness of explicit audio visual materials (Chez, 1971; Gendel, 1973; Vandervoort & McIlvenna, 1979). Whenever explicit visual materials were used either as a major component of a course, as they are in the SAR format, or to augment lecture material in an ongoing schedule, it was considered important that time was made available for discussion of the audience's feelings and reactions to such materials (Rosenburg & Chilgren, 1973; Stayton, 1978; Vandervoort & McIlvenna,

1979). The purpose of such visual materials was to convey specific information, to confront the viewer, and to raise anxieties to a conscious level where they might be discussed with others. Sequencing of materials, beginning with the least controversial topics, allowed for the building of comfort and trust in the groups (Marcotte, 1973; Vandervoort & McIlvenna, 1979: WHO, 1975).

A second methodological issue concerns the format of presentations. That is, should the format include lectures, unstructured group discussion, or structured group discussion (Flatter, 1978; Wollert, 1978). Most programs included both lecture and groups, although some were reported to have begun as lectures only, and to have developed combined techniques when the focus of the content changed from information giving only, to an integrated learning experience including information and attitude reassessment (Dickerson & Myerscough, 1979). The methodology must obviously be determined by the specific educational goals of the program. The SIECUS seminar in this study used both lecture and unstructured group discussion.

SUMMARY

Health professional sexual education cannot be designed in isolation. It is necessary to determine the prior experiences, values and knowledge of the students (professionals) as they affect their entry point into the educational program. Most individuals who enter basic professional training do so at a time when they are just entering adulthood. For approximately eighteen to twenty years they have been

involved in a socialization process in which, through interaction with others, especially significant others, they have developed their concepts of self. The roles that they perceive as appropriate for themselves and others are greatly influenced by their previous learning of the social values attributed to certain positions. The influence of family and peers will affect the sexual knowledge and attitudes of these potential professionals. Educators should be aware of, and show respect for, the individual backgrounds of the students.

In addition to these entry behaviours and values, the design of the educational program must also take into account the desired behavioural goals to be attained upon completion of the course(s). That is, what are the skills, knowledge, and attitudes appropriate to the position of a future health professional and their role in sexual counselling? The same considerations of entry and terminal behaviours are necessary for both continuing education programs and for basic professional programs in sexuality, with the added feature of a greater variance in the ages and experiences for the continuing education participants. The overall goal of any sexuality program is to provide effective sexual counselling services to clients. More specific behavioural goals are determined by the level and extent of the particular program. For example, one program may concentrate on counselling and interviewing skills, and another on sexual attitudes and values.

Currently some sexuality curricula are integrated into existing coursework, in classes such as anatomy, physiology and specialty courses concerning particular health concerns, and some are presented in separate courses on sexuality or counselling skills. Future research is needed to

determine the importance of timing and placement of sexuality materials in basic professional education, and the comparative values of undergraduate and postgraduate sexual health education. The SAR seminar in this study is one of many possible educational formats. It serves as an introduction to historical, ethical and medical issues related to sexuality and can be used as an effective component in a sexuality curriculum for health professionals.

CHAPTER III

METHODOLOGY

Subjects

The subjects for this study were health professionals and physically disabled persons selected nonrandomly from voluntary subjects who were registered for a Sexual Attitude Reassessment (SAR) seminar (treatment group) or who were members of selected professional organizations and community agencies in Edmonton (nontreatment group). The subjects were selected according to the following criteria: a) the health professionals were eligible only if they were currently practising their profession; b) no subject had attended a SAR or comparable seminar previously; c) the treatment subjects were in attendance at a three day SAR seminar (February, 1977), and d) the nontreatment subjects were eligible only if they stated that they would attend a SAR at a future date, given available funds and time. Both the treatment and the nontreatment groups included nurses, physical and occupational therapists, speech pathologists, and social workers; however, six general practitioner physicians participated in the treatment group only.

Demographic data obtained from SKAT sections three and four showed certain similarities between the treatment and nontreatment subjects. That is, both groups were predominantly Protestant, white; heterosexual

between the ages of 20 and 35 years, and married over five years. Over 60% of each group was female. A majority of the subjects thought themselves to have average sexual experience, knowledge and adjustment as compared to their peers. Most considered their parental home to have been more sexually repressive than permissive during their childhood. (Details of demographic data can be found in Appendix C.)

Nontreatment group. Letters which requested potential participation in a proposed survey of sex knowledge and attitudes were sent to 250 persons who were either health professionals or physically disabled persons living in Edmonton. Those interested were asked to complete the enclosed form which listed their name, address, phone number, profession and/or disability. Participants were assured that anonymity would be protected. (A copy of the letter and form can be found in Appendix D.) The letters were distributed through twelve professional associations and community agencies selected by the researcher. The 250 letters were distributed in relatively equal numbers to the different agencies. (See Appendix D for a list of agencies contacted.) Selection of the associations and agencies was based on the need to obtain representations from the health disciplines most often associated with treatment of long term disabling conditions and from the diagnostic groups most often treated in long term and medical rehabilitation services. The six professions included were Occupational Therapy, Physical Therapy, Speech Pathology, Nursing, Social Work, and Medicine. The six diagnostic groups were spinal cord injury, muiltiple sclerosis, arthritis, parkinsonism, diabetes and heart disease.

One hundred and thirty-three responses were received, a response rate of 55% which, according to Oppenheim (1976), is an average rate of response. Forty-four of these persons did not wish to participate. Of those who agreed, 13 could not be contacted and 41 were disqualified as they did not meet all the criteria set by the researcher. Thirty-five were acceptable and were tested, however, only 30 of those completed both the pre and posttests (22 professionals and 8 disabled persons).

Treatment group. A three day SAR seminar sponsored by the Alberta Institute of Human Sexuality and led by the author and her partner was offered through the Faculty of Extension, University of Alberta on March 3-5, 1977. A few days prior to the seminar each registrant received a letter stating that a survey of sexual knowledge and attitudes was proposed and that participation was requested from all registrants who were either health professionals and/or disabled individuals. The letter further stated that participation required the completion of a SKAT questionnaire, which would be distributed immediately before, and at the close of the seminar. Out of the 76 persons registered for the seminar 54 persons completed at least one of the tests; both pre and posttests were completed by 29 professionals and 5 disabled persons. (See Appendix D for a copy of the letter.)

Materials

Lief and Reed's (1972) Sex Knowledge and Attitude Test (SKAT II) was used in this study. The first edition, SKAT I, was developed in 1967 and tested extensively by Lief and Reed on several thousand medical and

nursing students. SKAT II has been administered to over 35,000 students and professionals (Miller & Lief, 1979). Several of these studies were in relation to SAR seminars, or seminars of similar format. With the exception of Golden and Liston (1972) each of these studies obtained significant results on at least some of the SKAT scales (Garrard et al., 1976; Golden & Liston, 1972; Hadorn & Grant, 1976; Miller & Lief, 1979; Mims et al., 1974). The coefficient alpha reliability estimates for the four attitude scales Heterosexual Relations, Sexual Myths, Autoeroticism and Abortion are .86, .68, .77 and .84 respectively. All items in SKAT are straightforward and undisguised, and are regarded as having face validity (Miller & Lief, 1979).

SKAT II is divided into four parts: I. Attitudes, II. Knowledge, III. Biographical Background, and IV. Personal Experience. In Part I four attitude scores are obtained from 35 Likert type items. They are: Heterosexual Relations (HR), Sexual Myths (SM), Autoeroticism (M), and Abortion (A). In Part I the respondent can make one of five responses as follows: A - strongly agree; B - agree; C - uncertain; D - disagree; E - strongly disagree. Responses A to E are scored from 1 to 5, with 5 reflecting a liberal response and 1 representing a conservative response.

HR attitude score deals with the respondent's attitudes toward pre and extra marital heterosexual relationships; SM attitude score indicates the level of acceptance or rejection of commonly held sexual myths or misconceptions; M attitude score reflects general attitudes toward acceptability of masturbatory activities, and the A attitude score indicates the respondent's attitudes regarding the legal, social, and medical aspects of abortion. High scores (scores normed over 60) in

these four attitude scales indicate rejection of commonly held sexual myths and liberal attitudes toward masturbation, premarital and extramarital sex, and abortion. Low scores (scores normed below 40) indicate acceptance of sexual myths and rejection of masturbation, nonmarital sex, and abortion as viable sexual behaviours.

Part II consists of 71 true-false items from which Miller and Lief selected 50 items, based on accepted theory, to be used for scoring. The remaining 21 items, which are of a more general nature, are not included in the scoring. The raw score mean of the 50 items is 38.81, and the reliability estimate is .87 on a sample of 851 medical students (Miller & Lief, 1979). Parts III and IV concern personal biographical data and experience. There are twelve items in Part III and 27 in Part IV. Each question in Parts III and IV has from two to ten alternative responses from which respondents are to select their answer. Items selected from Parts III and IV were used to describe the present sample. (See Appendix E for the SKAT questionnaire).

Procedure

Both groups were given the ~~SKAT-II~~ for the pre and posttest measure of sexual attitudes and knowledge.

Nontreatment group. Each of the 35 individuals who was acceptable for the nontreatment group was contacted by telephone and an appointment made for the researcher to administer the pretest in the last week of February at the subject's residence. These subjects were told only that they were participating in a survey and that a second test would be

necessary in one to two weeks. The tests were delivered personally in order to reduce the possibility of collaboration with someone else, to ensure that the test would be returned, and to clarify some of the terminology in the test if needed. The tests were given in a paper-pencil format. It was thought that the topic of sexuality might be threatening and that a verbal response would be more inhibiting than a written response. All responses for the SKAT were completed on a separate computer sheet. To ensure confidentiality, respondents were asked to identify themselves by a code number only, and to use the same number on the second test. The same procedure of telephoning and personal delivery was used for the posttests for this group between one and two weeks after the pretesting.

Treatment group. Registrants were offered a SKAT form at the time of registration for the SAR and those who accepted were directed to a separate room. A research assistant administered the SKAT test in the same manner as for the nontreatment group. This helped to maximize the similarity between the procedure for the nontreatment group and the treatment group. That is, the opportunity for collaboration was reduced, and terminology could be defined as necessary. The only difference in procedure was that the nontreatment group subjects completed the SKAT in the presence of the researcher only; whereas, the treatment subjects were seated together in a classroom after receiving individual instructions from the research assistant. Completed response sheets were again identified by code number only. At the conclusion of the seminar the tests were made available again and subjects were directed to the research assistant in a separate room.

In retrospect it is realized that the method of coding by numbers which were subject selected may not be reliable as subjects do not always remember their numbers. Although accurate matching of the subjects used in the study was ensured by careful scrutiny of the response sheets, about ten tests were rejected due to a lack of positive identification of matching code numbers. A more reliable method of coding is recommended for future studies.

Sexual Attitude Reassessment Seminar

The original format of the Sexual Attitude Reassessment (SAR) seminar process was developed by the National Sex Forum in San Francisco and has been modified and expanded by a number of centres in the United States (Chilgren & Briggs, 1973; Halstad et al., 1978; Lief, 1978). The Alberta program which was used in the present study is based upon the SAR seminars developed and presented by the University of Minnesota (Chilgren & Briggs, 1973; Held et al., 1975).

The basic purpose of the SAR seminar is to communicate information and to assist participants in developing useful and accepting attitudes toward their own sexuality and the sexuality of others (Vandervoort & McIlvenna, 1979). It consists of a highly orchestrated sequence of multimedia presentations on various aspects of human sexuality, interspersed with carefully organized small group discussions. (See Appendix A for SAR objectives.) The physical facilities of the seminar provided as informal an atmosphere as possible. A carpeted room with floor cushions was used for the large group sessions and participants

took cushions to adjacent small rooms for their discussion sessions. The seminar staff consisted of myself and my partner as large group leaders, an audio visual technician, and two small group facilitators for each group of ten participants. This staff further fit the criteria set by the University of Minnesota and adopted by the Alberta Institute of Human Sexuality in that each discussion group had a male and a female facilitator, one of whom was physically disabled.

The 1977 Edmonton SAR seminar was presented over a period of three days with a total of 31 hours involvement by the participants; 12 hours the first day, 10 hours the second, and 9 hours the third day. During the first two days of the seminar many important aspects of sexuality were presented through the use of slides, films, tapes, talks, and discussions. Participants were invited to take off their "professional hats" and to use the opportunity for personal growth and learning. The third day was more formal and was devoted to professional issues related to sexual counselling in health care.

The aim of the first day was to assist the participants in becoming more comfortable with various sexual topics through a process of desensitization (Lief, 1978; Vincent, 1968). Topics were selected to progress from least to most anxiety provoking, to give constant and explicit exposure to sexual materials, and to provide opportunity for open supportive discussion. The purpose of this approach was to encourage participants to recognize, discuss and subsequently reduce some of their anxieties associated with various sexual topics. The topics included historical and cultural aspects of sexuality, nudity, fantasy, masturbation, and commercial sex action films. On the second day the

process of resensitization began (Lief, 1978; Vincent, 1968). Having been bombarded on the first day with explicit materials, the participants were now able to focus their attention on the content of the films, and to increase their awareness of the loving and caring relationships depicted, rather than on their own anxieties. The topics presented were relationships of several types; heterosexual, homosexual, young and aged, able bodied and disabled. The last session of the second day centred around male and female roles in society and especially around men and women interacting with one another in intimate relationships. The third process, integration, was achieved by a more didactic approach on the third day (Lief, 1978; Vincent, 1968). A panel of disabled individuals presented their viewpoints of sexuality and a physician presented information on the anatomy and physiology of male and female sexual response. Following this, counselling techniques were demonstrated and discussed. The participants then went to their small discussion groups where they had the opportunity and encouragement to role play sexual counselling situations and to discuss these openly with their groups. In the final session the objectives of the seminar were reviewed and participants were encouraged to use their new knowledge and awarenesses in their future personal and professional lives. SKAT questionnaires were completed before the seminar closed.

Design

The design was quasi experimental since it was impossible to randomly select and randomly assign subjects to groups, nor was it

possible to employ matching groups. Such a design is considered satisfactory provjding the limitations to the internal and external validity of the design are recognised. Quasi-experimental research facilitates the use of such groups as existing classes of students, as in this study (Isaac & Michael, 1971). To answer the research questions, a 2 x 2 x 2 factorial design was used. The data were analysed using a three way analysis of variance. There was one fixed factor: profession (health professionals vs. physically disabled persons), and two repeated measures factors: group (treatment vs. nontreatment) and time (pretest vs. posttest). In addition one way analyses of variance were done to establish any pretest differences between the treatment and non treatment groups, and between the health professionals and the physically disabled subjects. In all instances the .05 level of significance was adopted (Kirk, 1968; Runyon & Haber, 1976).

CHAPTER IV

STATEMENT OF RESULTS

In their discussion of SKAT, Miller and Lief (1979) stated:

> The standardized scores are T-scored with a mean of 50 and a standard deviation of 10 . . . changes [in scores] . . . can be assessed by examining either the raw scores or the standardized scores. (p. 283).

In this study the dependent variables were the mean raw scores for each of the four SKAT attitude scales, HR, SM, A and M, and for the sexual knowledge scale. (See Appendix G for a comparison of SKAT norms and means obtained in this study.)

Treatment and Nontreatment Groups

One way ANOVAs were used to determine any significant pretest differences between the treatment and nontreatment groups. Significant differences were found on two of the SKAT attitude scales. The treatment group obtained significantly higher pretest scores on the HR scale ($F = 5.63$, $P < .02$) and on the M scale ($F = 3.94$, $P < .05$) (see Table 1). The treatment group had a mean score of 27.76 and 26.71 on the HR and M scales respectively, and the nontreatment group had mean scores of 24.33 (HR) and 25.03 (M). (See Table B, Appendix F for Means Table). These results reflect that on the pretest the treatment group had somewhat more liberal attitudes toward pre and extramarital

Table 1

ANOVA Summary Table
One Way ANOVA: Treatment and nontreatment group, pretests

S	SS	DF	MS	F	P
	S K A T HR Scale				
Between groups	187.6835	1	187.6385	5.634	.0207*
Within groups	2064.7788	62	33.3029		
	S K A T SM Scale				
Between groups	1.6754	1	1.6754	0.090	.7647
Within groups	1149.7451	62	18.5443		
	S K A T A Scale				
Between groups	1.4003	1	1.4003	0.053	.8181
Within groups	1625.5793	62	26.2190		
	S K A T M Scale				
Between groups	44.5680	1	44.5680	3.936	.0517*
Within groups	702.0239	62	11.3230		
	S K A T SK Scale				
Between groups	67.1494	1	67.1494	2.714	.1045
Within groups	1534.0593	62	24.7429		

note: *P .05

heterosexual behaviour, and toward masturbatory activities than did the nontreatment group. One would anticipate that if significance was found on one of these two scales (HR and M), that it would be found on the other, since Miller and Lief (1979) found that the HR and M scales showed the highest of all correlations ($r = .59$) among the SKAT scales. The remaining two attitude scales and the SK scale did not show significant pretest differences (see Table 1). Posttest scores were also significantly different for the HR and M scales, but no statistical significance was obtained between pre and posttest. That is, the treatment group showed no greater change in scores than did the nontreatment group. (See Graphs A & D, Figure 1.)

Results Related to Hypotheses

Effects of the SAR seminar. Three way ANOVAs indicate a significant interaction between the prepost test scores and the groups on the sexual myths scale ($F = 9.50$, $P < .003$) (see Table 2). Graph B in Figure 1 shows clearly an increase in prepost test scores for the treatment group, which shows that they were less accepting of sexual myths following the SAR seminar. The nontreatment group, on the other hand, showed some decrease in scores suggesting more acceptance of sexual myths on the posttest as compared to the pretest. The other attitude scales did not reach significance. (See Graphs A, C, & D, Figure 1). This offers only partial support for hypothesis one which predicted that the prepost test differences on the four attitude scales (HR, SM, A & M) obtained by the treatment group would be significantly greater than those

Table 2

ANOVA Summary Table

Three way ANOVA

A. group (treatment/nontreatment)
B. profession (health professional/physically disabled)
C. time (pre and post)

SKAT SM scale

S	SS	DF	MS	F	P
A	38.779	1	38.779	1.250	0.268
B	184.481	1	184.481	5.944	0.018*
AB	8.335	1	8.335	0.269	0.606
S-within	1862.125	60	31.035		
C	6.753	1	6.573	2.341	0.131
AC	27.396	1	27.396	9.498	0.003*
BC	1.119	1	1.119	0.388	0.536
ABC	1.196	1	1.196	0.415	0.522
CS-within	173.053	60	2.884		

* significant at .05 level

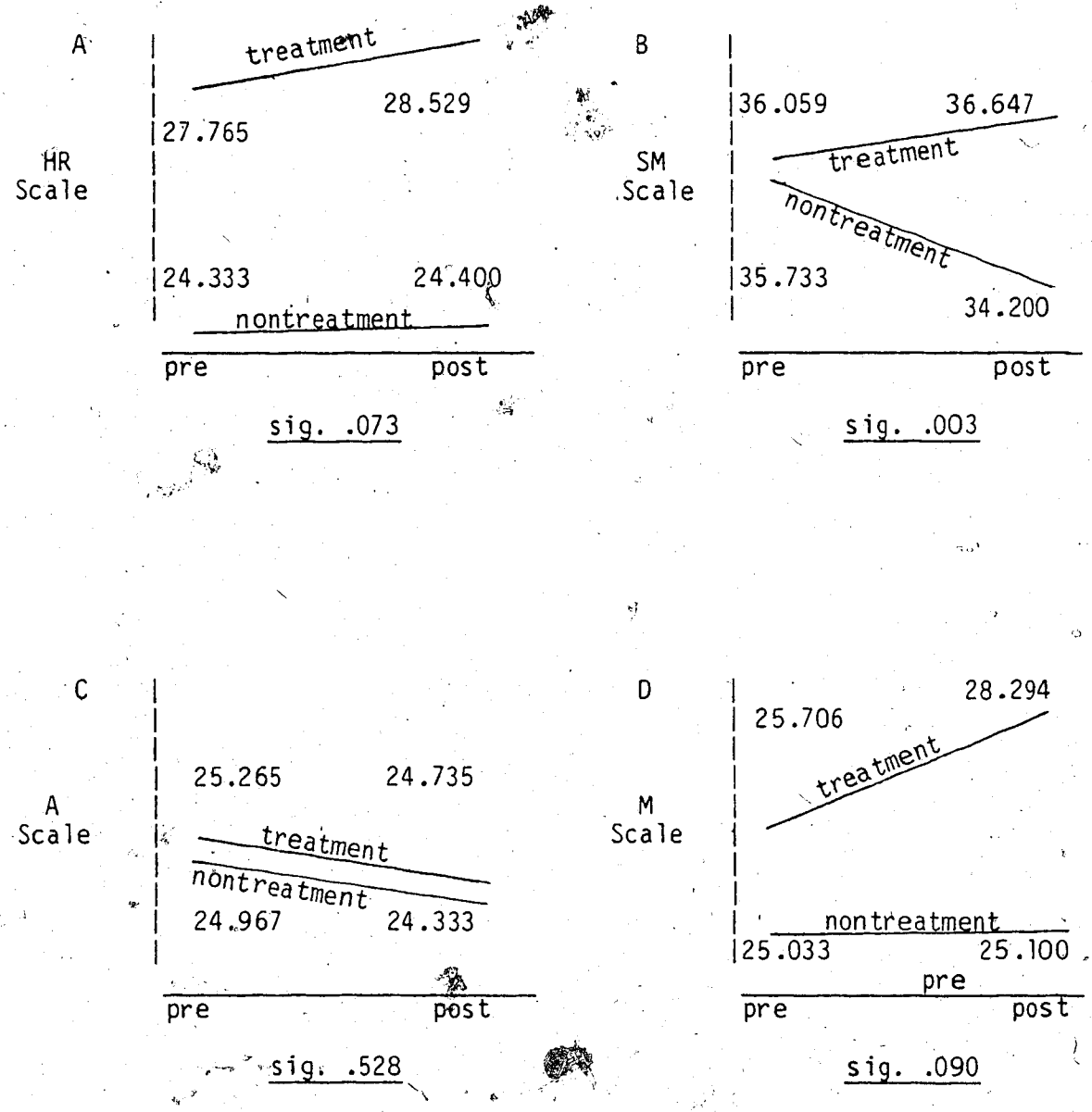

Figure 1

Results of Three Way ANOVAs
(groups x profession x time)

obtained by the nontreatment group. No significant prepost test difference was found between groups for the sexual knowledge scale, therefore, hypothesis two, which stated that there would be a significant prepost test difference between groups on the scores for the SK scale, is not supported. (See Appendix F, Tables C - I for ANOVA Summaries and Means Tables).

Health professionals vs. physically disabled subjects. It was anticipated that pretest scores would indicate that as a result of their previous professional education, the health professionals would be better informed and exhibit more liberal attitudes than the disabled subjects. From personal interaction with the disabled subjects at the seminar, I knew that they had had little postsecondary education. Significant results obtained by one way ANOVA for the sexual knowledge scale and the sexual myths scale indicate that the professionals were indeed more informed and as a result rejected more myths. However their general sexual attitudes (HR and M scales) and attitudes towards abortion were not significantly more liberal than those of the disabled subjects (see Table 3).

The significant difference on only the SM scale, for which the health professionals and disabled subjects obtained means of 36.49 and 33.62 respectively, lends only partial support to hypothesis three which predicted that the four pretest attitude scores (HR, SM, A & M) obtained by the health professionals would be significantly higher than those obtained by the physically disabled subjects. (See Appendix F, Table J for Means Table).

Table 3

ANOVA Summary Table
One Way ANOVA: Professional and disabled; pretests

S	SS	DF	MS	F	P
	S K A T HR Scale				
Between groups	18.9946	1	18.9946	0.527	.4705
Within groups	2233.4268	62	36.0230		
	S K A T SM Scale				
Between groups	85.5959	1	85.5959	4.979	.0293*
Within groups	1065.8181	62	17.1906		
	S K A T A Scale				
Between groups	0.0339	1	0.0339	0.001	0.9715
Within groups	1626.9579	62	26.2413		
	S K A T M Scale				
Between groups	16.2671	1	16.2671	1.381	0.2444
Within groups	730.3324	62	11.7796		
	S K A T SK Scale				
Between groups	155.0419	1	155.0419	6.647	.0123*
Within groups	1446.1770	62	23.3254		

note: *P .05

The fourth hypothesis stated that the sexual knowledge pretest scores of the health professionals would be significantly greater than those of the physically disabled persons. The data obtained support this hypothesis ($F = 6.647$, $P < .0123$) (see Table 3). The SK mean score obtained by the health professionals was 38.18 and that obtained by the disabled subjects was 34.31. (See Appendix F, Table J for Means Table).

As in the discussion regarding the pretest differences between the treatment and nontreatment groups, the pretest differences between the health professionals and the physically disabled persons also follow trends reported by Miller and Lief (1979) who indicated that the second highest correlation between the SKAT scales was that between SM and SK scales ($r = .57$). This suggests that the greater one's sexual knowledge, the greater the chance that one will reject sexual myths. There was no significant interaction between prepost test scores and the professionals vs. the disabled subjects. That is, the seminar did not affect the professionals any more or less than it did the disabled subjects.

CHAPTER V

DISCUSSION AND RECOMMENDATIONS

Pretest Sample Differences

Pretest differences between the treatment and nontreatment groups may have been related to two factors concerning the SAR seminar. The seminar was an "elective" rather than a "required" course for those who attended, and the SAR program was relatively new to the Edmonton area.

Elective vs. required. In discussing factors favouring required courses Maddock (1976) suggested that students who chose an elective in sexuality already had greater awareness and interest in the topic, and it was those who considered the topic less interesting and less important who had greater need to be educated in this area. Hence there is a need for required courses if all students are to receive basic sexual education. The SAR seminar attended by the treatment subjects in this study, although open to anyone to register, was presented essentially as a noncredit continuing education opportunity for health (helping) professionals. All registrants "elected" to attend.

The pretest scores indicate that prior to attending the seminar the treatment subjects had more liberal views than did the nontreatment subjects toward general sexual behaviours (HR and M scales). However,

there were no significant differences between groups on the other three scales, sexual myths, abortion and sexual knowledge. These results show partial support for the viewpoint expressed by Maddock (1976). Although the nontreatment group subjects were also potential participants, in that they stated an interest in attending a future seminar, it is recognized that intentions and actions are not the same and that the treatment and nontreatment groups are possibly from different populations. It is possible that it was the somewhat more liberal general sexual attitudes of the treatment group subjects that provided them with the "permission" to actually register for the SAR seminar (Zuckerman, Tushup, & Finner, 1976). From my personal experience in the SAR program, I would suggest that persons who attend such a seminar already have a certain degree of comfort with the topic of sexuality, and more conservative individuals are too inhibited to openly express an interest in learning more about sexual matters.

The possible effects of these pretest differences between groups on the results of this study are unclear. It may be argued that the treatment group of subjects were more amenable to a change in attitudes and an increase in knowledge because of their motivation to learn more and their willingness to interact with others interested in the topic of sexual health. Conversely, it could be said that individuals who have openly expressed interest in a rather controversial topic usually do so after considerable reevaluation and confirmation of their own values and attitudes toward the topic; therefore, they would be less open to further change (Oppenheim, 1976).

The introduction of a new program. The SAR seminar was first presented in Edmonton in 1975 and for the first few years we "preached to the converted". That is, many of the participants at the first few seminars, including the one in this study, were committed to the idea of sexual health as a viable concern and had been waiting for an opportunity to attend a sexuality program. Fewer than 10% had attended any previous sex education program. Ninety percent of the participants who attended the Edmonton SAR program in the first three years considered sexual counselling to be appropriate to their professional specialty, and over 90% believed a seminar such as a SAR should be a required component of their professional education. Many of the participants commented that one of the most positive aspects of the seminar was in finding others who shared their interests and commitment to the provision of high quality sexual health care. This high level of commitment was also seen in the disabled participants, many of whom were working as peer counsellors or client advocates, and, like the professionals, attended the early SAR seminars to gain personal and professional support for what they already believed to be an important issue (Ryan, 1980). These factors may be related to the pretest differences found in the general sexual attitudes between the treatment and the nontreatment groups. As stated earlier, no specific conclusions can be drawn regarding the effect of these sample biases on the results of the study, but they should be recognized as possible limitations to this study.

Professionals vs. Physically Disabled Persons. Being disabled in no way precludes an individual from being a professional or aquiring an education equivalent to that of a professional; however, through personal

contact with the disabled subjects it was found that most of them did not have postsecondary education, or formal education in any health related field. It was thought that the professionals would have greater opportunity, prior to the SAR seminar, to aquire more liberal attitudes and more sexual knowledge than would the disabled persons, and thus the professonals should have higher mean scores on all SKAT scales. In general the data do not support this hypothesis. The health professionals had significantly more knowledge and rejected more sexual myths, but their attitudes were not significantly different from those of the disabled subjects. This suggests that any sex education the professionals had received prior to the seminar was probably primarily informational, didactic instruction rather than an evaluation of attitudes.

The Importance of Attitude Assessment in Sex Education

Lack of sexual counselling in health care has been due to a lack of comfort on the part of the professionals rather than a lack of knowledge (Greengross, 1980; Mims, 1975; Payne, 1976). The ethical and moral issues involved in sexuality inhibit the professional from open discussion of sexual matters (Clancy & Quinlan, 1978; Lief, 1978). Greater understanding and acceptance of the diversity of individual preferences and practices by professionals can facilitate more therapeutic relationships with patients and clients (Cole, T., 1975; Marcotte, 1973).

Two studies (Payne, 1976; Daniels, 1978) in which the SKAT was used in conjunction with other test instruments support the concept that attitude evaluation is important in sex education programs for health professionals. In a study of nurses' sexual knowledge and attitudes Payne (1976) found that nurses with higher scores on the SKAT attitude and knowledge scales showed greater comfort with professional situations with sexual overtones, as measured by a Professional Sexual Role Inventory (PSRI) developed by Payne. She concluded that sexual knowledge alone was not adequate and nurses "need to have favourable attitudes toward sexuality and to be comfortable in clinical sexual situations" (Payne, 1976, p. 292), in order to provide adequate nursing care. The purpose of Daniels' (1978) study was to examine the relationship between attitudes toward sexuality, attitudes toward disability, and attitudes toward the sexual behaviour of the disabled. Data was obtained using the SKAT, the Attitude Toward Disabled Persons test (Yuker, Block & Young, 1970), and a test designed by Daniels, Attitudes Toward Sexual Behaviour of the Disabled. Results showed attitudes toward sexual behaviours of the disabled to be associated more with general sexual attitudes, particularly those toward heterosexual behaviours and masturbation, than with attitudes toward disability. Sexual knowledge was not found to be related to attitudes toward sexual behaviour of the disabled. These findings lend support to the design of the SAR curriculum which emphasizes the importance of the study of general sexual attitudes and values in the process of health professional sex education.

It is important to clarify here that having more liberal attitudes, or being more accepting of individual differences, is not meant to imply

that professionals, or anyone else, should change their own personal values, but rather that they should be able to be nonjudgemental in their interactions with their clients. For example, an Occupational Therapist has a young paraplegic patient with whom she is working to redesign his house for wheelchair accessibility. The therapist is committed to the idea that living in a sexual relationship is acceptable only in the sanctity of marriage, whereas the patient intends to continue living with the girlfriend with whom he lived before his accident. It is the responsibility of the therapist to facilitate her patient's rehabilitation by helping him and his partner in their resumption of their lives together. This can only be achieved in a positive manner if the therapist can accept the patient and his partner as individuals with a right to practise their own lifestyle. Commitment to the concept of sexual health is not meaningful if professionals are inhibited in their roles as sexual counsellors due to a lack of comprehensive sexual education.

Effects of the SAR Seminar

In light of the previous data supporting the effectiveness of the SAR seminar in raising sexual knowledge levels and liberalizing attitudes, the results of this study are unexpected (Garrard et al., 1972; Mims et al., 1974). Since few other studies used any form of control group or nontreatment group and most results were related to prepost testing of undergraduate students in educational programs, these results may reflect differences in research design and sample selection.

For example, in this study, one way ANOVAs on the prepost test differences showed a significant change in one SKAT scale, the M scale ($P < .004$) for the treatment group only. This indicated that following the SAR seminar the treatment group had more liberal attitudes toward masturbation. However, as already reported, when three way ANOVAs were used, the treatment main effect on the SM scale ($P < .003$) was the only significant result. As can be seen in Figure 1, this significant interaction was due not only to some increase in the treatment group SM scores, but also to a decrease in the nontreatment group SM scores. No rationale can be offered for this decrease in scores. It would appear that the effect of the seminar was to maintain rather than increase the treatment group SM scores during the time of the study.

It has been established that there were some pretest differences between the health professionals and the physically disabled subjects. Similar posttest differences were also found. That is, the SAR seminar had similar effects on the professionals as on the disabled persons. This lends support to the concept of including disabled clients as participants in the same workshop as professionals. However, this support is weakened by the fact that overall the effect of this SAR seminar, as measured by the SKAT, was minimal.

Compatability of SKAT with the SAR Curriculum

Careful analysis of the SAR curriculum, the data obtained in this study, and a closer scrutiny of the SKAT questionnaire suggests some possible reasons for the lack of significant results. In reviewing the

results of this study it became apparant that several discrepancies exist between the specific information tested by SKAT and the materials presented at the three day seminar. No pre-post test changes were expected in the abortion scale as the topic of abortion was not scheduled for major discussion at the seminar. Attitudes and information about the topics of heterosexual relationships, masturbation, and commonly held sexual myths were presented and discussed at length. However, a close scrutiny of each question in the attitudes and knowledge sections of the SKAT reveals that less than half of the questions in the SKAT were directly addressed by the seminar leaders in the large group formal sessions. At the discretion of the small group facilitators, participants were open to discuss any topic or issue in their small group sessions, but since these interactions were confidential it is not known if these interactions related to the SKAT questions. Issues included in SKAT, but not formally addressed in the seminar, include: differences in sexual behaviour patterns based on socioeconomic factors; rape and other sexual offences; contraception, and religious doctrines. It is suggested that the informality of the process of the SAR program allows for much incidental and informal learning and attitude reassessment. These topics may well have been discussed or introspectively examined by some of the participants during the seminar. Participants were able to select the issues most important and relevant to themselves. Topics covered extensively in the seminar but not covered by the SKAT questionnaire include: anatomy and physiology of sexual response; sexual concerns related to specific health issues, and sexual counselling techniques. This limited direct relationship between the questionnaire and the

detailed seminar curriculum may explain the lack of significant change in attitudes and knowledge after the seminar. In addition, while 50 knowledge questions are used to obtain the single SKAT sex knowledge score, a total of only 35 attitude questions are used to obtain the four attitude scores, an average of nine questions for each attitude scale. With these few items on the attitude scales it is difficult to find significant differences on the prepost tests of each attitude score, unless it is an extremely powerful change. It is recommended that future SAR seminars with similar curriculum design be evaluated by a test that includes medical issues and counselling techniques and more directly assesses the information presented at the seminar. In addition, some of the SKAT topics currently not included in the SAR seminar should be integrated into the curriculum, such as contraception and socioeconomic influences on sexual patterns.

A further recommendation is that a three to six month follow up test be done to determine any long term effects of future SAR seminars. In their discussion of encounter groups, Lieberman, Yalom and Miles (1973) suggested that many variables determine the long term effects of any group process. They include postworkshop activity, reinforcement from others, cognitive application of workshop concepts, and the personal characteristics of the individuals involved. In the case of the SAR seminar, professionals who actively initiate sexual health care programming in their practice following the SAR seminar, and who receive positive reinforcement from their peers (reference group) for such activity, are more likely to maintain any positive effects of the seminar. However, professionals who hesitate to participate in sexual

health care, or who receive no support for any attempts that they do make, are less likely to maintain any positive effects of their sex education experience. The skill training component (third day) of the SAR seminar in this study was an attempt to provide the professionals with sufficient basic skills and confidence to venture out and initiate some active behaviours following the seminar.

Implications for Future Sexual Health Education for Health Professionals

In view of the limitations of this study, in particular the nonrandom selection of subjects, the "elective" nature of the SAR seminar, and the questionable compatibility of the SKAT II with the SAR curriculum, the results have only limited generality. There is, however, evidence that SAR seminars are valuable tools for training health professionals in the area of sexuality (Garrard et al., 1976; Hadorn & Grant, 1976; Mims et al., 1974). Some studies have reported significant prepost test differences in attitude and knowledge change after SAR seminars. Some of these authors have used measurements other than the SKAT. For example, Ryan (1980) used opinion questionnaires and reported strong support by the participants for the concept of the SAR program, and for the inclusion of such a seminar as a component of health professional training. Many stated that they felt more comfortable regarding their existing or potential role in sexual counselling following the SAR seminar, and that they considered the experience to have been both personally and professional beneficial (Ryan, 1980). It

is recommended that studies be undertaken to determine the manner in which the SAR curriculum could be refined, and the most beneficial use of the SAR format as an adjunct to other sexuality curricula.

Lief (1979) stated that "attitudes and knowledge have reciprocal relationships" (p. 7). For example, the aquisition of knowledge may be inhibited by certain attitudes, or conversely, incorrect information may lead to inappropriate attitudes. How then, should sexuality curricula be designed in order to provide the optimum learning experience for health professional students? Comparative studies, using different sequencing of attitude, knowledge and skill training curricula components would provide valuable information concerning this topic area. Such comparative studies could be done using the sequence of materials within one particular course, or a series of courses. Based on personal experience, I would recommend that in all health disciplines basic level coursework should include both sexual knowledge aquisition and sexual attitude assessment in an integrated framework, and that such coursework should be compulsory. For example, information on sexual anatomy and physiology could be integrated into basic courses in anatomy and physiology. Similarly, appropriate sexual information could be included in courses concerning the various medical specialities, such as surgery, neurology and psychiatry. Discussion of attitudes toward sexuality and toward clients in general, would be appropriate in courses such as psychology, professional ethics, and psychosocial aspects of health care. More senior level courses should be more specialized and optional to the student. Examples of such courses are sexual history taking, counselling skills, in depth study of sexuality as related to a

particular group (such as the dying patient), and family counselling strategies.

Since most of the literature in the area of sexuality and health care is from the United States, it is recommended that a study be undertaken to survey sexual education programs in health professional faculties across Canada, and to formulate recommendations for basic compulsory and senior optional courses in such programs.

Summary

A three day SAR seminar was found to have little effect on changes in sexual knowledge or attitudes as measured by the SKAT II. It is suggested that the incompatability of the SKAT and the seminar curriculum was a more significant factor in these results than a lack of opportunity to acquire knowledge or to reevaluate attitudes at the seminar. The SKAT may not have been an appropriate measurement tool for the information and attitudes addressed at the SAR seminar. There was no significant interaction between the prepost test scores of the professionals as compared to the disabled persons. This supports the philosophy followed by SAR programmers that mixed groups of professionals and clients are appropriate to this educational process.

Future research is needed to determine whether the SAR or some other educational format and curriculum is most suitable for health professionals and clients to learn about sexual matters, at the undergraduate, graduate and continuing education levels. Research is also needed to find suitable evaluation techniques and measures of change

in attitudes, knowledge and clinical skills after completion of a SAR seminar or other professional sex education program.

REFERENCES

AASECT code of ethics. Washington: American Association of Sex Educators, Counsellors & Therapists, 1980.

Alouf, F.E. The northwestern university medical school program. In N. Rosenzweig & F.P. Pearsall (Eds.), Sex education for the health professional. New York: Grune & Stratton, 1978.

Annon, J.S. Behavioural treatment of sexual problems; Brief therapy. Hagerstown: Harper & Row, 1976.

Bahr, R.T. Sexuality education: A need in health care. In M.U. Barnard, B.J. Clancy & K.E. Krantz (Eds.), Human sexuality for health professionals. Philadelphia: W.B. Saunders, 1978.

Barnard, M.U., & Clancy, B.J. Introduction. In M.U. Barnard, B.J. Clancy, & K.E. Krantz (Eds.), Human sexuality for health professionals. Philadelphia: W.B. Saunders, 1978.

Becker, E.F. Female sexuality following spinal cord injury. Bloomington: Cheever Pub. Co., 1978.

Berkman, A.H. Sexuality [illegible] condition. Journal of Rehabilitation, 1975, 41-42, 13-15.

Berkman, A.H., Weissman, [illegible] & Frielich, M.H. Sexual adjustment of spinal cord injured veterans living in the community. Archives of Physical Medicine and Rehabilitation, 1978, 59, 29-33.

Brashear, D. Integrating human sexuality into rehabilitation practice. Sexuality and Disability, 1978, 1, 190-199.

Bregman, S. Sexual adjustment of spinal cord injured women. Sexuality and Disability, 1978, 1, 85-92.

Burnap, D.W., & Golden, J.S. Sexual problems in medical practice. Journal of Medical Education, 1967, 42, 673-680.

Cade, J.D., & Jessee, W.F. Sex education in american medical schools. Journal of Medical Education, 1971, 46, 64-68.

Calderone, M.S. Historical perspectives on the human sexuality movement: Hindsights, insights and foresights. In N. Rosenzweig & F.P. Pearsall (Eds.), Sex education for the health professional. New York: Grune & Stratton, 1978.

Carmichael, J., Tanner, L., & Carmichael, L. Research in human sexuality education. Medical Education, 1977, 71, 111-113.

Carrera, M.A., & Calderone, M.S. Training of health professionals in education for sexual health. SIECUS Report, 1976, IV (4), 1-2.

Chez, R.A. Movies of human sexual response as learning aids for medical students. Journal of Medical Education, 1971, 46, 977-981.

Chilgren, R.A., & Briggs, N.M. On being explicit: Sex education for professionals. SIECUS Report, 1973, I (5), 1-4.

Chipouras, S., Cornelius, D., Daniels, S.M., & Makas, E. Who cares. Washington: George Washington University, 1979.

Clancy, R.L., & Quinlan, M. Sex for the cardiac patient. In M.U. Barnard, B.J. Clancy, & K.E. Krantz (Eds.), Human sexuality for health professionals. Philadelphia: W.B. Saunders, 1978.

Cogswell, B. Rehabilitation of the paraplegic: Processes of socialization. Sociological Inquiry, 1967, 37, 11-26.

Cole, C.M. A treatment strategy for post myocardial sexual dysfunction. Sexuality and Disability, 1979, 2, 122-129.

Cole, T.M. Reactions of the rehabilitation team to patients with sexual problems. Archives of Physical Medicine and Rehabilitation, 1975, 56, 10-11.

Cole, T.M. Sexuality and the spinal cord injured. In R. Green (Ed.), Human sexuality: A health practitioner's text. Philadelphia: Williams & Wilkins, 1979.

Cole, T.M., Chilgren, R., & Rosenberg, P. A new programme of sex education and counselling for spinal cord injured adults and health care professionals. Paraplegia, 1973, 11, 111-124.

Cole, T.M., & Cole, S.S. The handicapped and sexual health. SIECUS Report, 1976, IV (5), 1-4.

Comarr, A.E. Sex classification and expectations among quadriplegics and paraplegics. Sexuality and Disability, 1978, 1, 252-259.

Comfort, A. Counselling in mastectomy. In A. Comfort (Ed.), Sexual consequences of disability. Philadelphia: G.F. Stickley Co., 1978.

Daniels, S.M. Correlates of attitudes toward the sexuality of the disabled person in selected health professionals. Sexuality and Disability, 1978, 1, 112-126.

Dembo, T. The utilization of psychological knowledge in rehabilitation. In J. Stubbins (Ed.), Social and psychological aspects of disability. Baltimore: University Park Press, 1977.

Dickerson, M., & Myerscough, P.R. The evolution of a course in human sexuality, university of Edinburgh. Medical Education, 1979, 13, 432-438.

Ellenberg, M. Sexual aspects of the female diabetic. Mount Sinai Journal of Medicine, 1977, 44 495-500.

Enby, G. Let there be love. London: Elek Pemberton, 1972.

Flatter, J. Small groups in sexuality programs. In N. Rosenzweig & F.P. Pearsall (Eds.), Sex education for the health professional. New York: Grune & Stratton, 1978.

Fortune, E. A nursing approach to body image and sexuality adaptation in the mastectomy patient. Sexuality and Disability, 1979, 2, 47-53.

Frank, D., Dornbush, R.L., Webster, S.K., & Kolodny, R.C. Mastectomy and sexual behaviour: a pilot study. Sexuality and Disability, 1978, 1, 16-26.

Garrard, J., Vaitkus, A., & Chilgren, R.A. Evaluation of a course in human sexuality. Journal of Medical Education, 1972, 47, 772-778.

Garrard, J., Vaitkus, A., Held, J., & Chilgren, R.A. Follow-up effects of a medical school course in human sexuality. Archives of Sexual Behaviour, 1976, 5, 331-341.

Gecas, V., & Libby, R. Sexual behaviour as symbolic interaction. Journal of Sex Research, 1976, 12, 33-49.

Geiger, R.C. Neurophysiology of sexual response in spinal cord injured. Sexuality and Disability, 1979, 2, 257-266.

Gendel, E.S. Use of explicit visual materials in professional education. SIECUS Report, 1973, 1, (5), 1.

Golden, J.S. & Liston, E.H. Medical sex education: The world of illusion and the practical realities. Journal of Medical Education, 1972, 47, 761-771.

Green, C., & Mantell, J.E. The need for management of the psychosexual aspects of mastectomy. In A. Comfort (Ed.), Sexual consequences of disability. Philadelphia: G.F. Stickley Co., 1978.

Green, R. Taking a sexual history. In R. Green (Ed.), Human sexuality: A health practitioner's text. Philadelphia: Williams & Wilkins, 1979.

Greengross, W. Some problems that professionals experience in counselling the disabled. Sexuality and Disability, 1980, 3, 187-192.

Greenland, C. Is there a future for human sexuality? In B. Schlesinger (Ed.), Sexual behaviour in Canada. Toronto: University of Toronto Press, 1977.

Hadorn, D., & Grant, I. Evaluation of a sex education workshop. British Journal of Medical Education, 1976, 10, 378-381.

Halstad, L.S., Halstad, M.S., Salhoot, J.T., Stock, D.D., & Sparks, R.W. Sexual attitudes, behaviour and satisfaction for able-bodied and disabled participants attending workshops in human sexuality. Archives of Physical Medicine and Rehabilitation, 1978, 59, 497-501.

Hawton, K.E. A human sexuality course for Oxford University medical students. Medical Education, 1979, 13, 428-431.

Held, J., Cole, T.M., Anderson, C., Held, C.A., & Chilgren, R. Sexual attitude reassessment workshops. Archives of Physical Medicine and Rehabilitation, 1975, 56, 14-18.

Hellerstein, [redacted] & Friedman, E.H. Sexual activity and the post coronary patient. Archives of Internal medicine, 1970, 125, 987-999.

Hohmann, G.W. Personal communication, March 26, 1981.

Hohmann, G.W. Reaction of the individual with a disability complicated by a sexual problem. Archives of Physical Medicine and Rehabilitation, 1975, 56, 9-10.

Hohmann, G.W. Sex and the spinal cord injured male. Paraplegia News, 1973, Feb., 16-17.

Isaac, S., & Michael, W.B. Handbook in research and evaluation for education and behavioural sciences. San Diego: R.R. Knapp, 1971.

Johnson, W.R., & Belzer, E.G. Human sexual behaviour and sex education (3rd ed.). Philadelphia: Lea & Febiger, 1973.

Kenan, E.H., & Crist, T. Counseling the spinal cord injured female and female partner of a spinal cord injured male. Journal of Sex Education and Theraphy, 1981, 7, 29-32.

Kent, S. Sex education is for physicians too. Geriatrics, 1975, 30. 177-182.

Kentsmith, D.K., & Eaton, M.T. Treating sexual problems in medical practice. New York: Arco Pub. Inc., 1979.

Kerr, N. Staff expectations for disabled persons. In J. Stubbins (Ed.), Social and psychological aspects of disability. Baltimore: University Park Press, 1977.

Kirk, R.E. Experimental design: Procedures for the behavioural sciences. California: Brooks Cole, 1968.

Kolodny, R.C. Sexual dysfunction in diabetic females. Diabetes, 1971, 20, 557-559.

Kolodny, R.C., Kahn, C.B., Goldstein, H.H., & Barnett, D.M. In A. Comfort (Ed.), Sexual consequences of disability. Philadelphia: G.F. Stickley Co., 1978.

Kolodny, R.C., Masters, W.H., & Johnson, V.E. Textbook of sexual medicine. Boston: Little, Brown & Co., 1979.

Krop, H., Hall, D., & Mehta, J. Sexual concerns after myocardial infarction. Sexuality and Disability, 1979, 2, 91-97.

Lieberman, M.A., Yalom, I.D., & Miles, M.B. Encounter groups: First facts. New York: Basic Books Inc., 1973.

Lief, H.I. Sex education in medicine: Retrospect and prospect. In N. Rosenzweig & F.P. Pearsall (Eds.), Sex education for the health professional. New York: Grune & Stratton, 1978.

Lief, H.I. Why sex education for health practitioners? In R. Green (Ed.), Human sexuality: A health practitioner's text. Philadelphia: Williams & Wilkins, 1979.

Lief, H.I. & Reed, D.M. Sex Knowledge and Attitude Test (SKAT). (2nd ed.) Center for the Study of Sex Education in Medicine, Philadelphia, 1972.

Ludwig, E.G., & Adams, S.D. Patient cooperation in a rehabilitation center: Assumption of the client role. In J. Stubbins (Ed.), Social and psychological aspects of disability. Baltimore: University Park Press, 1977.

Mackey, F.G. Sexuality and heart disease. In A. Comfort (Ed.), Sexual consequences of disability. Philadelphia: G.F. Stickley Co., 1978.

Maddock, J.W. Sex education in professional schools. Journal of Research and Development in Education, 1976, 10, 73-78.

Mantell, J.E., & Green, C. Reducing post mastectomy sexual dysfunction: An appropriate role for social work. In A. Comfort (Ed.), Sexual consequences of disability. Philadelphia: G.F. Stickley, 1978.

Marcotte, D.B. Sex education and the medical student. Journal of Medical Education, 1973, 48, 285-286.

Marcotte, D.B., Geyer, P.R., & Kilpatrick, D.G. Effects of spaced sex education on medical students' knowledge and attitudes. Journal of Medical Education, 1976, 10, 117-121.

Marcotte, D.B., & Kilpatrick, D.G. Preliminary evaluation of a sex education course. Journal of Medical Education, 1974, 49, 703-704.

Masur, F.T. Resumption of sexual activity following myocardial infarction. Sexuality and Disability, 1979, 2, 98-113.

Megenity, J. A plea for sex education in nursing curriculum. American Journal of Nursing, 1975, 7, 1171-1173.

Mehta, J., & Krop, H. The effect of myocardial infarction on sexual function. Sexuality and Disability, 1979, 2, 115-121.

Melman, A. The diagnosis and therapy of impotence associated with diabetes. Sexuality and Disability, 1978, 1, 52-56.

Melman, A., & Hammond, G. Placement of the small-carrion penile prosthesis to enable maintenance of an exdwelling condom catheter. Sexuality and Disability, 1978, 1, 292-298.

Miller, S., Szasz, G., & Anderson, L. Sexual health care clinician in an acute spinal cord injury unit. Archives of Physical Medicine and Rehabilitation, 1981, 62, 315-320.

Miller, W.R., & Lief, H.I. The sex knowledge and attitude test (SKAT). Journal of Sex and Marital Therapy, 1979, 5, 282-287.

Mims, F.H. Sexual health education and counselling. Nursing Clinics of North America, 1975, 10, 519-528.

Mims, F.H., & Swenson, M. Sexuality: A nursing perspective. New York: McGraw Hill, 1980.

Mims, F.H., Yeaworth, R., & Hornstein, S. Effectiveness of an interdisciplinary course in human sexuality. Nursing Research, 1974, 23, 248-253.

Mooney, T.O., Cole, T.M., & Chilgren, R.A. Sexual options for paraplegics and quadriplegics. Boston: Little, Brown & Co., 1975.

Mudd, J.W., & Seigel, R.J. Sexuality - the experience and anxieties of medical students. New England Journal of Medicine, 1969, 281, 1397-1402.

Neumann, R.J. The forgotten other: Women partners of spinal cord injured men, a preliminary report. Sexuality and Disability, 1979, 2, 287-292.

Nordqvist, I. Sexual counselling for disabled persons. Sexuality and Disability, 1980, 3, 193-198.

Oppenheim, A.N. Questionnaire design and attitude measurement. London: Heinemann, 1976.

Payne, T. Sexuality of nurses: Correlation of knowledge, attitudes and behaviour. Nursing Research, 1976, 25, 286-292.

Puksta, N.W. All about sex...after a coronary. American Journal of Nursing, 1977, April, 602-605.

Reiss, I.L. Heterosexual relationships of patients: Premarital, marital, extramarital. In R. Green (Ed.), Human sexuality: A health practitioner's text. Philadelphia: Williams & Wilkins, 1979.

Renshaw, D.C. Nurses need formal sex education. Journal of Nursing Education, 1975, 14, 16-19.

Riffenburgh, R.S., & Strassman, H.D. A curriculum in sex education for medical students. Journal of Medical Education, 1967, 42, 1031-1036.

Robinson, L. Psychological aspects of the care of hospitalized patients. Philadelphia: Davis Co., 1972.

Rosenberg, P., & Chilgren, R. Sex education discussion groups in a medical setting. International Journal of Group Psychotherapy, 1973, 23, 23-41.

Runyon, R.P., & Haber, A. Fundamentals of behavioural statistics. Reading: Addison-Wesley Pub. Co., 1976.

Ryan, T. Sexual attitude reassessment: An evaluation of seminars 1975-1977. Unpublished manuscript, 1980 Available from Alberta Institute of Human Sexuality, 244 Westridge Road, Edmonton, Alberta, Canada.

Schiavi, R.C. Sexuality and medical illness: Specific reference to diabetes mellitus. In R. Green (Ed.), Human sexuality: A health practitioner's text. Baltimore: Williams & Wilkins, 1979.

Schvaneveldt, J.D. The interactional framework in the study of the family. In F.I. Nye (Ed.), Emerging conceptual frameworks in family analysis. New York: MacMillan, 1966, 97-129.

Shaul, S., Bogle, J., Hale, J., & Norman, A.D. Toward intimacy: Family planning and sexuality concerns of physically disabled women. Snohomish County: Planned Parenthood, 1977.

Shymko, J.M. Current sex research in Canada. In B. Schlesinger (Ed.), Sexual behaviour in Canada. Toronto: University of Toronto Press, 1977.

Sidman, J.M. Sexual functioning and the physically disabled adult. American Journal of Occupational Therapy, 1977, 31, 81-85.

Smith, L. Religion's response to the new sexuality. SIECUS Report, 1975, IV (2), 1-2.

Spencer, J.L., & Thomas, M.E. Old morality vs. new morality. In M.U. Barnard, B.J. Clancy, Y K.E. Krantz (Eds.), Human sexuality for health professionals. Philadelphia: W.B. Saunders, 1978.

Stanley, E. An introduction to sexuality in the medical curriculum. Medical Education, 1978, 12, 441-445.

Stayton, W.R. The core curriculum: What can be taught and what must be taught. In N. Rosenzweig & F.P. Pearsall (Eds.), Sex education for the health professional. New York: Grune & Stratton, 1978.

Stewart, W.F.R. Sexual advice and counsel for handicapped people: A model for O.T. training. Occupational Therapy, 1978, March, 95-97.

Stryker, S. Symbolic interaction theory: A review and some suggestions for comparative family research. Journal of Comparative Family Studies, 1972, spring, 17-32.

Stubbins, J. Editorial introduction. In J. Stubbins (Ed.), Social and psychological aspects of disability. Baltimore: University Park Press, 1977.

Szasz, G. Sexuality curriculum for the physiatrist, physical therapist and occupational therapist. In N. Rosenzweig & F.P. Pearsall (Eds.), Sex education for the health professional. New York: Grune & Stratton, 1978.

Szasz, G., Miller, S., & Anderson, L. Guidelines to birth control counselling of the physically handicapped. Canadian Medical Journal, 1979, 120, 1353-1368.

Thomas, C.L. (Ed.), Taber's cyclopedic medical dictionary. Philadelphia: F.A. Davis Co., 1981.

Thornton, C.E. Sexuality counselling of women with spinal cord injuries. Sexuality and Disability, 1979, 2, 267-277.

Trieschmann, R.B. Sex, sex acts and sexuality. Archives of Physical Medicine and Rehabilitation, 1975, 56, 8-9.

Vandervoort, H.E., & McIlvenna T. The use of sexually explicit teaching materials. In R. Green (Ed.), Human sexuality: A health practitioner's text. Philadelphia: Williams & Wilkins, 1979.

Vasconcellos, J., & Wallace, D. Legislating sex education for professionals. In N. Rosenzweig & F.P. Pearsall (Eds.), Sex education for the health professional. New York: Grune & Stratton, 1978.

Vincent, C.E. (Ed.), Human sexuality in medical education and practice. Springfield: C. Thomas, 1968.

Vincent, C.E. Sexual and marital health: The physician as consultant. New York: McGraw Hill, 1973.

Wabrek, A.J., Wabreck, C.J., & Burchell, C.R. Marital and sexual counselling after masectomy. In R. Green (Ed.), Human sexuality: A health practitioner's text. Philadelphia: Williams & Wilkins, 1979.

Wagner, N.N., & Sivarajan, E.S. Sexual activity and the cardiac patient. In R. Green (Ed.), Human sexuality: A health practitioner's text. Philadelphia: Williams & Wilkins, 1979.

Walker, E.G. Study of sexuality in nursing curriculum. Nursing Forum, 1971, 10, 18-30.

Wallace, D. Sexuality and disability: Implications for the sex education of medical students. Sexuality and Disability, 1980, 3, 17-25.

Westgate, B. Sexual and personal relationships of the mastectomee. Sexuality and Disability, 1980, 3, 162-164.

WHO, Education and treatment in human sexuality: The training of health professionals. 1975, WHO Tech. Report series no. 527, 5-33.

Wollert, R.W. A survey of sexual attitude reassessment and restructuring seminars, Journal of Sex Research, 1978, 14, 250-259.

Woods, N.F. Human sexuality in health and illness. St. Louis: C.V. Mosby Co., 1975.

Woods, N.F., & Mandetta, A. Changes in students' attitudes following a course in human sexuality. Nursing Research, 1975, 24, 10-15.

Woods, S.M. A course for medical students in the psychology of sex: Training in sociocultural sensitivity. American Journal of Psychiatry, 1969, 125, 1508-1519.

Wright, B. Spread in adjustment to disability. In J. Stubbins (Ed.), Social and psychological aspects of disability. Baltimore: University Park Press, 1977.

Yuker, H.E., Block, J.R.. & Young, J.H. The Measurements of Attitudes Toward Disabled Persons. Albertson, New York, Human Resources Centre, 1966, revised 1970.

Zalar, M. Human sexuality: A component of total patient care. Nursing Digest, 1975, Nov./Dec. 41-43.

Zuckerman, M., Tushup, R., & Finner, S. Sexual attitudes and experience: Attitude and personality correlates and changes produced by a course in sexuality. Journal of Consulting and Clinical Psychology, 1976, 44, 7-19.

APPENDIX A:

Alberta Institute of Human Sexuality Inc.

Sexual Attitude Reassessment Seminar

ALBERTA INSTITUTE OF HUMAN SEXUALITY INC.

mailing address - 10420 - 54 Avenue,
Edmonton, Alberta. T0G 0T5

☆ The A.I.H.S. is a non-profit organization formed by a group of health professionals and educators who are involved in educational, counselling and research programs in human sexuality. A primary objective of the institute members is to promote the development of new programs, with special emphasis on sexuality in its relation to disability.

☆ The A.I.H.S. will carry out its aims by

a) - presenting Sexual Attitude Reassessment seminars, (SARs). SAR is presented in either a general two day format or a three day SAR with special reference to physical and/or psycho-social disability. The two day SAR is appropriate for participation by those over eighteen years of age. The three day SAR is of special interest to health professionals, the disabled and their families, but any adult may attend.

b) - making A.I.H.S. staff available to make formal presentations or to lead group discussions for audiences of varying sizes, backgrounds and interest.

c) - providing consulting services to any interested individuals, groups or organizations.

d) - conducting and promoting studies and research of human sexuality, and publishing the results of such research.

e) - providing training workshops for those interested in assisting with educational programs conducted by the institute, or in developing programs of their own.

☆ Most health professionals now agree that sexuality should be considered a part of the whole person, but until recently it has been a neglected aspect of medical and paramedical educational programs. Human sexuality is an area of difficulty for many of us at both the feeling and discussion level, a difficulty compounded when faced with explicit sexuality in the rehabilitation of the disabled. A.I.H.S. is committed to the idea that human sexuality should be a legitimate focus of concern of those working in medical and other helping professions, and that these professionals may first need help in evaluating their own attitudes to the subject.

☆ A.I.H.S. staff are available to take part in lectures, workshops or seminars on human sexuality anywhere in Canada.
Fees are negotiable and are based on expenses plus a professional fee, depending on the type of program requested.
For further information please contact the secretary-treasurer.
Alberta Institute of Human Sexuality, 10420 - 54 Avenue, Edmonton, Alberta, T6H 0T5

FOOTNOTE: New address is 244 Westridge Road, Edmonton, Alberta.

SEXUAL ATTITUDE REASSESSMENT:

A seminar in human sexuality and the disabled

This seminar is presented by the Alberta Institute of Human Sexuality in cooperation with the Faculty of Extension, The University of Alberta.

PURPOSE:
To raise awareness of your attitudes and feelings about your own sexuality and the sexuality of others, with special emphasis on the physically disabled. To provide an opportunity for participants to practice communication skills.

SEMINAR DESIGN:
The seminar is carefully organized in a developmental sequence. Large group presentations include movies and slides depicting a variety of sexual activities found in our society. In addition, the large group will be frequently divided into small discussion groups where a safe, comfortable setting will afford participants the opportunity to discuss and integrate the feelings and attitudes they are experiencing.

PARTICIPANTS:
It is expected that participants will include physicians, nurses, therapists, counsellors, clergy, the disabled and others. The benefit of the program is greatly enhanced if the participant attends with spouse, close friend or colleague with whom they can discuss personal matters. Please note, it is not required that someone accompany you. It is, however, our strong recommendation. Participants are expected to attend for the full three days.

RESOURCE PERSONS:
MRS. BENITA FIFIELD, President, AIHS; Associate Professor, University of Alberta
MRS. BRENDA ROBINSON, Vice-President, AIHS; occupational therapist
DR. MICHAEL PARRISH, Medical Director, AIHS; family physician
MR. ROSS ROBINSON, Research Director, AIHS, clinical psychologist
MR. ORVILLE FIFIELD, Coordinator, Physical Disabilities, AIHS; sexuality consultant
MRS. MEG PARRISH, Secretary-Treasurer, AIHS; occupational therapist

Consultants: DR. ED and MARYETTE BRANCH, psychologists

DATES AND TIMES: Thursday, March 3, 1977: 10 a.m. - 11 p.m.
Friday, March 4, 1977: 9 a.m. - 5 p.m.
Saturday, March 5, 1977: 9 a.m. - 5 p.m.

LOCATION: The University of Alberta

FEE: $75.00 (tax deductible)

CLASS LIMIT: 80

REGISTRATION:
Early registration is advised as enrollment is limited. Applicants must be 18 years of age or over.

Register now by completing the attached application form and mailing to:

Faculty of Extension
Room 234, Corbett Hall
The University of Alberta
82 Avenue and 112 Street
Edmonton, Alberta
T6G 2G4

Further information may be obtained by telephoning (403) 432-5049.

The University reserves the right to restrict registration in any class and to cancel any course due to insufficient registration.

ALBERTA INSTITUTE OF HUMAN SEXUALITY INC.
mailing address - 10420 - 54 Avenue,
Edmonton, Alberta. T6H 0T5

SAR, MARCH 3-5, 1977

Kiva Room, N.Ed.Bldg. U of A, Edmonton.

Day One

10.00-11.00	Registration. Research questionnaires.
11.00-11.15	Intro. schedule; process; trust.
11.15-11.45	Small group.
11.45-12.45	SAR intro. Concepts & Assumptions
12.45-2.00	Small group - with lunch
2.00-3.15	Fantasy - rap and media (coffee).
3.30-4.30	Masturbation - rap and media.
4.30-5.30	Small group
5.30-6.30	Normalcy - sex-o-rama -cartoons
6.30-8.00	Small group - with supper
8.00-9.30	Relationships - rap and media (coffee)
9.40-10.45	Small group

Day Two

9.00-9.15	Library and devices
9.15-9.30	Second day intro.
9.30-10.30	Sexual variations - rap and media (coffee)
10.45-12.00	Body awareness - rap, media & exercise
12.00-1.30	Small group - with lunch
1.30-2.45	Roles - rap and media
2.45-3.30	Small group
3.30-4.15	Panel
4.15-5.00	Small group
5.00-7.00	Wine and cheese reception

Day Three

9.00-9.15	Library and devices
9.15-9.30	Intro. to third day
9.30-11.00	Sexuality - a part of health care
11.00-1.00	Small group - with lunch. Role playing
1.00-2.00	Anatomy & Physiology - rap and media
2.00-2.30	Interviewing theory
2.30-3.00	Interviewing demonstration
3.00-4.15	Small group - role playing continued
4.15-5.00	Wind up and research questionnaires
5.30-6.00	Short staff meeting

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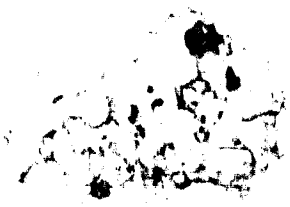
Edmonton, Alberta. T6H 0T5

OBJECTIVES

SEXUAL ATTITUDE REASSESSMENT SEMINAR

1. To increase awareness of sexuality as a health care issue.
2. To encourage evaluation and discussion of one's own attitudes, and the attitudes of others, regarding sexuality.
3. To promote recognition of all persons -- disabled and non disabled -- as sexual persons.
4. To provide information regarding sexuality educational and counselling resources in the community.
5. To present information and encourage discussion on several aspects of sexual activity found in our society today.
6. To discuss the role of the various health professionals, the patient and the family in relation to sexual counselling in health care.
7. To provide basic anatomical and physiological information related to sexuality.
8. To present in depth material on specific aspects of human sexual behaviours.
9. To provide opportunity for the practice of communication skills in the discussion of sexual concerns.
10. To discuss specific sexual dysfunctions as they relate to the general population as well as to the disabled.



APPENDIX B:

Description of PLISSIT System

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Description of the PLISSIT system.
adapted from J. Annon.

Level one - PERMISSION Depends upon: comfort of practitioner knowledge of practitioner values of practitioner	Discussion points: this type of counselling or interaction is needed by many and can be provided by many. It requires sensitivity and awareness.
Level two - LIMITED INFORMATION specific sexual concerns dispell myths can be verbal or non verbal many could benefit from such information	Can be given by most health professionals and others interested in [illegible] the information and using it to assist others.
Level three - SPECIFIC SUGGESTIONS obtain sex history: 1. definition of problem 2. course of problem 3. treatment of problem 4. ideas about causes and appropriate goals and treatment.	Fewer individuals are qualified to provide this type of interaction. Counselling skills and information are necessary, plus some therapeutic techniques.
Level four - INTENSIVE THERAPY full history specialized treatments	Small clientele; requires special skills of a sex therapist or other appropriate professional.

Handout materials at SAR seminar.

B. Fifield.

APPENDIX C:

Descriptive Data of Study Sample

TABLE A

Descriptive Data Regarding Study Sample

Factor	% in treatment group n=34	% in nontreatment group n=30
Male	41	27
Female	59	73
20-35 years	27	30
Health Professionals	85	73
Physically Disabled Subjects	15	27
White	100	97
Prostestant	53	63
Exclusively heterosexual	82	77
4 or more siblings	32	30
Sexual repressive home	62	70
Father in profession or business	50	37
Married (or have been)	68	77

APPENDIX D:

Survey Letters

403 · 432 · 3824

FACULTY OF HOME ECONOMICS
THE UNIVERSITY OF ALBERTA · EDMONTON CANADA T6G 2E1

TO: Disabled Citizens and Health Professionals

You will receive this letter either through an organization with which you are associated, or direct from me.

I would like to request your assistance in a research project that I am doing as part of my studies. The study is concerned with the topic of SEXUALITY AND THE DISABLED, an important, and unfortunately often neglected aspect of health care.

The study will include a survey to determine the sexual attitudes and knowledge of a number of health professionals and physically disabled adults in the Edmonton area.

Participants will be required to complete two short questionnaires in February 1977 and again in March. The questionnaires will take about 45 to 60 minutes to complete. All information will be kept in strict confidence.

It is hoped that the information gathered will help to establish improved health professional education programs and improved sexual counselling for patients in the Alberta health care system.

If you would be willing to share a couple of hours of your time to assist with this project, please complete the enclosed brief questionnaire and return to me in the enclosed stamped addressed envelope. I will contact you by telephone in January to arrange for you to complete the questionnaires.

If you are NOT able to participate would you indicate this at the bottom of the enclosed questionnaire and return to me in the envelope provided so that I may know that you did in fact receive this information.

Thank you for your cooperation.

Yours sincerely,

(Mrs) Benita Fifield
Graduate Student
Division of Family Studies
Rm. 801, General Services Building

BF*dam

ENC:
Jan. 1977

A STUDY OF SEXUAL ATTITUDES, AND KNOWLEDGE
OF HEALTH PROFESSIONALS AND PHYSICALLY
DISABLED ADULTS

INITIAL QUESTIONNAIRE FOR POTENTIAL
RESEARCH PARTICIPANTS

Name _____

Address _____

_____

Tel. no. (home) _____ (business) _____

Age _____

Profession or occupation _____

Business address _____

Are you disabled? _____

What is your disability? _____

How long have you been disabled? _____

Have you ever attended a two or three day seminar on sexuality and disability? _____yes _____no (check one)

IF YOU ANSWERED YES COMPLETE THE FOLLOWING

Title of workshop attended _____

Place held _____

Length of workshop attended _____

IF YOU ANSWERED NO COMPLETE THE FOLLOWING

Would you be interested in attending such a workshop if one was held in your area - given that you had the time and money available to be able to do so? ___ yes ___ no

THANK YOU FOR YOUR TIME AND COOPERATION.

If you DO NOT wish to participate at this time please sign below and return to me. Thank you.

Signature _____

Division of Family Studies, U of A.
Benita Fifield, Graduate student.

Mailing list for letter requesting participation in survey. (nontreatment group)

150 letters sent through local associations to the following professionals:

Occupational Therapists	25
Physical Therapists	30
Speech Pathologists	25
Social Workers	20
Physicians	20
Registered Nurses	30

100 letters sent through community agencies:

Canadian Paraplegic Association	20
Multiple Sclerosis Society	20
Rheumatoid Arthritis Home Group	15
Parkinson's Society	15
Diabetic Association	15
Alberta Heart Fund	15

Orville and Benita Fifield
10420 - 54 Avenue
Edmonton, Alberta
T6H 0T5

Dear

As President of the Alberta Institute of Human Sexuality and convenor of the Sexual Attitude Reassessment seminar being offered by this institute through the Faculty of Extension, March 3-5, 1977, I would like to welcome you as a participant. However, this letter concerns a personal project with which I would like to request your assistance.

I am currently registered as a full time graduate student in the Division of Family Studies, Faculty of Home Economics, at the University of Alberta. As part of my studies I have chosen as my thesis topic, a survey of sexual attitudes and sex knowledge of health professionals and disabled adults. I would like to ask you to complete a questionnaire concerning these topics - that is sexual attitudes and knowledge - both before and after the March seminar. The questionnaire is answered on a computer sheet and you are asked to use only an identifying number, not your name, to retain anonymity and confidentiality. The test would take about 45 minutes to complete each time.

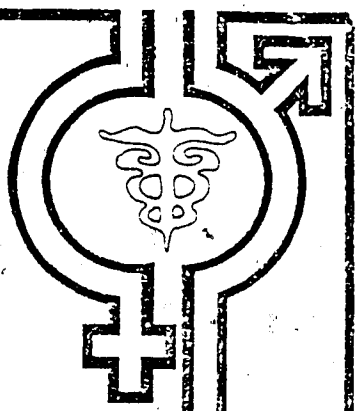
Questionnaires will be distributed during registration on Thursday March 3rd, and during the wind up session on Saturday March 5th. I do hope that you will participate in this research which we hope will assist in the funding and expansion of the program in the future.

Yours sincerely,
Benita Fifield
Benita Fifield

APPENDIX E:

SKAT Questionnaire

CENTER FOR THE STUDY OF SEX EDUCATION IN MEDICINE



SEX KNOWLEDGE AND ATTITUDE TEST
(S.K.A.T.)

A TEST ON KNOWLEDGE ABOUT AND ATTITUDES CONCERNING SEXUAL BEHAVIOR

Second Edition
(REVISED 1972)

Division of Family Study
Department of Psychiatry
University of Pennsylvania
School of Medicine
4025 Chestnut Street
Philadelphia, Pennsylvania
19104

HAROLD I. LIEF, M.D. *DAVID M. REED, Ph. D.*

CODING AND GENERAL INSTRUCTIONS

1. Pencils – Use any type of soft lead pencil. Do not use an ink or ballpoint pen.
2. All answers are to be recorded on the separate answer sheet. Please make no marks on this booklet.
3. Regardless of the number of alternatives provided, please mark only one answer per question.

IDENTIFICATION INFORMATION

I. We strive to maintain complete confidentiality. Some identifying number is necessary simply for the processing of this material. If there is some concern about using your Social Security or Student I.D. number, make up your own unique number and retain the key. Identifying numbers are used only for matching information for pre-and post-test comparisons.

II. Please select the one alternative that best describes yourself:

A. High School Student
B. College Student
C. Graduate Student
D. Non-Student (Skip to VI)

III. Which one of the following alternatives best describes your present occupation or field of study:

A. Medicine
B. Theology
C. Psychology
D. Education
E. Social Work
F. Sociology-Anthropology
G. Humanities
H. Nursing
I. Law
J. Other

IV. If you are a medical student, intern or resident, please indicate your status:

A. 1st year student
B. 2nd year student
C. 3rd year student
D. 4th year student or above
E. Intern
F. Resident

V. If you are a medical student or a physician, please indicate proposed or present area of specialization:

A. General Practice
B. Family Medicine
C. Internal Medicine
D. Obstetrics-Gynecology
E. Psychiatry
F. Pediatrics
G. Surgery
H. Urology
I. Community Medicine
J. Other

VI. Are you completing this questionnaire before or after a specific course in sex education?

A. Pre-instruction B. Post-instruction C. Neither

VII. Please mark block A (to identify this as the 1972 version of SKAT).

PART I : ATTITUDES

Please indicate your reaction to each of the following statements on sexual behavior in our culture, using the following alternatives:

A. Strongly agree
B. Agree
C. Uncertain
D. Disagree
E. Strongly disagree

Please be sure to answer every question.

1. The spread of sex education is causing a rise in premarital intercourse.
2. Mutual masturbation among boys is often a precursor of homosexual behavior.
3. Extramarital relations are almost always harmful to a marriage.
4. Abortion should be permitted whenever desired by the mother.
5. The possession of contraceptive information is often an incitement to promiscuity.
6. Relieving tension by masturbation is a healthy practice.
7. Premarital intercourse is morally undesirable.
8. Oral-genital sex play is indicative of an excessive desire for physical pleasure.
9. Parents should stop their children from masturbating.
10. Women should have coital experience prior to marriage.
11. Abortion is murder.
12. Girls should be prohibited from engaging in sexual self-stimulation.
13. All abortion laws should be repealed.
14. Strong legal measures should be taken against homosexuals.
15. Laws requiring a committee of physicians to approve an abortion should be abolished.

16. Sexual intercourse should occur only between married partners.

17. The lower-class male has a higher sex drive than others.

18. Society should offer abortion as an acceptable form of birth control.

19. Masturbation is generally unhealthy.

20. A physician has the responsibility to inform the husband or parents of any female he aborts.

21. Promiscuity is widespread on college campuses today.

22. Abortion should be disapproved of under all circumstances.

23. Men should have coital experience prior to marriage.

24. Boys should be encouraged to masturbate.

25. Abortions should not be permitted after the twentieth week of pregnancy.

26. Experiences of seeing family members in the nude arouse undue curiosity in children.

27. Premarital intercourse between consenting adults should be socially acceptable.

28. Legal abortions should be restricted to hospitals.

29. Masturbation among girls is a frequent cause of frigidity.

30. Lower-class women are typically quite sexually responsive.

31. Abortion is a greater evil than bringing an unwanted child into the world.

32. Mutual masturbation in childhood should be prohibited.

33. Virginity among unmarried girls should be encouraged in our society.

34. Extramarital sexual relations may result in a strengthening of the marriage relationship of the persons involved.

35. Masturbation is acceptable when the objective is simply the attainment of sensory enjoyment.

PART II : KNOWLEDGE

Each of the following statements can be answered either true or false. Please indicate your position on each statement using the following alternatives:

T. True F. False

Be sure to answer every question.

1. Pregnancy can occur during natural menopause (gradual cessation of menstruation).
2. Most religious and moral systems throughout the world condemn premarital intercourse.
3. Anxiety differentially affects the timing of orgasm in men and women.
4. A woman does not have the physiological capacity to have as intense an orgasm as a man.
5. There is no difference between men and women with regard to the age of maximal sex drive.
6. Social class is directly correlated with the frequency of incest.
7. The use of the condom is the most reliable of the various contraceptive methods.
8. The incidence of extramarital intercourse is constant for males between the ages of 21 and 60.
9. Nearly half of all unwed girls in America have sexual intercourse by age 19.
10. There are two kinds of physiological orgastic responses in women, one clitoral and the other vaginal.
11. Impotence is almost always a psychogenic disorder.
12. Transvestitism (a form of cross-dressing) is usually linked to homosexual behavior.
13. There was as much premarital coitus a generation ago as there is now.
14. Sexual attitudes of children are molded by erotic literature.
15. In some successful marriages sex adjustment can be very poor.
16. Homosexuals are more likely to be exceptionally creative than heterosexuals.
17. A women who has had a hysterectomy (removal of the uterus) can experience orgasm during sexual intercourse.
18. Homosexuality comes from learning and conditioning experiences.
19. In responsive women, non-coital stimulation tends to produce a more intensive physiological orgastic response than does coitus.
20. Those convicted of serious sex crimes ordinarily are those who began with minor sex offenses.

21. One of the immediate results of castration in the adult male is impotence.

22. The body build of most homosexuals lacks any distinguishing features.

23. Masturbation by a married person is a sign of poor marital sex adjustment.

24. Exhibitionists are latent homosexuals.

25. A woman's chances of conceiving are greatly enhanced if she has an orgasm.

26. Only a small minority of all married couples ever experience mouth-genital sex play.

27. Impotence is the most frequent cause of sterility.

28. Certain foods render the individual much more susceptible to sexual stimulation.

29. A high percentage of those who commit sexual offenses against children is made up of the children's friends and relatives.

30. A higher percentage of unmarried white teenage girls than unmarried black teenage girls in the United States have had intercourse with four or more partners.

31. The attitude of the average American male towards premarital intercourse is shaped more by his religious devoutness than by his social class.

32. In teaching their daughters female sex roles, middle-class mothers are more affected by cultural stereotypes than mothers in other social classes.

33. In most instances, the biological sex will override the sex assigned by the child's parents.

34. The onset of secondary impotence (impotence preceded by a period of potency) is often associated with the influence of alcohol.

35. Nursing a baby usually protects the mother from becoming pregnant.

36. In our culture some homosexual behavior is a normal part of growing up.

37. Direct contact between penis and clitoris is needed to produce female orgasm during intercourse.

38. For a period of time following orgasm, women are not able to respond to further sexual stimulation.

39. In some legal jurisdictions artificial insemination by a donor may make a woman liable to suit for adultery.

40. Habitual sexual promiscuity is the consequence of an above-average sex drive.

41. Approximately one out of three adolescent boys has a homosexual experience leading to orgasm.

42. Impotence in men over 70 is nearly universal.

43. Certain conditions of mental and emotional instability are demonstrably caused by masturbation.

44. Women who have had several sex partners before marriage are more likely than others to be unfaithful after marriage.

45. The emotionally damaging consequences of a sexual offense against a child are more often attributable to the attitudes of the adults who deal with the child than to the experience itself.

46. Sexual maladjustment is the major cause of divorce.

47. Direct stimulation of the clitoris is essential to achieving orgasm in the woman.

48. Age affects the sexual behavior of men more than it does women.

49. The circumcised male has more trouble with ejaculatory control than the uncircumcized male.

50. More than a few people who are middle-aged or older practice masturbation.

51. Varied sex techniques are used most often by people in lower socioeconomic classes.

52. Individuals who commit rape have an unusually strong sex drive.

53. The rhythm method (refraining from intercourse during the six to eight days midway between menstrual periods) when used properly is just as effective as the pill in preventing conception.

54. Exhibitionists are no more likely than others to commit sexual assaults.

55. The ability to conceive may be significantly delayed after the menarche (onset of menstruation).

56. Many women erroneously consider themselves to be frigid.

57. Menopause in a women is accompanied by a sharp and lasting reduction in sexual drive and interest.

58. The two most widely used forms of contraception around the world are the condom and withdrawal by the male (coitus interruptus).

59. People in lower socioeconomic classes have sexual intercourse more frequently than those of higher classes.

60. Pornographic materials are responsible for much of today's aberrant sexual behavior.

61. For some women the arrival of menopause signals the beginning of a more active and satisfying sex life.

62. The sex drive of the male adolescent in our culture is stronger than that of female adolescent.

63. Lower class couples are generally not interested in limiting the number of children they have.

64. Excessive sex play in childhood and adolescence interferes with later marital adjustment.

65. There is a trend toward more aggressive behavior by women throughout the world in courtship, sexual relations, and coitus itself.

66. Sometimes a child may have cooperated in or even provoked sexual molestation by an adult.

67. LSD usually stimulates the sex drive.

68. Seven out of ten parents desire formal sex education in the schools.

69. For every female that masturbates four males do.

70. Douching is an effective form of contraception.

71. Freshmen medical students know more about sex than other college graduates.

PART III : BACKGROUND

This information will be treated as strictly confidential and will be used for research purposes only. In no way will it be used to reveal anyone's identity. Please mark your responses on Part III of the answer sheet.

1. Age
   - A. 17 or under
   - B. 18 – 19
   - C. 20 – 21
   - D. 22 – 23
   - E. 24 – 25
   - F. 26 – 27
   - G. 28 – 30
   - H. 31 – 35
   - I. 36 or over

2. Sex
   - A. Male
   - B. Female

3. Race
   - A. White
   - B. Nonwhite

4. If you have been or are married, age at first marriage?
   - A. 17 or under
   - B. 18 – 22
   - C. 23 – 26
   - D. 27 – 35
   - E. 36 or over

5. If you have been or are married, how long?
   - A. 1 year
   - B. 2 years
   - C. 3 years
   - D. 4 years
   - E. 5 or more years

6. Are you first born?
   - A. yes
   - B. no

7. Father's Occupation.
   - A. Physician
   - B. Clergyman
   - C. Lawyer
   - D. Teacher
   - E. Other professional
   - F. Executive
   - G. Clerical sales
   - H. Skilled manual
   - I. Semi-skilled
   - J. Unskilled

8. Number of siblings
   - A. 0
   - B. 1
   - C. 2
   - D. 3
   - E. 4 or more

9. Please indicate the educational status of your father:
   - A. Non-high school graduate
   - B. High school graduate
   - C. Attended college but did not graduate
   - D. College graduate
   - E. Attended graduate or professional school but did not graduate
   - F. Holds graduate or professional degree

10. Using the alternatives listed above, please indicate the educational status of your mother.

11. Religion.
   - A. Catholic
   - B. Protestant
   - C. Jewish
   - D. Other

12. What was the earliest Church-affiliated sex education you received?
   - A. None
   - B. Elementary (K – 6)
   - C. Jr. High (7 – 9)
   - D. Sr. High (10 – 12)
   - E. College

PART IV EXPERIENCE

It would be helpful if you would fill in the following questions. They refer to levels of experience with sex and will aid our understanding of relationships between knowledge and attitudes. Please answer honestly, and feel free to omit any question or questions if you find them too personal.

For questions 1-5 indicate how many times you have had the following sexual encounters:

A. Never B. Once C. Two-five D. Over five

1. Dating
2. Going steady
3. Sexual intercourse
4. Intercourse involving the exchange of money
5. Orgasm with partner of the same sex

For questions 6-9 indicate the number of people with whom you have engaged in the following sexual activities:

A. None B. One C. Two-five D. Over five

6. Dating
7. Going steady
8. Sexual intercourse
9. Orgasm with partner of the same sex

10. How do you rate yourself in comparison with your peer group's experience in sex?

A. Far less experienced than most
B. Less experienced than most
C. As experienced as most
D. More experienced than most
E. Far more experienced than most

11. How do you rate yourself in comparison with your peer group's knowledge about sex?

A. Far less knowledgeable than most
B. Less knowledgeable than most
C. As knowledgeable as most
D. More knowledgeable than most
E. Far more knowledgeable than most

12. How do you rate yourself in comparison with your peer group's sexual adjustment?

A. Far less adjusted than most
B. Less adjusted than most
C. As adjusted as most
D. More adjusted than most
E. Far more adjusted than most

13. How would you rate the sexual permissiveness of your home when you were growing up?

A. Very permissive
B. Somewhat permissive
C. Neither permissive nor repressive
D. Somewhat repressive
E. Very repressive

For questions 14-17, rate your value system with regard to sex:

A. Not at all
B. Somewhat
C. Definitely
D. Very definitely

14. Is your value system conservative (in favor of traditional standards)?

15. Is your value system liberal (in favor of changing standards)?

16. Is your value system influenced by religion?

17. Is your value system in conflict with your parents' values?

18. Age at which you first began masturbation

A. Never masturbated
B. Under 10
C. 10 – 12
D. 13 – 15
E. 16 – 18
F. 19 or over

For questions 19-21 indicate the frequency with which you masturbated during the following time periods.

A Less than once/week
B Two - three times/week
C Four - five times/week
D Six or more times/week

19 Junior High School

20 High School

21 College

For questions 22-26 indicate if you have ever engaged in sexual intercourse using the following birth prevention methods.

A. Yes
B. No

22 I U D

23 Pill

24 Abortion

25 Sterilization

26 "Morning after" treatment

27 Which one of the following contraceptive methods do you prefer

A. Rhythm
B. Douche
C. Withdrawal
D. Condom
E. Foam and or Diaphragm
F. I U D
G. Pill
H. Sterilization
I. "Morning after" treatment
J. Other

APPENDIX F:

Cell Means and ANOVA Tables

TABLE B

Cell Means Table

A. Group: 1. Treatment 2. Nontreatment (pretests)

A	Mean	Std. Dev.	Cases
	S K A T HR Scale		
1	27.7647	5.3544	34
2	24.3333	6.2108	30
	S K A T SM Scale		
1	36.0588	4.9601	34
2	35.7333	3.4133	30
	S K A T A Scale		
1	25.2647	5.6639	34
2	24.9667	4.4216	30
	S K A T M Scale		
1	26.7059	3.5208	34
2	25.0333	3.1784	30
	S K A T SK Scale		
1	38.3529	5.2332	34
2	36.3000	4.6620	30

TABLE C

Cell Means Table

A. Group: 1. Treatment 2. Nontreatment (posttests)

A	Mean	Std. Dev.	Cases
	S K A T HR Scale		
1	28.529	5.701	34
2	24.400	5.512	30
	S K A T SM Scale		
1	36.647	4.861	34
2	34.200	3.316	30
	S K A T A Scale		
1	24.735	6.653	34
2	24.233	3.812	30
	S K A T M Scale		
1	28.294	3.746	34
2	25.100	2.940	30
	S K A T SK Scale		
1	39.118	4.971	34
2	36.267	5.112	30

TABLE D

Cell Means Table

A. Group: 1. treatment 2. nontreatment
B. Profession: 1. Phys. disabled 2. Health Prof.
C. Time: 1. pre 2. post

A	B	C	MEAN	STD. DEV.	CASES
			S K A T HR Scale		
1	1	1	28.000	5.788	5
1	1	2	30.000	7.450	5
1	2	1	27.724	5.384	29
1	2	2	28.276	5.470	29
2	1	1	23.250	4.803	8
2	1	2	22.375	4.438	8
2	2	1	24.727	6.706	22
2	2	2	25.136	5.768	22
			S K A T SM Scale		
1	1	1	34.000	5.831	5
1	1	2	34.600	7.127	5
1	2	1	36.414	4.822	29
1	2	2	37.000	4.440	29
2	1	1	33.375	2.200	8
2	1	2	31.125	2.416	8
2	2	1	36.591	3.404	22
2	2	2	35.318	2.885	22

TABLE E

Cell Means Table

A. Group: 1. treatment 2. nontreatment
B. Profession: 1. Phys. disabled 2. Health Prof.
C. Time: 1. pre 2. post

A	B	C	MEAN	STD. DEV.	CASES
			S K A T A Scale		
1	1	1	25.800	5.070	5
1	1	2	23.200	5.167	5
1	2	1	25.172	5.837	29
1	2	2	25.000	6.918	29
2	1	1	24.625	3.926	8
2	1	2	23.875	2.475	8
2	2	1	25.091	4.669	22
2	2	2	24.364	4.238	22
			S K A T M Scale		
1	1	1	26.400	3.507	5
1	1	2	27.800	2.490	5
1	2	1	26.759	3.582	29
1	2	2	28.379	3.950	29
2	1	1	24.000	3.162	8
2	1	2	23.500	2.390	8
2	2	1	25.409	3.172	22
2	2	2	25.682	2.950	22

TABLE F

Cell Means Table

A. Group: 1. treatment 2. nontreatment
B. Profession: 1. Phys. disabled 2. Health Prof.
C. Time: 1. pre 2. post

A	B	C	MEAN	STD. DEV.	CASES
			S K A T SK	Scale	
1	1	1	33.600	6.731	5
1	1	2	34.800	6.099	5
1	2	1	39.172	4.591	29
1	2	2	39.862	4.462	29
2	1	1	34.750	5.970	8
2	1	2	34.000	5.372	8
2	2	1	36.864	4.109	22
2	2	2	37.091	4.879	22

TABLE G

ANOVA Summary Table

Three way ANOVA
A. group (treatment/nontreatment)
B. profession (health professional/physically disabled)
C. time (pre and post)

SKAT HR scale

S	SS	DF	MS	F	P
A	423.136	1	423.136	6.777	0.012*
B	6.212	1	6.212	0.099	0.754
AB	48.001	1	48.001	0.769	0.384
S-within	3746.250	60	62.438		
C	5.363	1	5.363	1.596	0.211
AC	11.229	1	11.229	3.340	0.073
BC	0.039	1	0.039	0.011	0.915
ABC	9.261	1	9.261	2.755	0.012
CS-within	201.688	60	3.361		

* significant at .01 level

TABLE H

ANOVA Summary Table

Three way ANOVA
A. group (treatment/nontreatment)
B. profession (health professional/physically disabled)
C. time (pre and post)

SKAT A scale

S	SS	DF	MS	F	P
A	1.814	1	1.814	0.034	0.854
B	5.556	1	5.556	0.015	0.747
AB	0.077	1	0.077	0.001	0.970
S-within	3179.875	60	52.998		
C	22.303	1	22.303	4.323	0.042*
AC	2.084	1	2.084	0.404	0.528
BC	7.447	1	7.447	1.443	0.234
ABC	7.100	1	7.100	1.376	0.245
CS-within	309.563	60	5.159		

* significant at .05 level

TABLE I

ANOVA Summary Table

Three way ANOVA
A. group (treatment/nontreatment)
B. profession (health professional/physically disabled)
C. time (pre and post)

SKAT M scale

S	SS	DF	MS	F	P
A	142.615	1	142.615	7.702	0.007*
B	25.351	1	25.351	1.369	0.247
AB	8.682	1	8.682	0.469	0.496
S-within	1111.063	60	18.518		
C	9.647	1	9.647	2.199	0.143
AC	13.042	1	13.042	2.973	0.090
BC	1.196	1	1.196	0.273	0.603
ABC	0.386	1	0.386	0.088	0.768
CS-within	263.188	60	4.386		

* significant at .01 level

TABLE J

ANOVA Summary Table

Three way ANOVA
A. group (treatment/nontreatment)
B. profession (health professional/physically disabled)
C. time (pre and post)

SKAT SK scale

S	SS	DF	MS	F	P
A	27.628	1	27.628	0.656	0.421
B	309.770	1	309.770	7.354	0.009*
AB	36.425	1	36.425	0.865	0.356
S-within	2527.375	60	42.123		
C	2.315	1	2.315	0.542	0.464
AC	7.277	1	7.177	1.681	0.200
BC	0.270	1	0.270	0.063	0.802
ABC	2.740	1	2.740	0.642	0.426
CS-within	256.188	60	4.270		

* significant at .01 level

TABLE K

Cell Means Table

A. Profession: 1. health profession
2. physical disability
(pretests)

A	Mean	Std. Dev.	Cases
	S K A T HR Scale		
1	26.4314	6.1131	51
2	25.0769	5.5145	13
	S K A T SM Scale		
1	36.4902	4.2302	51
2	33.6154	3.7758	13
	S K A T A Scale		
1	25.1373	5.3142	51
2	25.0769	4.2320	13
	S K A T M Scale		
1	26.1765	3.4450	51
2	24.9231	3.3739	13
	S K A T SK Scale		
1	38.1765	5.4976	51
2	34.3077	6.0192	13

APPENDIX G

TABLE L

Comparison of normed pretest scores with SKAT normed scores

	H.P.	P.D.P.	Total Group	SKAT
Treatment group				
HR	48.48	48.96	48.55	49.13
SM	53.47	48.01	52.66	49.64
A	45.19	43.24	42.35	49.63
M	51.60	50.73	51.47	48.91
SK	51.60	41.00	50.04	50.91
Nontreatment group				
HR	43.26	40.70	42.58	49.13
SM	53.87	46.61	51.93	49.64
A	42.05	41.27	41.51	49.63
M	48.33	44.92	48.42	48.91
SK	47.20	43.19	46.13	50.91