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AT MAIMONIDES UNIVERSITY**

SEXUALITY AFTER BURN INJURY

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VITA

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ABSTRACT

The impact of sexual satisfaction after burn injury is explored. The purpose of this study is to investigate sexual dysfunctions after burn injury. The sexual satisfaction, sexual dysfunctions, and sex acts post burn injury was the primary focus of this paper were studied. Nine-teen burn survivors were given the twenty one item questionnaire for sexual dysfunction after burn injury. The participant population ($N=19$) was 68.4% men and 31.6% women, had an average of total body burn injury of 40% with 52.6% of the population having third degree or full thickness burn, and 47.4% employed full-time. Sexual Dysfunction After Burn Injury questionnaire found a significant decrease in sexual satisfaction, health, and social outings with in increase of masturbation. It showed no changes in orgasms. Conclusions indicate burn injury affects sexuality.

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CHAPTER I

Introduction

Sexuality is an integral part of being human and is inseparable from body image and self-esteem (Foucault, 1990). Foucault describes a normal sex life as one you and your partner decide is comfortable and gives you both pleasures. It can be gentle and healing. It can include holding a hand, giving a caress, or conveying gentle and loving words. A gentle massage or cuddling, are other ways that couples and individuals enjoy physical touch.

Honoring sexuality and the healing of the deep and sacred sexual self are essential components of reclaiming the power of touch in our lives (Crenshaw, 1996). Sexuality is different for each individual, as far as both its ecstasy of it; as well as a means of sexual healing. The desire to know and live our sexuality varies from person to person and the path to healing physical injury will come through countless and unexpected means (Crenshaw, 1996).

Sexuality is an essential and readily accessible doorway to the healing of a badly wounded human condition or illness. When sexuality is looked at, it is important that we recognize that sexuality includes everyone. Those who are celibate, single, mated, very young, very old, disabled, ill. Sexuality is about all of us, all the time, and it certainly includes, though is in no way limited to, the expression of physical, sexual intimacy between two partners (Caplan, 1996).

Stettbacher (1991) believed that sexuality is everywhere. It is the creative force. It is what created each of us, including the variations among individuals, races, cultures. It is what makes flowers reproduce, as well as the force behind the existence of every type of animal, tree, plant, or just about any living organism. Sexuality creates art, architecture, music, poetry. It is the universal catalyst for the mysterious occurrence of love. It is the process that unites masculine and feminine energies within us, thus allowing for the possibility of a deep inner unification and an enhanced connection to all of creation. It is behind everything that is beautiful. Yet, through some weighty historical and cultural forces stemming from unconsciousness and ignorance, sexuality has come to be associated with something sinful, something dirty, and something to feel ashamed of.

Since sex is not just intercourse, living a sexual life is an opportunity for everybody. Whether someone is single by circumstance or choice, widowed, or separated from our partner for any reason, an individual can still live a sexual life. We can experience a touch-filled, passion-filled life by tasting our food, by looking more closely at beauty, by feeling the warmth and contact and affection when people in our lives do extend physical touch. Even a light hand on one's back, or a brief hug, can be a source of physical and emotional nourishment (Rynearson, 1978).

Schaef (1987) found sexual dysfunction is an issue that surpasses all cultures, gender, sex, age, ethnicity, or faith. Any sexual dysfunction can be all around the world. There are few places in the world that are untouched by sexual dysfunction. The whole planet is suffering from some type of sexual dysfunction. Although many other countries around the world are sexually repressed, they are equally devastating to the individual who has the sexual dysfunction (Schaef, 1987).

Western culture, despite what may be a superficial appearance of openness, is deeply repressed sexually (Remland, 1995). Remland (1995) believes that repression is not measured by how few or how tight are the clothes we wear, what we dare to do in bed, how freely we assert our right to orgasm, how liberated our use of language is. He measures repression by the overriding sense of alienation from our bodies, from really feeling the touch of sex, intimacy, and eroticism. Repression is about our inability to know the value of our own sex and sexuality.

Debiase (2004) discussed the overemphasis on sex in Western culture is combined with a stark lack of deep understanding about it. While sexual obsession runs us on one level, there is an immense amount of depth, ecstasy, and knowledge available in the human body that remains largely untapped. Many individuals are aware that they do not understand the mysteries of their own sexuality. Perhaps they have had experiences that have hinted at the vast territory as yet unexplored, but they lack the knowledge, the context, the circumstance, and the guidance by which to further explore this terrain.

According to Mehren (1996), we inherit our parent's, our cultures, and our religion's attitudes toward the body and sex. We inherit the sex life of our collective environment. Part of this comes from the position-embedded, though often unconscious, notion of original sin. A persistent condition that tells us there is good and bad, right and wrong, and that the body, especially the body of a woman, is bad, wrong, ugly, and dirty (Mehren, 1996).

In Farrington's (1999) article it was found that if most individuals examine themselves closely enough, they discover that their conditioning about sexuality includes, as some level, notions of secrecy, shame, embarrassment, confusion, or perhaps simply an uncertainty about whether their sexuality, their expression of it, is all right. For most individuals, sexual healing and the lifting of the imposed shame of our conditioning will require significant efforts if we are to finally experience organic joy and freedom within the body.

Burn Injuries & Sexual Dysfunctions

While most of us are sure that we like to have sex, most of us also haven't spent much time thinking about what happens physiologically while we are engaged in the act. Masters & Johnson (1997) coined the term "sexual-response cycle" to mean the sequence of events that happens to the body when a person becomes sexually aroused and participates in sexually stimulating activities (intercourse, masturbation, foreplay, etc.). In the first phase of the sexual response cycle excitement is obtained. However, one needs to think about how this excitement is achieved. Is the excitement achieved through foreplay, touch, kissing, or any way in which an individual may find sexually stimulating? When an injury occurs and causes changes in the sexual response cycle, it then causes sexual dysfunction (Masters & Johnson, 1997).

There are many injuries that an individual may encounter. Few people have burn injury however those individuals who have experienced burn injury face a new life of many challenges. These challenges many include dysfunctions with sex and sexuality. The effect of burn on sexual response is talk about based upon the degree of the burn

survivor's injury and whether the damage affecting the individual's skin, tissue, and/or muscle effects the burn survivor's sexuality (Sipski, & Alexander, 1992).

Bors & Comarr (1960) questionnaire studied the impact on erections and ejaculations, depending on their extent of injury. In males is a loss of psychogenic erectile function in union with maintenance of reflex erectile functions. Ejaculatory function is markedly decreased in men with burn injury. This is most likely due to the coordinated neurological impulses from the nervous systems to the penis, in which is necessary for sexual stimulation to occur.

In a recent magazine article Beard (2004), found that consistent problems with sexual dysfunction can cause a burn survivor's self-esteem to plummet. The bottom line, says Beard, is that the couple needs to find out what's going on. If the burn survivor' and their partner repeatedly experiences problems that don't improve with time, then they need to ask themselves: "What do we need to do to work together?"; rest and understanding that the burn injury can cause physical and psychological changes in the burn survivor's sexuality. These changes can then lead to sexual dysfunctions.

In the article Prevention, (2004) sometimes the thrill sex is gone because the sex drive, or libido, can't peacefully coexist with stress, anger, or physical pain cause by the burn injury or the burn survivor miss out on sex because they have unrealistic expectations. Sometimes the reason is physical: Sex routinely gets put on hold, when the main objective of the burn survivor is learning how to begin "living" again. Also during the physical recovery process foreplay be painful.

Kaplan & Sobel (1991) found that as the skin is healing it can be painful after a burn injury. Any kind of pain, including burn injury, can make sex seem irrelevant. It can be brought on by lack of arousal, or desire, or the physical pain the burned skin feels when it is touched. Some serious burn injury can also cause pain during sex and at other times.

The recent article by General Practitioner (2006), found it is usually difficult to find any one reason for loss of sexual desire, and as a result there is no good data on which to base decisions. Possible explanations include overwork, stress, and lack of innovation in a long-term relationship along with loss of sexual interest in the partner. It is suggested that other aspects of the burn survivor's life is looked at first in order to see if there may be any changes they can work on in order to help with the burn survivor's sexual dysfunction.

Sayburn (2005), believes that human beings are nothing if not adaptable. It is possible to learn to live with chronic illness, disability and even pain, with proper care and support from the medical profession. But one thing guaranteed to make a happy person miserable is the disruption of a satisfying sex life. Sex, or lack of it, can make all the difference to a patient's well-being and relationships. It has even been described as 'the chutney that holds together the crumbling cheese sandwich of marriage'.

Taylor (2005), recent article provides suggestions to couples for increasing sexual excitement in their relationship. By experimenting with different degrees of touch and temperature, a couple will expose their body to a variety of thrilling physical reactions they may have not felt before. These diverse sensations dramatically increase arousal,

heighten skin sensitivity, and release pleasure-fueling endorphins. However, if one of the partners is a burn survivor, then these sensations can dramatically decrease the arousal as their heighten skin sensitivity does not release pleasure-fueling endorphins. Adding heat or cold to the burn injury spots on the burn survivor's body will actually decrease their sensitivity to touch.

As the above research has found, touch and the skin's sensitivity play a dramatic and large part in an individual's and couple's sexuality. Based on the research, when the skin is damaged it begins to cause sexual dysfunctions. We then must look at how the skin and touch play a role in sexuality and sexual dysfunctions.

CHAPTER II

Skin and Touch

The skin is composed of several layers. Epidermis and dermis are the two main layers which make up the skin. The outermost or top layer of skin is called the epidermis. The epidermis is primarily the protective layer and consists of a number of sub-layers. This is the layer of skin that we see. This layer rests on top of the dermis, which is the lowest layer. The dermis is a flexible, strong layer embedded with collagen and elastin fibers that give it resilience and elasticity. The dermis layer contains sensory nerve endings and receptors, connective tissue, hair follicles, blood vessels, and sweat glands (McCracken, 1999). The skin also provides a sensory line between the body and its surroundings that allow individuals to feel large variations of sensations. A great deal of sensitive information is sent to the brain from skin, which is densely packed with nerve

endings. There are certain areas of skin that have more nerve endings and are more sensitive than others. For example, the fingertips have the most nerve endings of all.

According to Register (1975) our most fundamental sexual organ is skin. It can alter how we experience providing and obtaining touch when the skin is disrupted. For each individual and couple, what feels good or not, must be mutually decided through communication and understanding. When partners begin stroking and rubbing the skin, sexual pleasure begins to develop (Montagu, 1998). Partners discover each other's bodies with touch to gain knowledge of what triggers pain or gives pleasure. Touch and massage are considered tools for sexual foreplay. It is through the stimulation and stroking of the skin, that sexually sensitive nerve receptors throughout the body become stimulated.

The skin covers us all over. Hooker (1952) found the skin's growth and development proceeds throughout life, and the development of its sensitivities depends largely upon the kind of environmental stimulation it receives or type of trauma it may receive. The surface area of the skin has an enormous number of sensory receptors receiving stimulation. Some of the stimulation skin receives can be perceived as sexual. The skin is called upon to make many new adaptive responses to the environment that may generate sexual desire. Among all the senses, touch stands supreme. The sense of pain, mediated from the skin to the brain, provides an essential warning system designed to compel attention. This can cause hinder sexual desire.

Hall (2004) reports sexual desire can be received through the skin. By touching, caressing, and fondling the skin, sexual desire is awakened. Through touch of the skin, individuals can increase eroticism in their mates. Stimulation of the skin with lips,

tongue, and objects can bring the whole body into a unique sexual response, which is familiar to the individual and his or her partner. It is natural that as an individual strokes, rub, kisses, and gently massage on sensitive skin, there will be an increase of sexual arousal. Sexual sensations will rise and fall through constant contact of the skin.

In the classic article by Bakwin (1949) it was found that extreme sensory deprivation in other respects, such as from light and sound, can be survived, as long as the sensory experiences at the skin are maintained. If an individual experiences sensory deprivation through the skin, enjoyment is lost. This pleasure can also lead into an individual's sexuality. Sexual desire can be reached through the skin. If it were cut off, sexual desire may be suppressed.

What happens to our sexuality when our skin is burned? Seigel (1986) discussed the skin and its effects on health, as we cannot survive if over fifty percent of our skin is destroyed. However, today there are many individuals who have survived burns over fifty percent. The skin is destroyed and disrupted. Experiencing touch can become painful and no longer pleasurable. A gentle massage or cuddling can be extremely difficult for a burn survivor. Sexual pleasures may not be obtained through stroking and rubbing of the skin. Body images and self-esteem may begin to cause tension in relationship. Pain and loss of skin sensitivity could become sexual obstructions within couples and individuals.

In The Oxford Dictionary of English by Soanes (2005) the word touch is defined as "the action or an act of touching (with the hand, finger, or other part of the body); exercise of the faculty of feeling upon a material object." Touching is defined as "the action or an act, of feeling something with the hand, etc." The active word is of feeling,

although touch is not itself an emotion, its sensory elements which is a combination we call an emotion. This emotion can be seen and determined as sexual. When speaking of touch, of being touched, especially by some sexual act, it's the state of being sexually moved that it is hoped to express.

Montagu (1967) went on to define sexual intercourse as “the harmony of two souls and the contact of two epidermises, elegantly emphasized a basic truth: the massive involvement of the skin in sexual congress.” No other relationship is the skin so totally involved in as sexual desire. The book *Our Bodies, Ourselves* (1976) indicated the true language of sex is primarily non-verbal. Words and images are poor imitations of the deep and complicated feelings within us. Unsure of touching as a way of sharing with others, we have allowed our fears and discomforts to limit the rich possibilities of non-verbal communication. Sexual expression has a power most of us are still beginning to explore. Sex has been called the highest form of touch. In the profoundest sense, touch is the true language of sex. It is principally through stimulation of the skin that both male and female are brought to orgasm in coitus, in the case of the male largely through the sensory receptors in the penis, and in the female through the sensory receptors in the vagina and circum-vaginal areas of the skin.

For both sexes the most immediately sexually arousing stimuli are tactile. In sexual foreplay, as well as during intercourse, manual and stimulation of erogenous zones as well as the skin, greatly intensifies the sexual experience (Stoller, 1968). However, what if tactile stimuli that produce sexual arousing are painful, do they cause injury? This is especially apparent when the exploration of the body that the individual may want to embark upon causes pain and discomfort. Sexual arousal may be inhibited. Reciprocal

stimulation of the skin between two mutually sexually interested individuals can be sexually arousing or sexually unexciting.

Hollender, Luborsky, & Scaramella (1969) commented, “The desire to be cuddled and held is acceptable to most people as long as it is regarded as a component part of adult sexuality.” They believe that for some women, the need to be held or embraced is a foremost determinant of sexual arousal. One must begin to think about sexual arousal being achieved if skin injury may obstruct sexual arousal. In many women the non-verbal message is: being held is being loved.

In a further study also by Hollender, (1970) in which the original group of 39 women participating in the first project was enlarged to 112, all between the ages of eighteen and fifty-nine, information was gathered on the correlations between the wish to be held and various behavioral patterns and subjective reactions. It was a general leaning towards openness in emotional expression. Such women were interested in and derived much pleasure, they were comfortable with or accepting of sexuality, felt free to feel and express hostility, responded in a friendly or affectionate manner after imbibing alcohol, responded positively to another form of body contact, ballroom dancing, and found pleasure in tactile behavior of other kinds.

Laudernslager and Reite (1984) believe it is in our human nature to be touched. Without touching individuals become withdrawn and depressed. With burn survivors touching may no longer be sensual or sexual. It may be painful and embarrassing. With touch, burn survivors may no longer be able to pick up clues, or ascertain sexual responses. Burn survivors may be limited to important sexual senses. Although touching

does not have to be sexual it may reaffirm a ''couples love and commitment towards one another. In the lightest stroking of a sexual partner, messages are being sent. It might be the softest touch. However, if no sensation is present, a partner may not receive the unspoken message. Or if the sensation of the touch is painful to the skin, the touch may be construed as a negative touch which may interfere with the intended desire.

Skin changes its responses under different circumstances, as when it is warm or cold, animated or exhausted (Powell, Brasel & Blizzard, 1967). With burn survivors, their skin may have a difficult time adjusting to warm or cold environments as the skin may not be able to monitor or regulate its temperature. What may have been erotic and pleasurable prior to the skin burn, may now be seen as painful or non-erotic. Sexual desire may be decreased by touch of the burn area, as it may be extra-sensitive or numb.

Burn Assessment

According to Robinson & Smith (1990) different systems have been developed to estimate the percentage of total skin that has been burned. Burns are judged by the size of the burn in relation to the whole body and by the depth of the burn, determined by how much of the thickness of the skin is involved. The size of the burn is described as a percentage of the total body surface area. One of the older systems is known as the Rule of Nines, which is based on the rough approximation that: each arm has nine percent of the body's total skin, the head nine percent, each leg nine percent, the front of the torso eighteen percent, the back of the torso eighteen percent, and the neck one percent. When burns exceed thirty percent of an adult's total body surface area, it is usually necessary to

perform grafts in stages because the patient does not have enough healthy skin to graft the burned area in a single operation.

It is helpful to understand something about the structure of normal skin (Monafo & Pappalardo, 1971). The outermost layer is the epidermis, which is composed of living Keratinocytes and Melanocytes, which are the pigment cells that impart color to the skin. As old epidermal cells die off, new cells replace them. Under the epidermis is the thicker layer of skin, called the Dermis, which is largely made of the protein collagen. Blood vessels, nerves, oil glands, hair follicles, and sweat glands are located in this layer. The cells that regenerate skin line the hair follicles and sweat glands. Thus, these structures are necessary for the skin to be able to heal itself. When skin is damaged in a burn, sensation may be altered along with sweating function and possibly hair growth. Damaged skin also results in loss of fluid and entrance of bacteria into deeper layers of skin and even into the body.

Monafo & Pappalardo, (1971) went on to describe two important factors in determining how severe a burn is include how much heat the skin acquires and the duration of the burning. The site of the burn is also significant because skin varies in thickness, water and oil content, the amount of subcutaneous fat, and the number of blood vessels from one location in the body to another. The severity of a burn injury depends on how profound the injury is and the extent of the body that has been burned. It is common for a person with a significant amount of burn injury to have burns of different depths. The deepest injury is frequently at the core of a burned area. There are numerous tests used to determine the depth of a burn injury, but an experienced burn specialist's examination continues to be the most reliable way of evaluating the depth of burns.

Burn Injury

According to the National Burn Center Reporting System, (n.d.), fire is the fourth greatest cause of accidental death in the United States. It is exceeded only by motor vehicle accidents, falls, and drowning as a cause of unintentional injury death. Each year, about 20,000 adults and children die and an additional 75,000 to 100,000 are hospitalized from fire-related injuries. Burn injuries occur in house fires, auto accidents, sand-work-related accidents, as well as in recreational accidents involving campfire, outdoor grills, boats, aircraft, and motorcycles. Basically, anything that involves heat, chemicals, or fires can cause a burn injury. The most common cause of burn injury is flame, and the most common place of injury is the home. House fires cause three fourths of all fire injuries. Very young children and older people are injured in house fires more frequently and more seriously than other people. Males are more likely than females to be injured in a fire. This may be because boys play with matches more often than girls, and because more men than women have jobs with a high risk of burn injury from contact with steam, chemicals, electricity, fire, and explosive materials.

Classification of burn injuries

Ravage (2004) explains the different types of burns. Injury to the top layer of skin is called a Superficial Burn or first degree burn. Superficial Burns normally heal within five to seven days. A common type of superficial burn is sunburn. Because the top layer of skin is thin, it is easily replaced. Even when skin is not injured, the skin completely replaces the top skin layer every forty-five to seventy-five days. Healing from a superficial burn usually occurs without scarring, although there may be some permanent

discoloration. With a first-degree burn, the skin becomes red, warm, swollen, and painful. Injury to the second layer of skin is called a dermal injury burn or second-degree burn. This type of burn involves a portion of the dermis as well as the epidermis. Second-degree burns are caused by brief contact with fire and by scalds from liquids that are mostly water. The skin is blistered, moist, discolored, and painful. Spontaneous healing is possible, usually within four to six weeks. Second-degree burns usually leave scars. Third degree burns destroy the full thickness of skin, all of the epidermis and all of the dermis, which includes fat. Third degree burns are commonly caused by contact with flame or liquids that have a high boiling point. A third degree burn appears dry, pale, and leathery. The skin will not grow back. Skin grafts must be performed to keep infection from entering the body through the burn. Because third degree burns destroy nerve endings, the burned skin is numb.

Burns that damage muscles underneath the subcutaneous skin layer, are described as full thickness burns. Injury to the underlying muscle and are called fourth degree burns (Clark, 2005). Fourth degree burns involve the tissues beneath the skin such as muscle and bone. This term is rarely used, because burns of this depth are rare. They are usually caused by high voltage electricity or by sleeping close to a fire for a long time in an altered stated of consciousness. The limb is often destroyed and amputation is necessary. Full thickness burns skin contracts and loses its ability to stretch. It becomes tight around the extremity, eventually restricting the blood supply to the hand or foot or limiting chest expansion during breathing.

Phases of Burn

Livneh & Parker (2005) observed that a person who is undergoing psychosocial rehabilitation after a disabling injury, they will go through a series of psychological stages. This is also true for burn injured survivor's and their families. The earliest involves physical survival, reduction of discomfort, and making certain that the trauma does not recur. Later, the person addresses issues surrounding maximizing recovery of physical skills and functions or training in new ones. The progress they make in these areas prepares them to begin to come to terms with the changes they have gone through and become whole again. At this stage survivors are prepared to accept themselves with both their totality and their damaged vessel. When this is accomplished, they work at resuming social activities with family and friends and, eventually, resuming work, play, and sexual activity. With this self-acceptance they can respond appropriately both to those who would reject them because of their injuries and to those who would treat them like worthless victims, because of their personal struggles.

The emotional journey to recovery is seldom a straight path (Banks, 2003). It is much more common to move in ups and downs; feeling great one day and helpless the next. Taking one day at a time and having a clear plan as to what goals need to be achieved by what point in time is one way of staying on track. The person who remains aware of how far they have already come and who makes use of the people who can help them get where they want to go is working in the right direction.

The Survival Phase

Fisher (2001) gives a full description on the survival phase during burn injury. In the early days and weeks following burn injury, the burned individual's condition may be

critical, and the prospect of death may appear great. The medical treatment of the individual in these early weeks is aggressive, with daily dressing changes, fluid and antibiotic therapies, and surgical interventions. Many times the individual is on a respirator or is too sick to communicate with the treatment team and/or family (Bingham, Gallagher, & Powell, 1987). The inability to speak with the individual is not easy for family members, who are often trying to come to terms with the likelihood that their loved one may die.

William, et al (2002) found that the burn survivor's partner looks towards staff for direction and encouragement regarding treatment, care, and prognosis. The treatment team is cautious when talking with the partner and/or family. The team are cautious not to provide false hopes. Many times the partner and family have a difficult time staying positive because of the uncertainties or a poor diagnosis. As the days go by, the partner and family begin to realize and accept the seriousness of the burn individual's medical condition and prognosis. The grieving process has begun, as evidenced by their acceptance of a possible poor outcome (Niemeier & Burnett, 2001). The family needs to begin to mourn their losses, both actual and potential. The treatment team is aware of this mourning process and normally allows the family the opportunity to convey their thoughts and feelings without fear of rejection or judgment.

Davidhizer & Dowd (1997) found that a wide range of psychological emotions, feelings, and thoughts are involved after burn injury. All burn injured survivors and their families experience grief, denial, and depression. The emotions the family experiences during this time will run the length from anxiety and fear to despair and depression. Family members may feel as if they are drowning in a flood of emotions. They often feel

as if they are going "crazy", if they cannot stop crying, if they feel numb, or if they are angry with the victim for getting injured (Bruce, Schultz, & Smyrnios, 1996). All of these feelings and emotions are normal under the circumstances. Again, it is best if the family feels comfortable expressing these emotions, because if they are left unaddressed, they could result in significant harm to the family and the patient.

Flach (2001) speaks about the first priority of treatment team, which is the patient. From time to time the treatment team may become irritated with the family's questions and demands for information. If this becomes an issue, the unit social worker or counselor will generally intervene and establish a specific time for the family to meet with members of the medical team to discuss the patient's condition and treatment. He recommends that family members be encouraged to bring a list of questions to this conference and to take notes throughout the meeting. A family that writes down explanations and asking the nurses and doctors to repeat or thoroughly explain information will help the family better understand prevent misunderstanding when the information is given to other family members. This is also a great opportunity for the medical team to learn about the patient's pre-burn functioning, personality, and coping styles. This information will be very useful to the therapists, who will develop the patient's treatment plan.

The Practical Phase

During the functional phase, even though death remains a possibility, it is no longer the main focus. Davis & Sheely-Adolphson (1997) found that unlike during the acute phase, medical interventions at this time are no longer solely for survival purposes.

Most of the efforts are now geared to helping the patient reach their maximum functioning potential. Staff members are less guarded against giving false hope, and a more optimistic tone can be noticed in conversations. This helps to alleviate some of the feelings of crisis and to reduce tension for the family. As the patient's condition becomes stable and shows signs of improvement, the family will start to relax and may even begin thinking in terms of the future. The family now needs to recover some control in their lives and begin to resume some of their normal activities: work, laundry, school, and even sex. The family may think about staying away from the hospital for a day so they can take care of other matters, or possibly they will want to leave before visiting hours are over. This is the start of the normal separation process. Ilechukwu (2002) found that during this time, burn survivors begin to exhibit high levels of stress and may view this particular time as in terms of abandonment and begin to play on the family's emotions, trying to make them feel guilty. The family can help by pointing out to their loved one how important it is for the patient to do things independently and gently reminding the survivor how much he or she formerly hated being dependent on others to brush the survivor's teeth or wash his or her face. The more independent the patient becomes, the sooner they will be able to go home. This time can be used by the family as respite, because once the patient is home, there will be little leisure time.

Belikov, et al (2006) demonstrated that the rehabilitation team makes a comprehensive assessment of what the patient can and cannot do. This point in time is packed with movement and new information. When the treatment team is given all this information, they establish a personalized treatment plan that will maximize strengths while addressing weaknesses. Patients may undergo physical and occupational therapy

for more than three hours per day. They work on feeding and dressing themselves and on walking. For the recovering burn patient, tackling boundaries and a new appearance can be horrifying. The information given by the relatives to the staff in the early weeks will be used at this time to challenge and encourage the patient.

As the patient prepares for the day of discharge, so too must the family (Spires, et al, 2005). Special arrangements need to be made for the care of young children, and medical equipment such as a walker, a commode chair, and dressing supplies need to be ordered. Furniture may need to be rearranged from various floors or rooms. A home care agency might become involved to help with wound care and physical therapy at home. All of this is coordinated with the social worker or discharge planner, who will sit down with the family as discharge nears and discuss at length the patient's needs, the family's resources, and any issues not yet addressed. Johnson & Cain (1985) believe this time is when sex should ideally be addressed. Many times, however neither patients nor staff entertains the thought of sex.

Appearance Phase

Now that the threat of death is out of the way and the burned individual's functioning abilities are known, the reality of the individual's altered appearance weighs heavily on them and their families (Bishop, 2005). The burn individual is no longer limited to the burn unit, and is free to move about the hospital to visit the cafeteria, the gift shop, and the rehabilitation department. During these trips off the unit the burn individual will come across many people who have never seen a burn victim. These people may stare at or even tease the burn survivor. Curious people may approach the

patient and ask questions, some of which may be quite inappropriate. Since this appearance is new to the patient as well, the recovering burn victim may not be prepared to deal with these encounters. Parkinson (2006) feels that the society in which we live can be painfully cruel to anything or anyone that is different from the norm. We fear what we don't understand. The unknown or the unexplained annoy many people.

Roessler & Rubin (2006) established that burn survivor will aggressively begin working with the social worker or counselor to change to their appearance, which may change quite a few times over the course of several months. The burn survivor's partner and family may be overlooked during this process, because, unlike the patient, they do not carry with them the visible signs of burn injury. Yet the family, like the patient, remembers the patient's pre-burn appearance. They struggle to integrate the new appearance into their psychological memory. Just as the burn survivor may hope this appearance is brief, so too might the partner and family. They may bring in pictures of the patient taken before the burn to show to the staff. Or they may place unrealistic expectations on plastic surgery, believing the burn survivor will look the same as before the burn. It is difficult for the family to accept that his injury has changed the patient forever.

According to McCafferty (1997) many burn survivors believe that before they can accept their appearance and go on with their lives, they must first forget what they used to look like. In a sense they must say goodbye to their old appearance, the one they were born with, and start over, creating a new identity for themselves, since our identities are closely linked with our appearance (Appiah, 2005). The family requires as much support dealing with this as does the burn survivor. In time, given proper guidance, the family

will come to accept the situation and can then begin picking up the pieces of their lives. The family and the patient will start with a clean slate, but the memories of this traumatic injury will be forever a piece of their past.

Sexual problems are one of the last taboos in medicine (Nazareth, Boynton, & King, 2003). They know they exist, they know that the burn survivors would like help with the sexual problems they may be experiencing. The burn survivor sees the primary health care team, as an appropriate source of help. The researchers know they must be sure that they will be ready to help when psychosexual problems are raised. They need to be able to recognize the problem and feel comfortable enough to discuss it. Sex and sexual problems often come into the medical team consultations. Sometimes it is easy to predict and understand, and on other occasions it may be totally unexpected. With this especially private part of their lives it is easy to see that the mind has a very powerful effect on the physical health. We should consider sexual problems as interactions between the emotional and the physical. Emotional factors, not always experienced at a conscious level, can interfere with sexual performance and enjoyment. Nazareth, Boynton, & King (2003) believed that the attitudes, anxieties, and fantasies revealed during the consultation and the physical examination are particularly relevant to understanding sexual problems. The researchers go one to describe the members of the primary healthcare team and at time believe they can be too focused on the medical care of the burn survivor. The medical team needs to keep their eye on the larger picture, and help them understand the varying degrees of interaction between their body and their mind along with possible sexual dysfunctions the burn survivor may begin or have already experienced.

Effects of Burn Injury

Broaddus' (2005) autobiography speaks about her experiences with burn injury. She describes how a burn injury has a profound impact not only on the injured individual but on everyone involved in the burn survivor's life, including parents, siblings, spouses, children, friends, and coworkers. As the burn individual fights for his life, family members and partners deal with the sorrow and confusion that has entered their lives. What once seemed so important, like vacation plans, becomes unimportant in the face of death. Normal routines have been exchanged with long hours at the hospital, last minute childcare arrangements, and extended visits by well meaning family and friends. Nothing is as it was. The medical unit's social worker, counselor, or staff psychologist, each of whom is trained in crisis intervention, can be helpful to the individual's partner throughout this ordeal. The family must eventually become the primary caregivers and will assume responsibility for the patient's day-to-day care. If the family's needs or partner's needs are repeatedly overlooked, the family may become overwhelmed and be incapable of the responsibility of caregivers.

In burn management, the prevention of scarring and infection is the primary goal (Zhou, Zhang, & Chen, 2006). For every member of the burn team, rehabilitation must start from the time of injury. Any type of burn injury is frightening. Patients do not know what to expect and will be in constant pain. Respiratory management, physical therapy management, occupational management, positioning, and engaging patients in functional

activities and movement must start immediately. Yet time and time again, the burn management team does not look at or emphasize sexuality.

The physical functions most treasured and most often used are those that have the utmost impact on self-image (Mitchoff, 2005). This makes sense when we think about it: we use our eyes and our hands to interact with the world in one way or another almost every waking movement. Furthermore, in order to survive we must use our nose and mouth to breathe, drink, and eat. Likewise, we use our feet and legs to mobilize in the pursuit of our goals.. We relate to others through what we hear, and we have an impact on others through our sexual arousal patterns, our external appearance, and what we say. “One aspect of nearly every surface characteristic we have is directly related to such fundamental needs as obtaining and consuming food and water, establishing and maintaining social connections, and obtaining those pleasures that give life its variety and flavor” (Moreira, 2005).

Alcoff & Mendieta (2003) found that gender is one of the qualities by which people identify themselves to themselves and the world. Gender is declared through hair, makeup, and clothes and grooming as well as through a personal style of relating to persons of the same sex and persons of the opposite sex. They found that concerns about changes in appearance and changes in functional abilities can strike at the core of our sense of being attractive and lovable. This can be why burn survivors are often asked to look deeper into themselves, and then others, to establish the sense of beauty and worth that was previously gained by attention being paid to physical appearance (Colino, 2005). In the long run this can lead to a better understanding of life and what it means to be a

lovable and attractive human being. In the short run recovery can include feelings of grief, rage, anxiety, and depression as the realization of loss sinks in.

Mueller's (2003) writings speak how about patients' sense of themselves as sexual being may be impaired by a decrease in function or appearance. The skin is where intimate contact is made, and to for fully experience physical and emotional pleasure we must be comfortable with both our own skin and appearance and that of our partner. For the burn survivor and a partner, many factors can interfere with this comfortable interaction. Some burn survivors withdraw from physical contact for fear of being rejected by the other, and some patients only passively accept the advances of the other, refusing to *give* of themselves as well as *take*. This may be the result of feeling less lovable and attractive as a result of a changed appearance.

Mueller (2003) goes on to speak about the burn survivor's partners, and their thoughts and feelings regarding their own difficult emotional reactions to work through. He speaks of the partner's fears of damaging or hurting the survivor, fear of causing embarrassment, and fear of revealing their own inhibitions about touching the damaged skin. The strong, mutual relationship the survivor and the partner used to share may be damaged as one or the other becomes less of a peer and more of a caretaker, afraid to express his or her own needs and desires for fear of burdening the other.

The burn trauma, dressing changes, as well as the stretching and straining of physical and occupational therapy, can also lead the patient to be awkward about, or even afraid of, skin exposure and contact (Herrick, 2005). Their changed appearance and changes in function and sensation may lead them to feel shame, fear, or other negative

emotions that get in the way of intimacy. Furthermore, fear of infection is great in the burn unit, and many patients remain leery of infection even after wounds have closed. They may shy away from skin contact as a result.

Zhu, et al (2006) describe one way many people recover from these conditions is to gradually increase contact with, and exposure of, the skin in an increasingly intimate manner. Early on in treatment, partners can learn how to cleanse and dress wounds. They may also massage the skin with soothing oils and creams. As rehabilitation progresses, massages become increasingly helpful as a way of loosening joints and returning sensitivity to the skin.

Hover-Kramer (2001) believes non-verbal emotional communication of touch and massage can begin to heal internal wounds. The courage and the words to make requests and to express feelings will follow gradually. Both the burn survivor and partner will benefit if they focus on the pleasurable sensation of warmth and touch, allowing themselves to feel their passion. When they look into each other's eyes and whisper in each other's ears, partners usually find their hearts opening and mutual attraction growing as inhibitions and apprehensions diminish.

Family, marital, sexual, and social relationships all play a major role in helping burn survivor be comfortable with their appearance and gradually develop a deeper sense of worth (Hoffman, 2004). This is because people internalize what they experience externally. In other words, as we experience encouragement, understanding, challenge, and a return to normalcy in relating to others, we begin to follow the same direction for ourselves. The path can be a difficult one, however, and negotiating it requires

consistency, communication, and honesty. Sheridan's (2003) research found that friends and family can best relate to survivors by giving them emotionally honest feedback when they request it. It is important for the burn survivor to communicate honestly and boldly as well. Both burn survivor and those close to them need to be honest with themselves about the feelings brought on by wounds or scars. They also need to be honest regarding the emotional and psychological effects the burn survivor undergoes with sexual activity and function with their partners. The burn survivor and his or her partner need to be made aware of the effects the burns will have on their sex life.

We sometimes feel disgusted when we look at wounds and scars and about our wish to stare at them or to look away (Ehde, 2000). She stated, "...there is possibly a primitive adaptive element in these behaviors." (pg. 158). When we see something new in the environment, we look at it until we determine whether we are in danger from it or whether we will be comfortable with it. An unusual appearance in a person may be a sign of disease processes that endanger us (Obstet, 1991). People who have good social skills may be more adept at looking quickly and then looking quickly away, but they feel the need to look nonetheless. Unfortunately, this need to look must be satisfied whether or not the burn survivor is comfortable with the changes in his appearance. Because of this, the survivor should be the one setting the pace for gradual exposure to social situations where staring might occur.

Randall, (1991) addresses how the burn survivor's tolerance for changes in appearance develops along with that of family and friends, as does the ability to tolerate the reactions of others. He believes if the patient asks for an honest judgment of the appearance of the wound, those close to the patient should make a direct and honest

statement. On the other hand, anyone who feels a need to comment on the wound should, get permission from burn survivors before doing so.

Wood (1986) found that some people cope with stares from strangers by reminding themselves silently that that person is being rude and that they do not have to let them get to them. He also suggested that others have found it useful to look away for a few moments when meeting new people. This allows the new people to stare, become comfortable with the scars, and regain their social amenities.

Schover's (2003) magazine article found that work and leisure activities generally require less intimacy than do family, marriage, and sexual relationships. She believes that many times work and leisure help us define who we are. She goes on to discuss that we are defined to some extent by the thing we do most often and most consistently. For many of us, these are our habits of work and play. The personality of the burn survivor plays a major role in how the wound and scarring effect work, play, and sex. Jackson (2006) found that people who are sociable and place great emphasis on being with others and who are very sensitive to the emotions of others may be more greatly affected by the reactions of themselves and others looking at and touching visible burn wounds and scars. People who experience their feelings more strongly and who derive great pleasure from being attuned to intellectual, emotional, and physical stimulation through cultural and aesthetic activities may also experience the impact of the injury to a greater degree. Those who are more individualistic, less involved with others, and less concerned with their own or other's reactions to the scarring may be affected less noticeably.

CHAPTER III

Burns and Sexuality

When burn a survivor is first admitted to the hospital, their main focus and that of their family is on their survival and physical conditions. Once the physical healing begins, other concerns surface. Patients begin to ask questions regarding their lives; on how they will handle relationships, and how will others see them. They begin to think and worry about sexuality and sex. Health care providers and patients hesitate to discuss sexuality. In Whitehead's (1993) literature review, sexuality concerns of patients with burns were an infrequent focus to the burn treatment team. Sexuality is a subject area in which health care providers do not consider will be a problem with patients. They focus much of their attention and energy on the physical recovery of the burn. They do not look into the emotional and psychological recovery of the individual when it pertains to sexuality and sex. Every disciplinary team member focuses on a particular intended medical intervention. A respirator therapist makes sure the burn survivor does not develop any breathing disorders. Physical therapists provide services that help restore function, improve mobility, relieve pain, and prevent or limit permanent physical disabilities of patients. An Occupational therapist ultimate goal is to improve clients' quality of life and ability to perform daily activities. Social Workers and psychologists provide the psychosocial support needed to cope with the burn injury or assist emotionally disturbed patients adjust to life after burn. However, many times none of the disciplinary team members think about asking or addressing sexuality and sex with the burn survivors and/or their partner.

Sexual dysfunction in patient burn survivors has received only limited attention in the literature on burn care. De Rios, Novac, Achauer, (1997) looked at five patients who

were post-burn. Discussion on the impact of post-traumatic stress disorder on sexuality was looked at; however, not enough research was obtained through this. Hospital burn units do not look at sexuality and the effects that burns have on the individual and couple. Medical treatment team members do not bring up the subject of sexuality and sex. It is common practice to have the patient bring up these concerns.

Bancroft (1991) found there may be concerns or anxiety about when to resume sexual activity, whether it is safe to do so, and whether normal sexual function will be regained. Burn survivors want normalcy and have concerns regarding the life they are to lead with burns. It takes patience, understanding, and lots of work on the part of the burn survivor, family, friends, and burn treatment team to adjust to these life changing events. Bancroft (1991) believes the effects of a clinical condition on a patient's sexuality, is directly related to the physical effect on the skin or psychological effects of the burn. Direct physical effects of a burn often look to be an explicit obstruction with sexual responses or with the genitals. Frequent concerns with burn patients are that of sexual functioning. A burn survivor may have experiences with vascular impairment or neurological damage. Other effects can be non-specific effects, such as pain or discomfort. Burned individuals may experience loss of skin sensitivity, decreased energy levels, redefining relationships, depression, anxiety, and loss of self-esteem. Malenfant et al (1996) found many burn survivors have problems with senses every week, which interferes with daily living. Sensory problems on burned skin begin to cause interference with sexuality as well. Burn survivors may have difficulty with their sexual partners engaging in sexual activity, which usually involves touch. Couples, on average, will

usually have sexual relations about three times per week. However, if burn survivors have sensory problems every week it begins to interfere with the couples' sexual activity.

A common complaint of burn survivors that can interfere with intimacy and sexuality is decreased energy levels. Decreased mobility and the resulting discomfort can affect what is comfortable and pleasurable for the individual sexually. A non-specific effect on burn survivor can cause changes in normal anticipated positions during sexual activity. It may require couples to be patient and understanding, to slow down and take small steps. Burn survivors may experience pain from the burns during sex. Also decreased mobility creates problems. Couples may at times find their usual sexual positions are affected by pain and decreased mobility. Other effects can include general depression, fatigue, weakness, lack of sexual desire, or immobility.

Fauerbach, et al (2000) looked at the effects of body image dissatisfaction after disfiguring changes. Scarring and disfigurement changes which occur on a burn survivor are likely to lead to major judgment and skewed body image changes in oneself. Changes in body image challenge burn survivors' self-esteem and may cause tension in their relationships. It is hard to feel romantic when they question their identity and purpose. The individual begins to demonstrate psychological changes from the burns such as embarrassment and feeling sexually unattractive. They will experience a loss of self-esteem as a result of the burn. The individual's relationships with family and friends also begin to change. Relationships between husband and wives may begin to look like child-parent rather than the adult-adult relationship that was present before the burn injury (Bancroft, 1991). While burns change the individual's and couples' lives, the burns do

not cause depression and anxiety. These are caused by the forced change in the survivors' life and their personal reaction to those changes (Bergamasc et al, 2002).

Women and men react differently to post burn injury. As stated before, sexuality is an integral part of being human and is inseparable from body image and self-esteem. Women have more concerns regarding body image and self-esteem. This is why Tudahl, Blades, and Munster (1987) found that evident the sexual level of functioning of post burn satisfactory level to be much less in women. It is believed that a correlation exists between body image and physical dysfunction as it pertains to sexuality post burn. The study also established that males have an exceptional post-burn sexual level of functioning. Bianchi's (1997) literature review also looked at post-burn injury outcomes in men. Again, with this research, body image and self-esteem post burn did not interfere with sexuality in men. With these two studies, one can conclude women with burn injury will have more of a difficult time adjusting to body image and have lower self-esteem than men.

Children and adolescents react differently to injury than most adults. They do not seem to have post-burn sexual dysfunction. It is said children have a different resiliency level than adults and react to trauma differently. In Sheridan, et al (2000) their main objective was to investigate the quality of life in those children who survived massive burns through a long-term assessment. This research showed most children with burn injury greater than seventy percent had a satisfying quality of life. Although sexuality is not a subject area which researchers investigate in children, one can conclude the younger an individual is when burn injury occurs, the less sexual dysfunction there could be in adulthood. Children's reality is usually based on what they know and what they

understand. If a child is burned at a young age then his or her understanding and reality of their burn makes sexuality in adulthood much easier to handle than those burn survivors who underwent burn trauma in their adulthood. When children grow up with burns, it becomes a part of who they are and may not be seen as a sexual dysfunction in their sexuality in later life.

This was also seen in Meyer's, et al (2004) research which found young adults who were burned as children do not have significant psychological problems. During this research study sexuality was not investigated. However, the fields of education, occupation, and social relationships were investigated. Sexuality falls under the umbrella of social relationship and the burn's survivors' connections with other people. When looking at burn survivors during adolescent it also does not seem to have great impact on sexuality satisfaction during later years and dating relationships (Robert, Blakeney, & Meyer, 1998).

As any individual grows older they begin to learn how society reacts to them and how they currently look to the outside world. However, if during this time, burn injury occurs, difficulties in adjustment may begin to develop. As children and adolescents continue to grow and adjust to the world around them, they learn how to deal and cope much easier with their environment than most adults. Lawrence, et al, (2003) found social and emotional aspects of burn injury had greater importance than the scars themselves. The scarring, severity, and visibility of burn scars may not be significant factors to burn survivors. Self-esteem and body image may have a greater significant role in sexuality than the physical sensations in which the scars provide.

In Cooper-Fraps & Yerxa (1985) studies regarding sexuality with burn survivors two years after injury, also demonstrated women scored lower in confidence than did males pertaining to school activities and vocational activities. However, this study was surprising as males scored lower on body image than did females. It also provides some optimism for those individuals, male or female, who are post burn injury to the face. In this study they found individuals with facial burns scored higher in confidence with activities of daily living, school activities, and vocational activities. Although the study looked only at ten post-burn disfigured individuals, it can provide a sense of hope to recently burned individuals and reassurance to those individuals who continue living with burn injury.

Another two-year study focused on general health, which found burn survivors, can expect good physical health recovery, even after large burn injuries (Williams, et al, 2003). Although sexual health was not measured, physical health was considered in the overall well-being of burn survivors. Health promotion is an area in which medical treatment teams emphasize aide in the recovery process of burn survivors. The body is already damaged and the skin is unable to assist with providing a barrier to internal organs or tissues. Keeping a healthy lifestyle benefits the recovery process. The benefits of establishing a healthy lifestyle are well documented. It also means living life in a way that helps the individual be physically and emotionally healthy (Andresen & Meyers, 2000). For someone who has suffered a traumatic life-altering event like a burn, beginning a healthy lifestyle may assist with the recovery process. Burn survivors may already experience lack of energy and decreased self-esteem and confidence, though with health promotions a patient may begin to regain some self-esteem and confidence.

Whitehead (1993) looks at an extensive literature review which found there was much concern regarding sexuality in patients with burns. This research also found a rare focus on sexuality within the medical treatment team. The article went into depth about sexual health promotion from the initial admission through rehabilitation process of the post burn patient.

Sexual healing is possible, but it just may be difficult. The patterns of sexual dysfunction caused by trauma are locked into the body and mind. Sexual healing comes to those who are willing to work for it, and it comes through many ways (Ironson & Field, 1995). This usually begins when individuals becomes more conscious of how they touch, and are touched by others. Another way is through awareness of how they touch themselves, how they treat their bodies, both physically and by way of attitude.

Rosa (1998) found that same gender friendships are another powerful medium for sexual healing. Women know how to admire each other, respect, and look at the inner beauty of each other, more so then men. Women tend to listen to feelings, which can be an enormous healing process with sexuality after a traumatic event. Similarly, men know how to support other men. They understand a man's point of view, their feelings of vulnerability, and support each other's strengths. Sexual healing happens both within and outside intimate and sexual relationships.

CHAPTER IV

Purpose of the Program Design

There are many injuries that devastate the individual, though burn injury is considered one type of injury which causes many changes in a survivor's life along with

the survivor's relationships. Many of these changes revolve around the loss of skin sensation. The psychological and physical changes that take place begin to effect sexual changes in the burn survivor. These changes concerning sex present the survivor with new challenges in their rehabilitation.

During the burn survivor's rehabilitation process, the medical team's primary purpose is to return the survivor to a pre-burn level of functioning. When re-establishing sexual functioning, the same goal is also present. In order for the medial team to restore, in an effective manner, sexual functioning, the medical team must have information about the survivor's sexual history. Also, one area which the medical team should investigate is the survivor's views about their own sexuality prior to the burn injury. The Sexuality after Spinal Cord Injury Questionnaire was used with permission from Paul A. Kettl, and altered from spinal cord injury to burn injury.

Hypotheses

Sexuality after burn injury will be measured by a questionnaire which was prepared from a variation of Sexuality after Spinal Cord Injury Questionnaire. Sexuality after Burn Injury Questionnaire is designed to obtain information about how the burn survivor sees his or her sexual essence before the burn injury and evaluate to post-burn injury. The questionnaire searches to evaluate the seeming differences in sexuality before and after burn injury. Questions are consequently connected to behavior before, and then after, burn injury. The Sexuality after Burn Injury Questionnaire is designed to obtain information about how the burn survivor viewed their sexual life before the burn injury

compared to how they view sexual life in rehabilitation after the burn injury. Using this information, rehabilitation in sexuality after burn injury can further progress.

Methods

The Sexuality after Burn Injury Questionnaire was designed from The Sexuality After Spinal Cord Injury Questionnaire. Some questions were omitted for context of research and all questions were changed from spinal cord injury to burn injury. The purpose of the questionnaire was to acquire a wide collection of information about sexuality in those individuals who are burn survivors. The questionnaire began with some demographic information. Other information pertained to: sexual satisfaction, views on body image, sexual difficulties, sexual satisfaction, physical health, social life, and sexual frequency. The burn survivor's views are collected through questions that are based on pre-burn sexual life views and post-burn sexual life views. This questionnaire is designed to evaluate and support sexual rehabilitation after burn injury.

Instruments

The Sexuality after Burn Injury Questionnaire instrument attempts to assess the supposed variation in sexuality before and after burn injury. The questions are connected to activities prior to burn injury, then after burn injury. Measurements are acquired to reveal the participants' deterioration in various aspects of sexuality after burn injury in contrast with the burn survivor's point of view on their pre-burn sexuality.

In order to obtain further therapeutic and clinical work during the rehabilitation process, this instrument may assist in obtaining important data on the burn survivor's point of view on his or her sexuality pre-burn injury and post-burn injury. The validity in

assessing the burn survivor's point-of-view is well thought-of in the instrument's paramount strength. A barrier which may modify the face validity is the burn survivor's attitude of sex life prior to their burn injury.

Procedure

The Sexuality after Burn Injury Questionnaire instrument is two pages long and designed to be answered by simple marks. An announcement of the study was placed on The Phoenix Society's internet page for Guest Book signatures. Participants were contacted via electronic mail and asked to participate in the study. A copy of the questionnaire was attached to the email. Those individuals who wished to participated sent their responses via electronic mail or postal mail. Participants responded to items on a four-point scale by circling the response that was most suitable. The participant may answer the questionnaire without assistance. It takes about fifteen minutes to complete. The statistical program SPSS 11.0 for Windows was used to analyze the responses. All questionnaire items were inputted into the program along with the participants' answers. SPSS 11.0 for Windows then gave all mathematical results.

CHAPTER V

Results

Participant profiles

The participant's summary was created based on their demographic information (Appendix C). This information was to give an idea of the level of burn injury and background information on the participants. Burn injury was the requirement in order to

participate in the study. A total of thirteen males and six female participants completed the questionnaire (Figure 1). The participants were an average age of thirty-one years old (Figure 2) with three percent total body burn (Figure 3) and a range of fifteen percent through eighty percent of total body burned (Figure 4). They mostly consisted of married individuals (Figure 5) who resided with their family (Figure 6). They typically have a college education (Figure 7) and were employed full time (Figure 8).

Research Findings

The primary goal of this study was to find any sexual dysfunctions post burn injury. There was a correlation with the decline in social outings and the enjoyment of these outings post burn injury (Figure 9A). Although there were some changes in the burn survivor's relationship with same-sex friends, there was a significant change in relationship with opposite-sex friends (Figure 9B). As burn survivors no longer view sexual activity as an important aspect of their lives, there was a change in sexual activity (Figure 10).

It was found that burn survivors who were men did not experience significant difficulty getting an erection and maintaining the erection. However, those men who did experience difficulty getting and maintaining the erection expressed those difficulties prior to their burn injury (Figure 11). The same was found with women, as they reported no physical difficulties that hindered intercourse, like having inadequate lubrication, or painful intercourse (Figure 12). As far as sexual satisfaction, there was no correlation with being male or female. Rather burn survivors were worried about their own sexual

satisfaction and the sexual satisfaction of their partners (Figure 13). The frequency of sexual activity also reduced after burn injury.

As regards sexual acts during sex it was found that burn survivors had about a fifty eight percent decline in intercourse (Figure 14) and ninety percent of burn's survivor's activity of masturbation had a large increase of forty-two percent (Figure 15). The questionnaire showed preference of intercourse prior to burn injury (Figure 16). All nineteen of the burn survivors reported the ability to have an orgasm and about eighty percent indicated having no change in their orgasms. The other twenty percent reported equally about having orgasms that were either similar or different.

Burn survivors also have a significant decrease on how attractive they feel and view their body post burn injury (Figure 17). Burn survivors had an increase in their health after their injury (Figure 18). During the rehabilitation process burn survivors had increased openly discussing their sexual concerns and feeling comfortable discussing sex with the staff. However it continues to demonstrate that that of sex is not a main concern for the burn survivor (Figure 19). The data shows that eighty-two percent of burn survivors reported their burn injury contributed to the break-up of their relationship with their spouse, boyfriend, girlfriend, or friends. About half of those participants felt the break-up was hastened by sexual difficulties (Figure 20).

Discussion

Although not much research has been done on sexuality of burn survivors, Edwards (2001), a brochure from The Phoenix Society gives burn survivors insight on intimacy and sexuality after burn injury. In conclusion, one can say burn injury does not

cause any physical difficulties in females or difficulty getting an erection or maintaining an erection in males. This study also showed a burn injury does not cause changes in orgasm. It did show, however, the burn survivor's self esteem, frequency, sexual satisfaction of one's self and partner, along with health and social outings declined a significant amount.

In order to have a full understanding on sexual dysfunctions of burn victims further research will need to be done geared towards this population. In order for Clinical Sexologists to assimilate themselves into the medical field and be part of a complex medical treatment team, further research and exploration into this population will need to take place. Due to the limited amount of research available on burn survivors, additional studies on burn survivors and sexuality will enhance the area of study significantly.

APPENDIX A

-----Original Message-----
From: Paul A. Kettl M.D. [mailto:pkettl@psu.edu]

Sent: Friday, February 11, 2005 12:27 PM
To: wiltzk@bellsouth.net
Subject: Re: Sexuality After Spinal Cord Injury

Karen,
Feel free to use the questionnaire. I think it would be appropriate to use the questionnaire with a burn injury population.
Good luck with your project.
Paul Kettl, M.D.
Professor of Psychiatry
Penn State College of Medicine

>>> "Karen A. Wiltz" <wiltzk@bellsouth.net> 02/10/05 11:30 PM >>>
Dear Paul A. Kettl,

My name is Karen A. Wiltz and I am currently enrolled in my third semester at Maimonides University's Doctoral program in Pastoral Clinical Sexology.

As part of our graduate program a dissertation is required. My dissertation focus is primarily with sexual dysfunctions with burn victims.

I came across your questionnaire of Sexuality After Spinal Cord Injury through the Handbook of Sexuality-Related Measures by Davis et al. I would like to take this opportunity to ask your permission in order to use the questionnaire in my research. However, I would like to change the questionnaire from spinal cord injury to burn injury.

Thank you very much for your time. If you require any further information from my behalf, please feel free to contact me:
wiltzk@bellsouth.net or
305-528-2533

Sincerely,
Karen A. Wiltz, MSW

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Karen A. Wiltz

## **APPENDIX B**

### Participant Consent Form

#### **INFORMED CONSENT FOR A SEXUALITY RESEARCH STUDY**

Dear Research Participant:

Your participation in a research study is requested. The research is being conducted by Karen A. Wiltz, a Maimonides University's Doctoral program student in Pastoral Clinical Sexology, and will examine sexuality in burn injury. In the actual research study you will be asked to answer a twenty one item questionnaire. This questionnaire will take approximately 15 minutes.

There are no physical or psychological risks associated with this research study, and your participation will contribute to the science of sexuality by helping to clarify the role of sexuality in the perception of others.

Your participation is completely voluntary, and you have the right to withdraw from the research study at any time without any penalty. The information you provide will be anonymous, that is, you will not be identified by name or any other labels. In addition, all information from the study will remain confidential to the extent permitted by law. The raw data will be kept in a locked file cabinet by the investigators. All data will be available to only the researcher and the researcher's supervisor. Any data that is published will be in terms of group averages, and no individuals will be able to be identified. Once the data is collected it cannot be withdrawn since no individual will be identifiable. You can know the results of the research study by contacting the experimenter.

I acknowledge that, I have been informed of the nature and purposes of this research study by Karen Wiltz. I have read and understand the information presented above. I give my voluntary consent to participate in this research study with answering the following questionnaire.

**DO NOT SIGN OR WRITE YOUR NAME ANY WHERE ON  
THIS CONSENT FORM AND/OR THE  
QUESTIONNAIRE!**

Thank you for your participation

#### APPENDIX C

#### **SEXUALITY AFTER BURN INJURY QUESTIONNAIRE**

Sex: Male\_\_\_\_ Female\_\_\_\_

Date of birth: \_\_\_\_\_  
 Level of injury: \_\_\_\_\_ Burn percent: \_\_\_\_\_  
 Marital Status: Single \_\_\_\_\_ Married \_\_\_\_\_ Divorced \_\_\_\_\_ Widowed \_\_\_\_\_  
 Present Living Situation: Who lives with you? (*Circle those that apply*)  
 Husband \_\_\_\_\_ Wife \_\_\_\_\_ Children \_\_\_\_\_  
 Girlfriend \_\_\_\_\_ Boyfriend \_\_\_\_\_ Parents \_\_\_\_\_  
 Brother(s) \_\_\_\_\_ Sister(s) \_\_\_\_\_ Live Alone \_\_\_\_\_  
 Level of Education: Grade School \_\_\_\_\_ High School \_\_\_\_\_ College \_\_\_\_\_ Post-Grad \_\_\_\_\_  
 Employed: Full-time \_\_\_\_\_ Part-time \_\_\_\_\_ Unemployed \_\_\_\_\_

(Mark the most appropriate response)

- |                                                                                                                                                                                             | Not at all<br>0 | Rarely<br>1 | Sometimes<br>2 | Often<br>3 | Very Often<br>4 |   |    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------|----------------|------------|-----------------|---|----|
| (1) How often do you go out socially?                                                                                                                                                       |                 |             |                |            |                 |   |    |
| a. Before your burn injury                                                                                                                                                                  |                 |             | (0             | 1          | 2               | 3 | 4) |
| b. After your burn injury                                                                                                                                                                   |                 |             | (0             | 1          | 2               | 3 | 4) |
| (2) How enjoyable was your social life?                                                                                                                                                     |                 |             |                |            |                 |   |    |
| a. Before your burn injury                                                                                                                                                                  |                 |             | (0             | 1          | 2               | 3 | 4) |
| b. After your burn injury                                                                                                                                                                   |                 |             | (0             | 1          | 2               | 3 | 4) |
| (3) How close were your relationships with your friends?                                                                                                                                    |                 |             |                |            |                 |   |    |
| a. Before your burn injury                                                                                                                                                                  |                 |             |                |            |                 |   |    |
| i. Same sex                                                                                                                                                                                 |                 |             | (0             | 1          | 2               | 3 | 4) |
| ii. Opposite sex                                                                                                                                                                            |                 |             | (0             | 1          | 2               | 3 | 4) |
| b. After your burn injury                                                                                                                                                                   |                 |             |                |            |                 |   |    |
| i. Same sex                                                                                                                                                                                 |                 |             | (0             | 1          | 2               | 3 | 4) |
| ii. Opposite sex                                                                                                                                                                            |                 |             | (0             | 1          | 2               | 3 | 4) |
| (4) How important was sexual activity?                                                                                                                                                      |                 |             |                |            |                 |   |    |
| a. Before your burn injury                                                                                                                                                                  |                 |             | (0             | 1          | 2               | 3 | 4) |
| b. After your burn injury                                                                                                                                                                   |                 |             | (0             | 1          | 2               | 3 | 4) |
| (5) How often did you engage in sexual activity?                                                                                                                                            |                 |             |                |            |                 |   |    |
| a. Before your burn injury                                                                                                                                                                  |                 |             | (0             | 1          | 2               | 3 | 4) |
| b. After your burn injury                                                                                                                                                                   |                 |             | (0             | 1          | 2               | 3 | 4) |
| (6) If female, during sexual activity, have you experienced any physical difficulties that hinder intercourse? ( <i>i.e., inadequate lubrication, painful intercourse, bleeding, etc.</i> ) |                 |             |                |            |                 |   |    |
| a. Before your burn injury                                                                                                                                                                  |                 |             | (0             | 1          | 2               | 3 | 4) |
| b. After your burn injury                                                                                                                                                                   |                 |             | (0             | 1          | 2               | 3 | 4) |
| (7) If male, have you experienced any difficulty getting an erection during sexual activity?                                                                                                |                 |             |                |            |                 |   |    |
| a. Before your burn injury                                                                                                                                                                  |                 |             | (0             | 1          | 2               | 3 | 4) |
| b. After your burn injury                                                                                                                                                                   |                 |             | (0             | 1          | 2               | 3 | 4) |
| (8) If male, have you experienced any difficulty maintaining an erection during sexual activity?                                                                                            |                 |             |                |            |                 |   |    |
| a. Before your burn injury                                                                                                                                                                  |                 |             | (0             | 1          | 2               | 3 | 4) |
| b. After your burn injury                                                                                                                                                                   |                 |             | (0             | 1          | 2               | 3 | 4) |
| (9) How satisfying was sexual activity?                                                                                                                                                     |                 |             |                |            |                 |   |    |
| a. Before your burn injury                                                                                                                                                                  |                 |             | (0             | 1          | 2               | 3 | 4) |
| b. After your burn injury                                                                                                                                                                   |                 |             | (0             | 1          | 2               | 3 | 4) |

- (10) How well do you feel you satisfied your partner?
- |                            |    |   |   |   |    |
|----------------------------|----|---|---|---|----|
| a. Before your burn injury | (0 | 1 | 2 | 3 | 4) |
| b. After your burn injury  | (0 | 1 | 2 | 3 | 4) |
- (11) How satisfied were you with the frequency of your sexual activity?
- |                            |    |   |   |   |    |
|----------------------------|----|---|---|---|----|
| a. Before your burn injury | (0 | 1 | 2 | 3 | 4) |
| b. After your burn injury  | (0 | 1 | 2 | 3 | 4) |
- (12) Compared to **before** your burn injury, have you: (*Circle most appropriate*)
- |                            |       |           |          |            |
|----------------------------|-------|-----------|----------|------------|
| a. Been sexually active:   | Never | Less than | The same | More often |
| b. Had intercourse         | Never | Less than | The same | More often |
| c. Engaged in oral sex     | Never | Less than | The same | More often |
| d. Engaged in anal sex     | Never | Less than | The same | More often |
| e. Engaged in masturbation | Never | Less than | The same | More often |
- (13) What was your most pleasurable sexual activity before your burn injury? (*please circle*)
- |                     |             |          |          |              |
|---------------------|-------------|----------|----------|--------------|
| kissing & caressing | intercourse | oral sex | anal sex | masturbation |
|---------------------|-------------|----------|----------|--------------|
- (14) Since your burn injury, have you been able to have an orgasm (*circle one*)
- |                                      |         |           |
|--------------------------------------|---------|-----------|
| Yes                                  | No      |           |
| If yes, was it ( <i>circle one</i> ) |         |           |
| The same                             | Similar | Different |
- (15) In your estimation how attractive do you feel your body was?
- |                            |    |   |   |   |    |
|----------------------------|----|---|---|---|----|
| a. Before your burn injury | (0 | 1 | 2 | 3 | 4) |
| b. After your burn injury  | (0 | 1 | 2 | 3 | 4) |
- (16) How healthy were you?
- |                            |    |   |   |   |    |
|----------------------------|----|---|---|---|----|
| a. Before your burn injury | (0 | 1 | 2 | 3 | 4) |
| b. After your burn injury  | (0 | 1 | 2 | 3 | 4) |
- (17) How well were your sexual concerns addressed during rehabilitation?
- |                            |    |   |   |   |    |
|----------------------------|----|---|---|---|----|
| a. Before your burn injury | (0 | 1 | 2 | 3 | 4) |
| b. After your burn injury  | (0 | 1 | 2 | 3 | 4) |
- (18) During rehab, how comfortable were you in discussing sex with the staff?
- |                            |    |   |   |   |    |
|----------------------------|----|---|---|---|----|
| a. Before your burn injury | (0 | 1 | 2 | 3 | 4) |
| b. After your burn injury  | (0 | 1 | 2 | 3 | 4) |
- (19) Has your burn injury contributed to the break-up of relationships with a significant other?
- |                                                |    |
|------------------------------------------------|----|
| Yes                                            | No |
| If yes, was it with: a spouse____ a friend____ |    |
- (20) If yes, how much do you feel sexual difficulties contributed to the break-up?
- |    |   |   |   |    |
|----|---|---|---|----|
| (0 | 1 | 2 | 3 | 4) |
|----|---|---|---|----|
- (21) Based on your experience, what is important for us to be teaching newly injured burn injury patients?

**APPENDIEX (D)**  
Demographic Information

Figure 1

## SEX

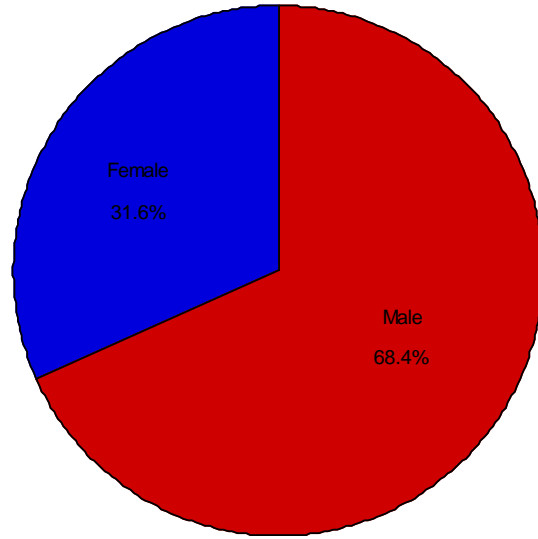


Figure 2

## AGE

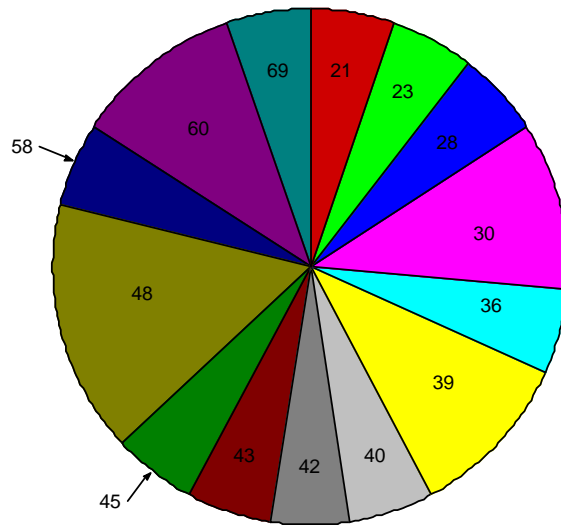


Figure 3

# INJURY

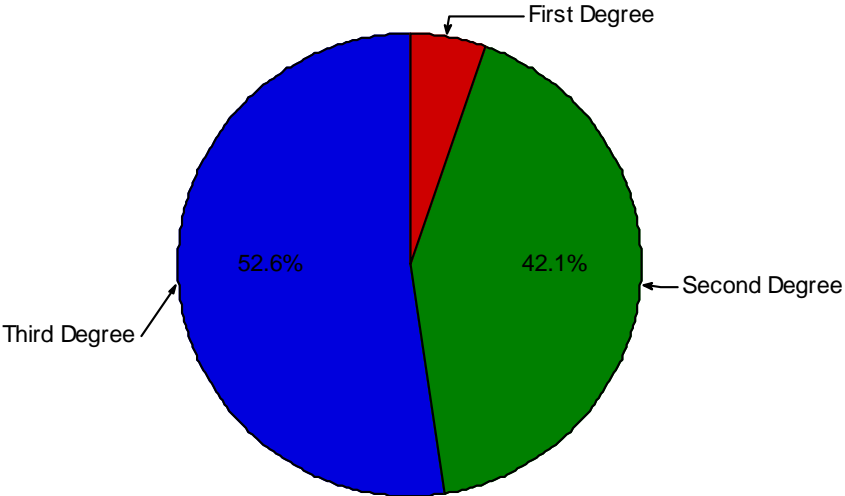


Figure 4

# BURN

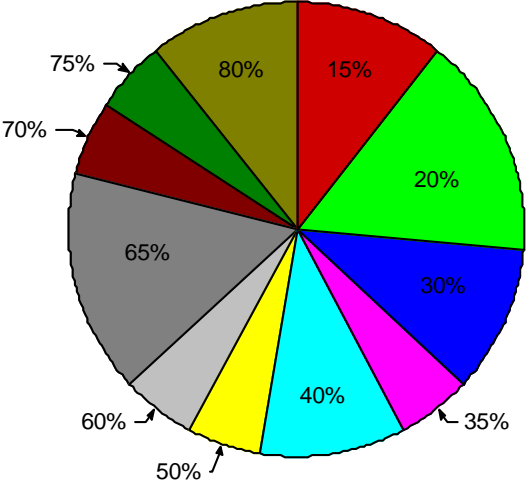


Figure 5

# MARRIED

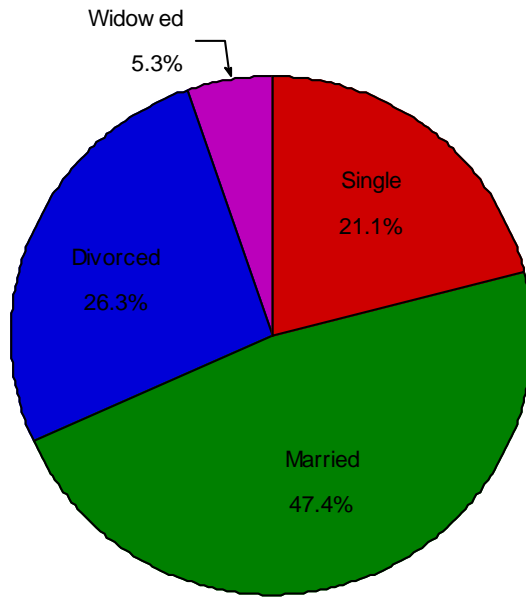


Figure 6

# LIVING WITH

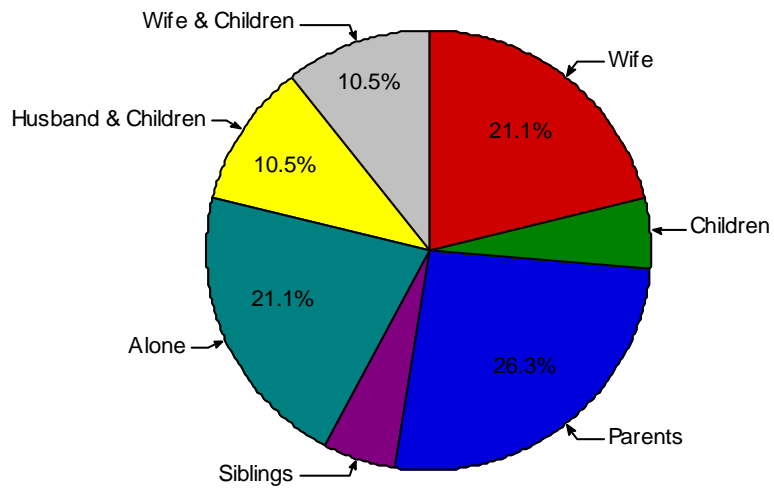


Figure 7



# EDUCATION

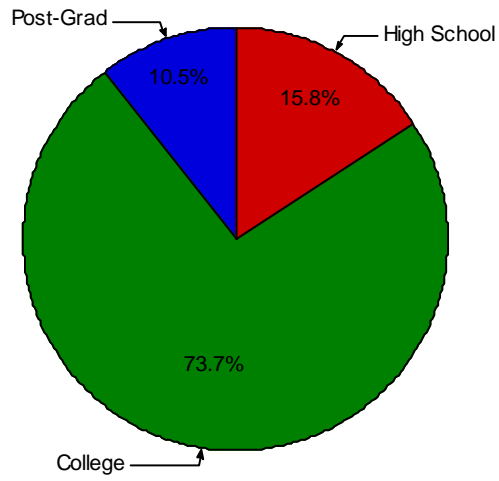
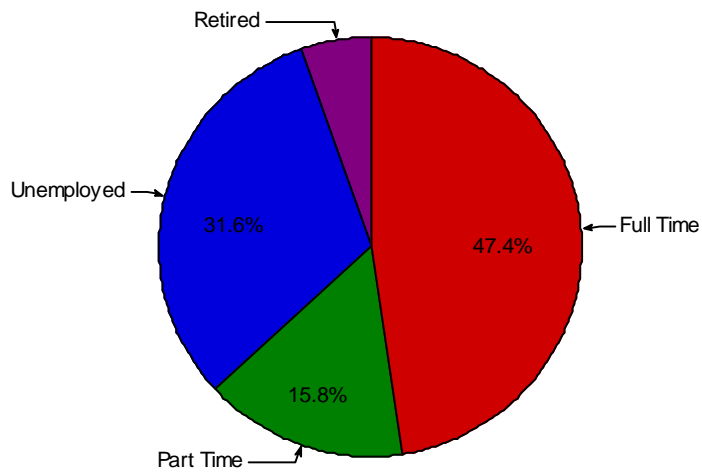


Figure 8

# EMPLOYED



**Correlations Social Life (Figure 9A)**

|        |                     | GOOUTB | ENJOYB |
|--------|---------------------|--------|--------|
| GOOUTB | Pearson Correlation | 1      | .895** |
|        | Sig. (2-tailed)     | .      | .000   |
|        | N                   | 19     | 19     |
| ENJOYB | Pearson Correlation | .895** | 1      |
|        | Sig. (2-tailed)     | .000   | .      |
|        | N                   | 19     | 19     |

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

**Correlations Opposite Sex (Figure 9B)**

|         |                     | BOPPSXB | AOPPSXB |
|---------|---------------------|---------|---------|
| BOPPSXB | Pearson Correlation | 1       | .570*   |
|         | Sig. (2-tailed)     | .       | .011    |
|         | N                   | 19      | 19      |
| AOPPSXB | Pearson Correlation | .570*   | 1       |
|         | Sig. (2-tailed)     | .011    | .       |
|         | N                   | 19      | 19      |

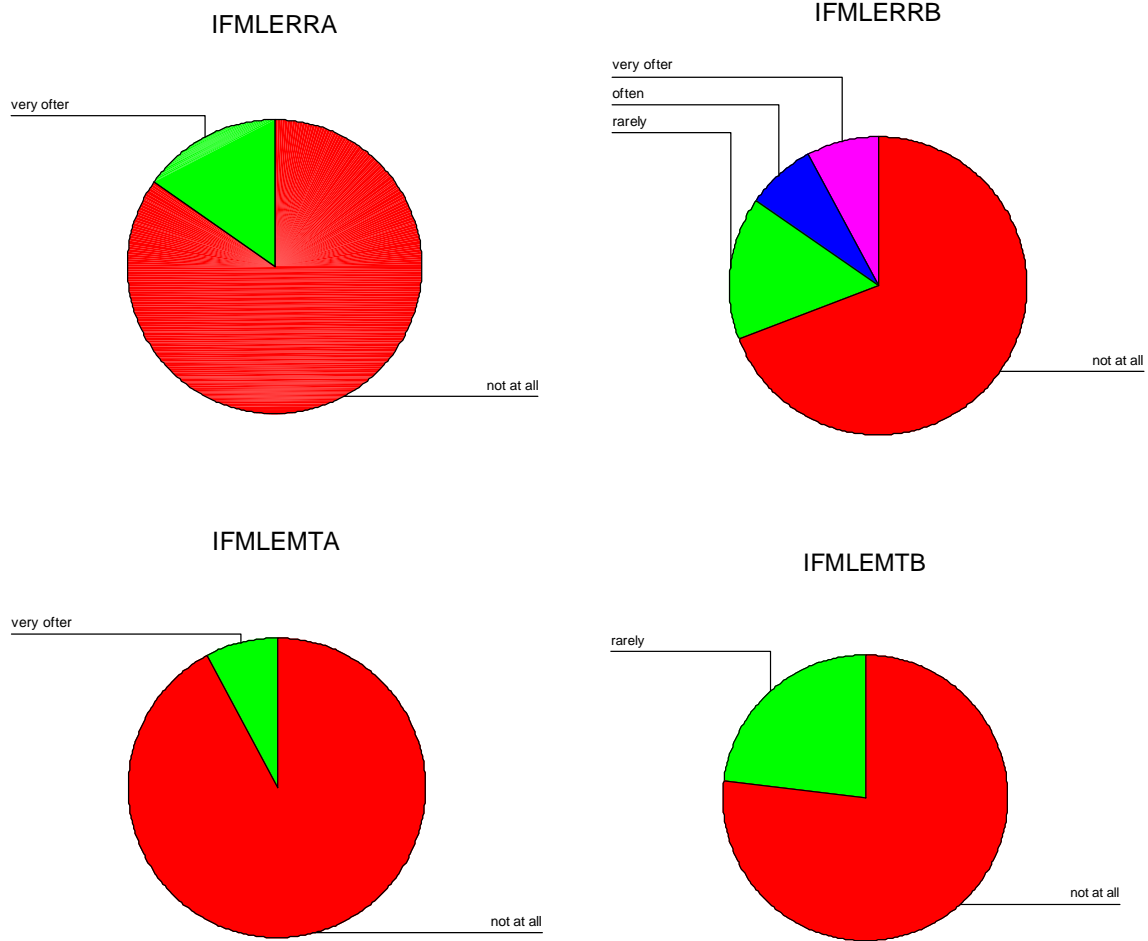
\* . Correlation is significant at the 0.05 level (2-tailed).

**Correlations Sexual Activity (Figure 10)**

|          |                     | IMPORTB | HWOFTENB |
|----------|---------------------|---------|----------|
| IMPORTB  | Pearson Correlation | 1       | .849**   |
|          | Sig. (2-tailed)     | .       | .000     |
|          | N                   | 19      | 19       |
| HWOFTENB | Pearson Correlation | .849**  | 1        |
|          | Sig. (2-tailed)     | .000    | .        |
|          | N                   | 19      | 19       |

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

Figure 11



IFFEMLEA (Figure 12)

|                  | Frequency | Percent | Valid Percent | Cumulative Percent |
|------------------|-----------|---------|---------------|--------------------|
| Valid not at all | 6         | 100.0   | 100.0         | 100.0              |

**Correlations (Figure 13)**

|          |                     | SEX   | USATISFB | PSATISFB |
|----------|---------------------|-------|----------|----------|
| SEX      | Pearson Correlation | 1     | -.186    | -.392    |
|          | Sig. (2-tailed)     | .     | .445     | .097     |
|          | N                   | 19    | 19       | 19       |
| USATISFB | Pearson Correlation | -.186 | 1        | .802**   |
|          | Sig. (2-tailed)     | .445  | .        | .000     |
|          | N                   | 19    | 19       | 19       |
| PSATISFB | Pearson Correlation | -.392 | .802**   | 1        |
|          | Sig. (2-tailed)     | .097  | .000     | .        |
|          | N                   | 19    | 19       | 19       |

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

**INTERCOUSE (Figure 14)**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | never      | 1         | 5.3     | 5.3           | 5.3                |
|       | less than  | 10        | 52.6    | 52.6          | 57.9               |
|       | the same   | 7         | 36.8    | 36.8          | 94.7               |
|       | more often | 1         | 5.3     | 5.3           | 100.0              |
|       | Total      | 19        | 100.0   | 100.0         |                    |

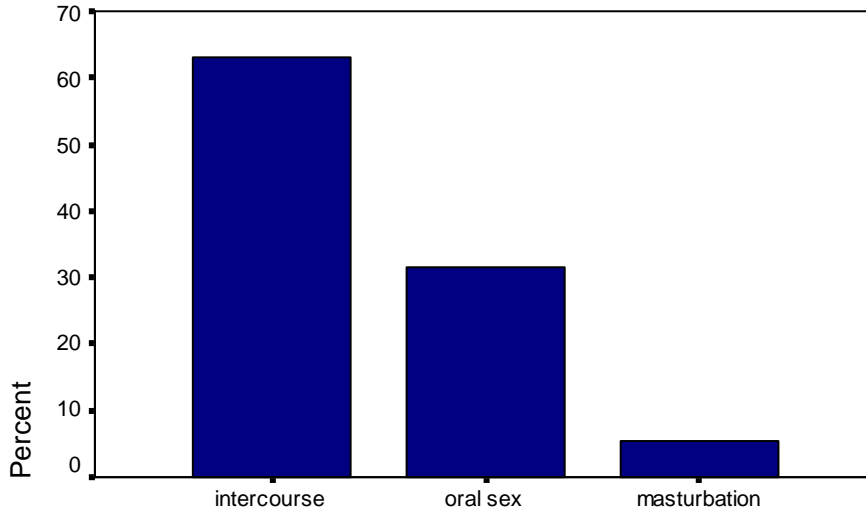
**MASTURBATION (Figure 15)**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | never      | 1         | 5.3     | 5.3           | 5.3                |
|       | less than  | 1         | 5.3     | 5.3           | 10.5               |
|       | the same   | 9         | 47.4    | 47.4          | 57.9               |
|       | more often | 8         | 42.1    | 42.1          | 100.0              |
|       | Total      | 19        | 100.0   | 100.0         |                    |

Figure 16

**PLEASURABLE SEX**

**Activity Before Burn Injury**



**PLEASURE**

**IFYES (Figure 17)**

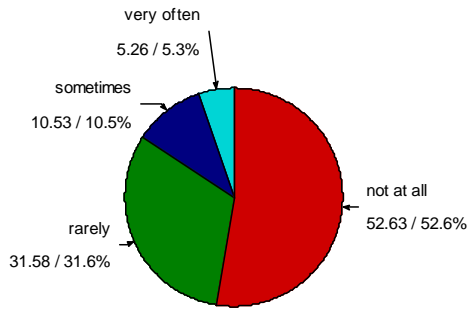
|                | Frequency | Percent | Valid Percent | Cumulative Percent |
|----------------|-----------|---------|---------------|--------------------|
| Valid the same | 15        | 78.9    | 78.9          | 78.9               |
| similar        | 2         | 10.5    | 10.5          | 89.5               |
| different      | 2         | 10.5    | 10.5          | 100.0              |
| Total          | 19        | 100.0   | 100.0         |                    |

**HEALTHYB (Figure 18)**

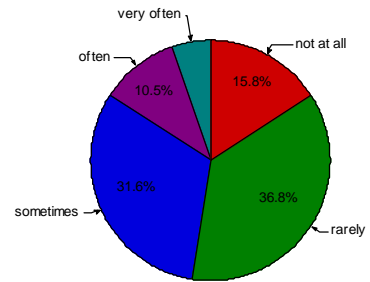
|              | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------|-----------|---------|---------------|--------------------|
| Valid rarely | 2         | 10.5    | 10.5          | 10.5               |
| sometimes    | 5         | 26.3    | 26.3          | 36.8               |
| often        | 12        | 63.2    | 63.2          | 100.0              |
| Total        | 19        | 100.0   | 100.0         |                    |

Figure 19

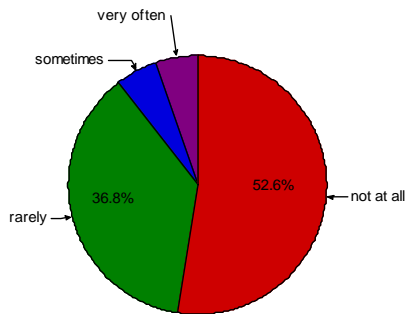
During Rehab  
Sexual Concerns



SEXUAL CONCERNS  
After Rehab



DICUSSING SEX  
with Staff



DICUSSION  
After Rehab

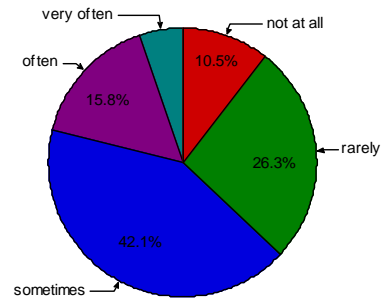
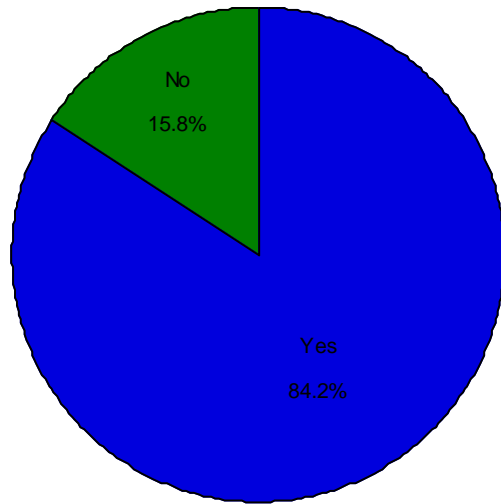


Figure 20

BREAK-UP  
from Burn Injury



## APPENDIX E

### Frequencies

#### SEX

|            | Frequency | Percent | Valid Percent | Cumulative Percent |
|------------|-----------|---------|---------------|--------------------|
| Valid male | 13        | 68.4    | 68.4          | 68.4               |
| female     | 6         | 31.6    | 31.6          | 100.0              |
| Total      | 19        | 100.0   | 100.0         |                    |

#### AGE

|          | Frequency | Percent | Valid Percent | Cumulative Percent |
|----------|-----------|---------|---------------|--------------------|
| Valid 21 | 1         | 5.3     | 5.3           | 5.3                |
| 23       | 1         | 5.3     | 5.3           | 10.5               |
| 28       | 1         | 5.3     | 5.3           | 15.8               |
| 30       | 2         | 10.5    | 10.5          | 26.3               |
| 36       | 1         | 5.3     | 5.3           | 31.6               |
| 39       | 2         | 10.5    | 10.5          | 42.1               |
| 40       | 1         | 5.3     | 5.3           | 47.4               |
| 42       | 1         | 5.3     | 5.3           | 52.6               |
| 43       | 1         | 5.3     | 5.3           | 57.9               |
| 45       | 1         | 5.3     | 5.3           | 63.2               |
| 48       | 3         | 15.8    | 15.8          | 78.9               |
| 58       | 1         | 5.3     | 5.3           | 84.2               |
| 60       | 2         | 10.5    | 10.5          | 94.7               |
| 69       | 1         | 5.3     | 5.3           | 100.0              |
| Total    | 19        | 100.0   | 100.0         |                    |

#### INJURY

|                    | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------------|-----------|---------|---------------|--------------------|
| Valid first degree | 1         | 5.3     | 5.3           | 5.3                |
| second degree      | 8         | 42.1    | 42.1          | 47.4               |
| third degree       | 10        | 52.6    | 52.6          | 100.0              |
| Total              | 19        | 100.0   | 100.0         |                    |



**BURN**

|       |           | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-----------|-----------|---------|---------------|--------------------|
| Valid | 15percent | 2         | 10.5    | 10.5          | 10.5               |
|       | 20percent | 3         | 15.8    | 15.8          | 26.3               |
|       | 30percent | 2         | 10.5    | 10.5          | 36.8               |
|       | 35percent | 1         | 5.3     | 5.3           | 42.1               |
|       | 40percent | 2         | 10.5    | 10.5          | 52.6               |
|       | 50percent | 1         | 5.3     | 5.3           | 57.9               |
|       | 60percent | 1         | 5.3     | 5.3           | 63.2               |
|       | 65percent | 3         | 15.8    | 15.8          | 78.9               |
|       | 70percent | 1         | 5.3     | 5.3           | 84.2               |
|       | 75percent | 1         | 5.3     | 5.3           | 89.5               |
|       | 80percent | 2         | 10.5    | 10.5          | 100.0              |
|       | Total     | 19        | 100.0   | 100.0         |                    |

**MARRIED**

|       |          | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|----------|-----------|---------|---------------|--------------------|
| Valid | single   | 4         | 21.1    | 21.1          | 21.1               |
|       | married  | 9         | 47.4    | 47.4          | 68.4               |
|       | divorced | 5         | 26.3    | 26.3          | 94.7               |
|       | widowed  | 1         | 5.3     | 5.3           | 100.0              |
|       | Total    | 19        | 100.0   | 100.0         |                    |

**LIVING**

|       |                    | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|--------------------|-----------|---------|---------------|--------------------|
| Valid | wife               | 4         | 21.1    | 21.1          | 21.1               |
|       | children           | 1         | 5.3     | 5.3           | 26.3               |
|       | parents            | 5         | 26.3    | 26.3          | 52.6               |
|       | siblings           | 1         | 5.3     | 5.3           | 57.9               |
|       | alone              | 4         | 21.1    | 21.1          | 78.9               |
|       | husband & children | 2         | 10.5    | 10.5          | 89.5               |
|       | wife & children    | 2         | 10.5    | 10.5          | 100.0              |
|       | Total              | 19        | 100.0   | 100.0         |                    |

**EDUCATION**

|       |             | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------------|-----------|---------|---------------|--------------------|
| Valid | high school | 3         | 15.8    | 15.8          | 15.8               |
|       | college     | 14        | 73.7    | 73.7          | 89.5               |
|       | post-grad   | 2         | 10.5    | 10.5          | 100.0              |
|       | Total       | 19        | 100.0   | 100.0         |                    |

### EMPLOYMENT

|                 | Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------------|-----------|---------|---------------|--------------------|
| Valid full time | 9         | 47.4    | 47.4          | 47.4               |
| part time       | 3         | 15.8    | 15.8          | 63.2               |
| unemployed      | 6         | 31.6    | 31.6          | 94.7               |
| retired         | 1         | 5.3     | 5.3           | 100.0              |
| Total           | 19        | 100.0   | 100.0         |                    |

### HOW OFTEN DO YOU GO OUT SOCIALLY? BEFORE

|              | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------|-----------|---------|---------------|--------------------|
| Valid rarely | 1         | 5.3     | 5.3           | 5.3                |
| often        | 8         | 42.1    | 42.1          | 47.4               |
| very often   | 10        | 52.6    | 52.6          | 100.0              |
| Total        | 19        | 100.0   | 100.0         |                    |

### HOW OFTEN DO YOU GO OUT SOCIALLY? AFTER

|                  | Frequency | Percent | Valid Percent | Cumulative Percent |
|------------------|-----------|---------|---------------|--------------------|
| Valid not at all | 3         | 15.8    | 15.8          | 15.8               |
| rarely           | 7         | 36.8    | 36.8          | 52.6               |
| sometimes        | 9         | 47.4    | 47.4          | 100.0              |
| Total            | 19        | 100.0   | 100.0         |                    |

### HOW ENJOYABLE WAS YOUR SOCIAL LIFE? BEFORE

|             | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------------|-----------|---------|---------------|--------------------|
| Valid often | 7         | 36.8    | 36.8          | 36.8               |
| very often  | 12        | 63.2    | 63.2          | 100.0              |
| Total       | 19        | 100.0   | 100.0         |                    |

### HOW ENJOYABLE WAS YOUR SOCIAL OFE? AFTER

|                  | Frequency | Percent | Valid Percent | Cumulative Percent |
|------------------|-----------|---------|---------------|--------------------|
| Valid not at all | 3         | 15.8    | 15.8          | 15.8               |
| rarely           | 5         | 26.3    | 26.3          | 42.1               |
| sometimes        | 10        | 52.6    | 52.6          | 94.7               |
| often            | 1         | 5.3     | 5.3           | 100.0              |
| Total            | 19        | 100.0   | 100.0         |                    |

**HOW CLOSE WERE YOUR RELATIONSHIPS WITH YOUR FRIENDS? BEFORE  
SAME SEX**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | sometimes  | 1         | 5.3     | 5.3           | 5.3                |
|       | often      | 7         | 36.8    | 36.8          | 42.1               |
|       | very often | 11        | 57.9    | 57.9          | 100.0              |
|       | Total      | 19        | 100.0   | 100.0         |                    |

**HOW CLOSE WERE YOUR REALTIONSHPIS WITH YOUR FRIENDS? BEFORE  
OPPOSITE SEX**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | not at all | 1         | 5.3     | 5.3           | 5.3                |
|       | sometimes  | 3         | 15.8    | 15.8          | 21.1               |
|       | often      | 9         | 47.4    | 47.4          | 68.4               |
|       | very often | 6         | 31.6    | 31.6          | 100.0              |
|       | Total      | 19        | 100.0   | 100.0         |                    |

**LOW CLOSE WERE YOUR RELATIONSHIPS WITH YOUR FRIENDS? AFTER  
SAME SEX**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | sometimes  | 7         | 36.8    | 36.8          | 36.8               |
|       | often      | 6         | 31.6    | 31.6          | 68.4               |
|       | very often | 6         | 31.6    | 31.6          | 100.0              |
|       | Total      | 19        | 100.0   | 100.0         |                    |

**HOW CLOSE WERE YOUR REALATIONSHIPS WITH YOUR FRIENDS? AFTER  
OPPOSITE SEX**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | not at all | 4         | 21.1    | 21.1          | 21.1               |
|       | rarely     | 2         | 10.5    | 10.5          | 31.6               |
|       | sometimes  | 4         | 21.1    | 21.1          | 52.6               |
|       | often      | 5         | 26.3    | 26.3          | 78.9               |
|       | very often | 4         | 21.1    | 21.1          | 100.0              |
|       | Total      | 19        | 100.0   | 100.0         |                    |

**HOW IMPORTANT WAS SEXUAL ACTIVITY? BEFORE**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | rarely     | 1         | 5.3     | 5.3           | 5.3                |
|       | often      | 9         | 47.4    | 47.4          | 52.6               |
|       | very often | 9         | 47.4    | 47.4          | 100.0              |
|       | Total      | 19        | 100.0   | 100.0         |                    |

**HOW IMPORTANT WAS SEXUAL ACTIVITY? AFTER**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | not at all | 4         | 21.1    | 21.1          | 21.1               |
|       | rarely     | 7         | 36.8    | 36.8          | 57.9               |
|       | sometimes  | 5         | 26.3    | 26.3          | 84.2               |
|       | often      | 3         | 15.8    | 15.8          | 100.0              |
|       | Total      | 19        | 100.0   | 100.0         |                    |

**HOW OFTEN DID YOU ENGAGE IN SEXUAL ACTIVITY? BEFORE**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | rarely     | 1         | 5.3     | 5.3           | 5.3                |
|       | often      | 9         | 47.4    | 47.4          | 52.6               |
|       | very often | 9         | 47.4    | 47.4          | 100.0              |
|       | Total      | 19        | 100.0   | 100.0         |                    |

**HOW OFTEN DID YOU ENGAGE IN SEXUAL ACTIVITY? AFTER**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | not at all | 5         | 26.3    | 26.3          | 26.3               |
|       | rarely     | 7         | 36.8    | 36.8          | 63.2               |
|       | sometimes  | 6         | 31.6    | 31.6          | 94.7               |
|       | often      | 1         | 5.3     | 5.3           | 100.0              |
|       | Total      | 19        | 100.0   | 100.0         |                    |

**IF FEMALE, DURING SEXUAL ACTIVITY, HAVE YOU EXPERIENCED ANY PHYSICAL DIFFICULTIES THAT HINDER INTERCOURSE?**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | not at all | 6         | 100.0   | 100.0         | 100.0              |

**MALE, HAVE YOU EXPERIENCED ANY DIFFICULTY GETTING AN ERECTIC DURING SEXUAL ACTIVITY? BEFORE**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | not at all | 11        | 84.6    | 84.6          | 84.6               |
|       | very offer | 2         | 15.4    | 15.4          | 100.0              |
|       | Total      | 13        | 100.0   | 100.0         |                    |

**MALE, HAVE YOU EXPERIENCED ANY DIFFICULTY GETTING AN ERECTIC DURING SEXUAL ACTIVITY? AFTER**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | not at all | 9         | 69.2    | 69.2          | 69.2               |
|       | rarely     | 2         | 15.4    | 15.4          | 84.6               |
|       | often      | 1         | 7.7     | 7.7           | 92.3               |
|       | very offer | 1         | 7.7     | 7.7           | 100.0              |
|       | Total      | 13        | 100.0   | 100.0         |                    |

**IF MALE, HAVE YOU EXPERIENCED ANY DIFFICULTY MAINTAINING AN ERECTION DURING SEXUAL ACTIVITY? BEFORE**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | not at all | 12        | 92.3    | 92.3          | 92.3               |
|       | very offer | 1         | 7.7     | 7.7           | 100.0              |
|       | Total      | 13        | 100.0   | 100.0         |                    |

**IF MALE, HAVE YOU EXPERIENCED ANY DIFFICULTY MAINTAINING AN ERECTION DURING SEXUAL ACTIVITY? AFTER**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | not at all | 10        | 76.9    | 76.9          | 76.9               |
|       | rarely     | 3         | 23.1    | 23.1          | 100.0              |
|       | Total      | 13        | 100.0   | 100.0         |                    |

**HOW SATISFYING WAS SEXUAL ACTIVITY? BEFORE**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | often      | 5         | 26.3    | 26.3          | 26.3               |
|       | very often | 14        | 73.7    | 73.7          | 100.0              |
|       | Total      | 19        | 100.0   | 100.0         |                    |

**HOW SATISFYING WAS SEXUAL ACTIVITY? AFTER**

|                  | Frequency | Percent | Valid Percent | Cumulative Percent |
|------------------|-----------|---------|---------------|--------------------|
| Valid not at all | 6         | 31.6    | 31.6          | 31.6               |
| rarely           | 4         | 21.1    | 21.1          | 52.6               |
| sometimes        | 3         | 15.8    | 15.8          | 68.4               |
| often            | 5         | 26.3    | 26.3          | 94.7               |
| very often       | 1         | 5.3     | 5.3           | 100.0              |
| Total            | 19        | 100.0   | 100.0         |                    |

**HOW WELL DO YOU FEEL YOU SATISFIED YOUR PARTNER? BEFORE**

|             | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------------|-----------|---------|---------------|--------------------|
| Valid often | 5         | 26.3    | 26.3          | 26.3               |
| very often  | 14        | 73.7    | 73.7          | 100.0              |
| Total       | 19        | 100.0   | 100.0         |                    |

**HOW WELL DO YOU FEEL YOU SATISFIED YOUR PARTNER? AFTER**

|                  | Frequency | Percent | Valid Percent | Cumulative Percent |
|------------------|-----------|---------|---------------|--------------------|
| Valid not at all | 5         | 26.3    | 26.3          | 26.3               |
| rarely           | 6         | 31.6    | 31.6          | 57.9               |
| sometimes        | 1         | 5.3     | 5.3           | 63.2               |
| often            | 5         | 26.3    | 26.3          | 89.5               |
| very often       | 2         | 10.5    | 10.5          | 100.0              |
| Total            | 19        | 100.0   | 100.0         |                    |

**HOW SATISFIED WERE YOU WITH THE FREQUENCY OF YOUR SEXUAL ACTIVITY? BEFORE**

|             | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------------|-----------|---------|---------------|--------------------|
| Valid often | 7         | 36.8    | 36.8          | 36.8               |
| very often  | 12        | 63.2    | 63.2          | 100.0              |
| Total       | 19        | 100.0   | 100.0         |                    |

**HOW SATISFIED WERE YOU WITH THE FREQUENCY OF YOUR SEXUAL ACTIVITY? AFTER**

|                  | Frequency | Percent | Valid Percent | Cumulative Percent |
|------------------|-----------|---------|---------------|--------------------|
| Valid not at all | 4         | 21.1    | 21.1          | 21.1               |
| rarely           | 6         | 31.6    | 31.6          | 52.6               |
| sometimes        | 6         | 31.6    | 31.6          | 84.2               |
| often            | 3         | 15.8    | 15.8          | 100.0              |
| Total            | 19        | 100.0   | 100.0         |                    |

**COMPARED TO BEFORE, HAVE YOU BEEN SEXUALLY ACTIVE?**

|             | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------------|-----------|---------|---------------|--------------------|
| Valid never | 1         | 5.3     | 5.3           | 5.3                |
| less than   | 9         | 47.4    | 47.4          | 52.6               |
| the same    | 5         | 26.3    | 26.3          | 78.9               |
| more often  | 4         | 21.1    | 21.1          | 100.0              |
| Total       | 19        | 100.0   | 100.0         |                    |

**COMPARED TO BEFORE, HAVE YOU HAD INTERCOURSE?**

|             | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------------|-----------|---------|---------------|--------------------|
| Valid never | 1         | 5.3     | 5.3           | 5.3                |
| less than   | 10        | 52.6    | 52.6          | 57.9               |
| the same    | 7         | 36.8    | 36.8          | 94.7               |
| more often  | 1         | 5.3     | 5.3           | 100.0              |
| Total       | 19        | 100.0   | 100.0         |                    |

**COMPARED TO BEFORE, HAVE YOU ENGAGED IN ORAL SEX?**

|             | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------------|-----------|---------|---------------|--------------------|
| Valid never | 1         | 5.3     | 5.3           | 5.3                |
| less than   | 4         | 21.1    | 21.1          | 26.3               |
| the same    | 10        | 52.6    | 52.6          | 78.9               |
| more often  | 4         | 21.1    | 21.1          | 100.0              |
| Total       | 19        | 100.0   | 100.0         |                    |

**COMPARED TO BEFORE, HAVE YOU ENGAGED IN ANAL SEX?**

|             | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------------|-----------|---------|---------------|--------------------|
| Valid never | 14        | 73.7    | 73.7          | 73.7               |
| less than   | 4         | 21.1    | 21.1          | 94.7               |
| the same    | 1         | 5.3     | 5.3           | 100.0              |
| Total       | 19        | 100.0   | 100.0         |                    |

**COMPARED TO BEFORE, HAVE YOU ENGAGED IN MASTURBATION?**

|             | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------------|-----------|---------|---------------|--------------------|
| Valid never | 1         | 5.3     | 5.3           | 5.3                |
| less than   | 1         | 5.3     | 5.3           | 10.5               |
| the same    | 9         | 47.4    | 47.4          | 57.9               |
| more often  | 8         | 42.1    | 42.1          | 100.0              |
| Total       | 19        | 100.0   | 100.0         |                    |

**WHAT WAS YOUR MOST PLEASURABLE SEXUAL ACTIVITY BEFORE YOUR BURN INJURY?**

|       |              | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|--------------|-----------|---------|---------------|--------------------|
| Valid | intercourse  | 12        | 63.2    | 63.2          | 63.2               |
|       | oral sex     | 6         | 31.6    | 31.6          | 94.7               |
|       | masturbation | 1         | 5.3     | 5.3           | 100.0              |
|       | Total        | 19        | 100.0   | 100.0         |                    |

**SINCE YOUR BURN INJURY, HAVE YOU BEEN ABLE TO HAVE AN ORGASM?**

|       |     | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-----|-----------|---------|---------------|--------------------|
| Valid | yes | 19        | 100.0   | 100.0         | 100.0              |

**IF YES, WAS IT...**

|       |           | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-----------|-----------|---------|---------------|--------------------|
| Valid | the same  | 15        | 78.9    | 78.9          | 78.9               |
|       | similar   | 2         | 10.5    | 10.5          | 89.5               |
|       | different | 2         | 10.5    | 10.5          | 100.0              |
|       | Total     | 19        | 100.0   | 100.0         |                    |

**IN YOUR ESTIMATION HOW ATTRACTIVE DO YOU FEEL YOUR BODY WAS? BEFORE**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | sometimes  | 1         | 5.3     | 5.3           | 5.3                |
|       | often      | 5         | 26.3    | 26.3          | 31.6               |
|       | very often | 13        | 68.4    | 68.4          | 100.0              |
|       | Total      | 19        | 100.0   | 100.0         |                    |

**IN YOUR ESTIMATION HOW ATTRACTIVE DO YOU FEEL YOUR BODY WAS? AFTER**

|       |            | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|------------|-----------|---------|---------------|--------------------|
| Valid | not at all | 6         | 31.6    | 31.6          | 31.6               |
|       | rarely     | 7         | 36.8    | 36.8          | 68.4               |
|       | sometimes  | 4         | 21.1    | 21.1          | 89.5               |
|       | often      | 2         | 10.5    | 10.5          | 100.0              |
|       | Total      | 19        | 100.0   | 100.0         |                    |



**HOW HEALTH WERE YOU? BEFORE**

|              | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------|-----------|---------|---------------|--------------------|
| Valid rarely | 1         | 5.3     | 5.3           | 5.3                |
| sometimes    | 4         | 21.1    | 21.1          | 26.3               |
| often        | 8         | 42.1    | 42.1          | 68.4               |
| very often   | 6         | 31.6    | 31.6          | 100.0              |
| Total        | 19        | 100.0   | 100.0         |                    |

**HOW HEALTHY WERE YOU? AFTER**

|              | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------|-----------|---------|---------------|--------------------|
| Valid rarely | 2         | 10.5    | 10.5          | 10.5               |
| sometimes    | 5         | 26.3    | 26.3          | 36.8               |
| often        | 12        | 63.2    | 63.2          | 100.0              |
| Total        | 19        | 100.0   | 100.0         |                    |

**HOW WELL WERE YOUR SEXUAL CONCERNS ADDRESSED DURING REHABILITATION? BEFORE**

|                  | Frequency | Percent | Valid Percent | Cumulative Percent |
|------------------|-----------|---------|---------------|--------------------|
| Valid not at all | 10        | 52.6    | 52.6          | 52.6               |
| rarely           | 6         | 31.6    | 31.6          | 84.2               |
| sometimes        | 2         | 10.5    | 10.5          | 94.7               |
| very often       | 1         | 5.3     | 5.3           | 100.0              |
| Total            | 19        | 100.0   | 100.0         |                    |

**HOW WELL WERE YOUR SEXUAL CONCERNS ADDRESSED DURING REHABILITATION? AFTER**

|                  | Frequency | Percent | Valid Percent | Cumulative Percent |
|------------------|-----------|---------|---------------|--------------------|
| Valid not at all | 3         | 15.8    | 15.8          | 15.8               |
| rarely           | 7         | 36.8    | 36.8          | 52.6               |
| sometimes        | 6         | 31.6    | 31.6          | 84.2               |
| often            | 2         | 10.5    | 10.5          | 94.7               |
| very often       | 1         | 5.3     | 5.3           | 100.0              |
| Total            | 19        | 100.0   | 100.0         |                    |

**DURING REHAB, HOW COMFORTABLE WERE YOU IN DISCUSSING SEX WITH THE STAFF? BEFORE**

|                  | Frequency | Percent | Valid Percent | Cumulative Percent |
|------------------|-----------|---------|---------------|--------------------|
| Valid not at all | 10        | 52.6    | 52.6          | 52.6               |
| rarely           | 7         | 36.8    | 36.8          | 89.5               |
| sometimes        | 1         | 5.3     | 5.3           | 94.7               |
| very often       | 1         | 5.3     | 5.3           | 100.0              |
| Total            | 19        | 100.0   | 100.0         |                    |

**DURING REHAB, HOW COMFORTABLE WERE YOU IN DISCUSSING SEX WITH THE STAFF? AFTER**

|                  | Frequency | Percent | Valid Percent | Cumulative Percent |
|------------------|-----------|---------|---------------|--------------------|
| Valid not at all | 2         | 10.5    | 10.5          | 10.5               |
| rarely           | 5         | 26.3    | 26.3          | 36.8               |
| sometimes        | 8         | 42.1    | 42.1          | 78.9               |
| often            | 3         | 15.8    | 15.8          | 94.7               |
| very often       | 1         | 5.3     | 5.3           | 100.0              |
| Total            | 19        | 100.0   | 100.0         |                    |

**HAS YOUR BURN INJURY CONTRIBUTED TO THE BREAK-UP OF RELATIONSHIPS WITH A SIGNIFICANT OTHER?**

|           | Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------|-----------|---------|---------------|--------------------|
| Valid yes | 16        | 84.2    | 84.2          | 84.2               |
| no        | 3         | 15.8    | 15.8          | 100.0              |
| Total     | 19        | 100.0   | 100.0         |                    |

**IF YES, WAS IT WITH...**

|              | Frequency | Percent | Valid Percent | Cumulative Percent |
|--------------|-----------|---------|---------------|--------------------|
| Valid spouse | 1         | 6.3     | 6.3           | 6.3                |
| friends      | 11        | 68.8    | 68.8          | 75.0               |
| both         | 4         | 25.0    | 25.0          | 100.0              |
| Total        | 16        | 100.0   | 100.0         |                    |

**HOW MUCH DO YOU FEEL SEXUAL DIFFICULTIES CONTRIBUTED TO THE  
BREAK-UP?**

|                  | Frequency | Percent | Valid Percent | Cumulative<br>Percent |
|------------------|-----------|---------|---------------|-----------------------|
| Valid not at all | 8         | 42.1    | 42.1          | 42.1                  |
| rarely           | 1         | 5.3     | 5.3           | 47.4                  |
| sometimes        | 1         | 5.3     | 5.3           | 52.6                  |
| often            | 4         | 21.1    | 21.1          | 73.7                  |
| very offer       | 5         | 26.3    | 26.3          | 100.0                 |
| Total            | 19        | 100.0   | 100.0         |                       |

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