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Is sexuality a problem? A follow-up of patients with severe burns 6 months to 7 years after injury

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ABSTRACT

Purpose and aims: This is the first study investigating sexuality from 6 months up to 7 years after burn. The aim was to examine sexuality in females and males by using the BSHS-B sexuality subscale and to examine possible contributing factors with regard to sociodemographics, burn characteristics, personality traits, and previous psychiatric disorders.
Methods: A cohort of 107 patients consecutively admitted to a Swedish national burn center was followed up at 6, 12, and 24 months after burn, and 67 individuals were followed up at 2–7 years after burn. The present study utilized the BSHS-B sexuality subscale, and multiple regression analyses were used to examine possible contributing factors.
Results: Women were less satisfied than men, and sexuality mean scores improved over time, even up to 7 years after-burn, in both men and women. The strongest contributing factors for worse outcome regarding sexuality were a history of psychiatric morbidity, neuroticism and burn severity.
Conclusions: As some patients experience sexual problems after burns, even many years later, it is important to identify these individuals. The BSHS-B sexuality subscale may be used as a screening tool, but more in-depth assessment might be needed to address all aspects of sexuality.

1. Introduction

In burn care, rehabilitation starts early to allow the patient to regain functional capacity to the greatest extent possible. Focus is on increasing function in every domain of physical and mental health, well-being, and quality of life [1]. One aspect of quality of life is sexual health, which is expressed in a working definition by WHO [2] as "a state of physical, emotional, mental and social well-being in relation to sexuality and not merely the absence of disease, dysfunction or infirmity". Sexual health requires a positive approach to sexuality and sexual relationships. Sexuality is behaviors and outcomes related to sexual health, and it is influenced by biological, psychological, social, economic, political, cultural, legal, historical, religious and spiritual factors [2]. Using that definition of sexuality it is fairly evident that having sustained a burn, with ensuing physiological, psychological and social consequences, is a risk factor for negative effects on sexuality. For example, scarring can affect an individual's self-esteem,

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which in turn can affect sexual satisfaction and some can experience sexual dysfunction after genital burns.

Sexuality after burn has not been extensively researched. A recent review found four studies in which the main purpose was to assess sexuality and 18 studies with sexuality as an indirect variable [3]. Moreover, there are few questionnaires covering sexuality after burns. In 1985 the Burn Sexuality Questionnaire was developed, but scoring and interpretation were not addressed [4]. However, the questionnaire was recently validated in a Brazilian burn population [5]. Bianchi [6] used the Sexuality Scale to measure the effect of burn on sexuality in men and reported that sexual esteem, sexual preoccupation and sexual depression were not associated with burn severity. Longer time since burn and younger age were related to better sexual health [6]. Recently, the sexual scale in the Maudsly Marital Questionnaire was used in India and findings indicated that dissatisfaction with sexual life in married burn patients was worse for men and for younger individuals [7].

In 1982, Blades and colleagues [8] constructed a scale, the BSHS, for burn-specific health that included sexuality as a subscale. Data from the subscale were presented in a separate study reporting patients' performance together with their own judgment of the ideal performance [9]. Nine months on average after burn, females reported lower levels of sexual satisfaction than men, no differences were found between groups of married and unmarried individuals, and no differences according to burn size or burn site were found [9]. Shortened versions of the BSHS are the BSHS-A [10] and the BSHS-B [11]. The sexuality subscales had not been used directly or subjected to analysis until recently, when this was done by Connell et al. [12,13].

In studies using the BSHS-A or the BSHS-B, women and older age have been associated with worse outcome in the subscale sexuality [13–15]. Individuals with avoidant coping [16,17], neuroticism [14,18,19], fear avoidance [14] and psychological illness [15,17] have reported negative outcomes in the sexuality subscale. Furthermore, large burns [13,15,20,21], burn site areas [13,15,22], and chronic pain [15] have been associated with low scores in sexuality, as has been the case for individuals who have not returned to work after injury [15,23] and those who live alone [13,15].

Most individuals recover during the years after burn and adapt to changed life circumstances [24]. In studies of young adults and adults burned as children, the majority described their sexual attitudes and behaviors as comparable to those of a general age-matched population [25,26] and that they had experienced similar feelings and concerns regarding sexuality as their non-burned peers [27]. Nevertheless, there are subgroups with impaired life quality [24], and it is important to identify those with remaining sexual problems [28].

There are few longitudinal studies examining sexuality several years after burn. Thus the aim of this study was to describe sexuality in females and males by using the BSHS-B at different time points from 6 months up to 7 years after burn and to examine possible contributing factors with regard to sociodemographics, burn characteristics, personality traits, and previous psychiatric disorders.

2. Method

2.1. Material and methods

2.1.1. Participants

This is part of a prospective longitudinal study concerning physical and psychological outcome after burn trauma conducted at the Uppsala Burn Center, one of two national burn centers in Sweden. At the time of the study the catchment area included approximately 3 million individuals and covered the northern and central parts of Sweden. Consecutive patients who were admitted for treatment of burns between March 2000 and March 2009 were asked to participate in the study as soon as their medical condition allowed if they were (1) 18 years of age or older, (2) Swedish speaking, (3) without documented learning disabilities or dementia, and (4) had a burn of 5% body surface area or larger, or a hospital length of stay (primary admission) of more than 1 day. Assessments were conducted during the initial treatment for the burn and at 6, 12 and 24 months after the burn. In addition, patients were contacted 2–7 years after burn and visited for follow-up interviews. The study was performed according to the Helsinki Declaration and was approved by the Regional Ethics Committee. Detailed descriptions of the participants together with a report of their burn-specific health-related quality of life and data from proportions of the same sample have been published previously [29].

2.1.2. Sociodemographic and burn-related variables

The following injury characteristics were extracted from the medical records: percentage of the total body surface area burned (TBSA), and of the TBSA-full thickness (TBSA-FT), length of stay in the Burn Center (LOS), and time since injury. Sociodemographic variables registered were sex, age at injury, living alone or cohabiting at the time of injury.

2.1.3. The Burn Specific Health Scale-Brief (BSHS-B)

The BSHS-B was completed at 6, 12, and 24 months as well as at 2–7 years after the burn. It is a 40-item questionnaire with 9 subscales as follows: simple abilities, hand function, heat sensitivity, treatment regimens, body image, affect, interpersonal relationships, sexuality, and work. The sexuality subscale includes three items (see Fig. 1). Responses to the items are made on a five-point scale ranging from 0 (all the time/great difficulty) to 4 (never/no difficulty). Mean scores are calculated for each subscale and high scores indicate a good perceived health status. Cronbach alphas were high (0.79–0.85).

2.1.4. The structured clinical interview for DSM-IV axis I disorders (SCID-I)

SCID-I [30] was used to assess the presence of preburn psychiatric illness. The SCID-I interview was performed during hospitalization, as soon as the patient's medical condition allowed and when the patient was devoid of cognitive dysfunction. A preburn psychiatric history was considered if the participant met criteria for a DSM-IV diagnosis at any time in his or her life before and including the time of the burn. The SCID interviews were conducted by