

Table 31. Sexual Education and Counselling for SCI Patients

Author Year; Country Score Research Design Total Sample Size	Methods	Results
<p>Hoacłaski et al. 2016 Canada Pre-post Level 4 N=7</p>	<p>Objective: To offer an existing intervention tool to women with MS and SCI. Population: N=7, Mean age 47.9, SD 11.2, range 25–61 years, 6MS, 1SCI Methodology: Delivered 5, 90-minute sessions at 2 weeks apart. Questionnaires were administered prior to, immediately following, and 6 months after treatment. Outcome Measures: 12-item Female Sexual Distress Scale (FSDS), Female Sexual Function Index (FSFI), 32-item Detailed Assessment of real-life Sexual Arousal (DASA), 32-item Dyadic Adjustment Scale (DAS), Five Facet Mindfulness Questionnaire (FFMQ), 10-item Physical Disability Sexual and Body Esteem Scale (PDSBE)</p>	<ol style="list-style-type: none"> 1. There was a significant effect of education on FSFI desire score, sexual activity increased, and overall sexual function significantly increased with treatment with a large effect size ($F(2,8) = 6.08, p = .025$). 2. Orgasm, genital pain reports, sexual satisfaction did not change with treatment 3. Findings suggest a psychoeducational approach (including mindfulness) has the potential to positively influence sexual adjustment for women with MS and SCI. 4. An examination of effect sizes on sex-related distress between each of the time points showed a strong effect of treatment from pre- to post-intervention, Cohen's $d = 1.19$, but did not reach significance.
<p>Zarei et al. 2020 Iran RCT Level 1 N=70</p>	<p>Objective: To assess the effectiveness of a mobile-based educational intervention on sexo-marital life in Iranian men with spinal cord injury (SCI). Population: N=70, Mean age: 36, ASIA: 26A/22B/14C/8D Methodology: The effectiveness of a mobile app was evaluated on 70 married men with SCI. Outcome Measures: Sexual adjustment, sexual satisfaction, marital adjustment, and marital satisfaction</p>	<ol style="list-style-type: none"> 1. Sexual adjustment (4.2 to 8.6) and sexual satisfaction (9.6 to 16.4) were significantly different at baseline, 4 weeks, and 8 weeks ($p < 0.001$). 2. Marital adjustment was not significant over time. 3. All marital satisfaction dimensions were significantly different from baseline, 4 weeks, to 8 weeks ($p < 0.001$).
<p>Rezaei-Fard et al. 2019 Iran RCT</p>	<p>Objective: To evaluate the effectiveness of a PLISSIT model sexual counseling program to promote sexual function of women with spinal cord injury.</p>	<ol style="list-style-type: none"> 1. There was a significant increase in FSFI scores after intervention from 15.9 to 21.75 ($p < 0.05$).

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Level 1 N=44	<p>Population: N=44, Mean age: 41.77, AIS: 14A/20B/7C/3D,</p> <p>Treatment: The intervention group received the PLISSIT sexual counseling in three sessions weekly, and the control group received the routine consultation of the center.</p> <p>Outcome Measures: Female Sexual Function Index (FSFI).</p>	<ol style="list-style-type: none"> 2. There were statistically significant increases in all domains of FSFI ($p < 0.05$). 3. Implementation of the PLISSIT model reduced sexual problems and increased scores of sexual functions for women with SCI.
<p>Schopp et al. 2002 USA Longitudinal Level 2 N=28</p>	<p>Demographics: 28 women with SCI; mean age 40 yrs, range 17-59.</p> <p>Methods: Participants accessing comprehensive gynaecologic and reproductive health care services at a SCI women's health clinic; surveyed immediately prior to 1st clinic visit, and at 3- and 12-month follow-ups; participants mailed a set of baseline questionnaires approx. 3 weeks before their scheduled exam date; subsequent assessments conducted by phone and mail.</p> <p>Outcome Measures: measures of health-promoting behaviours (breast self-exams, exercise, reducing fat intake, increasing fibre intake and mammography); SCI-adapted General Health subscale of the US. Short-Form-36 (SF-36); Satisfaction with Life Scale (SWLS); Brief Symptom Inventory (BSI).</p>	<ol style="list-style-type: none"> 1. There was an increase in breast self-examination across 3 time periods but no increase in other health promoting behaviours. 2. Trend toward increased willingness to engage in monthly breast self exams from baseline to 3 months, and trend toward increased willingness to receive a mammogram between baseline and 12-month follow-up.
<p>Pebdani et al. 2013 USA Longitudinal Level 2 N=253</p>	<p>Population: 253 individuals consisting of 159 males (mean age 48.74 ± 14.81 years) and 94 females (44.32 ± 13.12 years). Years since diagnosis - Males (13.75 ± 10.53 years), Females (12.79 ± 9.63 years) Level of injury C1-S5.</p> <p>Treatment: None</p> <p>Outcome Measures: Questions regarding family planning, the effect of SCI on family planning, where they received advice and information about SCI and pregnancy, SCI and fertility, and attitudes towards having children.</p>	<ol style="list-style-type: none"> 1. Approximately 50% had SCI prior to family planning. 2. Over half of the women in the sample had not spoken with a physician about SCI and pregnancy. 3. 60% of the women in the sample had been pregnant at some point in their lives. 4. Half of the men had fathered a child. 5. 13.4% reported that fertility issues had been discussed with a fertility specialist.

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		<ol style="list-style-type: none"> 6. 7.1% reported that they or their partner had taken part in an infertility evaluation. 7. 4.3% reported that either they or their partner had received fertility treatment. 8. 2 women and 1 man reported that they or their partner had an abortion partially because of their SCI.
Walker et al. 2021 USA Pre-post Level 4 N=10	<p>Objective: To develop and implement the Parenting Self-Management Program with people with SCI/D and evaluate the potential impact on knowledge, self-efficacy, and participation.</p> <p>Population: N=10 (6F;4M), Mean age: 37, 1 Paraplegia, 1 Tetraplegia, 1 Unknown, 3 MS, 1 Other</p> <p>Methodology: A mixed-methods approach with two phases was used to develop, implement, and evaluate the Parenting Self-Management Program for parents with SCI/D. Phase 1 included the development portion of the project, and Phase 2 was the implementation pilot study.</p> <p>Outcome Measures: General Self-Efficacy Scale, Modified Version of the Participation Survey/ Mobility, Open Ended Questions</p>	<ol style="list-style-type: none"> 1. Significant increases ($p < 0.05$) in perceived knowledge were found for the topics of emergency preparedness, home modifications, adapted equipment, fatigue management, pain management, and community resources among Phase 2 participants.
Brundage et al. 2020 USA Case Series Level 4 N=3	<p>Objective: The aim is to provide individualized and better-coordinated sexual health interventions specific to the cultural, religious, physical, emotional, cognitive, sexual orientation, and gender identity needs of the patients served</p> <p>Population: Participant 1: 64 years, Male, T7, AIS A Paraplegia Participant 2: 69 years, Male, C5, AIS D Quadriplegia Participant: 66 years, Male, C3, AIS D Quadriplegia</p>	<ol style="list-style-type: none"> 1. Participant 1: Specific distress related to self-esteem, body image, and coping with both the physical and emotional challenges imposed by his SCI. 2. Participant 2: He desired further evaluation for ED medication(s) that he could use in conjunction with the pump. He also wanted to explore how sexual health and disability impacted his relationship.

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	<p>Methodology: Conceptual sexual health care frameworks encompass a range of biopsychosocial factors and recommend utilizing an interdisciplinary approach to meet the diverse needs of individuals with disabilities.</p> <p>Outcome Measures: Veteran experiences with sexual rehabilitation</p>	<p>3. Participant 3: Tried both the ED medication and the pump in the privacy of his own home after hospital discharge.</p>
<p>Federici et al. 2019 Italy Pre-post Level 4 N=14</p>	<p>Objective: To evaluate the impacts of a psychoeducational intervention in a personal growth group on the sexual life of people with SCI and their partners particularly their sexual interest and satisfaction, depression, and anxiety</p> <p>Population: N=14 (6F; 5M), Mean age at injury 38.1, 6 Paraplegia, 1 Tetraplegia</p> <p>Treatment: Psychoeducational Intervention</p> <p>Outcome Measures: Sexual Interest and Satisfaction Scale (SIS), Beck Depression Inventory-II (BDI-II), Beck Anxiety Inventory (BAI)</p>	<ol style="list-style-type: none"> 1. There was an increase in SIS-item 5 (enjoy sexual health) that increased from 1.36 to 2.18 after intervention ($p = 0.003$). 2. SIS total score significantly increased from 10.55 to 12.82 ($p=0.011$).
<p>Hess et al. 2007 USA Pre-post Level 4 N=4</p>	<p>Demographics: 4 men with SCI; age range 35-55 yrs; time since injury 10-23 yrs; 3 with traumatic SCI, 1 with transverse myelitis; All with paraplegia: 2 complete, 2 incomplete (AIS B and AIS C).</p> <p>Methods: Patients referred to an outpatient SCI sexual health program and seen by an interdisciplinary team (nurse, physician, and psychologist); completed a pre-evaluation questionnaire and post-evaluation clinic visit questionnaire regarding their satisfaction with both sexual function and the clinic experience.</p> <p>Outcome Measures: pre- and post-visit satisfaction with sexual function and clinic experience.</p>	<ol style="list-style-type: none"> 1. Patients were very satisfied with their clinic experience. All stated they would recommend the clinic to others and would themselves return with new issues regarding their sexual health. 2. Despite patients' reporting insufficient knowledge about sexual function, all rated their clinic visit positively, and felt their questions had been answered and their emotional wellbeing appropriately addressed in a respectful environment.
<p>Lopes et al. 2022 Portugal Cross-sectional Level 5 N=112</p>	<p>Objective: To identify and characterize sexual activity among these patients, assess their sexual satisfaction and elucidate the factors that influence it.</p> <p>Population: N=112 (28F;84M), Mean age: 54.4, Time after injury 9.4 years, 30</p>	<ol style="list-style-type: none"> 1. Older age, older age at injury, female, and no vocational status were significantly associated with decreased sexual activity ($p<0.001$).

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	Complete, 81 Incomplete, 29 Tetraplegia, 76 Paraplegia Methodology: A telephone questionnaire, addressing some topics about sexual health and sexual satisfaction, applied to spinal cord injured individuals previously admitted to a Rehabilitation Hospital Outcome Measures: Factors that affect sexual activity and satisfaction	2. Older age, older at injury, and not having sexual counselling were significantly associated with decreased sexual satisfaction ($p < 0.05$).
Koyuncu et al. 2022 Turkey Cross-sectional Level 5 N=81	Objective: The aim of our retrospective study is to evaluate sexual function and to determine the level of sexual education provided by medical professionals in males with SC injury. Population: N=81, Mean age: 33.6, 15 Cervical, 45 Thoracic, 21 Lumbar, AIS: 43A/13B/16C/9D Methodology: A self-reported questionnaire was administered in a face-to-face interview technique, to minimize the risk of misunderstanding. It involves 15 questions grouped under five categories: erectile function, orgasmic function, sexual desire, intercourse satisfaction, and overall sexual satisfaction. Outcome Measures: International Index of Erectile Function (IIEF)	1. 90.1% of patients were never informed of the impact of SCI on sexual function. 2. 4.9% of participants could have a normal ejaculation, others experienced reduced or absent ejaculations. 3. After SCI, 38.3% of men could not achieve a psychogenic erection and 22.2% could not achieve a reflex erection. 4. Erectile dysfunction was severe in 66.7% patients. 5. Most patients (59.3%) were severely dissatisfied with their sex life.
Abed et al. 2022 Iran Case series Level 4 N=3	Objective: To examine sexual self-efficacy in men with SCI. Population: N=3 Participant 1: Age 43, TSCI, C5-C6 injury Participant 2: Age 44. TSCI, T2 injury Participant 3: Age. 38, TSCI, T2-T3 injury Methodology: Eight-week sexual self-efficacy promotion intervention Outcome Measures: Sexual Self Efficacy Questionnaire	1. All participants increased in sexual self-efficacy scores, mean of 6.33 to 18.33. 2. There were slight decreases in sexual self-efficacy at follow up, but scores did not return to baseline.
Valtonen et al. 2006 Sweden Cross-sectional Level 5 N=231 (190 SCI)	Demographics: 190 adults with SCI (144 M, 46 F) and 41 persons with menigomyelocle (MMC); SCI participants: mean age 46.6 yrs, range 21.8-74.2; Level of injury: 87 cervical, 60 thoracic, 39 lumbar/sacral. Methods: mail-out questionnaire on aspects of health and functioning. All SCI	1. 69% of men and 59% of women with SCI reported that they had received enough sexual counselling. 2. Those who reported the amount of sexual counselling as sufficient showed higher satisfaction

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	<p>participants had been treated in the Spinal Injuries Unit in a university hospital in Goteborg, Sweden.</p> <p>Outcome measures: satisfaction with sexual life, self-assessed sufficiency of sexual counselling.</p>	<p>with their sexual life than the others.</p> <p>3. In all subgroups, those who considered the sexual counselling they had received as sufficient were more satisfied with their sexual life than the others.</p>
<p>Charlifue et al. 1992 USA Cross-sectional Level 5 N=231</p>	<p>Demographics: 231 women with SCI; mean age 32.7 yrs; mean age at injury 21.5 yrs; 112 quadriplegic (72% complete), 119 paraplegic (77% complete).</p> <p>Methods: Women who had initial rehab at a hospital centre in Colorado contacted by phone to participate in a comprehensive survey that examined demographic characteristics, menstrual and female hygiene history, pregnancy and childbearing, and sexual health.</p> <p>Outcome measures: sexual health needs, concerns, and support.</p>	<p>1. Over half the women reported the sexual health information provided for them during rehab was inadequate; however, those whose rehab was after 1977 had higher levels of satisfaction (coincided with the establishment of a weekly women's group at the treatment centre).</p>